

## Quietly Humming Along? Approaching Film Sound in the Digital Culture Through the Streaming of *The Best Years of Our Lives* (1946)

By Jaka Lombar

“As a technology of converging media platforms,” writes Eva Tsai, “the proliferating screens around us are less psychical apparatus of positioning than embedded and embedding cultural and technological objects.”<sup>1</sup> Yet, as some of the most recent Film Studies scholarship which maps out the issues of new media has shown<sup>2</sup>, this kind of thinking frequently privileges the visual aspects of the technologies, and the wider cultural debates in which they participate, but fails to pay attention to the “audio” part of the audio-visual environment. This essay will probe this conspicuous discrepancy by examining the non-theatrical contexts of current video on-demand streaming practices from the sonic perspective, particularly in regard to the sounds that arise, or indeed fail to arise, independently from the filmic texts themselves, examined through the experience of streaming of *The Best Years of Our Lives* on Amazon Video.

### **The Presence of Proliferating Screens and Absence of Proliferating Sounds**

The opening quote by Tsai is also indicative of the kind of tendencies that align with the Film Studies sub-fields that most often engage with the phenomena of new media and the proliferating screens: advancing the cultural and technological aspects over the “psychical apparatus of positioning” could be situated within the discourses of New Film History and media archaeology. While a speculative meta-theoretical inquiry into Film Studies

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<sup>1</sup> Tsai, Eva. "East Asian Screen Industries." *Chinese Journal of Communication*. 4.2 (2011): 240-243, 242.

<sup>2</sup> See, for example, Starosielski, Nicole. *The Undersea Network*. Durham: Duke University Press, 2015., and Parks, Lisa, and Nicole Starosielski, (eds.). *Signal Traffic: Critical Studies of Media Infrastructures*. Urbana, Ill: University of Illinois Press, 2015.

historiography is well beyond the scope of this essay, a quick look beyond the sub-fields' tendencies toward sound could be beneficial for the following analysis. The "historical turn", which some trace back to the landmark FIAF 1978 Brighton conference in which more than 600 early films were screened<sup>3</sup>, led to the movement that Thomas Elsaesser termed New Film History, which recognised the need for accommodating the newly available material and reconciling empirical history and high theory<sup>4</sup>; though it is worth pointing out that the role of theory with semiotic and psychoanalytical leanings became diminished. This development within the discipline in turn paved the way for the current sub-field of media archaeology that continues to engage with the media objects of the past, but this time by reintegrating them into the present and by considering their lost potentialities from "the placeless place and the timeless time the film historian needs to occupy"<sup>5</sup>.

This kind of "enunciative position"<sup>6</sup> is by no means indicative of ocularcentric bias, yet somehow the sonic dimension seems to be predominantly consigned to the period before the transition of the New Film History towards media archaeology. New media proliferation began to stimulate Film Studies to move beyond cinema into the fields of video and the web, and beyond the practices associated with the artistic or entertainment purpose through consideration of the visuality in the medical, scientific, surveillance and warfare contexts. Yet this challenge to the "coherence of cinema as an object of inquiry"<sup>7</sup> largely abstained from engaging with sound. The comprehensive and ambitious writings of Rick Altman and

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<sup>3</sup> Chapman, James. *Film and History*. Basingstoke, Hampshire: Palgrave MacMillan, 2013, 12.

<sup>4</sup> Elsaesser, Thomas. "The New Film History." *Sight and Sound*. 55.4 (Autumn 1986), 246–51.

<sup>5</sup> Elsaesser, Thomas. "The New Film History As Media Archaeology." *Cinémas : revue d'études cinématographiques / Cinémas: Journal of Film Studies*. 14.2-3 (2004), 75-117, 112.

<sup>6</sup> Ibid.

<sup>7</sup> Grieveson, Lee, and Haidee Wasson. "The Academy and Motion Pictures." in Grieveson, Lee, and Haidee Wasson, (eds.). *Inventing Film Studies*. Durham: Duke University Press, 2008, xi-xxxii, xxvi.

Richard Abel<sup>8</sup> on early cinema sound have so far found few equals among contemporary work with a similar scope. As media archaeology engages with the visuality of the proliferating screens<sup>9</sup> and their dispersal through the digital structures, one is left wondering what happened to “proliferating sounds”.

Perhaps the fault lies in the very act of seeking to establish such a parallel situation even though media archaeology aspires to provide a cross-temporal, cross-medium way of seeing and hearing in which sporadic instances of the sonic proliferation study and sonic presence in new media<sup>10</sup> are the most what one could hope for. Yet this line of argument does not really hold when considered alongside the meticulous visual analyses that the new media scholarship is capable of producing, an example of which will be engaged with in the following section on the role of data centres in streaming culture. Could it be that media archaeology is merely inclined to engage with the various “others” of the mainstream cinema<sup>11</sup>, as long as they can be neatly mapped onto the pre-existing historical, cultural and technological structures that are predominantly seen (and can be literally mapped down), while the uncontrollable properties of sound preclude it from such analysis?

At this point, one can only speculate whether the study of sonic events within new media and the adjunctive study of the infrastructures that provide the audio-visual content for video on demand viewing ought to be augmented by the inclusion of an apparatus theory informed by the specific developments of the post-Dolby home viewing era, or a phenomenological

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<sup>8</sup> Abel, Richard, and Rick Altman (eds.). *The Sounds of Early Cinema*. Bloomington, IN: Indiana University Press, 2001, and Altman, Rick. *Silent Film Sound*. New York: Columbia University, 2004.

<sup>9</sup> Straw, Will. "Proliferating Screens." *Screen*. 41.1 (2000): 115-119, 115.

<sup>10</sup> For example, while Kerins advocates for the detailed study of sound in the digital age, his attention rests on cinema sound and only a portion of his concluding remarks focuses on the film sound in the non-theatrical settings. See Kerins, Mark. *Beyond Dolby (stereo): Cinema in the Digital Sound Age*. Bloomington: Indiana University Press, 2011, 318-328.

<sup>11</sup> Parikka, Jussi. *What Is Media Archaeology*. Cambridge: Polity Press, 2015, 10.

understanding of the viewing and hearing experience in a streaming context. Seung-hoon Jeong suggests bridging the gap between the two approaches through his reading of Deleuze's and Levinas's understandings of the face<sup>12</sup>, but this again represents a primarily visual study. Fundamentally, it seems, media archaeology focuses on the structures and procedures beyond the grasp of human perception, or at least the grasp of the spectator, and thus imposes greater limits for engagement with phenomenological theories<sup>13</sup>. This essay then proposes to evaluate an example of the streaming experience and to bring it into broader considerations regarding the value of sound in the new media environment.

### **The Sonic Experience of the Piano Sequence in *The Best Years of Our Lives* (1946)**

I feel obliged to shift to first person narration for this section of the essay in order to delineate my experience as closely as possible. On my laptop, I search among the suggested viewing options on Amazon Video, a subsection of the Amazon webpage, that provides the platform for the instant streaming of films on my personal computer. I am wearing headphones so that the majority of sounds that might arise from a domestic environment are drowned out during the film. I choose William Wyler's *The Best Years of Our Lives*, described by the site as the "masterpiece [that] recounts the problems faced by three returning veterans after WWII as they attempt to pick up the threads of their lives"<sup>14</sup>. By the time the film reaches the piano sequence (Figure 1.), the laptop is overheated and its cooling system begins to produce a quiet humming noise and as I touch it, I can feel the vibrations which match the sound of the

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<sup>12</sup> Jeong, Seung-hoon. *Cinematic Interfaces: A Theory of Image and Subjectivity*. New York: Routledge, 2013.

<sup>13</sup> Blom, Ingrid. "Media Archaeology vs. Media Aesthetics." *Graduate Programs in the Divisions*. Web. The University of Chicago. Accessed 28. 4. 2017. <[http://registrar.uchicago.edu/sites/registrar.uchicago.edu/files/uploads/catalogs\\_announcements/COLLEGE-final-2015-2016-as-of-Sept-22-2015.pdf](http://registrar.uchicago.edu/sites/registrar.uchicago.edu/files/uploads/catalogs_announcements/COLLEGE-final-2015-2016-as-of-Sept-22-2015.pdf)>.

<sup>14</sup> "The Best Years Of Our Lives (1946)." *Amazon Video*. Web. Last Accessed 28. 4. 2017. <[https://www.amazon.com/Best-Years-Our-Lives/dp/B00AOOR7DA/ref=tmm\\_aiv\\_swatch\\_1?\\_encoding=UTF8&qid=&sr=>](https://www.amazon.com/Best-Years-Our-Lives/dp/B00AOOR7DA/ref=tmm_aiv_swatch_1?_encoding=UTF8&qid=&sr=>)>.

cooling process. I will now proceed to read these sensations alongside the sequence's intertextual specificities in order to gain an of film sound in the streaming context.



Figure 1. The piano sequence in the saloon.

The sequence involves Homer and Butch who play the piano while Al waits for Fred, who is positioned in the background of the shot, to finish a phone call that ends the possibility of a relationship with Peggy, Al's daughter. The piano playing functions as a emotional counterbalance to the unpleasant situation occurring in the background while the three men stay in the front of the saloon at the piano. Homer is an amputee who has just began to learn how to play the instrument and, accompanied by Butch, is able to perform the "Chopsticks" duet, an easy four-hands piano piece. To Al's astonishment, Homer's mechanical hook prostheses do not impede the performance, and the overall sound design also manages to differentiate the two melodies, one being Butch's soft accompaniment and the other the more harsh and noticeably beginner's one. Furthermore, the sound of Homer's melody is matched

by the sound of metal hooks touching the keyboard, revealing the piano's materiality alongside its intended sonic output.

This juxtaposition of the piano sequence with my own sonic experience outside of the filmic text provides a sort of intertextual commentary, a "discourse that hosts other discourses"<sup>15</sup> by situating film and its visuality in a relevant but not exclusive position. The piano playing points my senses towards other "unintended" sounds: the sound of the mechanical hook prostheses on the keyboard and the sound of the laptop's cooling noise, both of which accentuate the sonic presence of the technological objects themselves.

This is by no means an analogical statement which would seek to equate the propensity of media platforms to produce unaccounted audio-visual contingencies, like the laptop's humming within the streaming environment, with the depiction, and its sonic equivalent, of Homer's disability. Rather, my argument appreciates the distinctiveness of any critique of the hegemonic able-bodiedness and the subversive value of seeking out empowering discrepancies that resist normativity<sup>16</sup>, a distinctiveness that is underlined by the audio-visual presence of disabled bodies in the filmic text, particularly in the case of *The Best Years of Our Lives*, which has been praised by recent studies for its depiction of infirmity<sup>17</sup>. Through this attentiveness and regard for the autonomous space of the disabled bodies, I am then able to trace the extended transgressiveness of the new media's exhibiting properties that intensify such qualities. In other words, the sonic experience of Homer's piano playing becomes amplified when seen, and heard, through the technology that is itself capable of inviting attentiveness to the embodied experiences of disability.

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<sup>15</sup> Casetti, Francesco. "Back to the Motherland: the Film Theatre in the Postmedia Age." *Screen*. 52.1 (2011): 1-12, 3.

<sup>16</sup> Kafer, Alison. *Feminist, Queer, Crip*. Bloomington: Indiana University Press, 2013, 17.

<sup>17</sup> Kozloff, Sarah. *The Best Years of Our Lives*. Houndmills, Basingstoke: Palgrave Macmillan, 2011, 90.

Furthermore, by listening to the piano sequence I become alert to the Butch's gesture of sustaining the melody and the ways in which distance and nearness arise from two bodies playing a piano keyboard, which in turn propels me to seek out sonically corresponding practices in the act of streaming itself. Nonetheless I am unable to hear beyond the quiet humming of the laptop, or indeed locate the source that sustains the filmic image and sound, making only the recognition of the distance between the source of the platform and my embodied experience more apparent. Ivan Raykoff similarly argues that there are conceptual and practical parallels between the technologies of sound, such as the piano, and technologies concerned with long-distance information transmission, such as the telegraph<sup>18</sup>. The tactile gestures performed on both interfaces become transformed into another perceptible experience, conjoining the "act of tactile *impression* and the ideal of evocative *expression*"<sup>19</sup>. While the source of the film I am streaming requires no bodily activity on the side of the data centre at which it is digitally stored, it nonetheless involves my own haptic initiation when I chose the film on Amazon Video, which in turn brought about the image and sound I am able to experience.

The haptic activity itself might not involve any sound output — though the sound of Homer touching the piano keyboard in the film sequence could gesture towards a more attuned listening which envelops such bodily engagement with technology — but the sonic experience is, somewhat counterintuitively, at least partly sustained by our sense of the "tangible"<sup>20</sup>, perhaps by virtue of the technology's own materiality and the way it relates to our own bodies. Sound and the faculty of hearing therefore ought to take on expanded roles

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<sup>18</sup> Raykoff, Ivan. "Piano, Telegraph, Typewriter: Listening to the Language of Touch." in Colligan, Colette, and Margaret Linley, (eds.). *Media, Technology, and Literature in the Nineteenth Century: Image, Sound, Touch*. London: Routledge, 2016, 159-188, 159.

<sup>19</sup> *Ibid.*, (emphasis in original).

<sup>20</sup> *Ibid.*, 161.

when thinking about the new media infrastructure, even when the initial impression might render them inaudible.

### **The Hushed Humming of the Data Centres**

Just as Butch's own performance sustains Homer's melody, the film I am streaming needs a constant supply of information in order to exhibit the visuals on the laptop screen and the audio in my headphones. Perhaps a better analogy would be piano sheet music, but Butch and Homer perform their duet without it. In any case, this section will attempt to explore how that which is outside our field of hearing still modulates our senses and aural impressions of the streaming experience in the digital environment.

It has been reported that Amazon "expanded their UK cloud infrastructure in the country"<sup>21</sup> by opening its first data centre at an undisclosed location in 2017, which is where I presume the data on *The Best Years of Our Lives* is stored and streamed from, by virtue of my geographical proximity. While I do not know its actual location, I can try to imagine the sonic and visual properties it would entail. This strange discontinuity between the lack of actual experience and the impression of casual familiarity with the data centres is what interests Jennifer Holt and Patrick Vonderau, who assert that the ways in which the cloud storage environment presents itself to the consumers and at the same time distances itself from them constitute a choreographed effort to manage the relationship between technologies and the people who use them<sup>22</sup>.

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<sup>21</sup> Williams, Rhiannon. "Amazon opens first secretive data centres in the UK." iNews. Web. Last accessed at 28. 4. 2017. <<https://inews.co.uk/essentials/news/technology/amazon-opens-first-secretive-data-centres-uk>>.

<sup>22</sup> Holt, Jennifer and Patrick Vonderau. "Where the Internet Lives: Data Centers as Digital Media Infrastructure." in Parks, Lisa, and Nicole Starosielski, (eds.). *Signal Traffic: Critical Studies of Media Infrastructures*. Urbana, Ill: University of Illinois Press, 2015, 71-93, 72.



Through the visual analysis of the images of the data centres released by Google and other web services, Holt and Vonderau recognize the topoi of nonthreatening corporate warehouses<sup>23</sup> that reassure the users of their stability and integration into the environment. One such instance that is particularly striking in validating their argument is the photograph of the Council Bluffs, Iowa data centre, which depicts a family of deer grazing next to the cooling systems (Figure 2).



Figure 2. Photograph of the Council Bluffs data centre, with a family of deer in the foreground.

This propensity of corporations, such as Google and Amazon, to locate their data centres on undisclosed peripheries where industrial zones meet meadows and other natural spaces also has sonic implications that Holt and Vonderau do not take into account. The fact that the industrial complex is matched or offset by an at least somewhat natural setting could have the

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<sup>23</sup> Ibid.

potential to integrate my impression of the facility into the casual soundscape of the semi-industrial non-places I am familiar with, where the sounds of machinery compete with the sounds of the wind in the greenery and with other everyday sounds. Furthermore, representational strategies such as Google's photograph of the data centre acknowledge the materiality of the new media as opposed to the competing idea of the cloud storage as wireless and ethereal. I intend to push this further by proposing that the experience of watching and hearing the streamed filmic texts despite their apparent immateriality can also be informed by the sonic environments of their material basis in the data centres, though by concealment and inaccessibility rather than external representation.

Thus, I am unsure whether Lisa Parks's argument that drawing a connection between the natural spaces and the technology's infrastructure corresponds to a concealment that keeps citizens "naive and uninformed about the network technologies they subsidize and use each day"<sup>24</sup> in her discussion on the "antenna trees" phenomena could be extended to the data centres and the "cloud" that resides within them. As Holt and Vonderau have acknowledged, the inaccessibility of the "interior" of the infrastructure, either because of security and competition concerns or the actual "black box-edness" of the technology<sup>25</sup>, does not necessitate a blockage of our thinking about it. While it certainly presents a troubling predicament for scholarly work on the subject, which ought to strive for the most complete information available, and indeed for the notion of informed citizens that can then influence polity, the relevance for applying the existing information and its apparent lack to the streaming experience is not actually exhausted. Indeed, the infrastructure's topology and apparatus are only elements of the media infrastructure's politics, another being its imaginary

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<sup>24</sup> Parks, Lisa. "Around the Antenna Tree: The Politics of Infrastructural Visibility." *Flow*. 6. 3. 2009. Web. Accessed 28. 4. 2017. <<http://flowtv.org/2009/03/around-the-antenna-tree-the-politics-of-infrastructural-visibilitylisa-parks-uc-santa-barbara>>.

<sup>25</sup> Holt and Vonderau, *Where the Internet Lives*, 74.

power<sup>26</sup>. This could be linked to what Brian Larkin calls the “poetic mode”<sup>27</sup> of infrastructure, in which the objects take on symbolic meanings despite their limited proximity to reality.

The very fact that I am unable to actually hear what the Amazon data centre sounds like facilitates my autonomous imagining of the hushed humming of the servers that takes place perpetually and therefore also during my own film streaming experience. This casual familiarity, again sustained only by the *visual* sources of the data centre interiors<sup>28</sup>, such as the stylized interior photograph of an unnamed Amazon data centre (Figure 3), begins to conciliate my awareness of the new media’s necessity for being grounded in materiality with the seemingly immaterial presence of the film’s source on my screen and headphones.

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<sup>26</sup> Ibid., 80.

<sup>27</sup> Larkin, Brian. "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology*. 42 (2013): 327-343, 335.

<sup>28</sup> These images of endless rows of the servers are indistinguishable from each other, but also instantly recognizable and recallable as generic high-tech spaces, which leads me to acknowledge that I am not imagining the specific and localised centre from which *The Best Years of Our Lives* data bits are coming, but rather the conception of the data centre in a general sense. As Chuck Tryon suggests, the, “on-demand culture is not linked to a specific technology, medium, or location”. See Tryon, Chuck. *On-demand Culture: Digital Delivery and the Future of Movies*. New Brunswick, N.J: Rutgers University Press, 2013, 176.

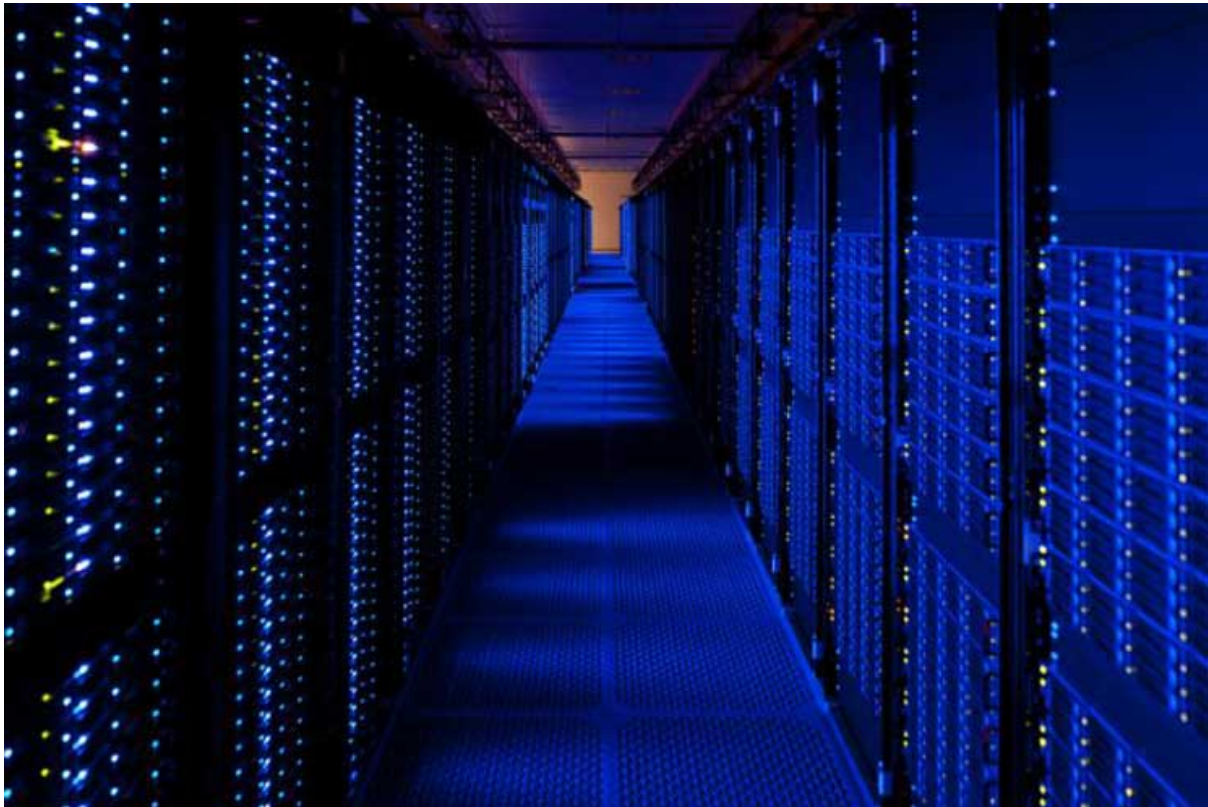


Figure 3. Photograph of the serves inside an unnamed Amazon data centre.

As a consequence, my sensations during the streaming become heightened through my awareness that inaccessible but not unimaginable sonic processes are occurring elsewhere, and are implicated in sustaining what I am experiencing. This awareness could be viewed as the anticipation for the sounds that never come, and can nonetheless be conceived of without the process of hearing. The presence of the servers' sounds would instantaneously integrate them into the wholeness of the action of watching and seeing the film, but because they remain on the level of imagination their features actually become more akin to the phenomenological description of subjective vision, where, via Merleau-Ponty's statement, "to see is *to have at a distance*"<sup>29</sup>. Conceiving of sound without hearing it, that is to say, without recalling it but relying on imaginative faculties, produces the kind of contemplative interaction with sound that is removed from its duration in time in a way that recalls

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<sup>29</sup> Merleau-Ponty, Maurice. *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*. Evanstone, Illinois: Northwestern University Press, 1964, 166.

Branigan's theorization of "'indirect' perception ... where sound is evaluated within a larger context or pattern of stimuli"<sup>30</sup>. In sum, this section has attempted to demonstrate that the technology and the infrastructure of the new media have a sonic bearing on the experience of watching and listening to the streamed film both through their presence and their capacity to draw attention to the distance, and are intimately bound to notions of materiality even in an environment that is seemingly wireless and removed from notions of the corporeal.

## **Conclusion**

Sound's capacity to affect filmic experiences is ubiquitous in the sense that it arises within but also extraneously to the film's content, in structured but also contingent and sporadic disclosures. While the previous section has focused primarily on sounds related to the inaudible settings of the data centres, they are by no means the only instances that could be examined in the context of the new media frameworks. The network that connects data centres with the audio-visual outputs is itself both inaudible and fundamentally implicated in the production of sound that is extraneous to the filmic text: while we might think of the cables that run underground and undersea as still and silent, the need for constant maintenance and repair invites action that in turn yields audible and ecologically consequential vibrations for the natural soundscapes they traverse. This essay has asked not only how our conception of film sound changes in the non-theatrical settings of the current streaming culture, but also how the sonic topology itself could be challenged by where we think the sound of the new media begins and ends. Another more specific and cinephilic example would be Peter Thomas's study of Super 8's "afterlife", in which he briefly touches

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<sup>30</sup> Branigan, Edward. "Sound and Epistemology in Film." *The Journal of Aesthetics and Art Criticism*. 47.4 (1989): 311–324, 315.

on the sonic properties of the film projection<sup>31</sup>. While the development of the projection booth sought to isolate the technology's audible presence, which to an extent corresponds to the data centres' own "remoteness", Thomas identifies ways in which sound is re-emerging from the booth, as some film stock processing services began to offer the option of layering the 8mm projector sound onto the DVDs of the scanned amateur footage<sup>32</sup>.

To conclude, this essay has sought to explore the audible and inaudible characteristics of the digital streaming culture by highlighting the relevance of sonic properties to the study of the new media environment. Two of the main traits Sobchack delineates in the network-like structures of the digital electronic technology are pervasion and dispersion<sup>33</sup>. While the analysis of the sonic occurrences in a non-theatrical extratextual situation that were expanded upon from the Amazon Video streaming of *The Best Years of Our Lives* might initially appear as limited in its applicability, the traits that Sobchack identifies as indicative of the digital era correlate to the sound's own qualities. This inclines me to suggest that the relevance of sound's presence in our conceptions of new media is well worth our attention and further study.

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<sup>31</sup> Thomas, Peter. "Anywhere But the Home: The Promiscuous Afterlife of Super 8." *M/C Journal*. 12.3 (2009), 1.

<sup>32</sup> Ibid.

<sup>33</sup> Sobchack, Vivian. *Carnal Thoughts: Embodiment and Moving Image Culture*. Berkeley.: University of California Press, 2004, 153.

## Bibliography

Abel, Richard, and Rick Altman (eds.). *The Sounds of Early Cinema*. Bloomington, Indiana: Indiana University Press, 2001.

Altman, Rick. *Silent Film Sound*. New York: Columbia University, 2004.

Blom, Ingrid. "Media Archaeology vs. Media Aesthetics." *Graduate Programs in the Divisions*. Web. The University of Chicago. Accessed 28. 4. 2017.

<[http://registrar.uchicago.edu/sites/registrar.uchicago.edu/files/uploads/catalogs\\_announcements/COLLEGE-final-2015-2016-as-of-Sept-22-2015.pdf](http://registrar.uchicago.edu/sites/registrar.uchicago.edu/files/uploads/catalogs_announcements/COLLEGE-final-2015-2016-as-of-Sept-22-2015.pdf)>.

Branigan, Edward. "Sound and Epistemology in Film." *The Journal of Aesthetics and Art Criticism*. 47.4 (1989): 311–324.

Casetti, Francesco. "Back to the Motherland: the Film Theatre in the Postmedia Age." *Screen*. 52.1 (2011): 1-12.

Chapman, James. *Film and History*. Basingstoke, Hampshire: Palgrave MacMillan, 2013.

Elsaesser, Thomas. "The New Film History As Media Archaeology." *Cinemas : revue d'études cinématographiques / Cinémas: Journal of Film Studies*. 14.2-3 (2004): 75-117.

Elsaesser, Thomas. "The New Film History." *Sight and Sound*. 55.4 (Autumn 1986): 246–51.

Grieverson, Lee, and Haidee Wasson. "The Academy and Motion Pictures." in Grieverson, Lee, and Haidee Wasson, (eds.). *Inventing Film Studies*. Durham: Duke University Press, 2008, xi-xxxii.

Holt, Jennifer and Patrick Vonderau. "Where the Internet Lives: Data Centers as Digital Media Infrastructure." in Parks, Lisa, and Nicole Starosielski, (eds.). *Signal Traffic: Critical Studies of Media Infrastructures*. Urbana, Ill: University of Illinois Press, 2015, 71-93.

Jeong, Seung-hoon. *Cinematic Interfaces: A Theory of Image and Subjectivity*. New York: Routledge, 2013.

Kafer, Alison. *Feminist, Queer, Crip*. Bloomington: Indiana University Press, 2013.

Kerins, Mark. *Beyond Dolby (stereo): Cinema in the Digital Sound Age*. Bloomington: Indiana University Press, 2011.

Kozloff, Sarah. *The Best Years of Our Lives*. Houndmills, Basingstoke: Palgrave Macmillan, 2011.

Larkin, Brian. "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology*. 42 (2013): 327-343.

Merleau-Ponty, Maurice. *The Primacy of Perception and Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*. Evanstone, Illinois: Northwestern University Press, 1964.

Parikka, Jussi. *What Is Media Archaeology*. Cambridge: Polity Press, 2015.

Parks, Lisa, and Nicole Starosielski, (eds.). *Signal Traffic: Critical Studies of Media Infrastructures*. Urbana, Ill: University of Illinois Press, 2015.

Parks, Lisa. "Around the Antenna Tree: The Politics of Infrastructural Visibility." *Flow*. 6. 3. 2009. Web. Accessed 28. 4. 2017.

<<http://flowtv.org/2009/03/around-the-antenna-tree-the-politics-of-infrastructural-visibility-lisa-parks-uc-santa-barbara>>.

Raykoff, Ivan. "Piano, Telegraph, Typewriter: Listening to the Language of Touch." in Colligan, Colette, and Margaret Linley, (eds.). *Media, Technology, and Literature in the Nineteenth Century: Image, Sound, Touch*. London: Routledge, 2016,159-188.

Sobchack, Vivian. *Carnal Thoughts: Embodiment and Moving Image Culture*. Berkeley: University of California Press, 2004.

Starosielski, Nicole. *The Undersea Network*. Durham: Duke University Press, 2015.

Straw, Will. "Proliferating Screens." *Screen*. 41.1 (2000): 115-119.

"The Best Years Of Our Lives (1946)." *Amazon Video*. Web. Last Accessed 28. 4. 2017.

<[https://www.amazon.com/Best-Years-Our-Lives/dp/B00AOOR7DA/ref=tmm\\_aiv\\_swatch\\_1?\\_encoding=UTF8&qid=&sr=>](https://www.amazon.com/Best-Years-Our-Lives/dp/B00AOOR7DA/ref=tmm_aiv_swatch_1?_encoding=UTF8&qid=&sr=>)>.

Thomas, Peter. "Anywhere But the Home: The Promiscuous Afterlife of Super 8." *M/C Journal*. 12.3 (2009).

Tsai, Eva. "East Asian Screen Industries." *Chinese Journal of Communication*. 4.2 (2011): 240-243, 242.

Tryon, Chuck. *On-demand Culture: Digital Delivery and the Future of Movies*. New Brunswick, N.J: Rutgers University Press, 2013.

Williams, Rhiannon. "Amazon opens first secretive data centres in the UK." *iNews*. Web. Last accessed at 28. 4. 2017. <<https://inews.co.uk/essentials/news/technology/amazon-opens-first-secretive-data-centres-uk>>.



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Wyler, William, Samuel Goldwyn, Robert E. Sherwood, and MacKinlay Kantor. *The Best Years of Our Lives*. Metro Goldwyn Mayer and Amazon Video, ©1946.

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Unknown, Google. *Google Data centers*. Web. Last accessed 28. 4. 2017.

<<https://www.google.com/about/datacenters/inside/locations/council-bluffs/>>.

Figure 3. Photograph of the serves inside an unnamed Amazon data centre.

James Hamilton, Amazon Web Services. *Data Center Frontier*. Web. Last accessed 28. 4. 2017. <<http://datacenterfrontier.com/inside-amazon-cloud-computing-infrastructure/>>.