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Sound and image in the abstract animation film

This text will attempt to describe the connection between sound and image in the abstract animation film. It will look at the process of creating an abstract animation film, as well as how it is perceived. It suggest that the analytic methods used in the narrative film, can also be applied to the abstract animation film. To try to understand this, it will use as a case study, the analysis of one short film: *Begone Dull Care* by Norman McLaren.



Introduction

There is a large number of examples of the abstract animation film, dating back to the early 20th-century. Both in subject and method the experimental film has challenged traditional filmmaking, and consequently the viewers perception of it. Looking back at articles and interviews from the last century, it seems that a lot of these films was forgotten, and the filmmakers uncredited (O'Grady, 1995). The internet seems to have changed that, and finding film prints and descriptions is today not difficult. Yet, the amount of analysis, through visual structure, of certain films are limited. This report will try to study one of these films, by using the film theory of David Bordwell, as well as the visual analytic tools of Bruce Block. In doing so, it seeks to explore the relationship between sound and image in the film.

Creating the abstract animation film

Norman McLaren (1914 –1987) was a Scottish born animator and filmmaker. His most famous work was done for the National Film Board of Canada, including *Begone Dull Care*. Working on films, McLaren was especially interested in the technical experiments with animation and sound. Very focused on the working process of his projects, rather than the finished movie, many of his films takes the animation techniques as the film's very subject (Jordan, 1953). One of these techniques is to draw directly onto clear 35mm film, omitting the use of a camera to shoot frames. This is also the method used in *Begone Dull Care*. McLaren was not the first to make use of this technique, and was likely to come across it, when assisting Len Lye, at the British Government's GPO (General Post Office) Film Unit in the 1930's (Rogers, 1952). There, Lye made an short commercial film for new postage rates, working with hand-painted film, as he chose a piece of music and arranged abstract shapes, to move in rhythm to the sound (Smythe, 2013). *A Colour Box* (1935) [fig. A –B] has a strong resemblance to *Begone Dull Care* (1949) [fig. C], and suggest that McLaren was technical inspired.



1 McLaren drawing directly onto clear 35mm film (Jordan, 1953).

McLaren might have started his work on *Begone Dull Care*, with this technical notion, yet this was not the first major task. Four days was spent with Oscar Peterson and his jazz trio, shaping the music, the way McLaren saw it fit for the later visuals. They came up with the basic form of the music, composed of three movements (Rosenthal, 1970). The overall visual structure of the film, follows these three parts: a medium tempo (allegro), a very slow tempo (lento), and a fast tempo (presto) (McWilliams, 1991). On why selecting this ABA form, which is common in classical music, McLaren explains:

*"Many years ago I was confronted with a problem regarding abstract film visuals. It is relatively easy to make a one or two minute abstract film that will hang together and be a unity. But with an eight or ten minute abstraction, it is much more difficult. One runs the risk of creating either too much monotony, or too much diversity. Some kind of format or structure seemed necessary to vary the uniformity or to discipline the variety. I found that some of the forms which music has evolved (to solve the same problem) lent themselves to abstract visuals. I used the ABA form of European classical music in *Begone Dull Care*." (Dobson, 1994. p. 202).*

Fig. A – C



In producing the visuals for the film, McLaren got help from Evelyn Lambart, who also worked at the Canadian Film Board. The two of them would work separately, on up to 4 meters of film at a time, scratch and painting on the raw film (Rosenthal, 1970). When it came to synchronizing image and sound, McLaren had made musical measurements of the recording he made with Peterson, writing down notes, beats, and rhythm. This data was numbered and then marked on the 35mm film, serving as a guide to the movement of the images. After a section of film was finished, they would, run it on the editing machine, to see if the image fitted to the music (McWilliams, 1991). As a result, the just under 8 minutes long *Begone Dull Care*, is a cleverly collected sum of images that, when animated, forms rhythmic movement in shapes and colors, accompanying the sound faultlessly.

The abstract form

Film historian David Bordwell categories the experimental or avant-garde film, as (a) a film positioned independently from the bigger studios, and (b) a film that is, more than often, established on a medium exploration (Bordwell, 2008). He furthermore, presents the abstract form, as a way of studying the graphic qualities of line, shape, tone, color, and movement in a film. He argues:

"All films contain these qualities ... In the abstract form the whole film's system will be determined by such qualities. (Bordwell, 2008. p. 356).

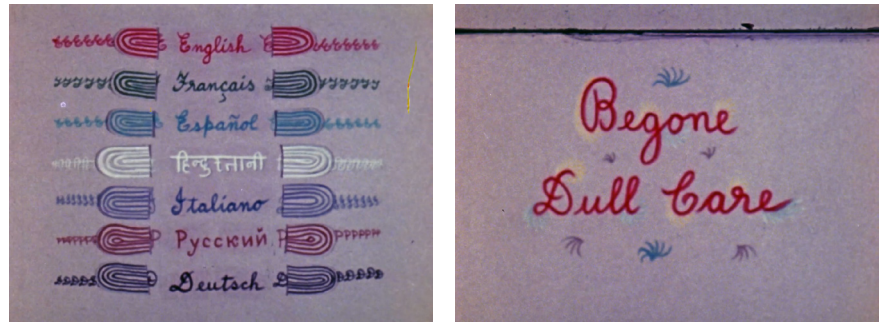
In structuring the abstract film, can we use the principle of theme and variations. Borrowed from the music term, it propose that the film might be organized, in a similar manner, as a piece of music. Bordwell classifies the separate segments as followed, (a) an introductory segment, displaying the basic elements of the film, and how they relate to one another, (b) a series of segments resembling the first, but with changes, (c) the changes grow, increasing the differences, (d) a return to the initial elements and relationship. The differences, whether small or great, will point the beginning of a new segment. Bordwell suggest, that it is not possible to trace segments, by attempting to find a narrative story in the abstract film. Instead, we must look for changes in the graphic qualities (Bordwell, 2008). Using Bordwell's principle, can we divide Begone Dull Care into 12 segments:

1. The title and credits of the film.
2. Introduction to the film's technical elements.
3. Repeats sections of Segment 2, adding color.
4. Further development of the elements.
5. Change in sound and image.
6. Greater variations in visual shapes and movement.
7. One visual element through the slow piano and bass part.
8. Rapid shift in sound and image, the moment the third part starts.
9. Quick dynamic music continues. Repeats sections of Segment 8, adding color.
10. Reintroduction of visual elements from part one.
11. Interpretation of Segment 7.
12. Climax in sound and image, before ending titles.

Considering the importance of the music in the film, the arrangement of the list can be further clarified as: 3 parts consisting of 12 segments, each containing a number of sections. The emphasis has gone into the first and last part, only mentioning the middle part (Segment 7), and in the graphs, shown later, the second part is completely absent. The reason for this negligence, is simply, the richer contrast in sound and image, in the other parts.

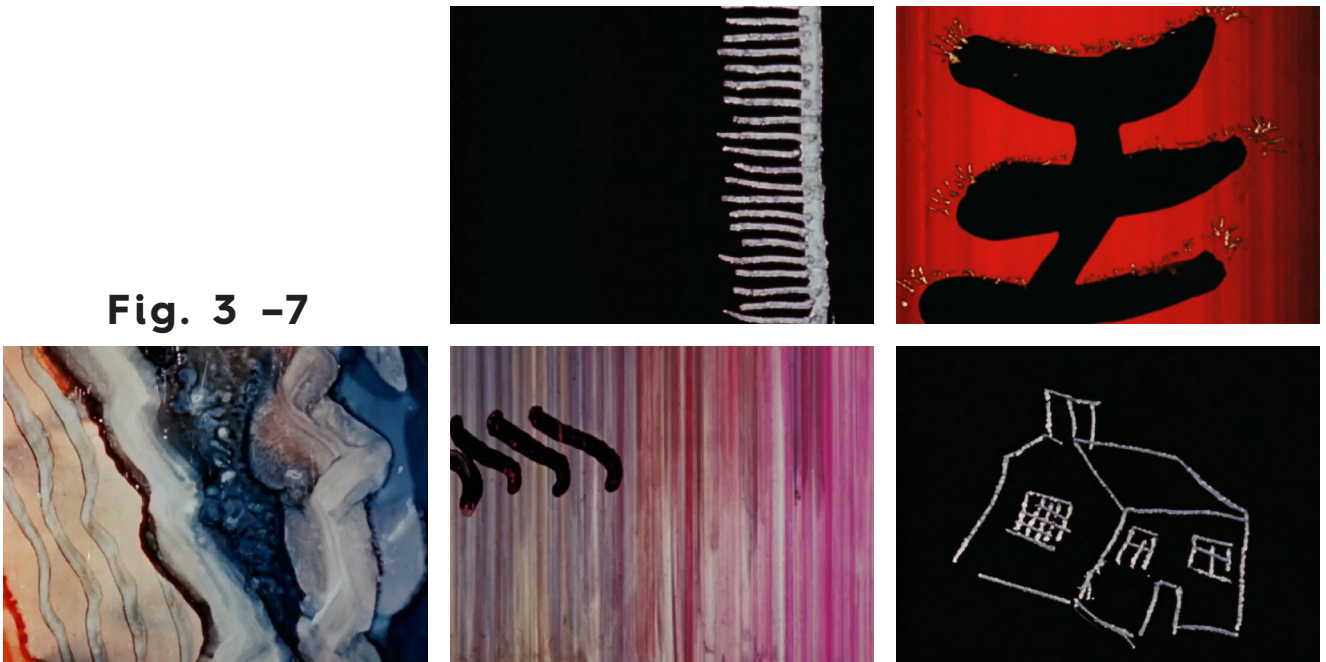
In addition to Bordwell's principle, can we use the visual analytic tools of, film producer and author, Bruce Block. Block breaks down the film into three fundamental blocks: story, sound, and visuals. Furthermore, he divides the visuals into basic components: space, line, shape, color, movement, and rhythm (Block, 2008). In describing the different segments composed in the film, are all of these components taken into account.

Fig. 1 -2



Segment 1 (0.00 – 0.40) shows the credits of the film and consists of 4 different titles in 7 different languages [fig. 1 -2]. Just from watching the opening, we get an idea, of the importance of sound. The editing underline the role of the music in the film, and conduct the image - the piano notes and chords are directing the change in frames (technically though, the image appear before the sound if viewed frame-by-frame). The color scheme is somewhat fainter from the rest of the film, and consists mostly of lighter nuances of purple, red and blue.

Fig. 3 -7



Segment 2 (0.41 – 1.19) introduce the basic elements of the film. At start, the piano plays a few chords followed by the bass, playing some notes as a response. This “call and response” between the instruments continues, including the drums, which leads to the introduction of the main musical theme or melody, of the first part of the film. Every one of these instrumental sections has it's own distinguished appearance of different colors and lines. The piano, when playing chords, takes the image of thin lines on a bar, as an almost reproductive image of the piano's keyboard [fig. 3], while the bass notes emerges as signs, resembling a mixture of Japanese calligraphy and microscopic insects [fig. 4]. Technically, are we presented with all three methods, of which McLaren uses, to create his visuals, (a) the mixing of inks, transparent paint, and celluloid dyes to get an landscape of abstract color patterns [fig. 5], (b) painting with ink on the clear film [fig. 6], and (c) scratching off the emulsion on black film [fig. 7] (Rosenthal, 1970). In less than one minute the basic visual concept introduced, as well as, the Oscar Peterson Trio.

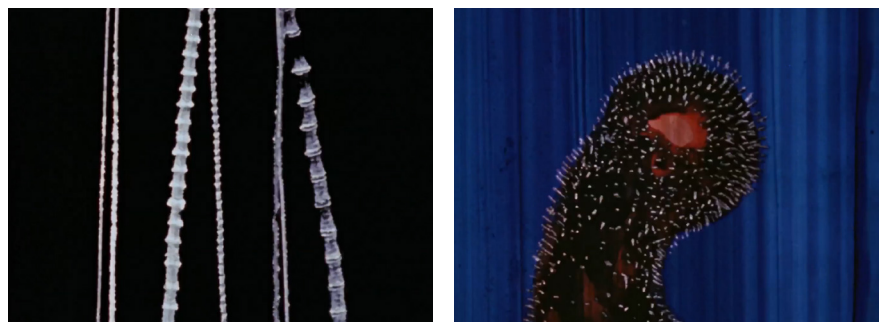
Segment 3 (1.20 – 1.57) repeats the structure of Segment 2, adding colors to the black and white sections [fig. 8]. This is followed by a series of three breaks, in which the different instruments take turns in responding to the piano. The visual characteristics of each instrument is once more emphasized.

Fig. 8 -10



Segment 4 (1.58 – 2.37) gathers the whole trio together around an improvisation piece by the piano. In this section, the number of layers in the image, is considerable higher than in the earlier sections. We are somewhat drifting away from the visual character of each instrument, focusing on an landscape of the whole musical picture [fig. 9]. This doesn't mean that the different characteristics are completely gone from the section, instead they are visible, in the difference of movement in the layers. A section of five small drum solos, each responding to a quick piano chord, is an example of the use of (a) black frames in-between the engraved frames, and (b) the engraved frames depicting a number of figurative forms, including a row of shovels [fig. 10]. Together the isolate objects emerge as symbols or statements and creates great difference in space and rhythm.

Fig. 11 -12



Segment 5 (2.38 – 2.57) brings a change in music and image. The rapid piano playing is presented, as an group of vertical white lines, filling the screen from top to bottom [fig. 11]. This is proceed by a, now so know, break where the characteristic bass notes response [fig. 12]. For the rest of the segment this routine is repeated three times, now with the piano answering. The last time, though, the piano let the final chord of the rapid playing, ring out till it is almost silent, thereby reducing the vertical white lines to just one.

Segment 6 (2.58 – 3.32) begins just as we think the film is over, a powerful piano chord sets off [fig. 13], a section that builds up to a repetition of the main theme. In this section we see a new image come to view, patterns with leaf-like features [fig. 14], as the use of vertical lines, crossing the screen, increases. After the theme melody is finished, a chaotic piece continues, before a series of isolated objects, again surrounded by black frames, ends the first part of the film.

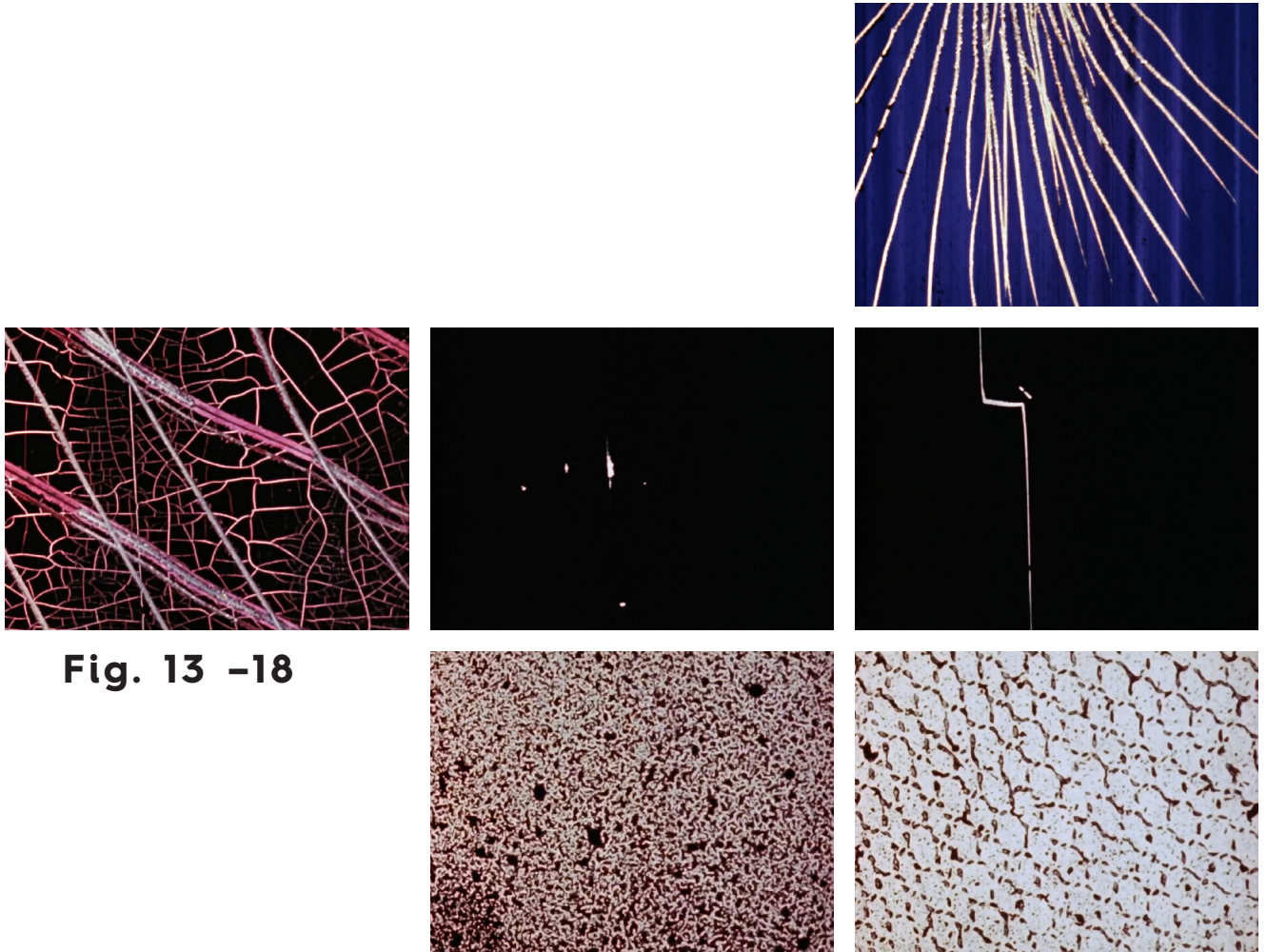


Fig. 13 -18

Segment 7 (3.33 – 5.43) is the whole second part of the film. Throughout the segment the piano and bass notes shifts in form, between vertical lines and dots. The scratching on the black film is the only technique applied, in making the lines and dots dance to the music. As a matter of fact, McLaren was running the 35mm film very slowly, varying pressure with a knife, to scratch the different elements (McWilliams, 1991). With the slow and relaxed music piece, we have time to see, the sound changing over time. A vertical line display a slow wave-like movement, relating to the decay of the music note [fig. 15]. Likewise, is the attack of a note seen as a crack in the line [fig. 16].

Segment 8 (5.44 – 5.56) offers sudden dynamic music, as the band plays a fast boogie-woogie. McLaren, later recalls, being very excited of an old record of Oscar Peterson, playing a boogie-woogie (Rosenthal, 1970). The energy of the third part of the film, comes to life, with the extended use of different sized dust on the film [fig. 17 –18]. Lambart had small boxes with dust categorized from fine to rough (McWilliams, 1991). Black and white grain-patterns fills the whole screen, once more concentrating on the entire bands energetic output. The bassline seems somewhat apparent, in form of black spots, and gives the image a flickering effect.

Segment 9 (5.57 – 6.18) follows the elemental structure of Segment 8, adding the vertical line [fig. 19] and color [fig. 20]. The leaf-like features, visible in Segment 6, is recurring in black and white. Although a piano solo is unfolding, the visuals keeps focusing on the broader rhythm of the band.

Segment 10 (6.19 – 6.40) includes piano notes, that both visually and musicaly, takes us back to the first part of the film. It also brings some of the characteristic crack in the line from the second part, while mixing it with the initial piano character [fig. 21]. A long section, with the piano repeating the same musical line, depicts smooth vertical brush lines. While we steadily zoom into the image, the vibrating movement of the lines, generates an almost dizzy effect [fig. 22].



Fig. 19 -24

Segment 11 (6.41 – 7.02) is formed by one section of piano and bass. The visual style copies the dancing notes from the silent middle part. Segment 11 is relatively low in intensity, providing a shift in structure, before the final segment.

Segment 12 (7.03 – 7.51) has music building up towards a climax. First section, continues through a display of visual techniques from earlier segments, almost as flashbacks showcasing the film's technical skill-set. It retain from using the personalized characters of the instruments, instead forming different abstract landscape patterns [fig. 23]. Next and final section, does a forceful repetition of notes, alike Segment 10. The image is spinning from left to right, involving mostly circular shapes [fig. 24], before ending titles, in 9 different languages, appear isolated by black frames. McLaren leaves his signature and year of production, in the final frames.

Graphic qualities

In collecting the information from the segments, can we construct graphs, showing the graphic qualities over time. In these graphs, the course of time covers the complete film, but leaves the middle part blank. The tone graph shows the brightness of the image in the film. Larger difference in brightness results in more contrast. Block states:

"The greater the contrast in a visual component, the more the visual intensity or dynamic increases." (Block, 2008. p. 11).

According to Block, one of the objects in successfully creating a interesting image, is handling the balance of contrast. If the image is too intense, it becomes unwatchable, while lacking in intensity, it becomes uneventful. The visual intensity, relates therefore directly to the viewers emotional reaction (Block, 2008). Looking at the tone graph, can we see that *Begone Dull Care*, has a high visual intensity. The space graph, displays the three-dimensional level in the film. The sections consisting of more layers, moreover has a deeper space. Of course, the space is not really deep, but the layering of different film pieces, establishes a sense of depth. On viewing the the space graph, it's features are almost identical to the tone graph. This demonstrate, that McLaren used the bright (or dark) image, controlling the distinction of sections and the distance in each segment. Thereby he gained a rhythm in variation, that made the film "hang together as a unity".

Sound

The sound graph shows, the level of musical dynamic of the film. The intensity of the sound can be high, in the powerful and high pitched sections, or low, in the slower and low pitched sections. The more flat sections of the first part of the film, illustrate the main theme of the music piece, and there is a general forward movement in the direction of intensity. When comparing the sound graph with the computer generated graph, which plot the sound in a frequency spectrum, similarities in shapes are noticeable. From the computer visualization, we see, in detail, the call and response pieces, with sections varying significant in force. In the case of *Begone Dull Care*, are we, as Smythe puts it:

"[Taken] back and forth between extreme states of order and chaos." (Smythe, 2013. p. 82).

Perception

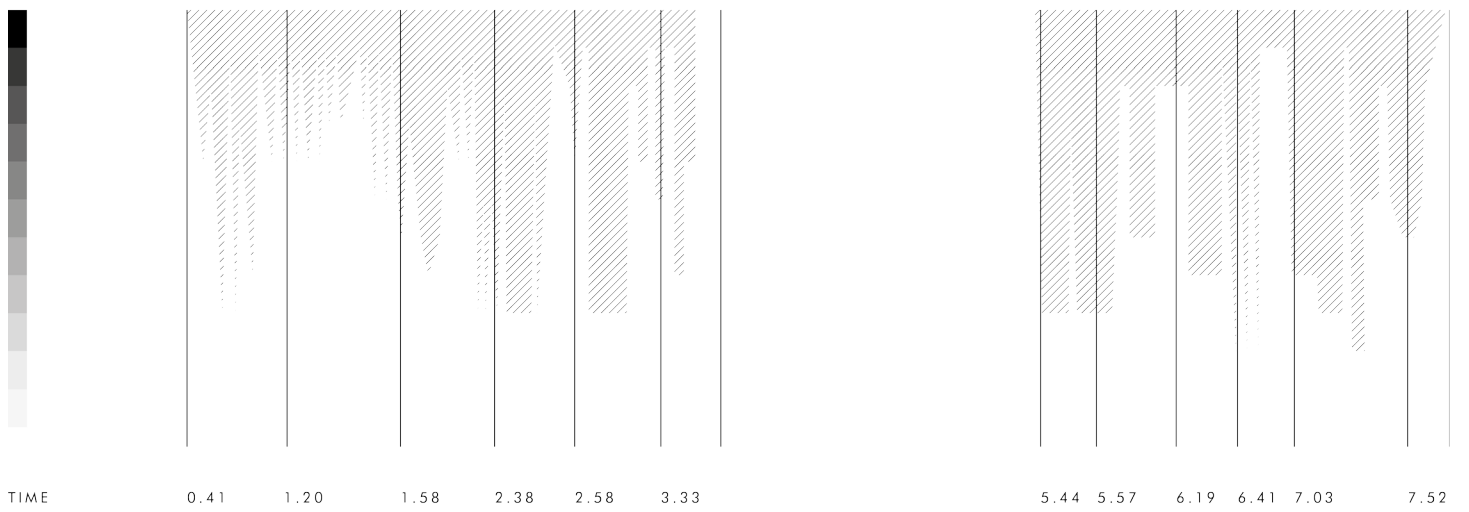
Our perception of the film, differs from person to person, which is properly why Len Lye never gave much attention to the viewer (O'Grady, 1995. p. 10). What we all see, is a series of interesting patterns of shapes and colors. These patterns transforms into greater variations, while accompanying the sound. Colors may shift and change rapidly, as the music develop. This might give sense of a story, but it is a pure visual one. Bordwell argue, that when we watch, these shapes and colors in an abstract film, we become more aware of such patterns and connect them to our world. He explains:

"In watching an abstract film. We do not need to use the shapes, colors, or repetitions that we see and hear for practical purposes. Consequently we can notice them more fully and see relationships that we would seldom bother to look for during the practical activities of everyday life. In a film these abstract qualities become interesting for their own sake." (Bordwell, 2008. p. 357).

Notes on the graphs

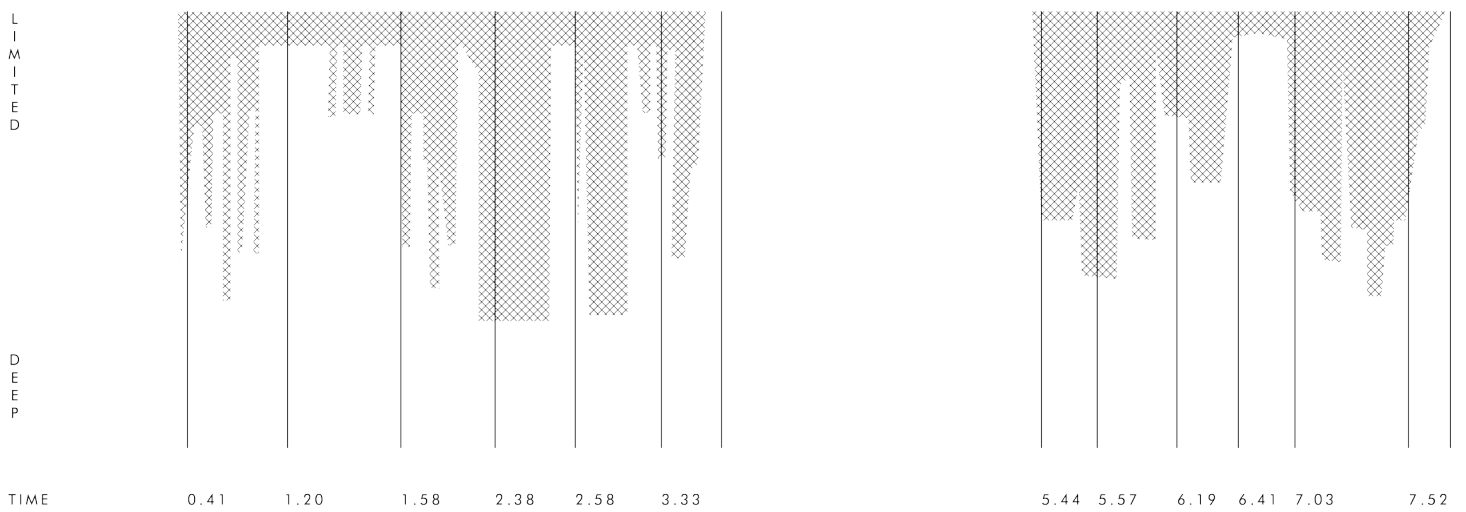
The following graphs are samples of measuring the visual components over time, in order to get a better understanding of the graphic qualities. The samples are in not way complete, and one could go further in describing, movement, rhythm and color.

2 TONE



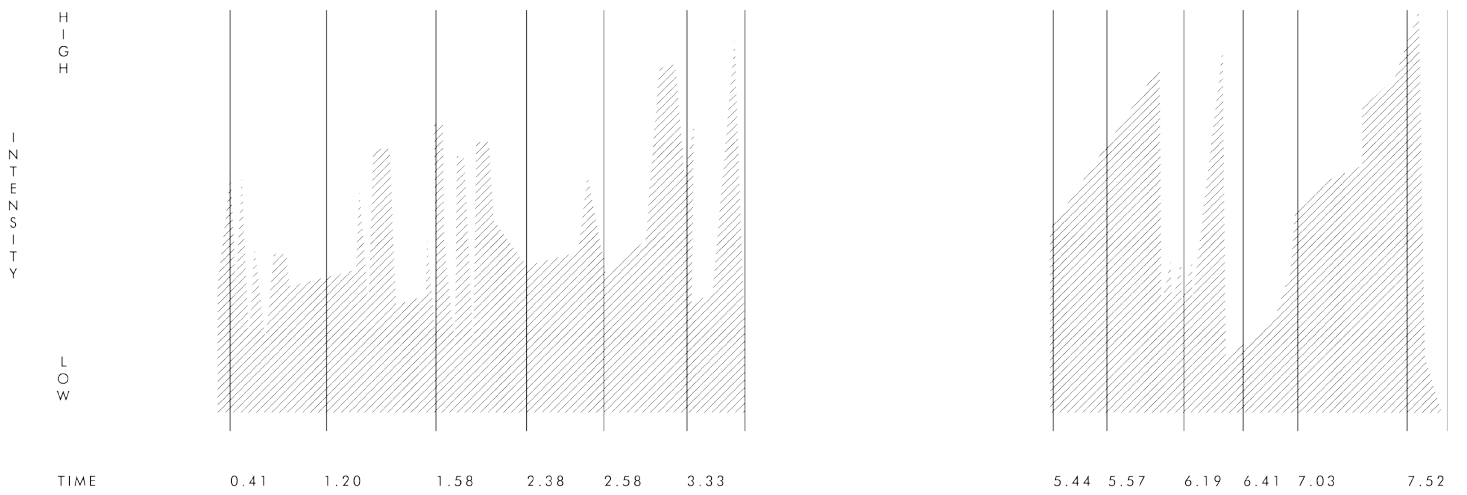
2 Graph showing the brightness development in the film.

3 SPACE

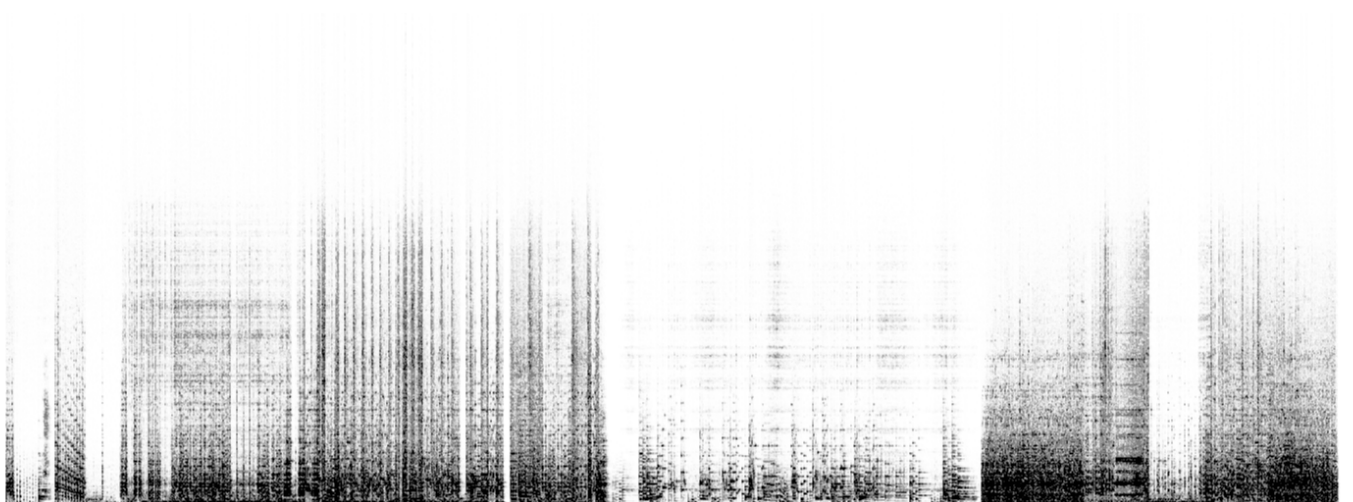


3 Graph displaying the three-dimensional level in the film.

SOUND



4 Graph showing musical dynamic structure of the film.



5 Computer visualization of the musical intensity of the frequency spectrum. Temporal Frequency Analysis

Conclusion

This report has tried to describe the connection between sound and image, in the short abstract animation film *Begone Dull Care* by Norman McLaren. In doing so, has it broken down the film into segments, uncovering the visual structure. Furthermore, has it given examples of the graphic qualities of the film, using graphs. It has also commented on the perception of the abstract animation film. What it fails to do, is giving an all-around analysis of the film, rather pointing out findings. Simply, it states that behind the straightforward colorful dancing rhythm patterns, McLaren seems to have followed a visual structure. Below are a some topics for future study.

Editing of the film, is a major tool to create the contrast in image. How does McLaren not only the rhythm of movement in animation, but moreover the rhythm of editing?

McLaren is working with three categories of visual form: pure form, symbols, and figurative image (McLaren, 1963). What is the relationship between the visual forms, in time, and why are they used?

How does McLaren use color patterns in the film?

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Filmography

- Begone Dull Care** Music: Oscar Peterson Trio
Canada, 1949, 7 min 52 s, 35mm, color
available through National Film Board of Canada website: https://www.nfb.ca/film/Begone_Dull_Care
- A Colour Box** Music: "La Belle Creole" by Don Baretto and his Orchestra
Great Britain, 1935, 3 min 7 s, 35mm, color
available through The Internet Archive website: https://archive.org/details/A_Colour_Box