Interpreting Abstraction: To What Extent Can Grief Be Interpreted Through An Audio-Visual Medium?

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A Professional Research Project

For Creative Music Production

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Abstract

Death and loss are unfortunate, yet inevitable experiences in all persons lives. Everyone will experience various forms of grief at various stages throughout life, with each experience being vastly different to previous or future.

Although a common experience felt by all, grief remains an abstract concept. This is mainly due to the complexities of interpersonal relationships, as well as the varying emotions felt by individuals at different points, or 'stages' during the grieving process. The current study attempts to discover to what extent the concept of grieving can be understood and interpreted by others, specifically through a singular artist's personal aural and visual interpretations of grief.

To accurately understand and audio-visually interpret grief, previous research in the fields of emotion, colour, shape and musical structure[1], have been reviewed. The aim of said review is to build a theoretical framework, to act as a 'scholarly boundary', assisting and guiding the personal audio-visual interpretations. Based on this framework, as well as on personal interpretations of grief, five original audio-visual works were created and shown individually to participants. These participants were then quantitively and qualitatively surveyed, to determine how accurately they could interpret the original audio-visuals, while also attempting to discover possible explanations for their own personal interpretations respectively. It was hypothesised that through this carefully defined framework of emotion, colour, shape, and breakdown of musical structures, this personal interpretation of grief would be understood and 100% accurately interpreted by participants.

Results show otherwise, with no stage having definitive and 100% levels of interpretation. These results give light to many new observations, including that a deeply personal and complex concept such as grief will always have unique and individual interpretations, directly influenced by one's own experiences with loss.

[1] Musical structures refer to the foundations of western music, for example tempo, dynamics, harmony, rhythm.

Classification of Framework (Literature Review)

Although an unavoidable life experience, and one that has been portrayed countless times through various artistic media, grief is still, and always will be, a complex concept. Much like love, grief is abstract in nature, and a unique experience for each individual. The experience is defined by a number of characteristics, including relationships, individual emotional states, and reliance on the individual/s being grieved for.

It is this abstraction and varying individual experience that makes grief an extremely worthwhile area of study. Despite the fact that there is already an abundance of previous academic works and experiments in relation to grief, it is the unique individual experiences one has with grief which allows for constant reshaping and moulding of the academic landscape in relation to grief and loss.

The purpose of this review is to build upon the foundations of these past academic writings, specifically the work of Elizabeth Kübler-Ross[2], which acts as a widely accepted framework on which to base the unique and personalised nature of this study. Although the experience of grief is specific to each individual, the aforementioned work gives the current study a strong base (a clearly defined set of 'stages' of the grieving process). This allows the audio-visual works to be personal interpretations as intended, while maintaining a level of integrity and shape through these accredited methods of defining the emotional contour of the process of grieving.

The first of these foundations on which the current subject of investigation will be built on is the work of Elizabeth Kübler-Ross, specifically her book '*On Death And Dying'* (1969)[3]. Kübler-Ross, a pioneering psychiatrist specialising in near-death studies, first introduced her theory on the five stages of grief in this 1969 book.

[2] Elisabeth Kübler-Ross**,** (1926-2004), was a Swiss-born American psychiatrist and author who was a pioneer in the study of death and dying. (Britannica, accessed 13th April 2023).

[3] Kubler-Ross, Elisabeth, MD. On Death and Dying (Scribner Classics) Classic Edition by Kubler-Ross, Elisabeth (1997) Hardcover. Later Edition, Scribner Classics, 1997.

The theory, now known as the 'Kübler-Ross Model' is one of the most commonly cited models relating to death, dying and the process of grieving. Through the interviewing of terminally ill patients in various stages of their illnesses, Kubler-Ross outlines five 'stages' of grieving: *Denial, Anger, Bargaining, Depression, and Acceptance*. Although not a linear process, Kübler-Ross theorises that an individual experiences each stage at some point through the grieving process. The importance of the book and subsequent model cannot be understated, acting as the benchmark for attempting to define the process of grieving, as well as shifting the collective consciousness on death and dying.

Albeit an important resource acting as a solid foundation for the current study, caution must be taken while using the Kübler-Ross Model exclusively. While the current study focuses on the grieving experience from a loss perspective, and the loss of a specific person, Kübler-Ross' model and theories were conceived from the interviewing of patients who themselves were dying, an entirely different perspective from the current study. Therefore, cautious use of the model is paramount. Another important factor to account for when using the model as a framework is time. Fifty-three years have passed between the conception of Kubler-Ross' model and the current study, so caution must again be taken, particularly in relation to cultural and societal differences - for example, ethics in relation to surveying/interviewing participants are much more important to consider now than fifty-three years ago.

As mentioned above, the Kübler-Ross Model directly relates to the current research as it acts as a strong framework for said research to be based on. The Kübler-Ross model clearly defines five set stages, giving the current study a defined template to base the audio-visuals on. Without this framework and template, the current study can easily become subjective and lose shape as it attempts to define personal experiences in relation to grief. If used with caution, *On Death And Dying* again acts as an excellent reference to form the base of the current research.

While the work of Kübler-Ross provides the current research with the template on which to base the study, it is important to further analyse the specific emotions that are generally experienced while an individual is said to be experiencing a specific 'stage' of grieving. Gathering information on the specific emotions involved in each grieving stage will allow for more detailed expression

through the media in which the current study will be interpreted. In Caitlin Stanaway's (Psy.D, Licensed Psychologist at the University of Washington) article "The Stages of Grief: Accepting the Unacceptable" (2020)[4], the various stages of grief have been further analysed and broken down as base emotions. While stages such as Anger and Depression are less complex, Stanaway's breakdown of the Denial (shock, confusion), Bargaining (guilt, shame, fear), and Acceptance (validation, pride) allows for a greater grasp and clarity in understanding the Kübler-Ross model of grief.

Although this breakdown of the five stages is helpful in understanding the base emotions of the model, caution is again needed when using the article as a source. Although written by a licensed psychologist, on an esteemed college website, the article is not scholarly in nature. It does not reference outside papers, journals etc., to bolster the objectives of the writer and therefore cannot be seen as entirely objective. It's important to note this and not allow the current research to rely too heavily on the resource.

With this detailed information on the specific emotions involved in the various stages of the Kübler-Ross Model, a detailed emotional breakdown of said model, as well as specific information relating to the type of grief and emotion the current study looks to portray, works relating to the visual and aural aspects of the current study can now be examined in more depth. The study of colour, specifically those in relation to emotion, offer an important resource when further attempting to define the framework in which personal grief can be expressed through the audio-visual medium.

Patricia Valdez and Albert Mehrabian's *Effects of Colours On Emotions* (1994)[5] acts as an excellent resource in beginning to define the visual framework of the current study. Published in the American Psychological Association's (APA) Journal for Experimental Psychology, the pair, based at the Department of Psychology at the University of California, reviewed and critiqued multiple past studies relating to the field of colour and its effect on emotion. From these reviews,

[4] Stanaway, Caitlin. "The Stages of Grief: Accepting the Unacceptable." *Counselling Centre*, 8 June 2020. www.washington.edu/counseling/2020/06/08/the-stages-of-grief-accepting-the-unacceptable.

[5] Valdez, Patricia, and Albert Mehrabian. "Effects of Colour on Emotions." *Journal of Experimental Psychology: General*, vol. 123, no. 4, American Psychological Association (APA), 1994, pp. 394–409. https://doi.org/10.1037/0096-3445.123.4.394.

Valdez and Mehrabian ascertained that many of these previous studies were limited in their approaches.

Using the Pleasure-Arousal-Dominance (PAD) framework, which is used to accurately describe specific emotional states. (e.g. P+A+D+ = creative/vigorous, P-A-D- = depressed/bored), the study resulted in accurate connection of these emotional states in participants with specific colours and combinations of colours (combinations were measured as complimentary/non-complementary). The authors used this framework to investigate the effect of varying levels of brightness, hue and saturation of various colours of the Munsell Colour System[6] to determine varying levels of arousal and pleasure in participants. Findings show a correlation between high levels of saturation/brightness and high levels of arousal, while they also showed high correlations between complementary colours and levels of pleasure. These findings directly influence the current study as they begin to define the visual framework in relation to colour choice and colour pairings, depending on the stage of grief. For example the *Anger* stage, the use of non-complementary, highly saturated colours (e.g. reds, blacks) to elicit high arousal negative levels of pleasure in participants.

Extending the work of Valdez and Mehrabian, Professor Tom Clarke and Alan Costall's *The emotional connotations of colour: A qualitative investigation* (2008)[7] is again an important resource to further base the visual aspects of the current research on. Here, the work of Clarke and Costall looks to highlight additional meanings and emotional connotations associated with specific colours by allowing participants to objectively and freely describe the emotion they feel when prompted to visualise a colour through verbal interview. This lack of restriction, present to some extent in Valdez and Mehrabian's aforementioned study (The use of the Munsell Colour System as well as a predetermined colour palette can be seen as restrictive) directly inspires the current study as participants will similarly be unrestricted to specific colour pallets or prompts, instead allowed to freely interpret what they both see and hear. This freedom of interpretation attempts to

[6] Munsell colour system, method of designating colours based on a colour arrangement scheme developed by the American art instructor and painter Albert H. Munsell. (Britannica, accessed 25th November 2022).

[7] Clarke, Tom, and Alan Costall. "The Emotional Connotations of Colour: A Qualitative Investigation." *Colour Research &Amp; Application*, vol. 33, no. 5, Wiley, Oct. 2008, pp. 406–10. https://doi.org/10.1002/col.20435.

shed light on the possible subtle differences from individual to individual in how and why they describe and interpret their given audio-visual as they do.

Results mirrored those present in Valdez and Mehrabian's aforementioned study, with reds/yellows (colours high in brightness/saturation) being described with more 'active' emotions (e.g. passion, anger) while blue/green colours being described as peaceful/calm. In addition to concise descriptions further defining the colour palette to be used in the current study, the method of surveying directly influences the methods present in the current research. Surveying participants through 'semi-structured' interviews and open ended questions allows for accurate recording of participant's reasonings for their interpretations, as opposed to solely relying on statistical data derived from quantitative methods of surveying. This multi-faceted approach to data collection is vital when dealing with a complex topic such as grief, as the approach can provide important written and numerical data on a participant's interpretations.

While the studies of both Valdez/Mehrabian and Clarke/Costall act as excellent references to specific details relating to colour choice and the emotional states attached to them, critique can be made in relation to both the modernity (Valdez/Mehrabian's paper was published over twenty-five years ago), and the sample size of Costall/Clarke's study (16 students). Contrasting these critiques, the work of Kersten and Van der Venet in their report *The Impact of Anxious and Calm Emotional States on Colour Usage in Pre-drawn Mandalas* (2010)[8], published in the Journal of the American Art Therapy Association, further focuses the current studies visual framework with a higher level of modernity as well as a larger sample size. The study attempts to discover a correlation between current emotional state and specific colour choice to colour pre-drawn mandalas, the hypothesis being that more anxious persons at the time of participating would choose "warmer" colours (Levy 1984) [9] - red/yellows, while calm persons would choose "cool", or, as labelled in Clarke/Costall's aforementioned study, "peaceful" colours (blue/green).

[8] Kersten, Andrea, and Renee van der Vennet. "The Impact of Anxious and Calm Emotional States on Colour Usage in Pre-drawn Mandalas." *Art Therapy*, vol. 27, no. 4, Informa UK Limited, Jan. 2010, pp. 184–89. https://doi.org/10.1080/07421656.2010.10129387.

[9] Levy, Bernard, I. "Research Into the Psychological Meaning of Colour." *American Journal of Art Therapy*, Jan. 1984.

Although the hypothesis stated colour choice would be directly affected by the participant's emotional states at the time of research, the results found no correlation between emotion and colour choice. This led Kersten and Van der Venet to believe choice was affected by an individual's colour preference and memory. This is an important insight to take into account for the current study as an individual's emotional state at the time of viewing will not need to be taken into account when participating, as the participant's emotions at the time of viewing will not greatly affect interpretations. Instead, similar to the work of Costall and Clarke, open ended questions regarding an individual's perception and description of specific colours are more in line with the current study.

While the work of Kersten and Van der Venet acts as an important resource in highlighting the effects of colour choice in relation to emotional state, it must be noted that the study is geared specifically toward art therapy, while the current study is focused solely on levels of interpretation and understanding, and does not yet seek to act as a form of healing for participants in its current form.

With the visual aspect of the current study in relation to colour now established, the work of Xin Lu, Poonam Suryanarayan, Reginald B. Adams, Jr., Jia Li, Michelle G. Newman, and James Z. Wang in their paper *On Shape and the Computability of Emotions* (2020)[10] lends additional information regarding shape in relation to emotion. The study attempts to distinguish emotional reactions (high/low valence and arousal) in various real world images, specifically through roundness, angularity, and image simplicity.

The study, published in the National Library of Medicine (USA), uses a dimensional approach to measure these emotional reactions to images, the argument being that reaction to an image is subjective, and this dimensional, three-plain (Arousal, Valence, and Dominance, mirroring Valdez/Mehrebian's aforementioned study) approach allows for more accurate description of emotional reaction. These accurate descriptions, along with an extremely detailed breakdown of

[10] Xin Lu, Poonam Suryanarayan, Reginald B. Adams, Jr., Jia Li, Michelle G. Newman, and James Z. Wang, "On Shape and the Computability of Emotions." *Proceedings of the 20th ACM International Conference on Multimedia - MM '12*, ACM Press, 2012, https://doi.org/10.1145/2393347.2393384.

images through their basic shapes and angles (e.g. Anger = circular, Fear = high angle/line count), aids the current study with additional material on which to build its visual aspects.

Although not directly related to the current study's abstract nature (real world images can influence interpretation much easier than abstract visuals), Lu et al.'s breakdown of real world images into their basic components (contour, line, continuous line, curves) allow the current study to connect specific emotions to specific shapes, important to note when creating the visual art for the current project. Criticism, if any, can be found in the sheer level of analysis and detail Lu et al. describes in this study. If the current study was to rely too heavily on the results of Lu et al., it would fear venturing from an art/aural thesis to a mathematical one. So again, caution must be used when using the study as a resource, with a combination of the aforementioned studies and personal interpretations a more practical approach.

With the emotional and visual framework of the current study now firmly in place, the final foundation on which to build the current study is the aural aspect. Marshall and Cohen's 1988 study *Effects of Musical Soundtracks on Attitudes Toward Animated Geometric Figures* [11] highlights how various musical structures, in this case tempo and activity - how 'busy' and dynamic a piece of music is, can affect how simple shapes and their interactions can be perceived by those who view it. This again directly relates to the current study as it assists in defining musical structures with emotional perceptions towards a visual piece.

Published by the University of California Press, the study uses an animated film (taken from Heider and Simmel's 1944 study)[12] which contains simple two dimensional shapes interacting with each other in various ways. Two contrasting piece of music - an allegro (fast paced) piece as well as an adagio (slow paced) piece were used to show the effect they had on interpretation of the relationships of the shapes.

[11] Marshall, Sandra K., and Annabel J. Cohen. "Effects of Musical Soundtracks on Attitudes Toward Animated Geometric Figures." *Music Perception*, vol. 6, no. 1, University of California Press, 1988, pp. 95–112. https://doi.org/10.2307/40285417.

[12] Heider, Fritz, and Marianne L. Simmel. "An Experimental Study of Apparent Behaviour." *American Journal of Psychology*, vol. 57, no. 2, University of Illinois Press, Apr. 1944, p. 243. https://doi.org/10.2307/1416950.

Results concluded that the allegro, more 'active' piece of music elicited stronger, more active emotions in participants - the large triangle was more 'aggressive' and 'unpleasant', while the small circle was 'intelligent' and 'heroic', while the adagio, slower piece elicited reactions of lower arousal such as 'calm' and 'good natured' for the smaller triangle. These reactions again mirror the studies of Valdez/Mehrabian, and Lu et al., further defining and strengthening the framework for the current study's audio-visual aspects in relation to emotional reaction and interpretation.

Although an important resource to further understand shape in relation to emotion, as well as the effect of tempo and dynamics on a visual piece, it's important to note that visuals for the current study will be extremely abstract in nature. While the visuals of the current study will 'react' to the audio (colours/movements mapped to the audio spectrum) the shapes depicted will have no specific relationship to each other. This is important as clear relationships or specific interactions between shapes can influence a participant's interpretation of the visual. Instead, colour, defined in the aforementioned reviewed literature, as well as shape, analysed and described in the work of Lu et al. will be the most important aspect in portraying the stage of grief.

With dynamics and tempo and their relationship with emotion and interpretation now added to the audio-visual framework of the current study, further analysis of musical structures is vital to the completion of said framework. The work of Ai Kawakami, Kiyoshi Furukawa, Kentaro Katahira, Keiko Kamiyama, Kazuo Okanoya in their study *Relations Between Musical Structures and Perceived and Felt Emotions* (2013)[13] gives direct insight into the effects of tonality (e.g. major and minor keys) on emotion, further defining the current studies aural framework.

Also published by the University of California Press, Kawakami et al. used similar methods of evaluation as previously mentioned studies (e.g. levels of arousal and valence), participants with varying levels in music training were presented with musical pieces in a variety of modes (keys). They classed these pieces as either active/passive (arousal) and pleasant/unpleasant (valence). The hypothesis put forward was that the emotion perceived in the musical pieces would not always

[13] Ai Kawakami, Kiyoshi Furukawa, Kentaro Katahira, Keiko Kamiyama, Kazuo Okanoya. "Relations Between Musical Structures and Perceived and Felt Emotions." *Music Perception*, vol. 30, no. 4, University of California Press, Dec. 2012, pp. 407–17. https://doi.org/10.1525/mp.2013.30.4.407.

correspond to the emotion felt by participants. It was also hypothesised that those with musical backgrounds would perceive the ‘sad/fearful’ pieces as more unpleasant, due to their ability to distinguish dissonance.

Results strongly correlated with the hypotheses put forward by Kawakami, Ai, et al, with minor keys (perceived to be more ‘sad’ than major) not always eliciting unpleasant responses. This lack of consistency gives important insight to the current study, with the aforementioned work of Marshall and Cohen highlighting the importance of dynamics and tempo as opposed to modality, giving the current study greater freedom to experiment with key in relation to the artist's personal perception.

Method

With the aural, visual, and emotional framework established, five audio-visual pieces averaging five and a half minutes were created and titled in accordance to Dr. Kübler-Ross' model for the five stages of grief – *Denial, Anger, Bargaining, Depression, Acceptance*. Twenty-one participants were randomly assigned one of five audio-visual pieces to interpret, which were assigned a letter A-E as to not give any indication to the participants of the stage they were viewing. An informational sheet (see Appendix A) was also given to each participant to read prior to watching the piece, which contained basic information on the project as well as on the Kübler-Ross model. This semi open-label approach was chosen as basic knowledge on the work of Kübler-Ross, which forms the base of the study, allows for a more educated interpretation and accurate dataset to aid the research.

Each participant was also surveyed using both quantitative as well as qualitative methods to determine both the level of and the reasoning behind their interpretations. A similar approach was taken in the work of Claudia Bullerjahn and Markus Güldenring, in their 1994 study *An Empirical Investigation Of Effects Of Film Music Using Qualitative Content Analysis,*[14] which emphasizes the importance of using both methods of content analysis for a greater understanding and accurate portrayal of results. As previously mentioned, this is due to the addition of a number of open-ended questions, which calls for the participants to elaborate further on their interpretations. This gives the current research additional information on the reasoning behind a participant's choices, as opposed to strictly numbers and data associated with quantitative research.

[14] Bullerjahn, Claudia, and Markus Güldenring. "An Empirical Investigation of Effects of Film Music Using Qualitative Content Analysis." *Psychomusicology: Music, Mind and Brain*, vol. 13, no. 1–2, American Psychological Association, Jan. 1994, pp. 99–118. https://doi.org/10.1037/h0094100.

Equipment

The audio was created using both physical and virtual instruments as well as with various sampling manipulation techniques. Recording and arrangement was done in Ableton Live 11, a digital audio workstation (DAW).[15] The visual aspects of the project were created using TouchDesigner[16], a multimedia software used to create motion art and graphics. Audio created in Ableton was also routed in places to TouchDesigner, meaning a number of visual aspects 'react' to the audio spectrum. This combining of both the audio and video as one piece means participants can fully experience and interpret each piece audio-visually, as intended.

Pieces were shown to participants on a 2017 13" MacBook Pro, with each piece shown at a 1280x720 full screen resolution. Audio was listened through a pair of Beyerdynamic DT770 Pro Closed-Back Headphones, allowing for both a high quality visual and immersive aural experience.

Procedure

The following table (Figure 1) summarises the framework created from the above referenced literature, as a base for the current study's audio-visual pieces. Below the table, each stage has been broken down in further detail to show how the framework was applied, as well as details behind the personal interpretations and the rationale behind the choices undertaken.

[15] A digital audio workstation (DAW) is an electronic device or application software used for recording, editing and producing audio files. (Wikipedia, accessed 28th November 2022)

[16] TouchDesigner is a node based visual programming language for real time interactive multimedia content, developed by the Toronto-based company Derivative. (Wikipedia, accessed 28th November 2022)

STAGE (Kübler-Ross, 1969)	***Denial***	***Anger***	***Bargaining***	***Depression***	***Acceptance***
ASSOCIATED EMOTIONS (Stanaway, 2022) (Lu et al, 2012) (Costall/Clarke, 2008)	Shock, Confusion	Aggression, Rage	Guilt, Shame, Fear	Sad, Anxious, Overwhelmed	Pride, Clarity
COLOUR (Valdez/Mehrabian, 1994) (Costall/Clarke, 2008)	Dark hues to mimic confusion and shock (Black, Grey)	High saturation, red 'warm, active' (Levy 1984), Valdez/Mehrabian 1994)	Reds, yellows + darker colours (purples) - Lower Saturations	Dark, intense hues of blue, black, red	Light blues, greens - 'cool, peaceful' (Levy 1984), (Costall/Clarke 2008)
SHAPE/ MOVEMENT (Lu et al, 2012)	Complex Shapes, Rotations highlights confusion	Complex Circular + Angular, Constant Movement	Less Complex/Dense, Circular - varied movement	Simple, Sparse lines	Simple, Continuous Lines, Less Angles
TEMPO (Marshall/Cohen, 1988)	Varied	Fast	Slightly slower than anger	Slow	Slow
DYNAMICS (Marshall/Cohen, 1988)	Varied – drones with loud crashes	Loud, harsh, fast attacks	Harsh, fast attacks	Slow attacks, low arousal/valence	Softer, less harsh, slow attacks

Figure 1: Table summarising the framework of the current study.

Denial

Visually, *Denial* attempts to evoke feelings of disillusion and disorientation with a fast-moving, constantly rotating geometric pattern**.** The high angle and line count of a geometric pattern intends to evoke feelings of anxiety and fear (Lu et al.) with the viewer unable to fix their view on any specific point throughout the piece.

Dark hues of grey and black dominate the palette, intended to further add to feelings of confusion and despair. The lack of hue and saturation further represents feelings of confusion, with the colour grey described as "emotionless" by participants in Costall and Clarke's aforementioned study. Grey was chosen as the main colour for *Denial* based on this description, with this lack of emotion being interpreted as a form of denial itself - attempting to detach oneself from the emotional trauma associated with grieving and loss. See Figure 2 below for stills of the *Denial* audio-visual.

Aurally, the composition is comprised of a multitude of heavily processed instruments, mainly strings (cello, viola) The multiple layers of instruments further compounds the shock and confusion felt visually, due to a saturation of the audio spectrum. This is intended to make the listener feel trapped, as if the audio-visual is 'closing in' on them. The piece is written around various cello and violin drones, with added processing and modulations intended to further compound feelings of disorientation. As outlined in the framework, tempo and dynamics vary throughout the piece, with loud 'crashes' happening at various, seemingly random points over the monotonous drone of the strings. These crashes have been interpreted as moments of shock and realisation of loss.

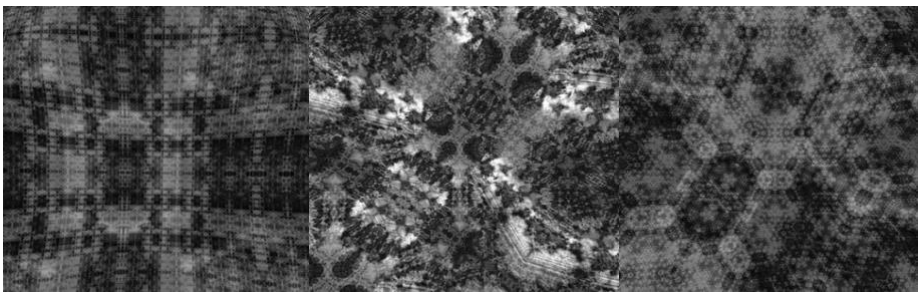

Figure 2: Stills from *Denial*, highlighting the complex shapes and dark hues intend to evoke feelings of shock and confusion.

Anger

Heavy saturations of red are intended immediately to excite and 'provoke' (Levy, 58) the viewer. Red was chosen to represent anger in accordance to the aforementioned research of Clarke & Costall, whose participants associated the colour red with "Aggression" and "Rage" (Clarke et al., 407) .

To compound this, dark complex shapes with hard lines and angles (Lu et al.) cycle at a high pace throughout the piece. The speed of cycling is intended to further heighten the viewers sense of anxiety by not allowing them to focus and familiarise themselves with any particular shape. See Figure 3 for snapshots of *Anger*.

Aurally, the composition is again heavily processed, with the majority of instrument layers processed with elements of distortion. Much of the focus is on the lower end of the audio spectrum, with dark, heavily distorted bass synthesizers giving the piece a harsh, gritty sound, again intended to emphasise feelings of anger, rage and aggression.

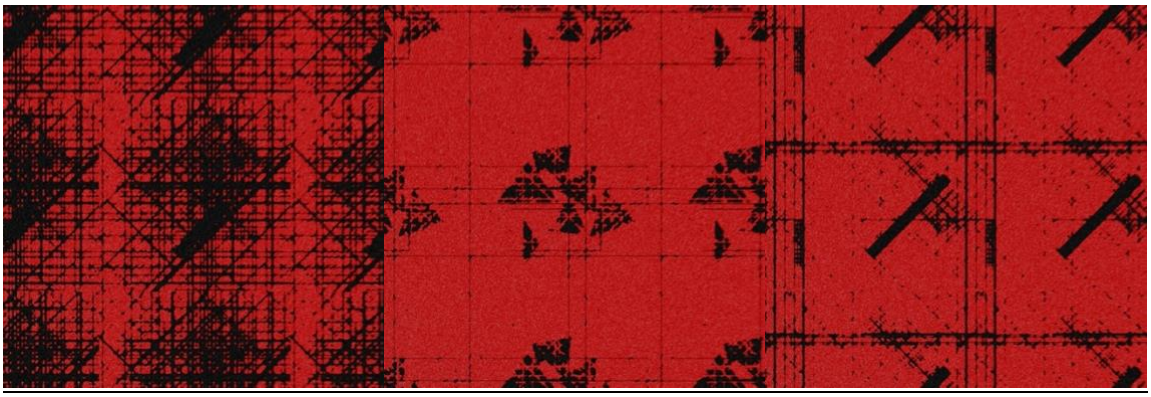

Figure 3: Stills from *Anger*. Heavy saturations of red paired with complex shapes intend to evoke feelings of rage and aggression.

Bargaining

A constantly changing and evolving visual and colour pallet in *Bargaining* has been used to heighten anxiety and evoke feelings of guilt, shame and fear in the viewer. Dark hues of blue and red consume a complex pallet of reds, purples and yellows, intended to mimic the feeling of being 'consumed' by guilt. The complex movement and shapes again intend to heighten anxiety in the viewer, a common theme and a common emotion throughout the majority of the grieving process. See Figure 4 below for snapshots of *Bargaining.*

Aurally, the heavy 'beating' bass drum surrounded with processed scream-like sounds again compound feelings of anxiety and fear in the participants. The lack of respite throughout the piece – the constant 'beating' and 'screaming', again aids the visual in consuming the viewer in feelings of anxiety and fear.

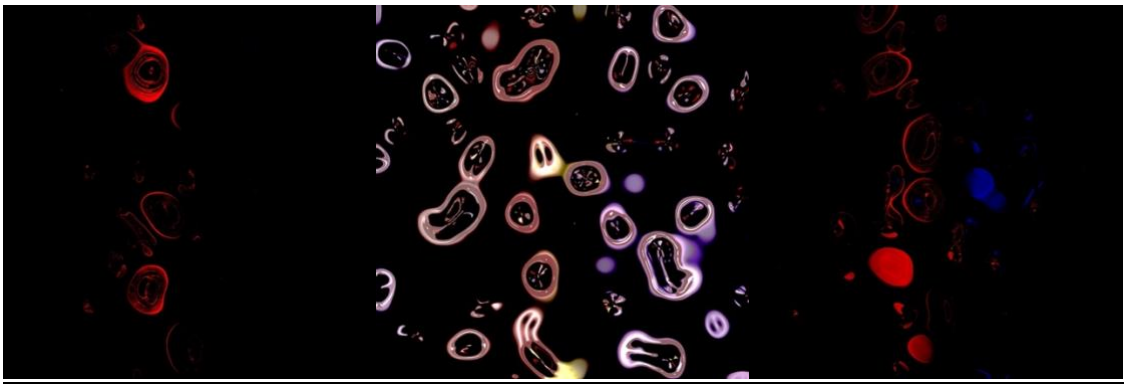

Figure 4: Stills from *Bargaining.* Black background with a shifting colour pallet intend heighten anxiety.

Depression

A dark blue and red gradient with sparse, black lines in *Depression* intends to evoke thoughts within the viewer and come to terms with the grieving process. The simplicity and lack of movement for this stage is intended to force the viewer to look inwards. Darker hues of red and blue have been described as "heavy" by participants of Clarke and Costall's study. The artist has interpreted this heaviness as an overwhelming, overbearing feeling of sadness – ever present in the depression stage of grieving. See Figure 5 for snapshots of *Depression.*

Aurally, the composition lacks melody to attach the ear to. The composition feels noisy, with various elements placed randomly throughout the composition. The various elements have been processed to give the composition a weighted feel, gathering pace throughout to compound the intended overwhelming feeling.

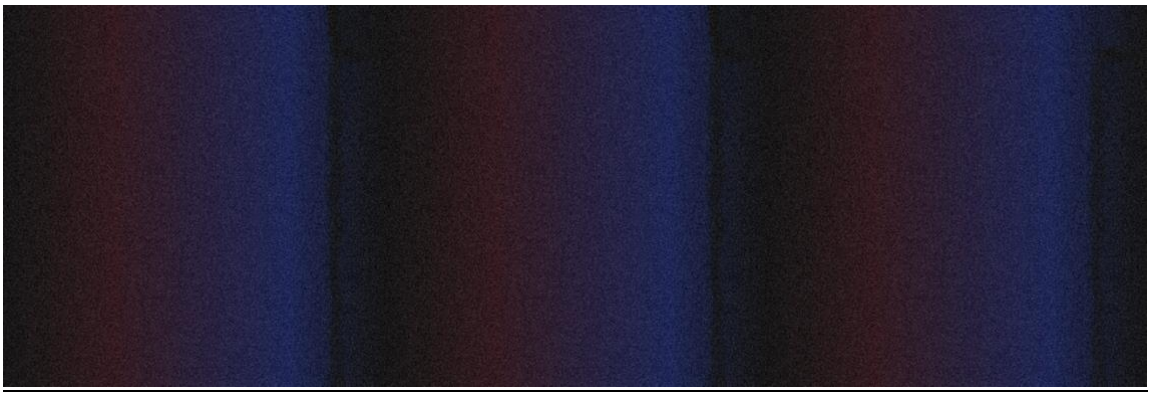

Figure 5: Stills from *Depression*. A simple gradient and lack of movement forces the viewer to come to terms with the sadness of loss.

Acceptance

"Soothing" (Clarke et al., 407) hues of blue, green and purple intend to evoke feelings of calm in viewers in *Acceptance.* A stark contrast to the other four stages, the pastel hues and saturations move slowly throughout the visual. Curved shapes with no lines again intend to put the viewer at ease (Lu et al.). See Figure 6 for snapshots of *Acceptance.*

Aurally, the composition is composed in a major key, again contrasting the other stages. The instrumentation mirrors the visual in its sparsity, with a simple pad paired with an uplifting violin that slowly fades in to crescendo throughout, intending to allow the participant to feel calm and relaxed. The clarity in the audio spectrum is intended to mirror and further evoke feelings of clarity in the viewer also.

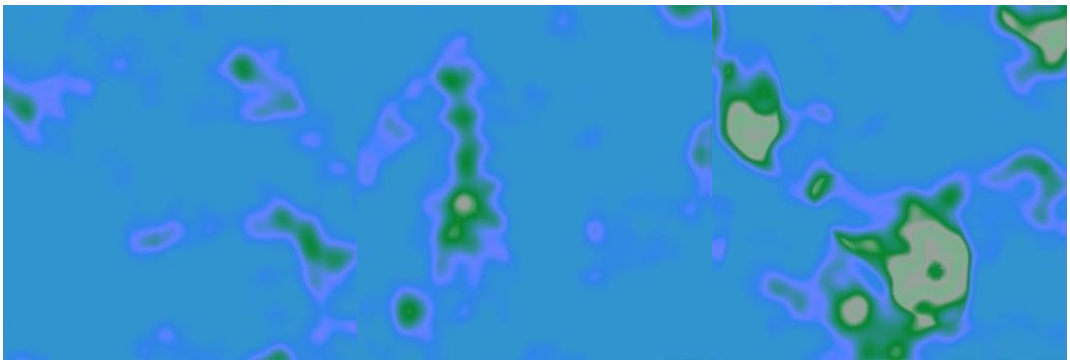

Figure 6: Stills from *Acceptance.* Pastel hues paired with simple shapes and slow movements calm the viewer, a stark contrast to the other four stages.

After participants were shown each stage, they were be asked to interpret what they have seen through both qualitative and quantitative methods. Semantic differential methods (a rating scale) were used to statistically determine levels of interpretation of each stage, followed by a series of open ended questions to discover the reasoning for their choices. This multi-method of gathering data aids the current study in finding out more about the reasoning behind an individual's unique interpretation of grief and the grieving process. The questions presented to participants were as follows:

1. Please choose the stage most accurately portrays the stage you have watched.
2. Please give reason for your choice (sound, shape, colour, overall feeling) etc.
3. How strongly do the below emotions associate with the piece you watched? – Rating scale from Strongly Disagree to Strongly Agree.
4. Are there any additional emotions you feel are not portrayed above? Please elaborate if so.

Results

Results contrast the original theory that an established theoretical framework would lead to 100% accurate interpretations among participants. Instead, results indicate that the complexities of the grieving process make it difficult to be fully, 100% interpreted as intended, even with a detailed framework guided by past research. The *Denial, Anger* and *Acceptance* audio-visuals had the highest percentage rates of interpretation, while *Bargaining and Depression* had the lowest percentage. Following this theme, Anger was the most commonly attributed stage to each audio-visual, while Bargaining and Depression were equally the least attributed. All of the following pies and graphs (Figure 7 – Figure 16) have been sourced directly from the current studies survey results.

Project File A – *Anger*

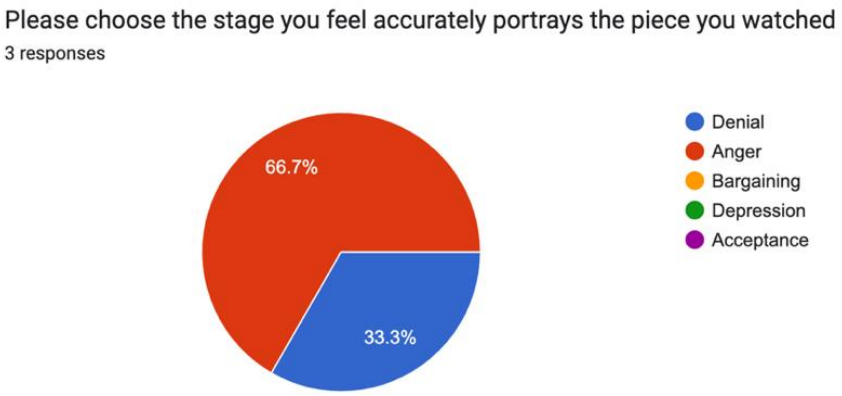

Figure 7: Participant's interpretations of *Anger*.

As shown in Figure 7 above, 66% of participants accurately interpreted Project File A as *Anger*. Elaborating on their choices, participants described the red and black visual as "confusing", "irritating", "intense", and "unpleasant". Aurally, the piece was described as "a build-up of anger and tension" and a reminder of "a racing heart rate you might get when you're angry". Overall, those who accurately interpreted the stage found the piece "dark" and "tense". While the participant who interpreted the piece as *Denial* found the distracting nature of the piece "helped drown out unwanted thoughts".

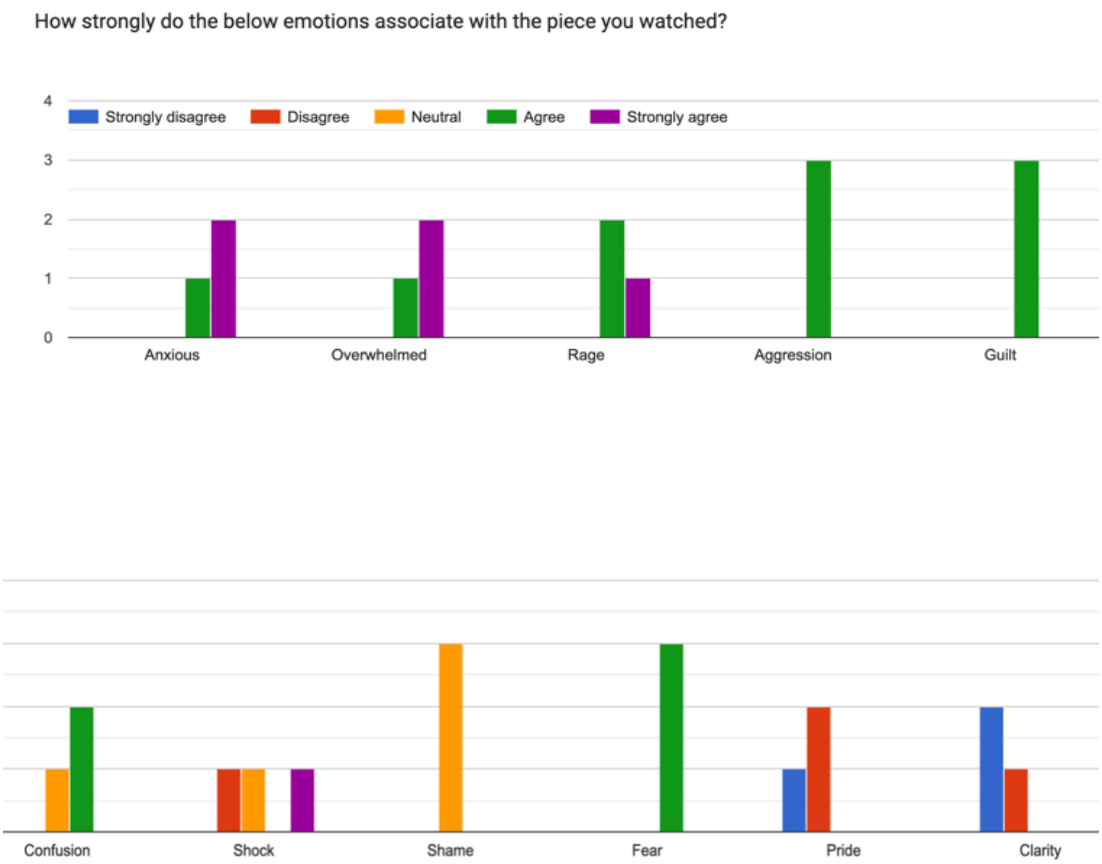

Figure 8: Rating scale responses for associated emotions in relation to *Anger*.

As seen in Figure 8, All participants felt various forms of negative emotions while interacting with the *Anger* stage. Aggression, Anxious, Rage, Guilt, Overwhelmed, and Fear were all agreed or strongly agreed to be directly associated with this stage, while Pride and Clarity were not felt to be associated with the piece. Feelings of Confusion, Shock and Shame were less unanimous among participants. When asked for further elaboration on emotional presence, feelings of "resentment" were evoked in one participant, "possibly due to its association with a negative experience or memory" – highlighting the first signs of attributing participant's personal experiences of grief to the watched audio-visuals.

Project File B – *Acceptance*

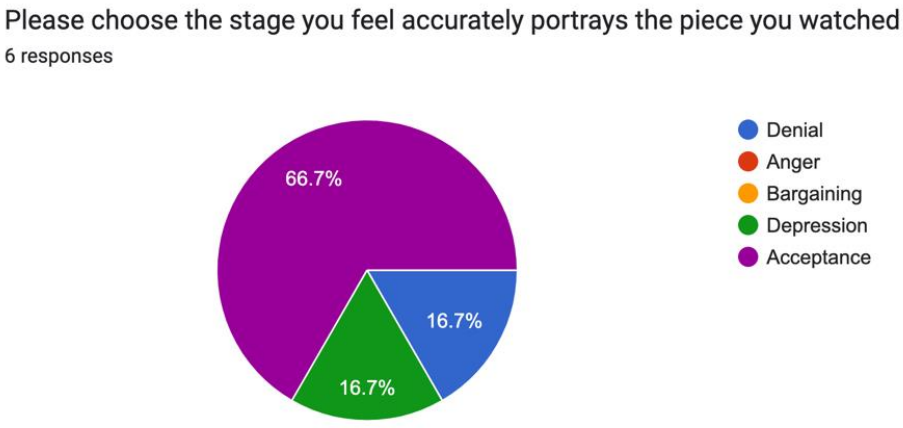

Figure 9: Participant's interpretations of *Acceptance*.

Similar to *Anger*, two-thirds of participants were able to accurately interpret *Acceptance.* Participants described feeling '"motionless", "still" and the piece as "relaxing" and "reassuring", with the colour blue described as "tranquil and calming". One participant who accurately interpreted the piece felt it "had a certain sadness to it but in a way that felt accepted and understood". As for those who interpreted the piece differently, the stillness of the piece caused them to feel "submerged" and "overwhelmed", possibly due to less distracting elements (less instrumentation/shapes) within the piece compared to the other stages.

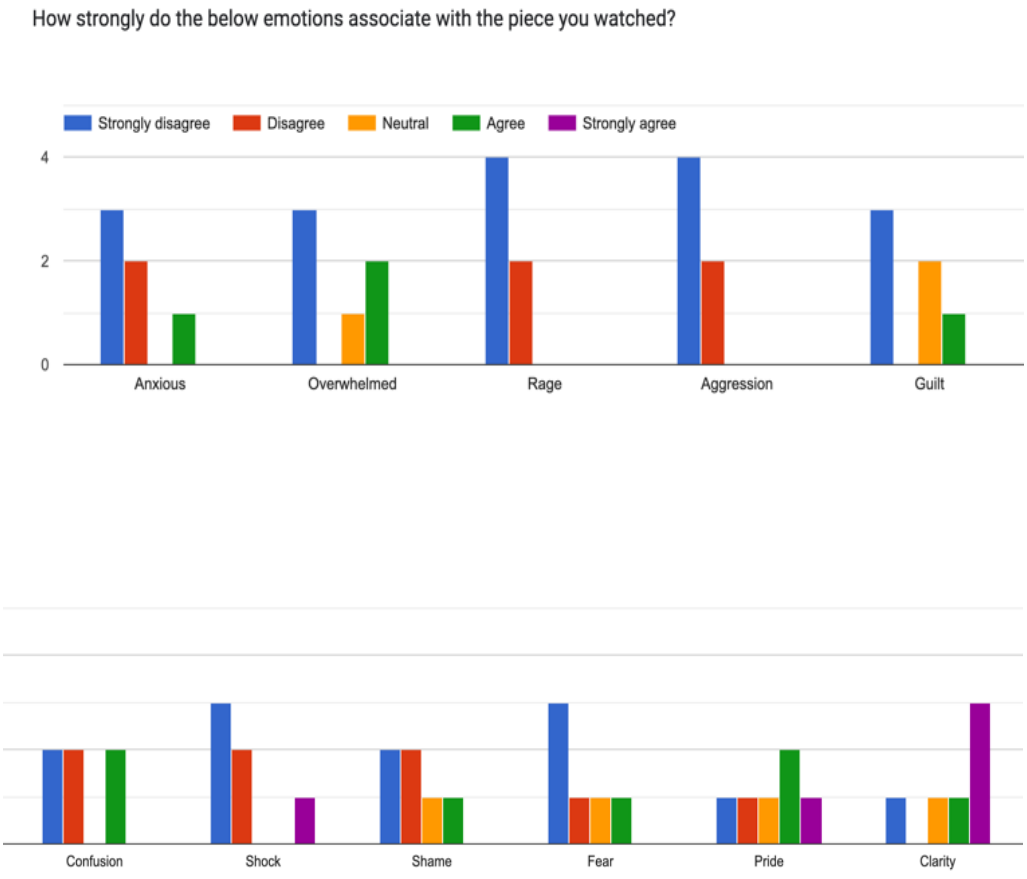

Figure 10: Rating scale responses for associated emotions in relation to *Acceptance*.

As seen in Figure 10, The spectrum of emotions associated with *Acceptance* is broader than that of *Anger*. While the artist intended the piece to evoke feelings of Pride and Clarity, A number of individuals recorded emotions including Guilt, Fear, Overwhelmed, Anxious, Confusion and Shame. As highlighted by one of the participants, who did not interpret the piece as *Acceptance*, this again is possibly due to the overall stillness of the piece, causing the participant's mind to wander towards their own negative experiences with loss.

Project File C – *Depression*

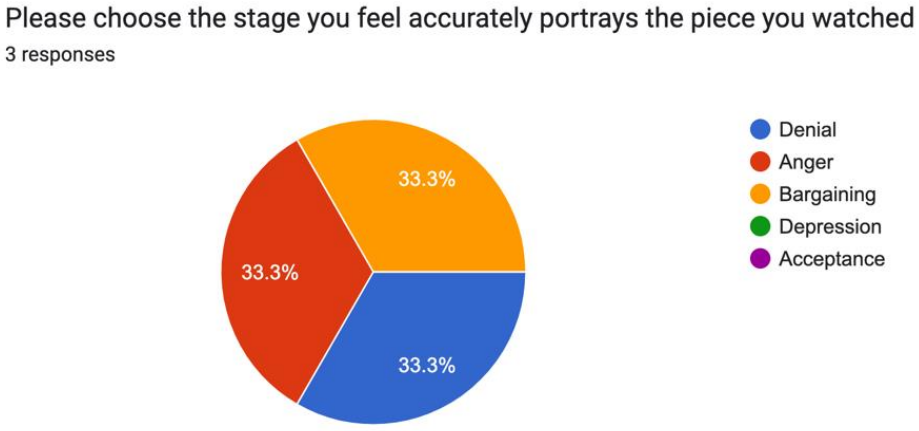

Figure 11: Participant's interpretations of *Depression.*

Above, Figure 11 highlights that *Depression* was not interpreted as intended by any of the participants, along with only being interpreted by one participant throughout the entirety of the research. Participants who interpreted the piece as *Bargaining* (also the only time bargaining was interpreted by a participant) felt the darker hues of red and blue "resemble feelings of fear and shame", while one participant interpreted the same colours as *Anger*, with reds and blues evoking images of a police car and murder. The same participant who interpreted the piece as *Anger* felt the composition of the music – the layers of noise in particular, irritated and raised levels of discomfort while watching and listening, again evoking images of a "person whose loved one has died and is crazy with anger".

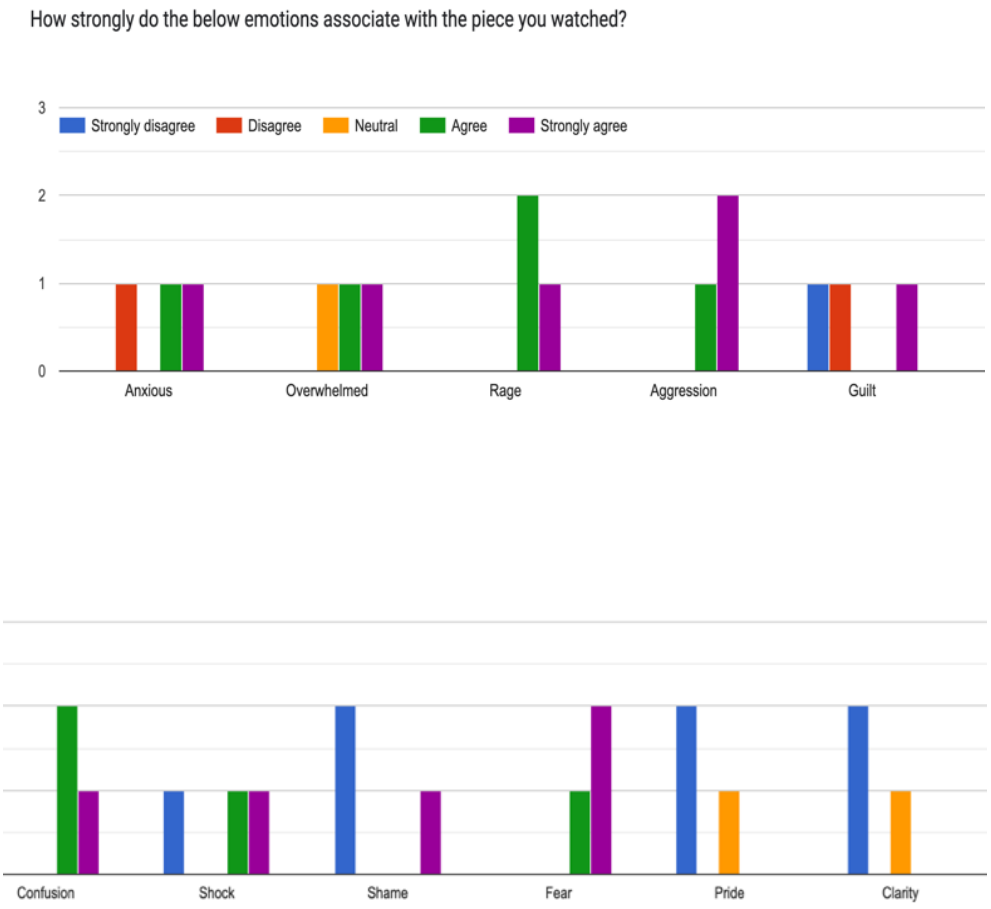

Figure 12: Rating scale responses for associated emotions in relation to *Depression.*

A broad range of negative emotions are evoked in participants who interacted with the *Depression* audio-visual, as expected due to the differences in interpretation. Feelings of Rage, Aggression, Fear and Confusion have been recorded by all participants, while other negative emotions, such as Anxiousness, Shame and Guilt are present for only some of the participants. This leads to further observations of participants interpreting the pieces in relation to their own personal experiences of grief.

Project File D – *Denial*

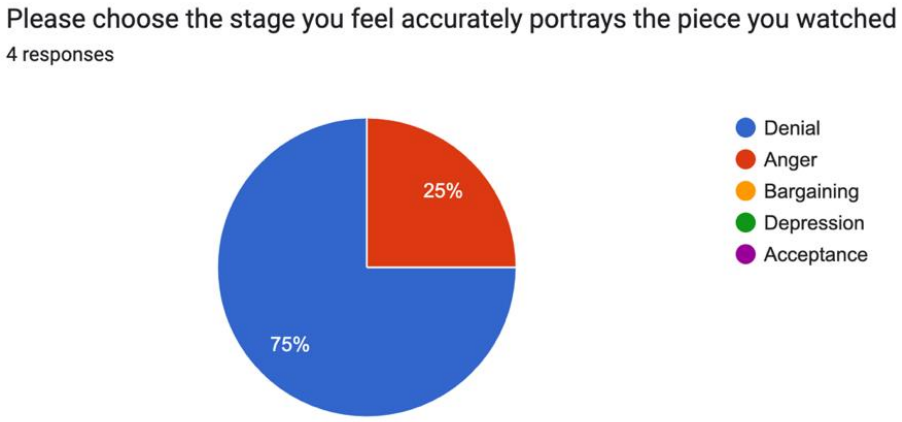

Figure 13: Participant's interpretations of *Denial.*

Participants who interacted with the *Denial* audio-visual had the highest levels of interpretation, with 75% of viewers interpreting the piece correctly. Those who interpreted the piece correctly described it as a "complex, confusing, dark visual" and the grey colour as "gloomy" as well as "a feeling of stress and hostility". Participants also described the tension as unbearable, wanting "to look away on a few occasions". Sonically, participants described the composition as "eerie" and "anxious" while the "difference in depth" between the different sonic elements "makes me feel like I'm in my own head trying to convince myself of something"

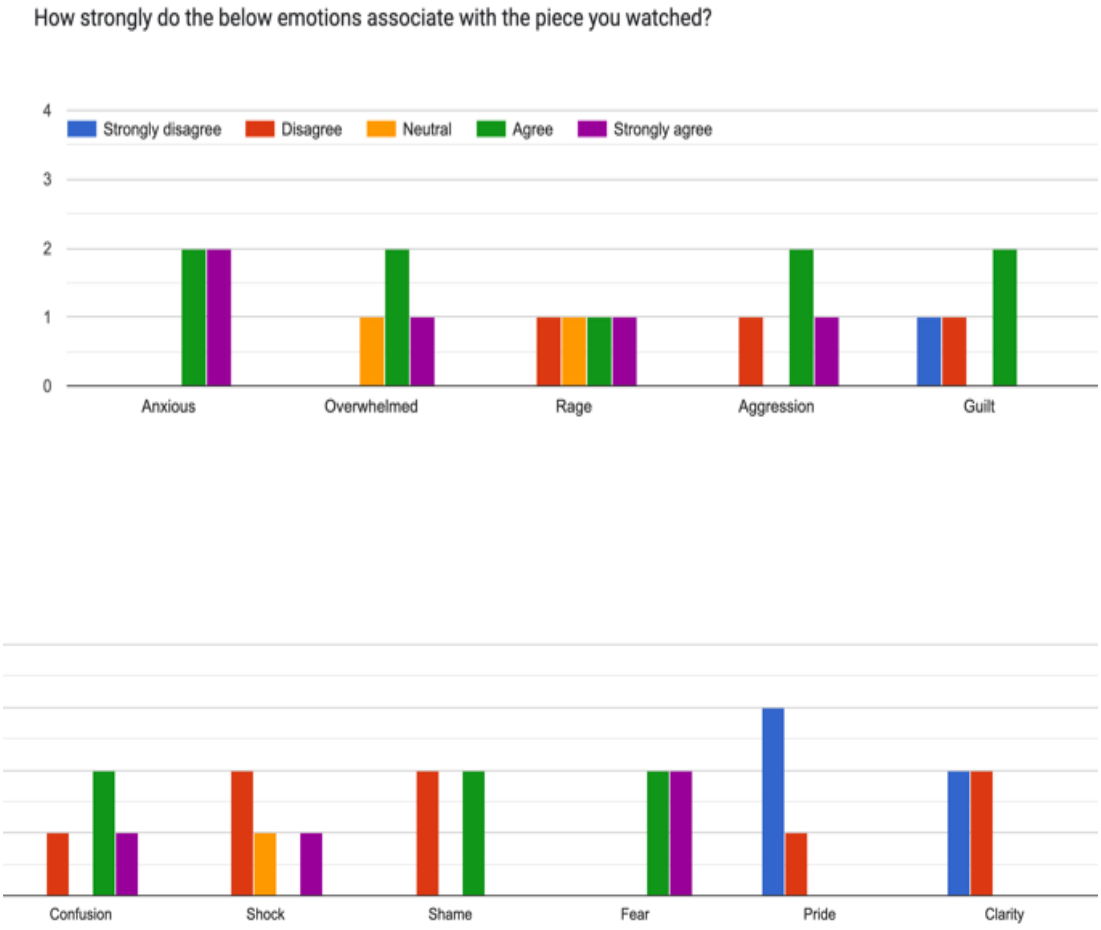

Figure 14: Rating scale responses for associated emotions in relation to *Denial.*

As seen in Figure 14, Both Fear and Anxiousness were evoked in all participants, while the majority felt Overwhelmed. Interestingly, although the stage had the highest percentage of intended interpretations, participants were split on the emotions most associated with *Denial*, Shock and Confusion, possibly an accurate reflection of the intended emotional impact of the piece. Again, Pride and Clarity were absent as associated emotions in all responses.

Project File E – *Bargaining*

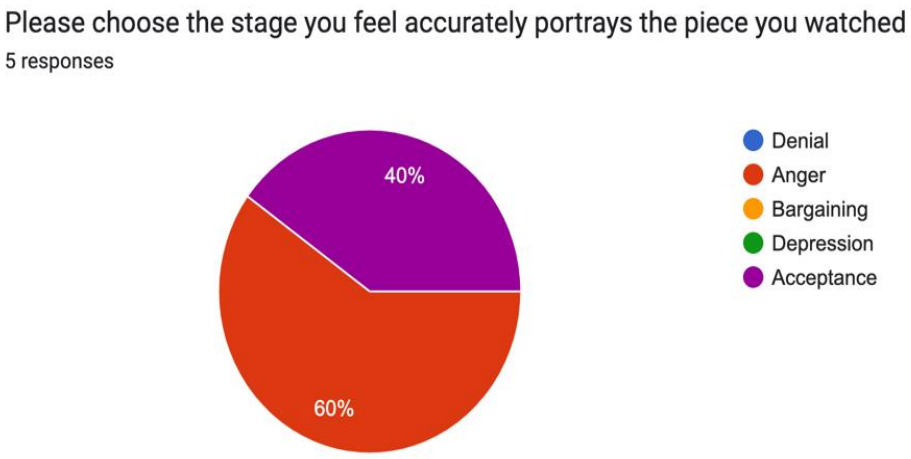

Figure 15: Participant's interpretations of *Bargaining.*

As seen in Figure 15, no participant who interacted with the *Bargaining* audio-visual interpreted the piece as the artist intended. One participant found the visuals "unclear", while another interpreted the colours and shapes as "happiness". The majority of participants interpreted the piece as *Anger,* visually interpreting the presence of red against the black background as "a dark, ominous mood". Participants were equally split on interpreting piece sonically, with the audio interpreted by one participant as "steam coming out of your ears", while another describes it as "fizzling fireworks". This again highlights the influence of personal experiences on interpretation.

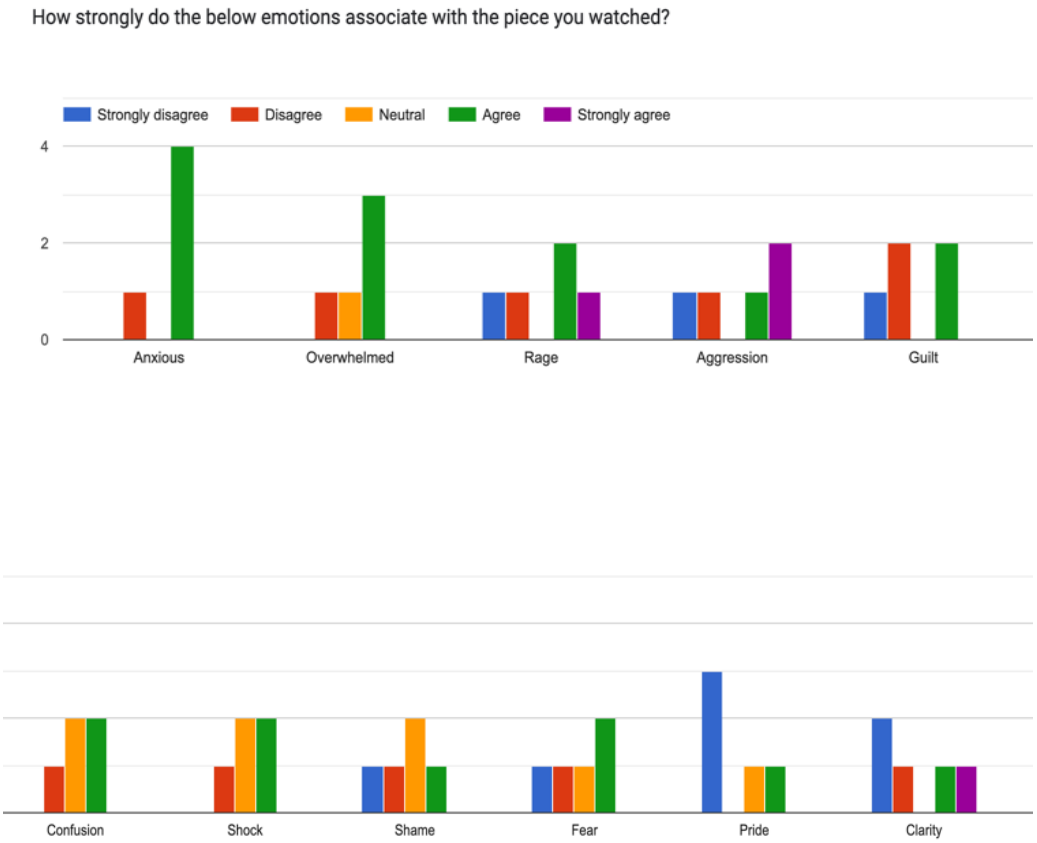

Figure 16: Rating scale responses for associated emotions in relation to *Bargaining.*

Due to the 0% correct interpretation rate among viewers, *Bargaining* has a broad spectrum with regards to associated emotions. Participants both agree and disagree on every emotion presented in the above rating scale. When asked about additional emotions they felt were present within the piece, participant's responses were again varied. Emotions ranging from "disorientating" and "detachment" to "calming" and "hopeful" were all recorded. See Appendix B for full responses to all survey questions.

Analysis/Discussion

Results indicate that the project design was appropriate for answering the research question, particularly with regards to the methods of surveying. The use of open ended questions invited participants to elaborate further on the reasoning for their interpretations, which shed light on how their own personal experiences with grief directly influenced interpretation of the audio-visuals. Each participant had varying interpretations to each of the foundational elements of the theoretical framework, be it colour, shape, or musical structure. This can be seen in the high level of variation in choice among participants, particularly in more complex stages, such as *Bargaining* and *Depression*. It is this tendency to interpret each stage in a personal way which causes the original hypothesis - that levels of interpretation would be consistently accurate due to an established theoretical framework - to be proven obsolete. Instead, results mirror those of the aforementioned work of Kersten/Van der Vennet – that individual preference and memory are the primary influencers of interpretations and choice.

While a number of the audio-visuals had correct interpretations of over 50%, No audio-visual was 100% interpreted as originally intended. *Anger, Acceptance* and *Denial* were the stages with the highest rates of intended interpretation, as well as the most commonly chosen stages by participants across all stages. This leads to new hypothesis that the 'stages' of grief as defined by Dr. Kübler-Ross are not all experienced equally, with some stages being more prevalent in individuals than others. The emotions associated with the *Anger* and *Denial* stages – Aggression, Rage, Shock and Confusion, can be observed as being more potently felt, remembered and understood by the majority of individuals whom have or are currently experiencing grief, regardless of their stage of grieving.

The levels of inaccurate interpretations of the other stages, including *Bargaining* and *Depression*, further bolster this new theory. Observations can be made of some individuals not experiencing all five stages as previously thought, but possibly 'skipping' some stages when experiencing grief, or 'forgetting' emotions when evoking memories of grief when the experience has passed. Further observations can also be made regarding these inaccurately interpreted stages, with both sharing

many similar traits emotionally, as well as how they have been visually and sonically interpreted. Shape, movement and dynamics are the main differences between the two stages, while the darker hues of blues and reds are present in both interpretations. This is the opposite of the stages interpreted accurately, with all 3 contrasting the others visually, sonically, and emotionally. This leads to additional extensions of the current research, to discover the overall importance and necessity of all components of the established framework.

Again, this highlights the strength in the current study's design, particularly with regards to the importance of using more than one method of surveying, as with statistical data alone, these levels of variance in interpretation among viewers would offer no information and only allow for shallow analysis of results. For sensitive areas of research such as emotion and grief it's paramount to understand *why* the stages are interpreted the way they have been by participants, so that the research and methods can be further expanded and possibly applied to areas such as art and music therapy in the near future.

Conclusion

While the current study has discovered and shed light on possible new theories relating to grief and loss through valid methodical design and application, further research is needed to explore the overall value of interpreting grief through the audio-visual medium. Possible extensions include the addition of more artists, to establish a broader and less predictable style of audio-visual. While there is little fault using a single artist's interpretations, as in this study, future research could benefit with the inclusion of additional interpretations to discover common interpretational themes and patterns between artists.

There is also scope for increased interaction among participants, to study the effects of creating their own physical and artistic interpretations of personal experiences relating to grief. Physically participating in visual art and sound have long been used as means of therapy, and it remains to be seen what effect the physical interaction and interpreting of grief specifically can have in aiding those who have experienced it.

Practice could be further improved by a widening of the sample size (the current study had just 21 participants), as well exposing participants to multiple stages of grief as opposed to a singular one. This could further highlight the value of audio-visual therapy, as well show these new mentioned hypotheses to be fact. As discussed, exploration of the equality and potency of the stages, as well as the equality of each part of the established framework, can also further extend knowledge and give clarity and insight to this abstract and complex area of research.

Appendix A

Informational PDF titled ‘Read Me’ which was given to participants to inform them of the work of Elizabeth Kübler-Ross. This approach was intended to aid participants knowledge and understand the basis for their interpretations, which in turn gave the study a more concise dataset to analyse. It also contains a flash warning for any participants who were possibly photosensitive.

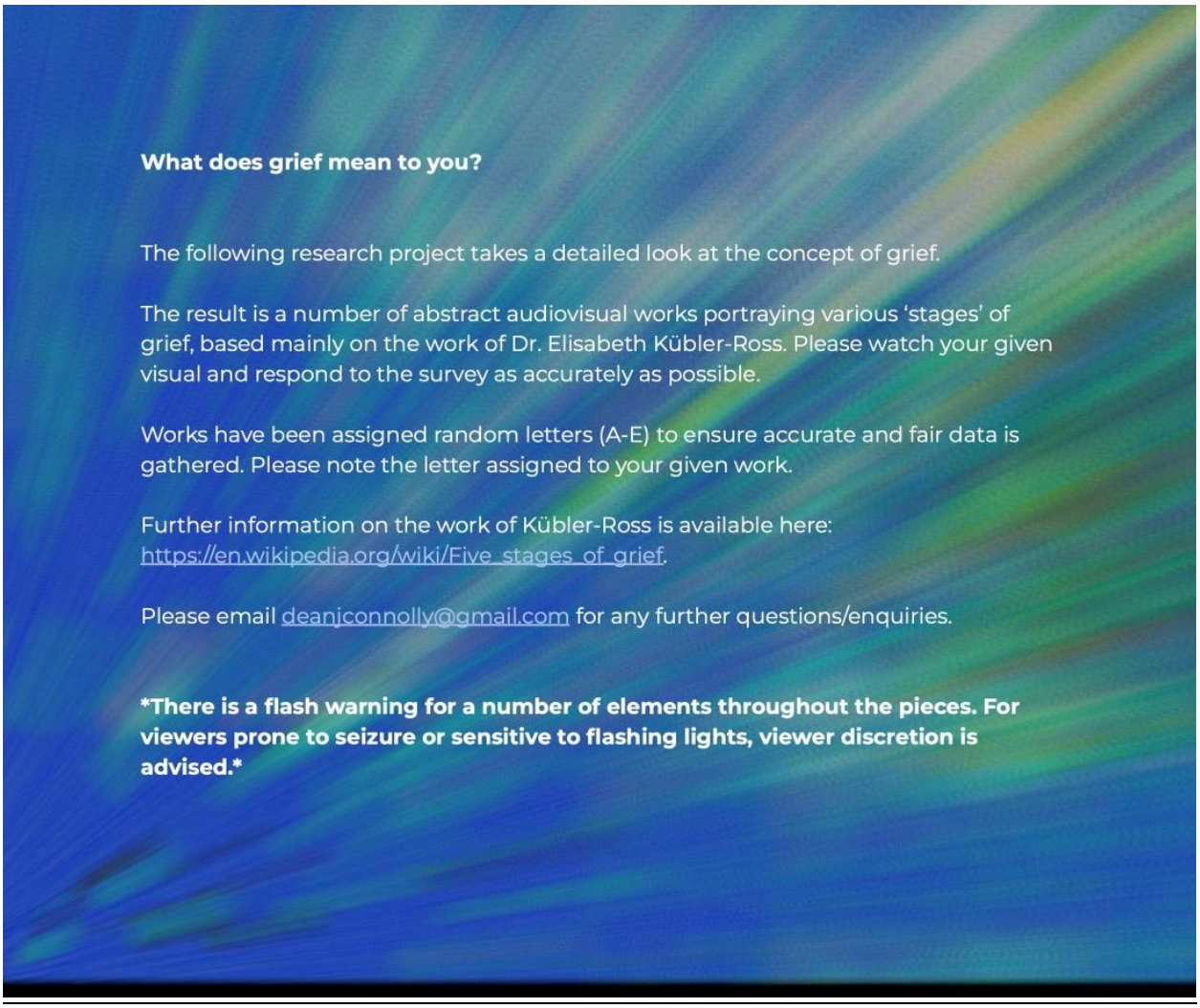

Figure 17: Informational PDF shown to participants.

Appendix B

Full transcripts of participant's long form answers. Two open-ended questions were asked to participants, the function of which was to gain qualitative information from participant's quantitative responses. Various quotes have been used from these responses for results/analysis throughout the study.

Project File A – *Anger*

3 Responses

Q: Please give reason for your choice (Colour, Shape, Sound, Overall Feeling etc.)

1. Participant 1: The flashing and colour red I thought associated with anger and the black interchangeable images associated with confused and irritated emotions swirling around the mind consistently.
2. Participant 2: The sound gave a feeling of rejection an unpleasant reality or situation. The sounds were distracting that helped drown out unwanted thoughts/conversations.
3. Participant 3: I associated the use red, the overall dark mood and the intense flashing of the visuals with anger. I felt like the sound portrayed a build-up of anger and tension rising. The combination of the sound and visuals was tense which I related to anger. Sound reminded me of a racing heart rate you might get when you're angry.

Q: Are there additional emotions you feel are not portrayed above? Please elaborate if so.

1. Participant 1: Possibly peace towards the end.
2. Participant 2: The sound evoked feelings of resentment within me, possibly due to its association with a negative experience or memory.
3. Participant 3: No response.

Project File B – *Acceptance*

6 Responses

Q: **Please give reason for your choice (Colour, Shape, Sound, Overall Feeling etc.)**

1. Participant 1: The colour and the overall sound.
2. Participant 2: It was relaxing. The colour blue is tranquil and calming. As well at the purple blobs coming in and out. It felt reassuring but still overwhelming towards the end but sometimes the more you've accepted something the more scary it is realising you're over the worst part of grieving.
3. Participant 3: It felt very introspective and thoughtful. It wasn't overwhelmed with emotion or vibrancy the way I imagine the other stages to be. I had a certain sadness to it but in a way that felt was accepted and understood. It felt quite complete or something.
4. Participant 4: Muted colours with slow movement matched the feeling of being motionless and still....deep within oneself but at the same time not present. Very submerging feeling.
5. Participant 5: Colour and sound.
6. Participant 6: Colour and sound.

Q: Are there additional emotions you feel are not portrayed above? Please elaborate if so.

1. Participant 1: Content, tranquillity and reassurance.
2. Participant 2: Calm.
3. Participant 3: Emotional detachment- a feeling of numbness and separation .... not a stillness as that would insinuate calm, and the piece more generated discomfort.
4. Participant 4: No response.
5. Participant 5: I had a feeling of relax and calm, I felt more open.
6. Participant 6: No response.

Project File C – *Depression*

3 Responses

Q: Please give reason for your choice (Colour, Shape, Sound, Overall Feeling etc.)

1. Participant 1: The dark colours of the piece resemble fear and shame. The noise at the beginning of the piece portrays guilt and then builds with a gradual crescendo to illustrate severe fear and anxiety. The piece ends in pianissimo resembling the next stage of grief, depression.
2. Participant 2: The sounds and visuals painted a picture in my head. I felt the lights (red and blue) made me think of a police car and there had been a murder. The sound gave me the feeling of anger and the person whose loved one had died is crazy with anger and I feel the sounds were like this person losing their mind at this fact. They are so crazy with anger they will do anything to catch who did this.
3. Participant 3: Colour, intensity, flickering.

Q: Are there additional emotions you feel are not portrayed above? Please elaborate if so.

1. Participant 1: No response.
2. Participant 2: No response.
3. Participant 3: Discontent.

Project File D - *Denial*

4 Responses

Q: Please give reason for your choice (Colour, Shape, Sound, Overall Feeling etc.)

1. Participant 1: I think my answer would have been somewhere between Denial and Anger but leaning more so towards the former. I felt on edge watching Video D as the cacophony of sounds were somewhat eerie at times. I was very tempted to even look away on a few occasions which gave me the impression that maybe I was trying to run away from the video or it was something that I did not want to know anything about. It was only on second viewing/listening that I noticed the voices that appear from the four-minute mark. This made me feel like changing my answer to Depression but I didn't. They are trying so desperately to be heard but they're blocked out among the noise making what they're saying almost pointless.
2. Participant 2: To me the beginning of the piece is full of pain and confusion , and then all of a sudden it becomes almost peaceful but still has an eery sound in the background that makes me feel anxious but somehow peaceful . The difference in depth such as the constant music in the foreground combined with the distant and more random sounds make me feel like I'm in my own head and I'm trying to convince myself of something although I know the real answer and I'm just avoiding it. This alongside the whispering in the background is like the little voices in your own head when you know something is wrong but you try to block it out to save yourself from the pain but you always know the truth deep down. It's like two completely different feelings that are battling with each other to take control. The gloomy grey colours make me feel sad but the movement itself and the interesting shapes it forms as it moves is like a distraction from the sad colours so even though it feels sad, I can distract from that and convince myself of its peacefulness.

3. Participant 3: There was a feeling of stress and hostility, the muttering voices sounded harsh and critical, the percussive sounds sounded like something breaking or ripping apart, the flashes and rumbling synths seemed like thunder.
4. Participant 4: Complex, confusing, dark visual.

Q: Are there additional emotions you feel are not portrayed above? Please elaborate if so.

1. Participant 1: Uneasy, scared, frightened, concerned, apprehensive, uncomfortable.
2. Participant 2: No Response.
3. Participant 3: Paranoia.
4. Participant 4: No Response.

Project File E - *Bargaining*

5 Responses

Q: Please give reason for your choice (Colour, Shape, Sound, Overall Feeling etc.)

1. Participant 1: Unclear blobs with hard to make shapes - dark colours and thumping sounds. The increasing noise reminds me of “steam coming out your ears”.
2. Participant 2: Mix from colours and sounds.
3. Participant 3: Lots of layers of colour in the blobs for happiness. There is a layer of sound mid-way through that sounds like fizzling fireworks. It fades to this sound towards the end too. Peaceful feeling at the end.
4. Participant 4: Soundscape conjures a Dark, Ominous, Foreboding mood. Emphasis on red colouring against darkness might indicate anger.
5. Participant 5: I'd go with "Anger", even though this to me is kind of a second "phase" of the moment you feel angry. I'm talking about that moment, more rational than the first one when you start to understand what is really happening, when things become real, vivid, lucid in your mind. When your heartbeat is no longer fast pacing but starts to slow down. The shape, the sound, the colour reminded me of a sort of high pressure.

Q: Are there additional emotions you feel are not portrayed above? Please elaborate if so.

1. Participant 1: No response.
2. Participant 2: Detachment - almost like phasing out all other noise, you can hear sirens being drowned out.
3. Participant 3: Disorientation.
4. Participant 4: Calming. Hopeful.
5. Participant 5: No response.

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