Sound of Violent Images / Violence of Sound Images:
Pulling apart *Tom and Jerry*

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A textual dissertation submitted to The Glasgow School of Art in partial fulfilment of the requirements for the award of Doctor of Philosophy

2023

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Declaration

I, Ren Garden declare that the enclosed submission for the degree of Doctor of Philosophy and consisting of a dissertation and portfolio of works meets the regulations stated in the handbook for the mode selected and approved by the Research Degrees Sub-Committee. I declare that this submission is my own work, and has not been submitted for any other academic award.

Signed: ███████████   Date: 05.06.2023

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Abstract

Violence permeates *Tom and Jerry* in the repetitive, physically violent gags and scenes of humiliation and mocking, yet unarguably, there is comedic value in the onscreen violence. The musical scoring of *Tom and Jerry* in the early William Hanna and Joseph Barbera period of production (pre-1958) by Scott Bradley played a key role in conveying the comedic impact of violent gags due to the close synchronisation of music and sound with visual action and is typified by a form of sound design characteristic of zip crash animation as described by Paul Taberham (2012), in which sound actively participates in the humour and directly influences the viewer's interpretation of the visual action. This research investigates the sound-image relationships in *Tom and Jerry* through practice, by exploring how processes of decontextualisation and desynchronisation of sound and image elements of violent gags unmask the underlying violent subtext of *Tom and Jerry*'s slapstick comedy. This research addresses an undertheorised area in animation related to the role of sound-image synchronisation and presents new knowledge derived from the novel application of audiovisual analysis of *Tom and Jerry* source material and the production of audiovisual artworks. The findings of this research are discussed from a pan theoretical perspective drawing on theorisation of film sound and cognitivist approaches to film music.

This investigation through practice, supports the notion that intrinsic and covert processes of sound-image synchronisation as theorised by Kevin Donnelly (2014), play a key role in the reading of slapstick violence as comedic. Therefore, this practice-based research can be viewed as a case study that demonstrates the potential of a sampling-based creative practice to enable new readings to emerge from sampled source material. Novel artefacts were created in the form of audiovisual works that embody specific knowledge of factors related to the reconfiguration of sound-image relations and their impact in altering viewers' readings of violence contained within *Tom and Jerry*. Critically, differences emerged between the artworks in terms of the extent to which they unmasked underlying themes of violence and potential mediating factors are discussed related to the influence of asynchrony on comical framing, the role of the unseen voice, perceived musicality and perceptions of interiority in the audiovisual artworks. The research findings yielded new knowledge regarding a potential gender-based bias in the perception of the human voice in the animated artworks produced. This research also highlights the role of intra-animation dimensions pertaining to the use of the single frame, the use of blank spaces and the relationship of sound-image synchronisation to the notion of the acousmatic imaginary. The PhD includes a portfolio of experimental audiovisual artworks produced during the testing and experimental phases of the research on which the textual dissertation critically reflects.

Acknowledgements

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1.   Introduction

This introductory section outlines different aspects of the PhD research related to the following areas: overview, research questions, aims and objectives, contribution, motivation and intention and format of submission. Within the following overview, I discuss key points related to the research questions, aims and objectives, literature survey, contextualisation of practice, methodology and conclusions.

1.1   Overview

This practice-based research, I suggest, can be viewed as a case study that demonstrates the potential of a sampling-based creative practice to excavate the underlying qualities of violence within the slapstick comedy of *Tom and Jerry* source material. The research asks how does a practice of decontextualisation and desynchronisation of the sound and image elements of violent gags unmask the underlying violent subtext of *Tom and Jerry*. The findings of this research, I propose, support the notion that intrinsic and covert processes of sound-image synchronisation play a key role in the delivery of visual gags and in the reading of the slapstick violence as comedic in *Tom and Jerry*. By disrupting the linear narrative structure of the source material using strategies of sampling, looping and repetition in the creative practice, I demonstrated that processes of desynchronisation and decontextualisation enabled new readings to emerge from the sampled source material. Differences emerged between the artworks produced in the practice, in terms of the extent to which they unmasked underlying themes of violence, which I propose implicates potential mediating factors related to the influence of asynchrony on comical framing, the role of the unseen voice, perceived musicality and perceptions of interiority in the audiovisual artworks.

My interest in this area partly stemmed from my observation that violence permeates *Tom and Jerry,* yet the viewing experience is of comical amusement, prompting the question of how sound-image relations contribute to the reading of violence as comical in *Tom and Jerry*. A particularly violent version of the *Tom and Jerry* animated series existed during the early Hanna and Barbera era (pre-1958) which the research focuses on specifically. In this period of classical Golden Era animation, Daniel Goldmark (2005) has described how the music and sound production played a central role in the comedic impact of gags due to the tight synchronisation of music and sound with visual action. This research analyses the sound-image relationships of *Tom and Jerry* shorts that I suggest exemplify the conventions of zip crash animation as described by Paul Taberham (2012), as a pattern of sound-image relationships that actively participate in the comedy and influence the viewer's reading of the

visual action by imbuing visual images with specific feelings – a characteristic termed rendering by Michel Chion (1994) in his theorisation of audiovisual relationships in film. I propose that the influence of sound-image relations on the viewers' interpretations of violence in animation represents a relatively undertheorised area of discourse.

In locating the research context through a survey of the literature, I draw upon two key strands of discourse: firstly, I discuss sound-image synchronisation including theories related to film music, and secondly, I discuss relevant concepts in slapstick comedy with an emphasis on the role of the visual gag. Taking a pan theoretical approach in the research proved advantageous in facilitating the identification of disparate elements of the audiovisual relationship in *Tom and Jerry*, including sound-image determinants that contribute to the comical reading of slapstick violence.

I propose that the tight synchronisation of sound and image in *Tom and Jerry plays* a key role in the reading of the slapstick violence as comedic and I discuss theorisation of sound-image relationships in film as critical to an understanding of these processes of synchronisation. I explored several of Chion's key theoretical concepts by undertaking an audiovisual analysis of a *Tom and Jerry* animated short and identified dominant sound-image tendencies that mediate the reading of slapstick violence as comedic in *Tom and Jerry*. Key sound-image relationships discussed include the role of the musical score in the temporal linearization[1] and vectorization[2] of images.

I identify an intrinsic and covert relationship between the experience of slapstick as comical and the close synchronisation of sound and visuals in *Tom and Jerry's* production, partly informed by Kevin Donnelly's (2014) theorisation of film aesthetics as comprised of occult processes. Drawing on empirical visual-perceptual research, Donnelly suggests that film processes, such as sound-image synchronisation, constitute unique aesthetic and perceptual characteristics that conceal their operation in order to maintain cinematic illusion. In terms of the PhD research, his writing prompted lines of enquiry and ideas of potential intervention into sound-image relations as part of the practice element of the PhD research. Donnelly's notion of asynchrony is particularly relevant to the creative practice of the research and my interventions into the synchronisation of sound and image in *Tom and Jerry* source material. I also suggest that the concept of the integrated soundtrack offers a means to reconceive, in practice terms, the audiovisual relationships of the sampled material

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[1] 'Temporal linearization' (of images by sound) refers to the effect of sound imprinting a sense of succession or temporal sequencing in images (Chion, 2009, p.494).
[2] 'Vectorization' (of images by sound) refers to a process of temporalization, where sound imprints a sense of directionality and expectation, on images that contain movement (ibid.: p.496).

by referring to notions of musicality. I propose that the audiovisual artworks produced as part of the practice support Danijela Kulezic-Wilson's (2020) proposition that a dialectical relationship between sound and image can be facilitated when the interconnectedness of soundtrack elements is actively embraced, and conventional hierarchies of the soundtrack are disrupted.

As part of the process of identifying how the highly synchronised visual and sound elements of *Tom and Jerry* create a sense of anticipation and expectation in violent slapstick gags, I discuss a cognitivist approach to film music as offering useful insights in terms of the role of factors such as congruence between music and visual action. Within Annabel Cohen's (1993, 2000) cognitivist approach to film music, she outlines how music exerts a significant influence over the meaning of a scene and is critical in directing visual attention and generating expectations about scenes, and highlights that cartoons particularly rely on music to suspend disbelief. This approach, I suggest, is useful as a means of understanding how the music and sound of *Tom and Jerry* both engages viewers, creates anticipation and directs viewers towards a comedic reading of the slapstick violence.

I identify a point of intersection between Cohen's account and Paul Wells' (1998) discussion of cartoon violence; Wells proposes that a key element of the portrayal of the cartoon violence of *Tom and Jerry* as comedic relies on its effects being presented as temporarily depersonalised, softened and diffused. I suggest that Cohen's account of how sound-image relations exert an influence over a viewer's interpretation of audiovisual material can also be applied to the reading of violence in *Tom and Jerry* as innocuous and comical. Sound-image relations mediate the process of temporary depersonalisation and diffusion of the effects of violence, as described by Wells, and I suggest that the musical scoring of *Tom and Jerry* actively participates in this process of diffusing the images of violence in the material.

Within my review of the research context, I also focus on how the slapstick violence of *Tom and Jerry* engages the viewer, which I suggest, is elucidated in Tom Gunning (1986, 2010) and Donald Crafton's (1995) discussions of the role of the visual gag in slapstick. Gunning's discussion of the relationship of slapstick comedy to notions of the machinic and his discussion of the mode of spectatorship engendered by the cinema of attractions, I suggest, are particularly relevant to the slapstick humour of *Tom and Jerry* and the form of spectatorship elicited. Also, important to an understanding of the spectatorship involved in slapstick comedy, are viewer perceptions of violence in slapstick as hyperbolic exaggeration, as described by Muriel Andrin (2010) and viewer perceptions of comical pain in relation to violent gags, as discussed by Louise Peacock (2014). I propose that Peacock's notion of the

unharmed body in slapstick overlaps with Well's discussion of how the invincible body in cartoons establishes a comical frame. Consideration of these factors prompted ideas within the creative practice related to altering the reading of violence in *Tom and Jerry* by removing the reassurance of the viewer being able to see that the body is unharmed by violence and responses to the artworks implicated this as a significant factor in viewers' interpretations of the themes of violence.

In contextualising my creative practice in the PhD research, I outline contextual issues relevant to the use of sampling, including issues related to copyright. I identify relevant artworks from the fields of visual art and experimental film that utilise forms of sampling, looping and repetition as a means of excavating hidden meanings within film. I also contextualise my use of single-frame flicker-type effects by reference to key experimental film practices that utilise flicker as a form of direct address to visual-perceptual capacities and identify key concepts relevant to the artworks generated by the research.

The research adopts a practice-based methodology that involved the production of novel artefacts in the form of animated artworks as part of my creative practice. I propose that the artworks embody specific knowledge of factors specific to the aims of the PhD research related to the reconfiguration of sound-image relations and their impact in altering the reading of violence contained within the *Tom and Jerry* source material. Therefore, the artworks contribute new knowledge by offering a means, in practice terms, to renegotiate the reading of violence within pre-existing animation. The self-reflexive process of my practice in the current research also contributes knowledge through my evaluation of the research findings including input from viewers who shared their subjective responses to the artworks and provided insights into individual differences in responses.

The methodology of the PhD research entailed an initial analysis of the *Tom and Jerry* source material, selection of samples, a testing phase, and an experimental phase in which the audiovisual artworks were produced using an improvisational approach. Following the production of artworks, the viewer discussion groups were undertaken to gather viewer responses to the artworks. The initial analysis of the source material was undertaken using Chion's audiovisual analysis procedure and entailed an evaluation of a *Tom and Jerry* animated short under different conditions, where either the sound or image was masked. The results of the analysis support Donnelly's theorisation that covert, hidden processes of synchronisation underlie the illusory unity of film and I suggest, these processes are critical to the portrayal of the slapstick violence of *Tom and Jerry* as comedic. The results of the audiovisual analysis are discussed from a pan theoretical perspective and included a novel

application of concepts to the field of animation derived from Chion's theorisation of the sound film and a cognitivist approach to film. The analysis findings also served to guide the selection of samples for the test and experimental phases. Importantly, works produced during the test phase revealed that despite altering the sound-image synchronisation in the samples of *Tom and Jerry*, certain imagery retained a highly vectorized form and possessed a strong sense of temporal directionality. This persisted even when there was a significant shift in the thematic content (from slapstick comedy to violence) – a finding that influenced my production of the artworks *Plaster*, *Strike* and *Then Now* in the experimental phase.

In *Plaster* (see Figure 1), my sampling of the *Tom and Jerry* source material and reworking using looping and repetition, invoked a sound-image relationship that approached a condition of asynchrony. My intervention into the source material served to reduce the sense of the comedic and reconfigured the reading of violence in the material, which I suggest, supports Donnelly's notion that asynchrony creates a rupture in the illusory unity of sound and image. I discuss Well's identification of the role of the indestructible body in creating a comical framing of violence in animation as a means of understanding viewer responses in relation to *Plaster*; viewers were unable to assess whether the body was unharmed, which I suggest contributed to the reduced comedic interpretation of the content of *Plaster*. A key insight, that can be considered emergent knowledge, from the creation of *Plaster* also related to the role of the unseen voice, which I suggest supports Chion's conceptualisation of the effects of the acousmêtre on the viewing experience.
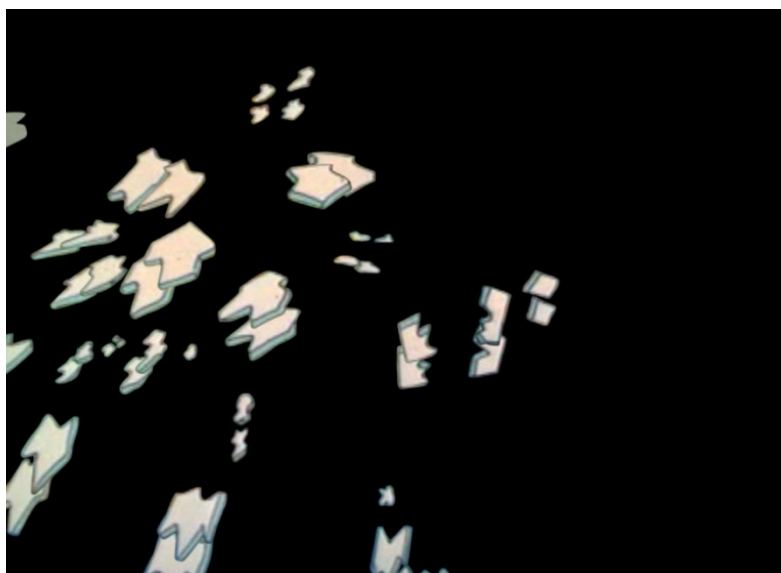
Figure 1: still *Plaster*, colour, sound, 2 min 17'

In *Strike* (see Figure 2), I sampled a visual device from the *Tom and Jerry* source material that functions as a visual accent at the point of impact of a violent gag. I propose that this visual device represents the hyperbolic gesture described by Andrin as characteristic of slapstick, but in an abstracted, visualised form. In *Strike*, decontextualisation and use of repetitive loops altered the comedic framing and sense of violence during highly synchronised sequences. I discuss differences in viewers' responses in their reading of violence in *Strike*, by reference to Kulezic-Wilson's discussion of the musicalisation of the soundtrack.

Figure 2: still *Strike*, colour, sound, 4 min 31'

In *Then Now* (see Figure 3), I sampled and reworked the *Tom and Jerry* source material creating a flicker-type effect by repeating single, coloured frames containing simple outlines of a visual device representing the point of impact of a gag in a *Tom and Jerry* short. I also paired the visual images with slowed sound to produce an asynchronous sound-image relationship in the work. I suggest that *Then Now* invoked a sense of immediacy, of an interior state, but did not specifically evoke the underlying violent subtext of *Tom and Jerry* and I refer to Taberham's (2018) discussion of entoptic phenomena in analysing viewer responses to *Then Now*. I propose that a key insight from the creation of *Then Now* relates to how asynchronous sound-image relations in the work occupy an ambiguous threshold that diminished the viewers' connections to the comedic themes and the underlying violent subtext of *Tom and Jerry*, and instead emphasised the act of perception.

Figure 3: still *Then Now*, colour, sound, 1 min 45'

In conclusion, the production of the artworks *Plaster*, *Strike* and *Then Now* provided insights into how a practice of altering sound-image relationships using processes of decontextualisation, desynchronisation and repetition, transformed the experience of the underlying subtext of violence within the slapstick comedy of *Tom and Jerry* source material. Strategies of repetition and looping reduced the capacity of sound to vectorize images, and without the forward sense of directionality and progression this served to reinstate the subtext of violence within the artwork *Plaster* in particular. Therefore, a key insight related to the role of repetition and asynchronous sound-image relations in reducing the comical framing of the source material. Viewer responses to *Strike* varied with respect to the perception of violence and I refer to the notion of musicalisation as potentially useful in accounting for the divergence in viewers' perceptions of violence within *Strike*. In terms of *Then Now*, a key insight related to how asynchronous sound-image relationships defamiliarised the source completely and reduced the connection to slapstick comedy and the violent subtext of *Tom and Jerry*; instead, the work evoked a heightened sense of interiority with an emphasis on the act of perception. A further insight from the research relates to the finding of gender-based expectancies in the perception of the offscreen voices in *Plaster* and *Strike* and suggests the potential influence of pre-existing gender biases related to the depiction of the female scream in film.

1.2 Research Questions

A broad outline of the research is provided here in terms of research questions, followed by the broad aim and objectives and method of submission.

1.2.1 Research Questions:

How does a practice of decontextualisation and desynchronisation of the sound and image elements of violent gags of *Tom and Jerry* unmask the underlying subtext of violence within the comedic slapstick of *Tom and Jerry*?

How does disrupting the linear narrative structure of *Tom and Jerry,* through use of repetition and looped forms, transform the viewer's experience of violence within *Tom and Jerry*?

1.2.2 Research Sub-Question:

The PhD research can be viewed as a case study that demonstrates the potential for a sampling practice to allow access to underlying qualities of violence within the slapstick comedy of *Tom and Jerry* source material.

The research also explores through practice, whether altering the perceived resolution of acts of violence in *Tom and Jerry* source material, fosters an exchange between themes of comedy and horror.

1.3   Aim and Objectives

1.3.1 Broad Aim

Broadly, the aim is to investigate how processes of decontextualisation, and desynchronisation of sound and image elements shift the perception of onscreen violence in *Tom and Jerry.*

1.3.2 Specific Objectives

To derive new animated video works from samples of *Tom and Jerry* that reposition relations between sound and image to make explicit the qualities of violence that underlie the slapstick comedy of *Tom and Jerry* – qualities that are obscured by the comedic frame of the original source material.

The practice-based research utilises an experimental, improvisational approach using Adobe After Effects software to reanimate samples of the *Tom and Jerry* source material.

The animated video works will enable critical reflection, interpretation and analysis of the impact of processes of synchronisation of sound and image on viewing onscreen violence implicated in the samples of *Tom and Jerry*. The research seeks to integrate and interpret the findings of my research practice through written critical appraisal that draws upon the fields of animation and film theory.

1.4   Contribution

The original contribution to knowledge proposed by this practice-based research is the development of moving image works that enable a different reading of the source material. The research reanimates elements of *Tom and Jerry* animated shorts from an era of animation typified by closely synchronised image and sound. The research contributes to the field of experimental film by offering a means, in practice terms, to renegotiate readings of violence contained with pre-existing animation.

This practice-based research represents an original contribution to a limited area of discourse on synchronisation in the field of film; the discourse is elaborated through a practice-based exploration of the role of synchronised sound in shaping readings of violence in slapstick animation source material. This contribution would therefore be of interest to

both animation and film practitioners, and wider audiences, both general and academic, with an interest in experimental animation forms.

By evaluating the practice-based research findings against existing theoretical frameworks adopting a pan theoretical approach in the field of moving image, it is proposed that the discussion of the impact of decontextualisation and desynchronisation in sampled animation represents a possible new line of future enquiry, which is anticipated to be of interest to film and animation practitioners and scholars.

1.5   Motivation and Intention

In terms of contextualising my motivation in developing this practice-based research, my interest initially stemmed from subjective observation of my attraction to early Golden Era animation of the 1940s to late 1950s, particularly *Tom and Jerry* animated short films, that were both comical and violent in content. I was partly intrigued by a shift in my perception from my childhood encounter of *Tom and Jerry* on television, where the inherent violence was not as salient to me as when I revisited it as an adult: As an adult, I was aware that it was simultaneously funny and extremely violent, and yet somehow the integration of sound and imagery occluded the subtext of extreme violence.

In terms of investigating the role of the integrated sound of *Tom and Jerry*, I was interested specifically in the Hanna and Barbera phase of the *Tom and Jerry* animated shorts due to the highly idiosyncratic musical scores produced by composer Scott Bradley that were suffused with these violent and comical themes. The power of Bradley's musical scores appeared dependent on highly controlled levels of synchronisation that enhanced the impact of visual imagery and delivered precisely timed gags to the fullest extent. However, it appeared to me that there was a further, less tangible organising function of the sound in Bradley's musical productions: a function that appeared integral to the dissonance of the affective experience of *Tom and Jerry*, that was at once horrifyingly violent and reassuringly light-hearted. I was motivated to explore concepts from the field of film studies, particularly theorisation by Chion, that hitherto had not been applied to the field of animation.

An influential factor in commencing the practice-based research related to my experience of completing a Master of Art (MA) in Fine Art Media, during which I had started to question the relationship between sound and image in animation during my MA. I had initiated a process of questioning the function of sound in my own practice and I started to explore improvisational modes of making in animation and sampling practices. Having also

previously engaged in empirically oriented neuropsychological and cognitive research I understood that practice-based research offered an opportunity to engage in different mode of research of engaging improvisational processes that could potentially elicit unforeseen and unpredictable outcomes in practice.

1.6 Format of Submission

The research project utilised a methodology that entailed a process of experimentation, improvisation and reanimation of samples taken from existing source material of *Tom and Jerry* animated short films. The submission comprises both the practice-based research and textual analysis in the form of written appraisal of the findings of the practice element. The dissertation submission contextualises and presents a critical appraisal of the findings of the practice-based works.

2.   Literature Survey

This section locates the conceptual framework that forms the basis for the practice in the PhD research by drawing from theory in the fields of film and animation, film music and slapstick comedy. I propose that there are points of intersection between these fields and their respective contributions, and rather than widen the scope impractically, I suggest they offer incisive insights into how the audiovisual relationships of *Tom and Jerry* operate. Violence permeates *Tom and Jerry* in the repetitive, physically violent gags, scenes of humiliation and mocking, power imbalances between characters and notoriously discriminatory representations, yet unarguably, the viewing experience is one of comical amusement. Understanding how audiovisual relationships facilitate the comedic in the violent slapstick of *Tom and Jerry*, I suggest, constitutes an essential background to the PhD practice which seeks to unmask the underlying violent subtext of *Tom and Jerry*.

As I discuss, there is an intrinsic and covert relationship between the tight synchronisation of sound and visuals in *Tom and Jerry's* production and the reading of the slapstick violence as comical. Therefore, I outline two key strands within this conceptual framework: firstly, I discuss sound and image synchronisation and contributions from cognitive film theory, and film music and soundtrack practices, with particular reference to the writings of Chion, Donnelly and Kulezic-Wilson; and secondly, I discuss concepts related to slapstick comedic violence, with an emphasis on role of the visual gag. Adopting a pan theoretical approach is advantageous, I suggest, in facilitating the identification of disparate elements of the audiovisual relationship in *Tom and Jerry,* and in facilitating my extrapolation of the sound and image determinants that make this form of slapstick violence comical. Following this, I identify key attributes of the sound scoring of *Tom and Jerry*.

2.1   Theorising Film Music

The expansion of the field of film music studies beyond the classical Hollywood model offers a means to reconsider elements of the classical model present in the soundtrack of *Tom and Jerry* shorts. I consider this essential in exploring creative processes aimed at disrupting the audiovisual elements of *Tom and Jerry*. For the purposes of the research, the established literature on film music theory as it relates to cartoons is considered with a specific focus on synchronisation of sound and image. In this section, I also outline key contributions from a cognitivist approach to film music and theories of the soundtrack; both perspectives, I argue, implicate sound as having a key role in the formation of meaning derived from film images and in imbuing unseen images with meaning. The notion of the unseen has been

extensively theorised by Chion (1994) in relation to concepts of offscreen space and acousmatic sound in film, which I also discuss. Specifically, I was interested in how the creative practice in the research could intervene into audiovisual relationships and potentially alter the meanings derived from sampled *Tom and Jerry* source material.

Cognitive film theory is grounded in a multidisciplinary research field that utilises an empirical research methodology aimed at reducing subjective bias (Cohen, 2015). Originating in the writings of David Bordwell (summarised in Bordwell, 1989), cognitive film theory integrates findings from cognitive psychology in positing that mental representations such as knowledge structures (schema) are implicated in top-down and bottom-up processes of film spectatorship, though as Noël Carroll (1992, p.200) observes, 'cognitivism is not a unified theory...because different cognitivist theorists often present small-scale theories that conceptualise the phenomena at hand differently and, sometimes, in nonconverging ways'. I suggest that theorisation from a cognitivist approach by Joseph Anderson (1996) is particularly relevant to the practice of the PhD research in terms of his discussion of the role of perceptual, cognitive and attentional processes in shaping viewers' responses to audiovisual material.

Anderson advances an ecological approach to cognitive film theory, proposing that evolutionary constraints in perceptual and cognitive processes influence the experience of viewing film at a basic level: 'it is, then, from the basic, ecologically driven act of perception and categorization that we proceed, by way of inference, deduction, abstraction, and so forth to other levels of categorization' (ibid., p.51). For Anderson (ibid., p.166), film is a 'set of nested illusions' whose effect is directly dependent on the constraints set by human perceptual limits. Clearly there are different approaches within cognitive film theory, but a shared focus is discernible in explaining how film elicits a range of responses, including emotions primarily by reference to intersubjective perceptual and cognitive processes that shape engagement. However, as Carl Plantinga (2002, p.31) observes, the multidisciplinary nature of cognitive film theory has also enabled a greater understanding of how intersubjective processes, specifically at the basic level of mental representations in human cognition, underpin broader social and cultural processes.

In the context of film music, a cognitivist approach broadly conceptualises music in film as performing three functions: imparting meaning, facilitating memory and suspending disbelief, Cohen (2000, p.361) asserts. This perspective, I suggest, explains how the sound-image relationship mediates the formation of meaning and the suspension of disbelief in relation to viewing animation such as *Tom and Jerry*. Cohen's (1993) experimental studies on the

relationship between sound and visual dimensions in film suggested that music narrativises and directs emotions, even when the visual stimulus is simple, such as a film of a bouncing ball. She found that when visual images without music were presented to viewers, they judged low, slow bounces as sad, and high, fast-moving bounces as happy. But, when musical tones were added and a low-toned, slow-paced melody was paired with a fast-moving ball, the film was judged as sadder than when the ball was presented alone, suggesting an additive effect of associative meaning from sound, even when divergent audio and visual elements were presented together. Cohen (2000, p.364) has conceptualised these findings in terms of the 'congruence-associationist hypothesis' that proposes that a film character whose actions are most congruent with the music, will receive the viewer's attention and the emotive associations of the music. In this context, congruence relates to structural similarities (or differences) across auditory and visual modalities, whereas association refers to how film music establishes a context for the interpretation of the film (Cohen, 2015, p.10). Therefore, Cohen's work implicates music in exerting a significant influence over the meanings viewers form of the actions of characters, which in the context of *Tom and Jerry*, suggests that music may potentially direct viewers' attention to a comedic interpretation of violent actions and generate expectations about scenes in line with this interpretation.

On the role of film music in the suspension of disbelief, Cohen (2000, p.367-368) suggests that cartoons rely more heavily on music to suspend disbelief than other film forms such as live-action, because of their inherent lack of realism. She suggests that film music facilitates the construction of a sense of reality in two ways: firstly, by providing an affective component that joins with the visual image leading to a stronger sense of reality than image alone and secondly, by providing stimulation that reduces the criteria of a reality test. Suspension of disbelief is typically evaluated by measuring a viewer's level of engagement or absorption in the film and higher levels of engagement are found when images are accompanied by film music compared to without. I suggest that the musical scoring of *Tom and Jerry* similarly suspends disbelief for the viewer by conveying the emotional and physical world of the onscreen characters through music.

Conventionally, music in film has been considered a subordinate element, a position that was certainly the case in the early Hanna and Barbera (pre-1958) production phase of *Tom and Jerry*. The subordination of music in film was reflective of the general dominance of the image in narrative film, however, it is important to recognise that within contemporary film music discourse, the notion of a discrete category of film music per se is problematic. Uncertainty about the nature of the relationship of film to music pervades academic

discourse because what is regarded as film has become indistinct, while the term film has become anachronistic and definitions of the soundtrack have changed over time, as Guido Heldt (2016) observes. Moreover, film musicology as a field has historically ignored forms such as short films, abstract and experimental film, documentaries and adverts (ibid., p.98). Importantly, film music is differentiable from 'pure music' by virtue of its function within a system, Claudia Gorbman (1980, p.184) asserts: 'To judge film music as we judge "pure" music is to ignore its status as a part of the collaboration that is the film...the interrelations between music and the rest of the film's system'. Among its constitutive parts, the most elementary distinction considered in film music relates to whether it sits within the diegesis of the film or is considered nondiegetic and part of the cinematic apparatus, though increasingly such dichotomies do not fit neatly into film practice (Stillwell, 2007, p. 184).

Despite the development of theory and practice in the field of film music, subordination of music to image persists in many soundtrack practices, but as Goldmark, Kramer and Leppert (2007, p.5) observe, even if the artistic intent is to use music as an 'accent or inflection', music may still subsume the role of representation whether intended and recognised as such, or not. Therefore, I was keen to explore, in practice terms, what Goldmark et al. (ibid., p.7) highlight as an alternative conception of film music when it is reframed outside of a hierarchical ordering of sound and image that recognises its potential agency as 'an object of interpretation' with a separate identity from visual images.

2.2   Synchronisation of Sound and Image in Film

In the Golden Era, classical Hollywood period in which the early Hanna and Barbera period of production of *Tom and Jerry* was firmly rooted, film music practices entailed highly synchronised, hierarchical arrangements of audiovisual elements. In analysing these processes, I consider Donnelly's (2014) writings on the role of occult processes of synchronisation in film as providing a useful conceptual framework to consider the question of how the audiovisual relationships in *Tom and Jerry* exploit visual-perceptual tendencies in the viewer whilst remaining largely hidden. Donnelly's notion of asynchrony is particularly relevant to the creative practice of the research and my interventions into sound-image synchronisation in the *Tom and Jerry* source material. Following this, I discuss the concept of the integrated soundtrack as theorised by Kulezic-Wilson (2020), with reference to the musicalisation of the soundtrack.

Synchronisation of sound and image features heavily in the classical Hollywood era where the composition of musical scores was typically undertaken after shooting and editing was

complete, which meant that music was developed and synchronised based largely on the visual edit (Donnelly, 2005). Close synchronisation of film music and sound to visual images, dubbed 'mickey mousing', was characteristic of early animated film and is described by Chion (1994, p.121) as the pairing of visual action and movement with musical 'trajectories (rising, falling, zigzagging) and instrumental punctuations of action (blows, falls, doors closing)'. The key aim of mickey mousing, Audissino (2020) suggests, is to direct the viewer's attention to a particular action within the filmic space. In the silent film era, music often provided an explicit commentary on the film by playing 'against the images, refusing to serve them subserviently but instead creating a sort of asynchronous counterpoint', or was used to illustrate onscreen action in extreme mickey mousing known as 'the canary effect' (ibid., p.152). Audissino also highlights the imitative function of mickey mousing in directing a viewer's attention by mimicking spatial movements, such as using fast downward scales when a character falls down a flight of stairs (ibid., p.155).

The sound scoring of *Tom and Jerry* featured limited use of this more extreme form of synchronisation, however I suggest that mickey mousing had an important role in amplifying the relationships between textures of sound and image in *Tom and Jerry* at moments of dramatic tension – a key characteristic of mickey mousing noted by Andy Birtwistle (2010, p.179). Whilst mickey mousing is frequently criticised as an over-used filmic sound trope, it performs an important function in animation by supporting the role of sound in facilitating the processing of visual movement – 'sound helps to imprint rapid visual sensations' (Chion, 1994, p.122). The lower threshold of perception of audio information compared to visual information, Chion proposes, highlights the key role of 'sound in action films and cartoons in speeding our eyes up' (2009, p.265).

The view that sound is key to the experience of film is also shared by Anderson (1996), who suggests that synchrony of sound and image is a fundamental property of the information gathering function of human perception that is applied when watching film. He posits detection of synchrony as an innate mechanism that is part of cross-modal confirmation processes: if 'patterns and rhythms are confirmed across modalities, the information carried by sound and image is perceived as being generated by a single event' (ibid., p.86). This account suggests that the tendency to search for cross-modal patterns leads to non-diegetic music being accepted as linked to visual images in film. I suggest this mechanism underlies the perception of synchrony of sound and image in *Tom and Jerry* wherein the synchronisation of a comical nondiegetic musical score with violent action directs the viewer towards a comical interpretation of the visual images. James Buhler (2018, p.13) also proposes that audiovisual synchronisation directs the viewer's attention by dividing the visual

image into foreground and background so that objects with synchronised sounds are naturally foregrounded as a means of imparting 'narrative sense'. This point is particularly relevant to the cel animation of *Tom and Jerry* in which there is a noticeable division between background and foreground cels with the musical score focused exclusively on the visual action in the foreground.

Close synchronisation of sound and image in early sound film was fuelled by a drive for perceptual realism until early theorists challenged the prevailing doctrine, Buhler suggests. One of the early challenges to sound-image synchronisation in film was formulated by Sergei Eisenstein (1898-1948), Vsevolod Illarionovich Pudovkin (1893-1953) and Grigori Alexandrov (1903-1983) in their essay 'Statement on Sound' (1928) and Pudovkin's essay 'Asynchronism as a Principle of Sound Film' (1929) in which they advocate for the use of counterpoint (when sound and image are juxtaposed) in film, proposing that asynchrony of sound and image enables a dialectical relationship between sound and image. In later writings, Eisenstein elaborated on the concept of synchronisation in his book, *The Film Sense*, conceptualising notions of external and internal synchronisation (1957, p. 82). He describes the notion of a 'hidden, inner' synchronisation of image and sound that arises from the fusion of 'plastic and tonal elements', whilst external synchronisation refers to a natural connection between an object and its sound (ibid.). By extension, in the PhD research I was interested in how repetition and looping could alter the sound-image synchronisation of the *Tom and Jerry* samples and potentially achieve a condition of asynchrony that might reconfigure the reading of violence specifically.

2.3   Occult Aesthetics

I propose that Donnelly's (2014) theorisation of processes of synchronisation in film is key to understanding the intangible qualities of sound-image synchronisation, particularly his conceptualisation of asynchrony in film – an area that the research explored by reworking sampled *Tom and Jerry* source material as part of the practice. Donnelly focuses on sound-image relationships in film by drawing on explanatory constructs from empirical visual-perceptual studies and operationalising concepts from Gestalt psychology. As well as providing a critical framework, his writing prompted lines of enquiry and potential intervention into sound-image relations as part of the practice element of the research.

Film discourse has overemphasised the role of narrative, Donnelly contends, to the exclusion of consideration of innate perceptual-cognitive structures and processes of pattern recognition in the structure of film, while processes of perception are central to both the viewing experience and the analysis of film, he asserts. His fundamental premise in *Occult Aesthetics,* is that film aesthetics are comprised of 'occult' processes that seek to conceal their operation, where occult is defined as 'hidden and unapparent' (ibid., p.2). He suggests that the sound film possesses unique aesthetic and perceptual properties that are defined by occult processes of synchronisation; these processes produce an illusory sense of unity and engender a sense of reality for the viewer. Any knowledge of the operation of these processes such as synchronisation processes, he asserts, are concealed from the viewer to ensure that the medium of cinema can function effectively in engaging the viewer in a coherent onscreen world.

Cinema exploits the desire for unity through the use of suggestion in allowing information to register on different emotional and cognitive levels, guided by the Gestalt concept of the 'minimum principle' that refers to the tendency for the perceiver to see the simplest possible interpretation of a pattern (ibid., p.23). Accordingly, film's limited repertoire of audiovisual language renders only limited details of the real world and fosters a tendency in the viewer to 'fill in the gaps' of missing information, by focusing on the overall whole rather than directing attention onto individual sound and image elements (ibid.). A key process in filmmaking, Donnelly proposes, is the unification of sound and image into a single Gestalt perception – 'a seamless, unproblematic representation of reality'- so strong is the human desire for a unified and coherent experience (ibid., p.22). Thus, Gestalt psychology, he suggests, explains cinema's reality effect, whilst mainstream film seeks to eliminate uncertainty and contain anxiety through the provision of a continuous and cohesive whole. Empirically validated studies of perceptual-cognitive processes and visual-perceptual

illusions reveal how cinema consistently exploits these visual-perceptual effects to maximise dramatic moments of synchronisation, Donnelly contends, whilst tending to invalidate the notion that film is a primarily visual medium. In studies of sound-image congruence effects, it has been demonstrated through motion bounce illusions that sound effects significantly alter visual perception and therefore has relevance to understanding how a unified percept of sound and image appears 'living onscreen' (ibid., p.79). These ideas informed my practice-based interventions into the *Tom and Jerry* source material; the notion of the minimum principle prompted my questioning of how decontextualisation of the samples leads to changes in viewers' interpretations of the underlying themes of *Tom and Jerry*.

I was also influenced by Donnelly's stratification of different levels of synchronisation in film when considering how the sound-image relationships in the *Tom and Jerry* source material might be altered in my practice. He suggests that all film tends to fall within one of three broad categories of sound and image relationship: from 'tight synchronisation at one end to total asynchrony at the other, and a condition of 'plesiochrony' of vaguely fitting synchrony in the middle (ibid., p.31). Crucially, he differentiates synchrony and asynchrony in proposing that they represent 'different ways of thinking' (ibid., p.2). The drive for unity and cohesion, Donnelly contends, is intimately tied to the process of synchronisation where synch points act to provide a logic to the film perceptually and aesthetically.[3] This notion of the synch point was important in guiding my analysis of the dynamics of the *Tom and Jerry* source material prompting my realisation of how the dynamics of a gag typically cohered around such synch points; this was also useful in guiding my decision-making regarding how I might disrupt these points of synchronisation by creating asynchronous sound-image relations at these points.

Donnelly highlights how the juxtaposition of sound and image ('counterpoint') produces asynchrony that ruptures the illusory unity of sound and image (ibid., p.81). Asynchrony is identified within Bill Morrison's film *Decasia* (2002), where a repetitive, droning soundtrack by Michael Gordon accompanies the disintegrating visual imagery that remains resolutely incoherent throughout generating a 'relentless marching apart of sound and image tracks' (ibid., p.120). Sustained periods of asynchrony can not only generate feelings of uncertainty in relation to the illusory diegetic world on screen but can induce a state of cognitive dissonance – a mental state produced by the experience of holding two contradictory ideas

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[3] A synch point refers to a focus point around which the image and soundtrack are matched, notably on the basis of mouth movements during dialogue or sound effects of onscreen actions such as gunfire and may emphasise an activity with a 'stinger or sonic punch' (Donnelly, 2014, p.4). Synch points function to connect image and sound elements by performing a locking function and are implicated in the concept of rendering where sound is used to convey onscreen feelings and affects.

simultaneously that leads to feelings of anxiety due to an innate preference for internal consistency across beliefs and actions. In practice terms, this prompted my attempt to create asynchronous sound-image relations in the sampled source material, as a means of invoking a sense of dissonance in the viewers' perceptions of comedic versus violent themes.

2.4　The Integrated Soundtrack

In exploring the sound-image synchronisation of the *Tom and Jerry* source material in my practice, I was aware that despite synchronisation governing the musical scoring as previously discussed, there were also attributes of the scoring that suggested a departure from the classical Hollywood style of scoring. In *Tom and Jerry's* musical scoring, Bradley's orchestration entailed using the sound of musical instruments as effective stand-ins for more naturalistic sound effects whilst creating a sense of musicality across the whole soundtrack that conformed to the demands of comic timing necessary to deliver gags effectively. Contemporary film scoring practices have shifted significantly from the classical Hollywood model of tightly synchronised music and sound where music was the most important element of the soundtrack; instead, music is now conceived as just one element among several in the soundtrack. Whilst Bradley was working within the classical Hollywood model of film scoring, in which a hierarchical system of sound was applied with music as the dominant element among sound, his scoring practices nevertheless reflect a more integrated approach, although this approach is distinct from the practices conceptualised as characteristic of the integrated soundtrack by Kulezic-Wilson (2020), as I discuss below.

I propose that theorisation of the integrated soundtrack offers a means to reconceive the audiovisual relationships in the *Tom and Jerry* source material and, in practice terms, suggests an alternative reconfiguration of sound-image relations – a key aim of the PhD research. Within the conceptualisation of a unified and integrated soundtrack, Kulezic-Wilson (ibid., p.5-8) describes how the conventional soundtrack hierarchies of music, sound effects and dialogue are disregarded, and instead an integrated approach adopted that embraces 'the interconnectedness of all soundtrack elements'. Subtleties of underscoring using unconventional methods have been incorporated through new soundtrack practices, which means that Hollywood film scoring clichés are effectively avoided, leading to an 'engaged rather than a passive viewer', she suggests (ibid., p.5). In films such as Béla Tarr and Ágnes Hranitzky's *Werckmeister Harmonies* (2000) she describes a sense of audiovisual hypnoticism of long takes, background loops and synchronised sounds that establish a rhythm within the film (ibid., p.105-107). Several key attributes emerge from the

integrated soundtrack including changes to viewers' experiences and expectations of film with an increased receptiveness to enhanced cinematic sensuousness and the emphasis on musicality[4]. Cinematic sensuousness can take cerebral, embodied and emotional forms, Kulezic-Wilson suggests, highlighting a key role of sound in producing 'intensified audiovisual aesthetics'[5] that demonstrate a tendency to 'synchronise the experience of the spectator with that of the film's body', in part due to processes of musicalisation (ibid., p.96).

The audiovisual works produced in the PhD practice also approach a condition of musicalisation of the sound-image relationships, which I suggest, altered the affective engagement of viewers. Critically, Kulezic-Wilson highlights the potential of the integrated soundtrack to facilitate a dialectical relationship between sound and image by embracing the interconnectedness of soundtrack elements when conventional hierarchies of the soundtrack are disrupted. Arguably, the scoring of *Tom and Jerry* already incorporates an interconnectedness of music and sound because of Bradley's specific style of orchestration, but it is directed towards a representational rather than aesthetic function and oriented towards the comic timing of visual gags. Nevertheless, I suggest that Kulezic-Wilson's discussion highlights the potential for a dialectical sound-image relationship to emerge when the sense of musicality is reconfigured by altering the interrelationships of the constitutive elements of the *Tom and Jerry* soundtrack.

A shift towards an emphasis on soundtracks for their aesthetic rather representational function was also previously highlighted by Donnelly (2013), who suggests that this shift was facilitated by the proliferation of digital compositional processes such as sampling, that foster conception of music in electronic terms. This view overlaps with Chion's (1999, p.150) discussion of the impact of technological advances in multitrack film sound; he invokes the notion of the 'superfield' to describe the altered perception of space afforded by multitrack sound that emphasises ambient offscreen sounds that extend past the screen and attain a level of autonomy from visual images. As Donnelly observes, offscreen space can be activated through ambient sound as a means of maintaining a sense of threat by withholding visual information or representing an emotional landscape or a sense of interiority. These ideas suggested a means, in practice terms, to intervene and reposition the elements of the

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[4] Cinematic sensuousness relates to aesthetic experience and the foregrounding of sensuous features of the medium, a 'sensuousness of the form itself – its sonic and visual textures, composition, rhythm, movement and flow – rather than sensations generally associated with advanced exhibition technology' (Kulezic-Wilson, 2020, p.9).

[5] Carol Vernallis (2013, p.4-6) uses the term 'intensified audiovisual aesthetics' to describe a 'post-classical style' of 'accelerating aesthetics, mingling media and memes' in which 'fluid, flexible, heterogeneous and affectively rich' musical and audiovisual processes are reflected in audiovisual sequences and visual techniques in contemporary media.

Tom and Jerry source material to both embrace the interconnectedness of elements of the soundtrack and activate offscreen sounds to enhance a sense of interiority, therefore.

2.5   Theorising the Unseen: Offscreen Space, the Voice and the Acousmêtre

As part of the creative practice of the research, audiovisual samples were taken from *Tom and Jerry* shorts that featured the human voice, though rarely in the form of spoken dialogue. The presence of the human voice in the audiovisual samples necessitates its consideration within the wider context of film discourse. Chion's theorisation of the voice and the acousmêtre is particularly useful in its exploration of the offscreen voice and is considered in detail, therefore. Chion (1999, p.5) identifies a privileging of the human voice above other sounds in film and a tendency of the voice to structure the sonic space it occupies, reflecting a natural vococentrism. Of especial relevance to the research, given its frequent usage in the *Tom and Jerry* samples, is an understanding of the human scream as deployed in film, particularly the gender-based connotations of the human scream.

In describing the 'liberty of imagination' characteristic of the cartoon, Chion (2009, p.39) suggests that its imaginative power is derived from the 'acousmatic imaginary' of its construction – from sound whose source is heard but unseen. Such acousmatic sound possesses a degree of narrative indeterminacy that allows for freedom of interpretation. When the acousmatic sound is a voice however, a different form of power emerges – 'we get a special being, a walking and talking shadow' – the acousmêtre (Chion, 1999, p.21). An acousmêtre who has been seen on screen, but has exited the film frame, is perceived as 'more familiar and reassuring', compared to the 'not-yet-seen' acousmêtre whose voice 'becomes invested with magical powers...usually malevolent' (ibid., p.23). This form of acousmêtre brings a sense of disequilibrium and tension and provokes in the viewer a wish to see its source. The 'bodiless voice...is taken as more or less all-seeing, all-knowing, often even all-powerful...the limits of his being and his body generally go undefined' (ibid., p.100). The desire in the viewer to see what is being heard occurs in Alfred Hitchcock's *Psycho* (1960), where viewers hear the dialogue of mother and son speaking, but the visual source is withheld. The scene, Chion suggests, encapsulates the narrative as an 'obsessive idea of getting into the house in order to see the mother', to locate the source of the unseen voice; *Psycho* progresses with suspense built by the possibility of seeing the mother and 'de-acousmatizing' the voice, but Hitchcock repeatedly withholds the joining of body and voice all the way to the end of the film (ibid., p.141).

When the voice is presented in film is a scream it functions as a point of convergence potentially bringing together plotlines or marking the end point of a trajectory (ibid., p.76). It also represents a point of instantaneity, 'an ineffable blackhole', reflected in Chion's use of the term 'screaming point' to denote its capacity to suspend time. Its power does not derive from the quality of the voice, but from its placement, indeed it can be 'a place occupied by nothing, a blank, an absence', the 'unthinkable', outside of representation (ibid., p.76-77). He posits the female scream as having the power to signify something absolute that a male voice cannot achieve and proposes this reflects a societal gender bias – 'we tend to call the woman's cry a scream, and the man's cry a shout' (ibid., p.78). His rationale in imbuing the female voice with the power to represent the absolute, resides in his depiction of the female scream as embodying a point 'outside language' that suggests a limitlessness, whereas the male shout demarcates a territory and signifies both power and a will to exercise power. Within the practice, my interest in the use of the voice to both punctuate the end point of a gag and intensify the emphasis on the underlying violent subtext guided the inclusion of the sounds of screams in the artworks produced.

2.6   The Sound of *Tom and Jerry*

In this section, I discuss theorisation of sound in animation with reference to the production processes of *Tom and Jerry*. I propose that the contribution of sound to the process of projecting violence as comedy in animation, has been relatively neglected, whilst research has tended to focus on the potential harmful effects of cartoon violence on viewers. I discuss Taberham's (2018) delineation of the key characteristics of the sound design of zip crash animation and Goldmark's (2011) depiction of the music of Golden Era animation as 'funny music'. The section concludes with a discussion of *Tom and Jerry's* sound production including the musical scoring by Bradley for MGM studios under the artistic direction of Hanna and Barbera.

2.6.1   Zip Crash Animation

The PhD research analyses the sound-image relationships of *Tom and Jerry* shorts as a paradigmatic exemplar of the prototypical conventions of 'zip crash' animation, as described by Taberham (2018, p.136) following Norman Klein's (1993) analyses of cartoons. The term zip crash refers to a mode of animation, typically theatre-shorts of the 1940s to 1960s by MGM and Warner Bros, in which a particular pattern of relationships between audio and visual elements was developed:

The zip crash mode can be characterized as highly mannered and ostentatious, with sound that plays an active part in the humour of the films, rather than defining the visual rhythm or operating solely in the service of the story. Sound effects are both flamboyant and incongruous, such as a gunshot sound when characters dash off screen, or a tyre screech when they come to a stop...Music in zip crash soundtracks is fragmented, shifting in tempo and genre, and frequently quotes brief excerpts of other compositions for comic effect.

(Taberham, 2018, p.136)

Despite the on-screen anarchy of zip crash animation, the sound design is highly structured by conventions related to the use of audio and visual elements, including the use of sound effects that are not necessarily naturalistic or congruent with the visual elements, but as Taberham (ibid., p.138) asserts, function to convey feelings associated with the on-screen action e.g. using the sound of a car tyre screeching when a character digs in their heels to come to a stop. This function of sound, termed rendering by Chion (1994, p.109), describes the viewer's recognition of sounds as 'truthful, effective, and fitting not so much if they reproduce what would be heard in the same situation, but if they render (convey, express) the feelings associated with the situation'.

Taberham (2018, p.138) identifies a key attribute of zip crash sound design in the work of Chuck Jones and Treg Brown in the animated short *Now Hear This* (1962), noting the role of sound in 'perceptually imprinting fast visual events' on viewers through the use of sound punctuations with 'crashes, gun shots, swooshes'. He observes that in zip crash sound design, the music (typically full orchestration), sound effects and visual elements combine in a mutually reinforcing way, whilst Brown's non-musical sound-effects become musicalised when combined with orchestration by composer Carl Stalling (ibid., p.139). A further key attribute of zip crash sound design is its use of sampling; classical, jazz and popular songs were frequently sampled in fragments, though often subject to processes of retiming in order to fit more precisely with the visual rhythm of the onscreen action of the animation.

2.6.2   The 'Funny Music' of cartoons

The use of sound and music in cartoons for comedic effect has led to the long-standing characterisation of cartoon music as funny music, though this characterisation fails to recognise the subversive use of music in Golden Era animation. In his book chapter, 'Sounds funny / funny sounds: Theorizing cartoon music', Goldmark (2011, p.257) highlights the capacity of cartoon music to self-satirise and identifies how discourse fails to recognise the qualities, expectations and purpose of cartoon music compared to live action film. He notes that following the release of *Fantasia* (dir. Walt Disney, 1940), classical works were

repeatedly satirised in cartoon shorts by Warner Bros' Bob Clampett (1913-1984), Friz Freleng (1906-1995) and Chuck Jones (1912-2002), who launched 'scathingly critical satires of the culture of the concert hall' and the 'artificiality of the performance of classical music and the aura of sanctity that clung to it' (Goldmark, 2002, p.109). The attraction to reworking classical works, Goldmark proposes, stems from the fact that these musical pieces could be manipulated musically to fit with the onscreen gags, yet retain enough of their implicit structure to be recognisable as the original classical work.

Eliciting humour using music largely depends on the operation of rules and anticipation in the audience, suggests Miguel Mera (2002), and has direct relevance for understanding the comic timing of gags in *Tom and Jerry* shorts. Mera notes that theories of humour have tended to focus on notions of superiority, incongruity and relief, with consensus on the role of audience complicity in the subversion of expectation and anticipation – 'for an audience to find something funny, they must be complicit in the anticipation: they must expect what you predict them to expect' (ibid., p.91). Humour is directly elicited in music by parody, referentialism, instrumentation and diegetic/nondiegetic ambiguities but importantly depends on the situation and context rather than the musical gestures per se[6] (ibid., p.96). In composing for *Tom and Jerry*, Bradley frequently appropriated preexisting musical compositions, which comprise a separate entity from music specially composed for film, by virtue of it possessing its own 'semiological, spatiotemporal and emotional context' (ibid., p.100). Preexistent music becomes humorous when the audience recognises its prior context and can contrast it with the new context, potentially creating a perception of incongruity. Incongruity is also at play in the use of purported 'funny instruments' such as the tuba, bassoon, trombone, double bass and piccolo with very low or high notes that function at the musical extremes outside of the 'pleasant-sounding range' (ibid., p.102-103). This capacity enables humour to be injected into a scene and is frequently deployed as a special effect in *Tom and Jerry's* sound score serving as hyperbolic exaggeration of the actions contained within a gag.

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[6] Parody requires a familiarity with the subject being parodied and is determined by the intrinsic properties of the listener, although the context overrides the music in determining whether parody music in film is funny or not. Referentialism relates to the use of known musical works in a comic context, requires a recognition and understanding of the comic intention. Instrumentation refers to the notion that certain instruments such as the tuba, bassoon, trombone, double bass and piccolo are known as being comedic. When music belongs to either a diegetic or nondiegetic category, humour is elicited when the boundary is crossed, for example when the music starts as nondiegetic but crosses the boundary into being diegetic (see Mera, 2002, p.107).

2.6.3 *Tom and Jerry's* sound production

It is important to consider the context in which *Tom and Jerry's* production developed, particularly within the bustling Hollywood industry of 1939 that contrasted sharply with the post-Great Depression social climate of America and Europe's immersion in World War II. As Robert Adams (1991, p.10-11) observes, MGM studios represented a 'kingdom unto itself' with a set of MGM film theatres tied into the release of MGM films. It was against this backdrop that Hanna and Barbera were tasked with developing their idea for a cartoon series:

> It seemed like a solid idea to both of us. A natural conflict, a cat after a mouse, a big guy picks on a little guy, sympathy for the abused mouse. Laughter and applause when big guy, cat, gets just deserts.   (Hanna,1991, p.7)

The first cartoon of the series, *Puss gets the Boot,* premiered in 1940 in Los Angeles, and featured a grey cat called Jasper (renamed Tom), in combat with unnamed brown mouse[7] (later named Jerry), each with markedly different personalities: Tom is described as a 'fiendish opportunist, always anxious to ingratiate himself with the powers at be', whilst Jerry is described as 'the impish schemer, happy minding his own business until cornered, piqued or generally provoked', though Jerry most frequently emerged the victor in their battles (Adams, 1991, p.16). Humans featured rarely in the series except for the housekeeper character Mammy Two Shoes. *Puss gets the Boot* went on to receive an Oscar nomination for Best Short Subject Cartoon, which encouraged MGM to fund production of further *Tom and Jerry* shorts.

Patrick Brion (1990) outlines changes that occurred in the production process during three distinct periods of production of the *Tom and Jerry* shorts up to 1967. The periods are identified according to artistic direction of the time: William Hanna and Joseph Barbera period (1940-1958), the Gene Deitch period (1960-1962) and the Chuck Jones period (1963-1967). According to Brion, the Deitch and Jones periods of *Tom and Jerry's* production took place during a time of relative decline of the American cartoon, in contrast to the Hanna and Barbera period, which is widely acknowledged as representing the height of 'dazzling artistic genius' in animation production (ibid., p.5). Bolstered by a budget of $50,000 per *Tom and Jerry* short, MGM ensured that the investment in *Tom and Jerry* was on par with the funding of major feature film productions. Leonard Maltin (1987) describes how Hanna and

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[7] Barbera (1994, p.74-76) states that Jerry was unnamed in *Puss gets the Boot*, and the names Tom and Jerry were on the winning entry drawn from a hat in a competition among studio personnel and had been submitted by an animator named John Carr.

Barbera's working methods entailed meticulous planning and preparation with high expectations placed on animators to fulfil their high standards. In contrast to the improvisational nature of the initial stages of storyboard and script writing – with Hanna working out most of the timings and Barbera working on the gags and sketches – the animation was undertaken in a highly routinised division of labour, with animators frequently having to redo sequences to 'catch an expression just right or sharpen the timing of a gag' (ibid., p.290). The sound scoring of the cartoon was undertaken by Bradley in discussion with Hanna, although the timing was largely prespecified for action sequences then transcribed onto an exposure sheet and a bar sheet for annotation of the musical score.

2.6.4   Scott Bradley's scoring of *Tom and Jerry* (1940-1958)

> [...] the orchestra is always ready to supply personality on the sound track – pointing up the high lights of one scene, emphasizing the intensity of another, and making possible long sequences of silent action which, but for the music, would be unbearable
> (Bradley, 1947, p.30)

A colossus of cartoon music, Scott Bradley (1891-1977) was the key musical figure in MGM animation studios over twenty-five-year period, from 1934 until the studio closed in 1957, though several shorts have a release date of 1958. Bradley composed the musical scores for virtually all of MGM's cartoon productions, including the *Tom and Jerry* shorts and several film scores over this period. Bradley's style of composition in cartoon music has been described as 'highly dissonant, contrapuntally labyrinthine, and rife with special effects' (Goldmark, 2005, p.45). Bradley was known for taking an innovative approach to scoring, famously utilising composer Arnold Schoenberg's twelve-tone technique, and proposed that cartoon music should be progressively modern (Bradley, 1946, cited in Goldmark, 2005, p.49). He was also characteristically less reliant on pre-existing melodies than his cartoon composer contemporaries, preferring to write original music, although excerpts from popular melodies are discernible in the *Tom and Jerry* shorts.

The emergence of *Tom and Jerry* as a box-office hit with *Puss gets the Boot* (1940) led to the development of the 'MGM Style' of virtually no dialogue, and the paradigm shifted towards a recurrent theme of 'fight, chase, conflict' taking inspiration from slapstick and vaudeville comedic action (ibid., p.51). At this time, Bradley was granted an unprecedented level of freedom in his work on the *Tom and Jerry* shorts, and he was able to work his score into any blank spaces in narrative, emphasising the action and enhancing mood without conforming to prespecified dictates on the rhythm or pace. The production process altered when new directors, Hanna and Barbera, were appointed by MGM, and Bradley intervened

at an earlier stage in productions composing from bar sheets that contained specific timings for the gags. This enabled a process of 'fusing' his music more closely with the action wherein the structure of a *Tom and Jerry* short was likened to a 'progression of reactions', an 'ever-rising level of aggression until the cartoon's action and music simultaneously reached a violent explosion' (ibid., p.52).

In terms of scoring chase sequences, Goldmark notes Bradley did not allow the rhythm of the chase to completely direct the pacing or style of the music, instead he employed a more flexible approach to underscoring. In *Puttin' on the Dog* (1944), Goldmark highlights how Bradley's music does not engage in typical matching of footfalls to downbeats, instead it seeks to:

> […] fight against any synchronization of the aural and visual elements. Without a steady beat to dictate how the scene unfolds musically, each gesture of the cue can connect to the action without being enslaved to the beat. The score then switches ...causing the momentum to increase and the tempo seemingly to speed up until complete anarchy is reached as the instruments hold out a climatic, trilled stinger-style chord – and all for a chase that last less than ten seconds. (ibid., p.53)

The level of violence in the chase sequences of *Tom and Jerry* was unprecedented in its focus on repetitive acts of abuse, mostly enacted on Tom's body and accompanied by his screams of pain: Bradley's response was to intensify the music in line with the intensity of the violence. Goldmark cites the critic John Culshaw's (1951) reflections on the appearance of 'true' violence in cartoons post-World War II and insists on the human basis of narratives of violence enacted on the animal bodies of *Tom and Jerry*.

According to Goldmark, Bradley's music in *Tom and Jerry* was key in imbuing the violence, not just with a sense of how it sounds, but crucially how it feels, invoking Chion's (1994) concept of rendering. He suggests that the music anticipates the sound and feel of gestures, so that over a very brief period (e.g., eight frames) a physical impact resonates deeply 'in the viewer's psyche to cause him or her to flinch at the thought (and sound) of a painful injury' (ibid., p.63). Bradley supplied weight to violence by rendering pain starkly through the use of shock-stinger chords to create dissonant sounds, instead of relying on what he viewed as clichéd traditional sound effects. I propose, however, that the fast return to melodic orchestration after a violent impact in a *Tom and Jerry* short, served to ensure there was no lasting impact of the violence, as shock-stinger chords were sustained briefly only.

Frequently, Bradley employed music to direct the audience in a forward progression towards the conclusion of a gag, a process termed vectorization by Chion (2009), that allows an audience to anticipate the endpoint of a chase in advance. Goldmark (2005, pp.66-67) cites

the final chase scene in the *Tom and Jerry* short *Solid Serenade* (1946) in which the descending pattern of strings are overtaken by lower strings, similarly descending, with a foreshadowing of the danger of a dog through the use of downward sliding trombones. The downward sliding glissandos act as a means of rendering Tom coming to a halt, but the repeated use of a chord from the melody of *Is You Is* (Jordan and Austin, 1944) as the dog enters the kennel, alludes to its prior use during a violent scene alerting viewers to Tom's unfortunate impending fate (see Figure 4).

Figure 4: still *Solid Serenade (*1946) colour, sound, 7 min 21'

2.7   Cartoon Violence and *Tom and Jerry*

> We get to thinking of those little characters as human beings who believe in "direct action" and the world needs a few laughs in the midst of so much suffering.
> (Bradley, 1944, p.119)

Tom and Jerry animated shorts from the early Hanna and Barbera era (pre-1958) are frequently cited as having produced the most violent version of its slapstick comedy in the history of its production (Boone, 2021; Britannica, 2021; Lowe, 2021). This era of *Tom and Jerry* is also characterised by high investment in music and sound production, which played a central role in the comedic impact of gags, through precise timing and synchronisation with visual action. The delivery of violent gags, associated with the chase format, structured the form of the *Tom and Jerry* shorts of this era, where narrative was not the dominant concern (Barbera, 1994, p.114). *Tom and Jerry* has been identified as a paradigmatic exemplar of mainstream cartoon violence and subject to evaluation of its specific effects on children (Atu

and Anshi, 2020), whilst cartoon violence in general has been extensively scrutinised in research on whether viewing violent cartoons increases aggressive behaviour in children and adolescents (Stein & Friedrich, 1975; Hapkiewicz, 1979; Nathanson & Cantor, 2000; Potter, 2003; Kirsch, 2006; Blumberg, Bierwirth & Schwartz, 2008; Ghilzai, Alam, Ahmad, Shaukat & Noor, 2017).

As Kirsch (2006, p.548) observes, cartoons tend to sanitise the outcomes of violence, whilst pain and suffering are rarely depicted realistically and comedy is used to 'camouflage and trivialize the violence' (see King, 2000; Potter and Warren, 1998) – a point that equally applies to *Tom and Jerry*, I propose. A key element of the portrayal of the cartoon violence of *Tom and Jerry* as comedic relies on its effects being presented as temporary. Peacock's (2014) articulation of the unharmed body in slapstick, I suggest overlaps with Well's (1998) notion of the invincible body in cartoons in establishing a comical frame. As Wells observes, the destructive acts that form the narrative substrate of cartoon gags tend to have no enduring impact:

> *Tom and Jerry* continuously pursue each other, the consequence of which is wholesale demolition of the domestic environment...all without any real consequence. The home is immediately repaired and ready for its next assault, but the audience never sees the implications of destruction for those who experience or live within it.
> (ibid., p.161)

A further element of the presentation of cartoon violence as innocuous or harmless, is the framing of cartoon characters as indestructible, despite being subjected to repeated violent gags. Wells (ibid., p.146) suggests that underlying dynamics of power and status differentials between characters thematically structures gags in cartoons such as *Tom and Jerry* whom he classifies as 'equal adversaries', in contrast to the dynamic of 'inept hunter / superior hunted' relationship of *Elmer* and *Bugs Bunny*. Norman Klein's (1993, p.38) writings in *7 Minutes: The Life and Death of the American Animated Cartoon,* on character development categorises the cartoon character as occupying one of three roles in terms of the controller, the over-reactor and the nuisance; the indestructible nature of the controller guides the cartoon and defines 'how far the others can go, whether they can be amoral, strike each other at will. He decides when the mischief will end', in contrast to the over-reactor who is on the receiving end of violent gags and the nuisance who acts as an annoyance to the over-reactor. In terms of *Tom and Jerry*, Klein suggests they trade-off controller roles, which appears consistent with the fluid and fluctuating power relations depicted throughout *Tom and Jerry*.

The characters presented in *Tom and Jerry* embody the fluidity of the language of animation that enables a playful flexibility in its modelling of gender identities and social status – whilst its 'handling of race operates differently due to its dissemination of crude, racist stereotypes, particularly of African-Americans', Wells (1998, p.215) asserts. In later years, a logic of absence and erasure prevailed within *Tom and Jerry* in the handling of the racially discriminative character Mammy Two Shoes who was omitted during the era of Civil Rights in the US and replaced by a white Irish female character. Wells' analysis of intersecting issues pertaining to the language of animation make a perceptive contribution to understanding the visual dynamics operating during *Tom and Jerry* gags, but the relative contribution of the sound score in framing violent gags as comedic remains largely unrecognised in his analysis.

The perception of onscreen violence in *Tom and Jerry*, Wells suggests, is largely diffused and softened by a process of temporary depersonalisation that takes place during violent gags. Wells cites the example of Tom being hit by an iron and his body taking the shape of the iron mid-gag, which enacts a process of depersonalisation and reduces empathic engagement by the viewer. The transformation of the body during a violent gag elicits laughter in the viewer, he suggests by a process of diffusion of the perception of pain and instead enhances the comical reading of the gag (ibid., p.213). I suggest that Cohen's cognitive-associationist account offers a means of understanding how the sound-image relationship mediates Wells' notion of temporary depersonalisation; the musical scoring of *Tom and Jerry* actively participates in the process of depersonalisation by associating light-hearted music with the aftermath of the violent impact. I propose that this serves to diffuse the intensity of the visual image of violence, but also redirects the meaning towards a reading of the violence as innocuous and temporary.

In animation, violence that results in drastic changes of bodily form is largely reserved for animal bodies, because of dominant social norms, suggests Olga Blackledge (2010): 'if the animated characters are "advanced" to the position of a human, they have to comply with social rules, thereby losing their ability of bodily transformation and acquisition of solid, integral images' (ibid., p.53). She notes that *Tom and Jerry* occupy animal bodies of cat and mouse, but do not possess stable bodily forms due to acts of violence inflicted upon them and highlights how Hanna and Barbera, overturned the rules they previously abided by when working at Disney studios. The rules circulated to Disney staff related specifically to preserving a character's bodily integrity when animating. Once established at MGM studios, Hanna and Barbera's use of violence in *Tom and Jerry* did not respect physical boundaries of bodily form and frequently distorted, pierced and decapitated the protagonists' bodies with

a vast array of everyday objects. The key attribute of the violence of *Tom and Jerry*, Blackledge contends, is that it appears fantastical and imbued with excess, which denies a sense of reality, both in the resulting forms and the unrealistic consequences: 'all the injuries heal magically in no time' (ibid., p.51).

Unquestionably *Tom and Jerry* established the subgenre of the chase cartoon with its two protagonists – 'combatants in a constant uproar' – combining physical humour with an extreme degree of violence, that harkened back to vaudeville, but transgressed the natural boundaries of the physicality of the human body – 'animation had no such boundaries' (Goldmark, 2005, p.58). Whilst Bukatman (2014) suggests the suburban backdrop of *Tom and Jerry,* of seeming bourgeois domesticity, is key in playing the quotidian context off against the uncanniness of the violent action. Hanna and Barbera developed the violent chase plotline with *Tom and Jerry* from 1940 to 1958, developing the paradigm that would be further popularised by the Warner bros chase duo Wile E. Coyote and the Road Runner developed by Chuck Jones (director) and Mike Maltese (writer) in 1949.

However, the violence of *Tom and Jerry* was frequently subject to criticism for the level of violence it portrayed. Michael Barrier (1991, p.420) describes the *Tom and Jerry* production team as 'pursuing their objective as relentlessly as a cohesive infantry squad', and adopted a critical stance towards the aesthetics of violence that permeate *Tom and Jerry*:

> Hanna and Barbera never addressed the aesthetic issues that the violence in their cartoons constantly raised; there's no reason to believe that they ever recognized that such issues existed […] As if to compensate for their consistently high level of violence, the *Tom and Jerry* cartoons in the late forties began to offer ever larger helpings of sentimentality. (ibid., p.422)

Barrier's appraisal of Bradley's musical contribution to *Tom and Jerry* appears largely informed by his disapproval of the violence as he considered the music as functioning merely as an aural equivalent of the violent visual narrative. In Barrier's view, the shorts represented an awkward amalgam of the differing styles of Hanna and Barbera, such as *Fine Feathered Friend* (1942), which he considered sentimental, yet more brutal than any previous short. He also identifies changes in the visual appearance of characters over time as evidence of a lack, or absence, at the centre of *Tom and Jerry* narratives and cites the frequent, dramatic changes of tone in the short *Baby Puss* (1943), from being 'full of cute stuff, with no really violent gags' towards malevolence and viciousness (see Figures 5-6).
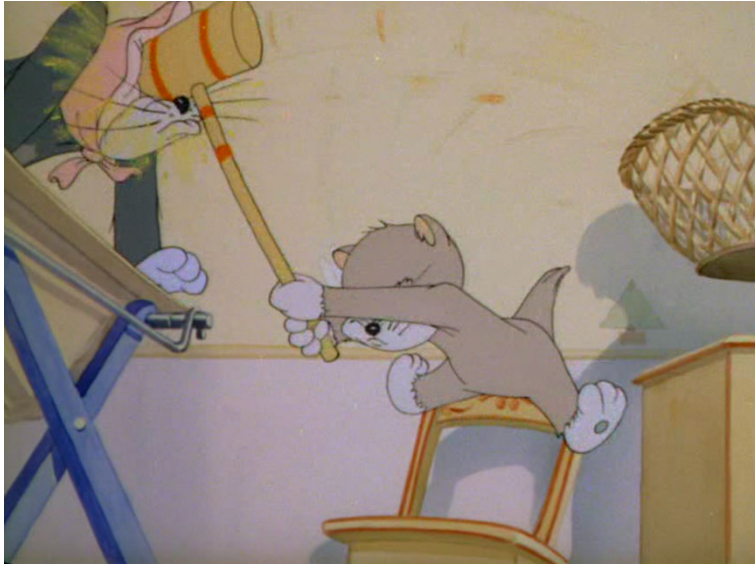
Figures 5-6: stills *Baby Puss (*1943) colour, sound, 7 min 51'

He suggests the sound effects propagate an atmosphere of violence: 'when Jerry applies a nutcracker to Tom's tail, the resulting crunch is all too realistic' (Barrier, 1991, p.409). For Barrier, the competing dynamics of sentimentality and brutality created a visual language of suffering, that had:

> [...] hardened into a formula, one in which the intention to inflict pain, and the suffering of pain, were everywhere present. Not only did Tom show no interest in eating Jerry, but the characters' sibling like rivalry in the early cartoons gave way to an unshaded thirst for damaging each other. (ibid., p.409-410)

2.8   Film Violence

The visual language of suffering that Barrier describes in relation to the slapstick violence of *Tom and Jerry*, can be contextualised by reference to themes that have dominated discourse on film violence, I suggest. In this section, I discuss relevant contributions from discourse on film violence that refers to contemporaneous issues of film censorship in the Golden Era period of Hollywood film that were likely to have exerted influence on the production of *Tom and Jerry* in the early Hanna and Barbera period. I also discuss the impact of changes in film censorship on depictions of onscreen violence as highlighted by Stephen Prince in relation to viewer enjoyment of onscreen violence.

Onscreen violence has been a mainstay of cinema from its earliest inception and abounds in contemporary cinema prompting recurrent fears about its potential to cause societal harm. The predominant themes of early academic discourse related to questions of the potential for violence in film to increase aggression in viewers, with more recent scholarship focused on the meaning produced by different forms of filmic violence including newer forms such as torture porn (Neroni, 2012). The debate surrounding film violence is partly driven by the use of violence as a frame for discussions of underlying sociocultural problems, suggests James Kendrick (2009, p.3): 'salient cultural issues often get displaced onto discussions and historically determined perceptions of film violence'. Definitions of what constitutes violence are multifarious, and although Kendrick (ibid., p.8) differentiates fictional or 'mediated violence', from documentary footage of real-life events, and he states that an all-encompassing definition of film violence lacks the capacity to meaningfully differentiate between the diverse forms presented in film. Film violence in the Golden Era period of Hollywood classical film was presented in a particularly sanitised form as dictated by the Production Code Administration (PCA), known as the Hays Code, comprising industry guidelines on censorship of film content from 1932 to 1968, which outlined a list impermissible categories.

> Thus, in the 1930s and 1940s, filmmakers might show gunfire blasting into masonry walls, shattering windows, and blowing holes in furniture, but they could not squib actors so as to simulate bullet strikes on the body...The foundational statement of violence against people in this period was a representational statement that, far from producing anguish and pain, violent death merely signals the onset of sleep.
>
> (Prince, 2009, p.283)

An alternative definition of onscreen violence was offered by Prince (2003, p.35) as 'stylistic encoding of a referential act' that refers to both the violent behaviour and its stylistic construction in film. He examined how these two elements have varied in cinema over time

by comparing changes in the behaviours depicted (e.g., stabbing, beating etc) with changes in the stylistic rendering of the behaviours (e.g., use of special effects). He concluded that although the stylistic design of violence has changed significantly over time, the same violent behaviours recur repeatedly in cinema, whilst imagery of real death in society continues to be largely taboo. A key observation he makes relates to the changes that occurred in the depiction of violence after the abolishment of the PCA code; post-classical Hollywood cinema was characterised by the proliferation of previously forbidden imagery in film such as rape, dismemberment, mutilation and the depiction of extended and prolonged violence (ibid., p.35).

Viewer responses to fictional violence are 'volatile', particularly in response to graphic forms of violence that tend to employ aesthetic devices of montage-slow motion and graphic mutilation that 'agitate, excite, horrify and excite' (Prince, 2000, p.17). The notion that watching fictional violence provides some form of cathartic release and the opportunity to expunge feelings of aggression and hostility, is largely unsupported by research findings, which in contrast, suggest that watching film violence induces an increase in aggressive behaviour. Given the potentially deleterious effects of watching mediated violence, research has focused on factors underling the attraction to watching violence, which Weaver (2011) states has implicated factors of selective exposure (the decision to choose violent content over non-violent content), enjoyment from forming dispositional or moral judgements about characters (Affective disposition theory: Zillman and Cantor, 1977), experiencing violence as physiologically arousing (Arousal theory: Zillman, 1998) and enjoyment of the delivery of justice to characters deemed dissimilar to the viewer's own ideals (Raney & Bryant, 2002). The notion of enjoyment related to the delivery of justice appears particularly relevant to the violence portrayed in *Tom and Jerry* shorts, where Tom's unscrupulous behaviour is frequently shown as backfiring on him.

To understand viewer responses to onscreen violence, Clark McCauley (1998) explored factors related to viewer feelings of disgust. He suggests that, unlike the fictional violence of the horror genre, which is experienced as attractive or appealing, real-life violence tends to evoke feelings of disgust, although individual differences exist in relation to sensitivity to disgust. He concludes that seemingly aversive experiences of being frightened, disgusted and saddened that are elicited by horror films are governed by a principle of 'psychological reversal' where danger is experienced as attractive when the arousal elicited by the material is bounded within a protective frame: 'dramatic productions...are enjoyable for providing access to arousal with the reassurance of present safety' (ibid., p.160). Although feelings of fear and disgust are elicited by horror films, these responses are relatively weak as film

provides multiple 'cues for unreality' providing a protective frame enabling feelings of safety, pleasure and enjoyment. I suggest that the comedic framing of violence in *Tom and Jerry* denoted by its artificial construction as animation, provides clear cues of unreality and provides a protective frame for viewers watching the onscreen violence.

However, I propose that the slapstick comedy of *Tom and Jerry* has the potential to construct a dynamic of repulsion and attraction, where potentially violent acts could elicit opposing experiences of humour and disgust. However, the sound-image synchronisation in *Tom and Jerry* and the use of upbeat musical scoring emphasises a comedic reading of the violent acts portrayed. I was interested in whether a reconfiguration of the sound-image relations in the practice of the research could foster an exchange between themes of comedy and horror in the sampled material, therefore. The observation that pleasure is derived from watching onscreen horror has been dubbed the 'paradox of horror' by Noel Carroll (1990, p.159), who concludes that pleasure in viewing horror derives from a fascination with the manifestation of a monster – an extraordinary creature acknowledged as non-existent by contemporary science. Importantly, Carroll (ibid., p.18) describes how horror invokes a mirroring effect, whereby the audience's emotional responses converge with those of the film characters. However, Carroll's definition of horror has been criticised by Aaron Smuts (2009) as too restrictive, wherein he cites slasher movies as an example of a horror genre that falls outside of Carroll's criteria. Smuts concedes that formulation of an all-encompassing definition of horror is likely impossible, and instead suggests that Carroll's theorisation may reflect a particular paradigm of horror. The pleasure associated with viewing horror, Smuts proposes, reflects the operation of deep-seated beliefs based on an individual's exposure to a specific cultural mythology.

The genres of slapstick comedy and horror, share common attributes of being primarily 'affective genres' that seek to invoke affective states of laughter and terror respectively, and invoke similar spectatorial experiences of attraction and repulsion where the viewer wants to look away from a repulsive act of violence, yet is drawn to watch the violence. Both genres share a similar thematic concern with presenting the body in 'profound disarray', suggests Stacey Abbott (2011, p.5). In comedy, the body is often presented as 'under attack, whether that be a pie in the face, a pratfall, or a coyote falling off yet another cliff in his never-ending pursuit of the road runner', whereas in horror there is an enduring preoccupation with the monstrous body and violence enacted upon the body (ibid., p.6). Likewise, in *Tom and Jerry*, characters' bodies are frequently disassembled by violent gags, however, their bodies always spectacularly reassemble themselves, which demonstrates to the viewer that the violence has resolved without serious harm being caused. Therefore, within the creative

practice of the research, this prompted the question of whether altering the sound-image relationships and denying the viewer the sense of resolution of acts of violence in *Tom and Jerry*, would invoke a different spectatorial response in viewers reflecting a shift from themes of comedy to horror.

2.9   Theorising Slapstick Humour

We have discovered that the harder they hit, the louder they laugh.

(Hanna, cited in Adams, 1991, p.16)

Despite the comical having persisted as an enduring theme of animation from its earliest inception, as seen in the work of pioneers of optical devices, e.g., Charles-Émile Reynaud's *Pantomimes Lumineuses* praxinoscope shows of the comedic *Pauvre Pierrot* (1892) through to the development of animated film, e.g., James Stuart Blackton's *Humorous Phases of Funny Faces* (1906), it can be argued that animation has been limited as a medium by its marriage to comedy. With the rise of television in the 1950s, children became the main audience for animation, which along with the emphasis on comedic or fantastical narratives, led to what Kristin Thompson (1980, p.111) describes as a 'trivialisation' of the medium.

It is however, perhaps because of this close relationship between animation and comedy, that the medium developed its own distinct form of humour in the use of the visual or sight gag. Wells (2020, p.500) suggests that the gag is part of a wider ideological positioning of animation in the role of subverting normal expectations and a 'naturalizing of "impossible" actions and conditions'. His analysis of the animated cartoon in the context of the USA, appears perceptive in identifying how animated comedy in the Golden Era functioned as a permission-giving device, a 'permissive filter', in offering a 'carte blanche approach to any form of joke making' (ibid., p.504). This view, I suggest, has explanatory relevance to the particularly violent form of slapstick comedy that repeatedly recurs within *Tom and Jerry* in the Golden Era; Wells suggests that animated comedy functions as an illusory veneer using subtext, metaphor and analogy for humour that defies conventions. In this context, where slapstick violence pervades the animated comedy, the humour does not emerge from the action per se, but from the reactions of the character to the events and of viewers witnessing them 'battle against their own fears of failure' and their attempts to avoid their inevitable failure (ibid., p.501-502). Interestingly, he highlights how this permissive filter fostered a certain self-awareness in animation because it conspicuously foregrounds the self-conscious nature of the humour.

Within theorisation of the relationship between humour and violence in slapstick comedy, the visual gag as a comedic device is central *Tom and Jerry's* particular form of slapstick. In contextualising and deconstructing the humour of *Tom and Jerry*, I identify critical insights in Gunning's writings on the mechanical in the humour of the gag (Gunning, 2010), conceptualisation of the cinema of attractions (Gunning, 1986) and Donald Crafton's (1995) differentiation of gag, spectacle and narrative. Key factors that mediate the relationship of humour and violence in slapstick comedy, which I also consider important, relate to Andrin's (2010) concept of the hyperbolic gesture and Peacock's concept of comedic pain (Peacock, 2014). Notably, there are several points of convergence between these writers on how slapstick comedy elicits laughter including references to theories of humour and a tacit acknowledgement of Henri Bergson's contribution to an understanding of laughter, which I outline briefly.

In the context of my analysis of the humour of *Tom and Jerry* in the PhD research, I concur with Sheila Lintott's (2016, p.356) observation that there are useful insights to be gained from across the gamut of comedy theory and I suggest that perhaps it is important to also consider how a pan theoretical approach, encompassing cogent and precise elements from each theory, may potentially offer a more comprehensive understanding of the complexities of humour. However, the prominence of the visual gag in *Tom and Jerry*, I argue necessitates a close reading of the gag in slapstick comedy as a means of understanding the particular form of humour at play in *Tom and Jerry.*

2.9.1 Theories of Humour

I outline the three of the main theories of comedy that operationalise concepts of incongruity, relief and superiority, and whilst alternative accounts exist, these typically receive relatively little attention in academic discourse (Morreall, 2009). Importantly, as Lintott (2016) observes, these theories cannot be considered as rival theories given the disparity in their respective emphases of conceptual issues versus delineating mechanisms of laughter, for example. Moreover their respective differences can also be characterised in terms of the domain-specificity of each theory wherein incongruity theory emphasises cognition, superiority theory focuses on emotions and relief theory refers to physical responses: 'So, just as my heart quickens (physical) and I am fearful (emotional) when I judge (cognitive) a car is about to hit me, it is likely that the experience of comic amusement often includes some or all of these aspects' (ibid., p.347). Indeed, an account that recognises the interconnectedness of incongruity, superiority and relief in experiences of comic amusement appears both apt and cogent in analysing comedic responses.

Incongruity theory identifies humour in the perception of the incongruous, where a perception or experience violates learned experience and expectations. Different versions of incongruity theory offer varying definitions of incongruity, whilst the notion that it is incongruity that is the source of enjoyment has been challenged by accounts that instead, posit that enjoyment derives from the resolution of incongruity (Schultz, 1976). Relief theory purports to account for responses to humour by focusing on the process of laughter and suggests that laughter provides a discharge of surplus energy and entails a form of emotional release. Superiority theory is the oldest and most accepted of theories of humour and takes as its fundamental premise that the experience of humour is the result of enjoyment of a sense of superiority over another.

Unarguably superiority theory is premised on a sense of ridicule and the inferiority of the object of the humour– a version of which is discernible in Bergson's writings. When Bergson (1911) asks, 'What does laughter mean?', he answers by grounding humour in the social suggesting it acts as a social signifier of a moment of indifference to others, when emotions are put aside and a sense of the ridiculous is embraced. He identifies the comic in acts that are accidental, absentminded, or reveal a 'mechanical inelasticity', which society disproves of, whether related to mind, body or character (ibid., p.10-12). Accordingly, laughter serves as a social gesture that engenders a fear of humiliation and serves a utilitarian function as a 'corrective', although it is not necessarily motivated by any sense of kindness or justice, rather 'it indicates a slight revolt on the surface of social life...and the after-taste is bitter' (ibid., p.200). Arguably, Bergson (ibid., p.29) acknowledges a certain limitation in the notion that laughter operates adaptively, to somehow fortify socially acceptable behaviour, stating that it is, at best, a leitmotif; more persuasive is his notion that the comical arises through being reminded of the mechanical nature of body and that it is a 'mere machine'.

2.9.2   Derailing the machine: The gag in slapstick comedy

The links between a mechanical sensibility, the comical and the gag, is developed in Gunning's (2010, p.138-140) analysis of early slapstick film in which he likens gags to 'crazy machines' whose purpose is to manufacture their self-destruction; the machine represents human logic but the machine 'misused or turned against itself becomes a gag'. He notes that the term slapstick originates from the performances of the 16th Century commedia dell'arte in which a wooden slatted device was used to produce an exaggerated sound, which he identifies as the prototypical crazy machine whose comic value derives simply from it functioning like 'an exploding bubble' (ibid., p.141). Various forms of mechanical device that act as ostensible 'gag machines' proliferate in early slapstick comedy he suggests, as found

in Buster Keaton's *Electric House* (1922), *Our Hospitality* (1923), *The General* (1927) and *The Navigator* (1924). Such gag machines serve to defeat all attempts at purposeful action: they interrupt, derail and confound all efforts to maintain order (ibid.).

Slapstick comedy of the early cinema period enacts a balance between the outright spectacle of the gag and the demands of narrative, Gunning (1986) states in 'The Cinema of Attraction[s]: Early Film, its spectator and the Avant-Garde', concurring with earlier writing by Donald Crafton (1995). Though Gunning notes that the increasing narrativisation of cinema post-1907, if anything, reaffirms spectacle as a form due to its emergence in avant-garde film practices and adoption and integration into narrative film. He conceptualises the cinema of attractions as a form of early cinema in which the films, despite their heterogeneous nature, entail a form of spectatorship oriented towards capturing the viewer's attention by prompting their curiosity and enjoyment of spectacle. Filmmakers of the period shared a common drive towards a form of filmmaking focused on 'presenting a series of views to an audience, fascinating because of their illusory power...and exoticism' (ibid., p.382). His use of the word attraction derives from how cinema originally developed as form of exhibition akin to the fairground attraction, where frequently the technological innovation, e.g., the Cinématographe, was advertised as the attraction, rather than the film per se. Citing the James Williamson film, *The Big Swallow* (1901), Gunning (2018, p.16) highlights how the central gag of the film, featuring a single shot edit of a man's enlarged and gaping mouth seemingly swallowing the camera, uses irrational physiology as a means of display of the spectacle of technological capabilities of cinema itself.

Unlike narrative cinema's focus on storytelling, the cinema of attractions is an exhibitionist form that openly recognises the attention of the viewer by forging a relationship based on various forms of acknowledgement of their presence: actors, comedians and magicians directly look and gesture into the camera – behaviours typically avoided in narrative cinema because a direct address to the camera is considered as a rupture of illusionistic realism. In the cinema of attractions, films tend not to employ elaborate plotlines to drive action, and are characteristically 'plotless' Gunning suggests, citing Georges Méliès' *Le Voyage de la Lune* (1902), as paradigmatic exemplar that comprises a series of displays, loosely joined by a plot that is little more than a framing device for the demonstration of the spectacle of magical illusions performed (ibid., p.383). I consider Gunning's theorisation of slapstick useful in understanding how the slapstick comedy of *Tom and Jerry* solicits attention; I suggest that the chase form of *Tom and Jerry* is essentially exhibitionist in form, enacting a form of spectatorship where the viewer's attention is captured by the spectacle of attractions on display in the form of violent, comedic gags. *Tom and Jerry* shorts are arguably largely

plotless, but sequentially structured around gags of mechanical and physical self-destruction. These gags function comically as explosive attractions that frame the backfired, derailed attempts at purposive action of its protagonists. Importantly *Tom and Jerry* shorts also possess a characteristic pace that frequently builds towards a climatic end, again a feature Gunning (ibid., p.144) identifies in certain early slapstick comedies such as Lewin Fitzhamon's silent short *That Fatal Sneeze* (1907).

Arguably, Gunning's account does not fully capture the emphatic nature of the gag in *Tom and Jerry*, which is more fully addressed by Donald Crafton (1995, p.108), who proposes that the role of the gag in slapstick is primarily disruptive. He suggests that the gag enacts a similar response in the viewer to that of the slapstick prop - its 'violent aural effect, the "slap" may be thought of as having the same kind of disruptive impact on the audience as its visual equivalent in silent cinema, the pie in the face' (ibid.). The impact of the gag resides in its power to represent a 'kind of emphatic, violent, embarrassing gesture' representing spectacle (ibid., p.357). However, within film discourse on slapstick comedy in early cinema, he observes that the key elements of slapstick, such as gags, were historically devalued because of their lack of integration into narrative.

Slapstick was always characterised as 'the bad element' because of its use of excess, in contrast to role of the narrative which was to try to contain the excess (ibid., p.355-356). Crafton suggests that film criticism that dichotomises narrative and gag, presents an overly simplistic account, and the devaluation of slapstick rests on a mistaken assumption that slapstick filmmakers intended to integrate these two elements. In contrast, he contends that filmmakers consciously set these elements in antagonistic opposition to each other as a calculated rupture, with little attempt to integrate the gag into the narrative. He characterises this antagonism as an opposition between vertical, paradigmatic elements of slapstick related to spectacle, the 'thrown pie', and the horizontal, syntagmatic elements of narrative, 'the chase' (ibid., p.356). Slapstick is considered a generic term for non-narrative intrusions that are differentiable from gags that are a specific form of intrusion with its own structure and logic. He suggests that that the gag may work with or against wider narrative, and frequently follows what he describes as comic-strip logic, which I suggest is apparent in *Tom and Jerry* where gags often misdirect and complicate a sense of linear cause and effect and the musical scoring functions to restore the sense of order*.*

2.9.3   Violence and Humour in Slapstick Comedy

Andrin's (2010, p. 228) concept of the hyperbolic gesture in slapstick comedy, I argue captures the essence of how violence is represented in *Tom and Jerry*, particularly in terms of slapstick comedy's creation of 'invincible bodies'. The use of hyperbole appears in the excessive and exaggerated representations of 'bodies, gestures and objects' functioning as a recurrent rhetorical device that creates a sense of visual overload and induces laughter, Andrin suggests (ibid.). Repetition of violent gestures – another example of hyperbolic gesture – 'turns characters into jack-in-the-boxes' and the fast pace of the action militates against the viewer partaking in reflection that could prompt a more empathic response than laughter. It is the extreme nature of the violence that marks it out to the viewer as exaggeration, and provides an assurance of its comic purpose, whilst the slapstick body typically emerges unharmed, 'immune to fragmentation...displaying a lasting physical integrity' (ibid., p.231). Andrin's ideas are particularly applicable to the face-paced, repetitive violent acts represented in *Tom and Jerry*, in which bodies are subject to rapid and extreme distortions in shape following acts of violence (often animated as repetitive acts), but rapidly resume their original shape as the action continues forward at pace. These issues prompted further questions in the research of what, if any, is the potential impact of altering the legibility of the violence as hyperbolic exaggeration in *Tom and Jerry*, for example, if the reassurance of the unharmed body is somehow altered, then does this change viewers' readings of the violence as comical.

Among the key attributes that define slapstick comedy, such as the presence of a double act, falls, trips, thrown objects, malicious props and stunts, Peacock (2014, p.30-31) highlights the unique relationship slapstick has with comical violence and pain. However, she observes that the filmic devices of cause and effect represented in the comical acts listed, though prompting laughter, importantly do not conform to rules of everyday reality. Viewers' perceptions of the comedic element of slapstick are shaped by the use of repetition (improbable repetitive acts are perceived as funny), inversion (reversal of a character's behavioural pattern that is perceived as unhelpful to the character) and reciprocal interference of series (when two characters form different interpretations of a situation, which the audience is aware of). The extent to which slapstick acts of performed pain are viewed as enjoyable depends on notions of perceived deservedness; social responses to others' pain are typically guided by decisions on the morality of situations, hence the frequent use of deliberate performed incompetence in slapstick. Humour in response to pain is constructed by the gag in a number of ways, she suggests, including invoking a sense of superiority (laughing when a victim is in pain, but the viewer is pain-free), incongruity (subversion of

expected outcomes in the performance) and relief (release of tension through laughter) and all may operate simultaneously in one comedic gag, though certain gags may also fall outside of these concepts.

Processes of engagement and amusement are critical to understanding viewers' responses to comical pain in slapstick comedy and responses to *Tom and Jerry* I suggest. Peacock (ibid., p.66) suggests that if a viewer is highly engaged with the victim, then this greatly reduces the chances of finding their suffering humorous due to their empathic identification with the victim. On the other hand, if the situation or character is highly fictionalised then this facilitates a more playful engagement by the viewer. I suggest that the highly fictional, artificial nature of animated characters, such as those that appear in *Tom and Jerry*, would fit with Andrin's notion of a reduced level of empathic identification that leads to a more playful form of viewer engagement. Thus, the establishment of a clear 'play frame or comic frame', as described by Peacock (ibid.), also applies to the representation of pain in *Tom and Jerry*; it serves the function of enabling the viewer to laugh at the performance of pain by providing an unambiguous signal that a response of empathy is not required.

Peacock's emphasis on the dynamics of the double act in slapstick comedy is also relevant to an understanding of how the violence operates in *Tom and Jerry*. The violence portrayed in *Tom and Jerry* shorts tends to revolve around one half of a double act coming under attack from the other, or a third party such as Spike the dog. The perpetual conflict between *Tom and Jerry* also reflects a slapstick trope of establishing and playing on a physical opposition or status disparity, in this case, Tom's status is, in theory, higher as indicated by the fact he is the housecat and the home is his territory, as well as his apparent physical dominance, but nevertheless Jerry's diminutive size and lower status does not prevent him getting the upper hand frequently, she suggests.

In conclusion, I suggest that many of the key attributes that define the slapstick comedy are highly applicable to the slapstick comedy of *Tom and Jerry*, particularly Andrin's characterisation of the hyperbolic violent gesture that is characteristic of the exaggerated violent impacts on the characters' bodies, and in their use of objects. This form of visual comedy, that presents pain as a comical source of enjoyment, is mediated by precisely timed gags that elicit a specific form of attention through use of spectacle. However, the humour relies on the establishment of a comic frame, and although this is implicit in the cartoon form, it is also facilitated by processes of sound-image synchronisation I propose.

3.   Contextualisation of Practice

In this section, I outline contextual issues relevant to my creative practice of sampling, including issues related to copyright and I identify relevant artworks from the fields of visual art and experimental film that utilise different forms of sampling of audiovisual material. I also contextualise my use of repetition, looping and flicker-type effects, by reference to discourse on flicker in experimental film practices.

3.1   Differentiation of Appropriation and Sampling

In the following discussion, I outline a working definition of sampling and discuss copyright considerations that are relevant to my practice of sampling from copyrighted animation. Appropriation is defined by Clemens and Pettman (2004) as an explicit act of theft that belongs to a modernist tradition of clearly defined techniques, elements, and forms. A key function of appropriation is the act of rupture that unites works in this tradition (ibid., p.26). Sampling, on the other hand, they propose, sidesteps binary categorisation between original and copy by invoking a condition of anonymity. Vanessa Chang (2009, p.145) recognises the sample as a space of 'play and rupture, where the past both defines the present and is effaced by it'. This notion of effacement of the origin is a key consideration in my own sampling practice where I endeavour to complicate the connection of samples to the original source.

I identify my practice as sampling-based and my use of samples of copyrighted *Tom and Jerry* animation unavoidably confronts legal boundaries and limits. Within this research, I have taken into consideration and complied with notions of fair dealing in the UK as defined in the Copyright, Designs and Patents Act 1988. The act permits the use of copyrighted material to be used without consent from the copyright owner for the purposes of non-commercial research or private study. Such use is only permitted when it is 'fair dealing' and the act specifies that 'copying the whole work would not generally be considered fair dealing'. In the US context, the College Art Association's (CAA) *Code of Best Practices: In Fair Use for the Visual Arts* (2015) also offers additional instructive guidance on general limitations in the fair use of copyrighted materials in acts of appropriation, without referring specifically to practices aligned to sampling per se. The code specifies 'fair use' as the 'most important and most flexible' of the 'exceptions designed to assure space for future creativity' (ibid., p.5). Within the code, the use of copyrighted materials is considered a key tool for the wider visual arts community, and a default position of always seeking permission is described as possibly compromising the output of practitioners. It also specifies that it is

crucial that the new work is 'transformative' in creating something new with a different character or places the original material into 'a new context where it performs a new function' (ibid., p.15).

3.2   Appropriation and Sampling in Found Footage Filmmaking

Within the research, I identify my practice as sampling-based and differentiable from strategies of appropriation, which I discuss by reviewing relevant contextual insights from the field of found footage filmmaking – a field that can be considered as bridging both appropriation and sampling-based practices. Strategies of erasure, repetition and looping are central to my sampling practice, and I discuss these in relation to the experimental film practice of Martin Arnold. In terms of defining a sampling practice, I concur with Clemens and Pettman (2004) who suggest that differentiating appropriation or sampling depends on the extent to which appropriated material is presented as quotation and whether the originary source is easily discerned or not. William Wees (1993, p.5) has written extensively on found footage practices in *Recycled Images*, which I consider relevant to my practice, particularly his discussion of the disruptive power of the fragment.

I suggest that Wees' perceptive analyses of found footage films that contain significant reworking undermines the notion of sampling and appropriation as entirely independent processes. He notes that reuse of found footage may require minimal intervention, other than 'finding it and showing it to someone who appreciates it' (ibid.). An unworked found footage film would not appear to fit the definition of a sample given its unambiguous link to the original source, however. Wees highlights several processes employed by artists in contemporary sampling practices shared by filmmakers using appropriation strategies, including 'looping', 'changing the order of shots', 'alternating shots from progressively earlier and later points', 'repeating shots' and refers to the layers of reworking in Ken Jacobs' refilmed found footage in *Tom Tom, the Piper's Son* (1969) that entails 'stretching its action, repeating movements, and blowing up details of its mise-en-scene' (ibid , p.8-11). Despite the similarity between these acts of reworking and a sampling-based aesthetic, Wees primarily defines the re-use of found footage as an act of appropriation by the artist in inviting us 'to recognize it as found footage, as recycled images' (ibid.).

In the case of found footage that involves significant alteration or reworking of the original material, Wees asserts that the impact of the reworked footage is the development of a new visual identity (ibid., p.26). In addition to potential genre shifts invoked by reworkings of found footage, Wees suggests that more complex manipulations shift the viewer's attention

towards the medium itself, whilst reworkings that abstract footage, can render a 'whole new set of aesthetic and critical concerns that have nothing to do with found footage as such' (ibid., p.31). He suggests that found footage film involves a negotiation of 'reclamation', and in the case of public images, there is a possibility of critical appraisal of the underlying motives of their original use (ibid., pp.31-32). The methodology of appropriation is considered by Wees to lack deconstructive or critical power and serves as simply establishing historical specificity. Whereas collage is considered more powerful in its capacity to interrupt; interruption is a 'form-giving device' and inherently 'critical… [it] probes, highlights, contrasts'; whereas appropriation accommodates – 'accepts, levels, homogenizes' (ibid., p.47). Within my practice of sampling, I suggest that my reworking of sound-image samples would fit with the notion of interruption, which Wees suggests, can expose hidden ideological underpinnings of the original source material (ibid., p.54).

3.3 The Loop and Experimental film

Within the practice of the PhD research, I explore the use of strategies of looping and repetition to alter the underlying meanings of the *Tom and Jerry* source material. This section contextualises practices that use repetition as a means of reconfiguring meanings in the film image, including the work of Martin Arnold, Guillaume Paris and Rodney Graham. These practices are highly relevant to my practice in terms of the potential of the loop to expose the underlying or hidden subtext of film, whilst the work of Max Hattler evokes notions of endlessness and repetition.

In Arnold's practice, he reworks found footage from classical Hollywood cinema and Golden Era cartoons and utilises strategies of looping, repetition and erasure to critique codes of representation within the original source texts. In his interview with Arnold, Scott MacDonald describes how Arnold's work *Passage à l'acte* (1993) 'lays bare the politics of a conventional media moment' by transforming the original source material through processes of repetitive stuttering (Arnold and MacDonald, 1994, p.3). Arnold describes reconfiguring meanings within the film image as key in his practice - 'miniscule shifts of movement could cause major shifts in meaning' (ibid., p.6). Referring to his reuse of Hollywood film material, he suggests that below the surface representations of the material lie multiple repressed meanings and advocates that 'we should not only consider that which is shown' (ibid., p.7).

Arnold's use of repetition to expose 'sinister underbellies' of appropriated cartoons, as observed by Steve Anker (2012, p.254) in relation to *Shadow Cuts* (2010), *Soft Palate* (2011) and *Self Control* (2011) is relevant to my aim of unmasking the violence in *Tom and*

Jerry, I suggest. Within these works, Arnold isolated characters' body parts (see Figures 7-8) whilst removing background visual information, to create flickering loops of repetitive gestural movements accompanied by brief sound samples from the source material and a recent work in the series, *Background Check* (2020) continues to feature extracted body parts and processes of repetition. As Anker observes, Arnold's *Shadow Cuts* generates a sense of 'death-like futility to the spasmodic repetitiveness', whilst *Soft Palate's* fragmented elements of violent bodily gestures produces a 'fevered repetition' that confronts 'dark subtexts' (ibid., p.255).
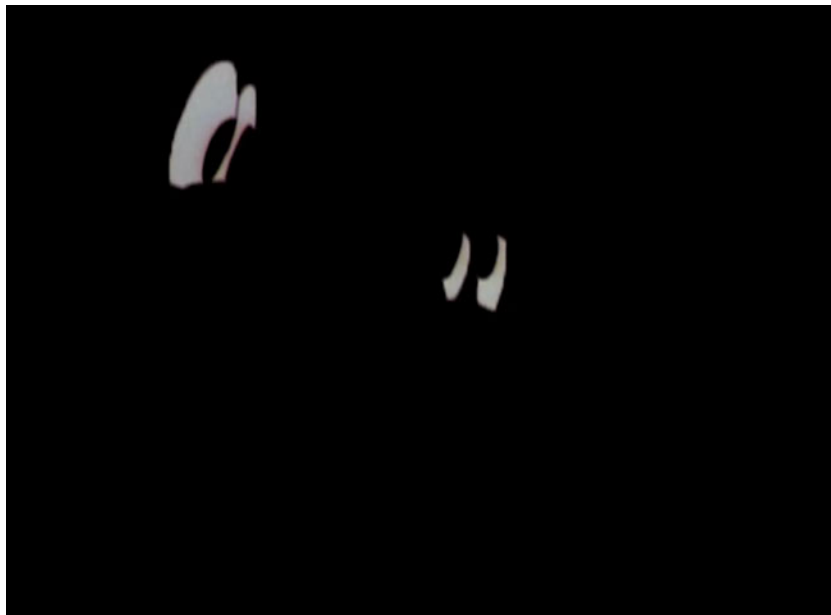
Figure 7: still *Shadow Cuts* (2010), colour, sound, 4 min 30' loop

Figure 8: still *Haunted House* (2011), colour, sound, 3 min 30' loop

Within Guillaume Paris' work *Fountain* (1994), Esther Leslie (2013) identifies a restaging of cel animation's processes of repetition, and the eternal return of precinematic optical devices, visualised in the looped samples of a Disney character locked in repeating cycles of motionlessness. In *Fountain*, a looped sample of a scene from *Pinocchio* (1940) depicts Pinocchio lying motionless, face down in a fountain whilst the water of the fountain flows continually around him (see Figure 9). Noting the inherent circularity of the scene, she observes that an 'animated piece of wood, who wishes to be human, is almost killed. He nearly returns to the deadness that he is' (ibid., p.40). In practice terms, I was influenced by the notion of repetition as a device that reveals the endlessness of the temporality of animation as demonstrated by the looping in *Fountain*, which Leslie suggests releases a hitherto unseen truth in the material of the Disney original.

Figure 9: still *Fountain* (1994), colour, sound, loop.

In Max Hattler's works *Sync* (2010) and *Spin* (2010), his use of visual animation loops similarly conveys a sense of endlessness that recalls the temporality of pre-cinematic optical devices such as the zoetrope. Hattler (2011, p.185) has described how *Sync* was informed by his sense that there is an 'underlying unchanging synchronisation at the centre of everything; a sync that was decided at the very beginning of time' – an idea that manifests in the abstract imagery of the animation that presents the universe as a repeating cyclical loop (see Figure 10). Dan Torre (2015) identifies how the abstract rotating loops of *Sync* induce a mesmerising and hypnotic viewing effect that is both immersive and relentless.

Figure 10: still *Sync* (2010), colour, sound, 9 min.

The use of the loop in Rodney Graham's *Vexation Island* (1997) appears to emphasise a sense of compulsion in the endlessness of the loop. The film presents a shipwrecked man, who over the course of the nine-minute duration, awakens from an unconscious state and attempts to shake a coconut out of a tree, only to be struck on the head by the falling coconut and knocked unconscious again. Vanessa Smith (2005) proposes that Graham's use of looping in *Vexation Island* presents the protagonist as suspended between states of consciousness and unconsciousness, states of sleeping and wakefulness and seemingly locked into a cycle of compulsive repetition, as allegory of humankind trapped in a self-defeating cycle of habit and repetition.

I identify similar cycles of repetitive, compulsive behaviour in the chase format of *Tom and Jerry's* violent slapstick; however, I suggest that this quality remains obscured by the sound-image relations that serve to emphasise the comedic qualities of the repetitive violence portrayed. Graham presents the film as a continual loop, which Smith (ibid., p.2) suggests, serves to enforce upon the protagonist a repetitive cycle from which he cannot escape, whilst simultaneously imposing upon the spectator a cycle of repulsion and attraction, invoking cycles of vulnerability and confusion. This prompted my exploration of a similar device of repetitive looping in the research to that found in *Vexation Island*, which I employ as a means of similarly exposing the underlying compulsive repetition of violence in *Tom and Jerry* by emphasising the quality of endlessness within the source material.

3.4   Flicker in Film

My use of the single frame in the current research invokes a flicker-type effect aimed at producing the sensation of afterimages. In this section, I discuss flicker effects with reference to its early use in animation by Otto Messmer and in experimental film. I also identify points relevant to the practice in the research within writings by Tony Conrad on his film *The Flicker* (1966) and by Taberham (2018) on Robert Breer's animation practice.

Early manifestation of flicker in film resulted from low frame rates (16 - 24 frames per second) that exposed the viewer to a perceptible blank frame as the projector shutter closed to conceal the movement of the filmstrip (Gunning, 2017). To solve this issue and produce a smoothly fused image, projector shutters were designed with two or three blades so that the rotations could achieve rates of up to 72 flicks per second. In terms of analysis of the process underlying the perception of filmic motion, Gunning (ibid., p.4) suggests that there is a degree of consensus on the relevance of phi phenomenon and flicker fusion[8]. Anderson (1996, p.61) suggests that the apparatus of film was developed to fit with human visual-perceptual capacities primarily to eliminate such flicker effects and states that flicker fusion in film (the point at which images fuse and flicker disappears) tends to occur at fifty flashes per second. He suggests that accounts of the perception of continuous motion in film based on notions of persistence of vision or phi motion are misleading. Instead, Anderson (ibid., p.61) asserts that the perception of motion in film is essentially an illusion that arises from the 'indistinguishability of the small frame to frame changes in a movie from the continuous changes that occur in real motion'.

In defining flicker in experimental film, Regina Cornwell (1971) describes it as comprising 'the short and very rapid succession of recurrent images which flutter or fluctuate in various structures throughout the work' – unarguably a concise definition, though as I propose, its simplicity belies the complexity of the perceptual capacities explored by filmmakers' use of flicker effects in film. I was interested in the potential of flicker in film to tap into perceptual thresholds and induce sensations that address the viewer physically. Experimental filmmakers have deployed flicker in film to varying degrees, from deploying intense stroboscopic effects, to its use in the intermittent animation processes of Norman McLaren.

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[8] The concept of phi phenomenon emerged from experimental work by Max Wertheimer in 1912 in the field of Gestalt psychology and implicates processes of perceptual organisation in the perception of apparent motion between two static objects, termed beta movement. Gunning (2017, p.4) states that 'the phenomenon of apparent motion typifies the gap-filling and pattern-completing aspect of perception that Gestalt psychology emphasises. The dark phase of the flicker supplies an empty gap that our perception/cognition fills'.

In McLaren's work, *Blinkity Blank* (1955), afterimage effects are produced by creating 'frame clusters' of 3-4 frames that disrupt continuity to create an 'overall visual "impression"...a kind of impressionism of action and time' (McLaren, 1955 cited in Russett and Starr, 1976, p.127). In addressing my aim of reconfiguring the readings of violence in *Tom and Jerry* source material, I was interested in the potential of flicker effects to evoke violent themes. In this respect, I suggest that one of the earliest examples of flicker in animation – Messmer's animated short *Felix turns the Tide* (1922) – is particularly effective. The animation features strobing in the sky that mimics the flashes of bombs exploding over a battlefield and was informed by Messmer's own experiences of war (see Figures 11-13).

Figures 11-13: stills *Felix turns the Tide* (1922), black and white, silent, 10 min

Messmer was a combat veteran of the 104th Field Signal Corps, and his experiences in the trenches in the Lorraine region in France in 1917, informed his apocalyptic vision of the destruction of war in *Felix turns the Tide*, suggests Donna Kornhaber's (2020). Messmer's primary intention, Kornhaber contends, was to depict the physicality of the carnage of the battlefield with realism; 'the rows upon rows of dead bodies stand as a stark statement against the kind of bodily elasticity and physical impunity one typically associates with cartoons' (ibid., p.94). Kornhaber highlights Messmer's direct address to the physicality of the viewer by his use of repeating flickering patterns in *Felix turns the Tide* that disorient the viewer and asserts that the unflinching 'graphicness of his images' forces viewers to 'gaze upon what the war has wrought: he is literally commanding them to look' (ibid., p.94).

In addition to the use of flicker effects in a representational way, such as its use in *Felix turns the Tide*, I was interested in exploring how flicker effects have the potential to directly address a viewer's visual-perceptual capacities. The particular use of the stroboscopic properties of flicker by Conrad in his film *The Flicker* (1966), I suggest, exemplify this direct address to the viewer; indeed, Conrad describes *The Flicker* as inducing a 'hallucinatory' and 'hypnotic effect' on the viewer (Conrad, 1965 cited in DeJong and Lampert, 2019, p.93). The film utilises varying rates of projection (from 24 fps to 4 fps) and alters the perception of visual flicker to create 'rhythmic harmonic effects' that correspond to the 'tonic or key-note in music' (ibid., p.95). Visually, Conrad sought to develop rhythmic effects in the alternating black and white frames of the film to induce a form of 'sensory disruption' (ibid., p.92).

According to Sitney (1969, p.245) there are three flicker films of significance: Conrad's *The Flicker*, Paul Sharits' *N:O:T:H:I:N:G* (1968), and Peter Kubelka's *Arnulf Rainer* (1960). He highlights the similar visual properties of *Arnulf Rainer* and *The Flicker* where both comprise alternating black and white film frames, but notes they are dissimilar in their respective soundtracks. *Arnulf Rainer* is described as symphonic with varying levels of synchronisation and syncopation with the image, whereas the sound of *The Flicker* is characterised as a continuous buzzing sound. Gunning (2017, p.10) suggests that flicker in film can enable access to previously imperceptible aspects of visual-perceptual experience and attributes *Arnulf Rainer*'s use of flicker and pattern as offering a means of invoking states of ecstasy by intensifying perception in the viewer.

Sharits' work is also considered relevant to the PhD research in terms of my exploration of the use of the single chromatic frame and the production of afterimages, which I suggest, are key properties of several of his films. I found Sharits' *Ray Gun Virus* (1966) particularly relevant to the artwork *Then Now* I produced as part of my practice in the research because

of the similar interaction between flicker and solid frames and how the rapid succession of different coloured frames seems to produce visual afterimages. In *N:O:T:H:I:N:G* the flicker of one-to-three frame bursts of different colours, takes on a violent and assaultive function, a facet that I also explore in the current research.

The potential for flicker to work at the level of perceptual thresholds is also discussed by Dirk de Bruyn (2014, p.122) in relation to Breer's animation *69* (1968). He suggests that the combination of flicker, clustering of frames and use of abstraction operates at the 'ambiguous threshold' between 'making and not making sense' and described the experience of viewing the work as 'immediate and fleeting, not analytic' (ibid., p.123). He also suggests Breer's focus on implicit perceptual processes in *69,* and his insertion of blank frames into the work represents a process of reinstatement of 'the hidden' of the cinematic projection apparatus. The flicker effect within the Breer's works is also described as challenging core perceptual capacities by Taberham (2018, p.146). He identifies Breer's works *Image by Images 1* (1954) and *Recreation* (1957) as disrupting the impression of consistent motion by creating 'strong collisions' between frames that are sufficiently different so that each frame is registered individually, whereas consistent object movement is conveyed by 'weak collisions' resulting from the use of similar frames (ibid.). The conceptualisation of collisions in cinema was originally articulated by Eisenstein, but as Taberham observes, the notion of collisions has been influential more widely among experimental filmmakers utilising flicker effects including Kubelka.

The potential of a visual frame sequence to disrupt a sense of continuous motion is discussed by Taberham in relation to Breer's work also. As previously outlined, I was interested in the vectorizing role of sound in imparting visual images with a sense of directionality. Taberham's discussion of within-frame visual collisions suggests that specific qualities of visual information can either disrupt or enhance visual continuity and the sense of directionality in a sequence of frames. Taberham (ibid., p.129) applies the term fluctuation to describe Breer's technique of varying the number of frames to convey a movement onscreen, citing the example of a rotating spray can in *LMNO* (1978) where motion is 'staggered momentarily to show the viewer how the impression of motion is created, before resuming back to ordinary phi motion'. Taberham derives the term phi disruption to refer to a sequence in which images of objects may contain strong collisions in terms of their colour, but have weak collisions in terms of shape, exemplified by a sequence in *69*, where the colour of a cylinder and the background of the frame create strong collisions, but the cylinder retains a consistent shape creating weak collisions between frames. Taberham (ibid., p.131) asserts that both shape and colour can be varied to cause phi disruption, though a stronger

disrupting effect - radical phi disruption - is produced when the form of objects is varied between frames. These insights prompted my consideration of the potential use of within-frame visual information to disrupt a sense of directionality in the artwork *Then Now*, which I undertook by alternating the within-frame visual information related to colour and form.

4.   Methodology

In this section, I outline the practice-based methodology of the PhD research that guided my production of the novel artefacts, the audiovisual artworks. I discuss the improvisational approach of my creative practice and considerations related to cel animation. I present results of the audiovisual analysis of the source material and the sample selection procedure. Following this, the methodology of the viewer discussion groups is outlined. Finally, the audiovisual artworks are discussed, and the knowledge embodied in the artworks presented, by reference to my subjective reflections and viewer responses obtained through viewer group discussions.

4.1   Practice-Based Research

The PhD research adopts a practice-based methodology, in line with Linda Candy and Ernest Edmonds' (2018, p.63) definition of practice-based research as involving the development of questions from the process of practice, set in a specific context, with an emphasis on outcomes informing practice. Research and practice can be considered as distinct but interdependent processes; research encompasses the process and product of systematic investigation to produce original, contextualised results that are amenable to dissemination, whilst practice refers to a process of conception and realisation of ideas through the creation of novel artefacts, within a specific field (ibid., p.64). Both the creation of an artefact and the knowledge gained from the process of creation and analysis are key suggest Candy and Edmonds, where insights gained can be a central to the artefact. The importance of the transmissibility of knowledge contained within the artefact, or artwork, is highlighted by Hazel Smith and Roger Dean (2009, p.7) who suggest that 'crucial to fulfilling all the functions of research…for an artwork itself to be a form of knowledge, it needs to contain knowledge which is new and that can be transferred to other contexts'.

Within the PhD research, artefacts were produced as part of the creative practice in the form of audiovisual works of brief duration (approximately three minutes). It was envisaged that new knowledge contained within the artworks and generated by my engagement in practice, would provide further insights that would influence the making of later works. Importantly, the research artefacts, in the form of audiovisual works, are experienced directly through my own intersubjective processes of perception and reflection, but also invite a viewer or audience to engage in their own perceptual and reflective experiences of the artworks. Within the methodology of the research the production of the artefact both contains

knowledge and allows further forms of knowledge to emerge from my subjective reflections and the reflections of viewers.

In practice-based research, the artefact is considered fundamental to the research endeavour but requires a commentary to provide a context for how the artefact should be read and understood: an artefact 'alone, without text, cannot be seen as a research outcome' (ibid., p.66). A key aspect of practice-based research in the arts, relates to the capacity of the research to bring forth relevant experiences of artistic practice, with the potential to have an impact on others, Mika Hannula, Juha Suoranta and Tere Vaden (2005) assert. They suggest that the relationship between theory and practice in practice-based research is cyclical and linked by 'practical reason', whilst the knowledge gained through the research must be transferable from generalities of theory to specifics of practical knowledge (ibid., p.104).

4.2   Improvisational Approach

My practice within the research is improvisational in form and I suggest that the creative practice sub-cycle, the 'iterative cyclic web', outlined by Smith and Dean (2009) can be considered an analogue of the creative cycle of improvisation. I suggest that it provides a useful methodological framework for the different interlinking phases of the PhD research related to the development of ideas (academic research and practice-based processes involved in experimentation) and the range of outcome-related processes (artworks, documentation, theory). Smith and Dean describe two distinct modes of working in creative practice and research: a process-driven approach and a goal-directed approach (ibid., p.8). A process driven approach has no clearly defined beginning and end points, whereas a goal-directed approach comprises a clear plan and target outcome. My creative practice mostly adopts a process-directed approach due to the iterative and cyclical nature of improvisation that involves engagement in and observation of process, although I am also guided by the over-arching goals of the PhD research. To maximise the opportunity for idea generation, the experimental phase of the research project takes a process-driven approach that involves processes of subjective observation and embraces the open-ended nature of improvisational experimentation within the research methodology.

An improvisational approach in the research, with an emphasis on reworking audiovisual processes and materials, I suggest, yields a type of knowledge that has been referred to as

'praxical knowledge' by Barbara Bolt[9] (2004, p.48). It is through praxical engagement with aspects of practice (e.g., tools, methods) that praxical knowledge emerges as a form of multiplicitous, tacit knowledge, she suggests. The critical interpretation, or exegesis, of the work of art is considered by Bolt as key in offering a means to reveal the work of art in itself, not simply as a way to explain or contextualise the artwork. According to this view, theorisation progresses from the process of handling, and art research is a 'mode of revealing and a material productivity' with the potential to inform theory (ibid., p.34). Following Bolt's approach, the exegesis of this PhD research, as a written dissertation, will further extend the praxical knowledge from the particularity of the specific process of handling, towards a wider contribution to knowledge, therefore.

My own praxical engagement with the *Tom and Jerry* original source materials, the tools of the Apple Mac computer hardware, Adobe After Effects software and the reworked moving image material, I suggest, are essential to the emergence of praxical knowledge enabled through the self-reflexive handling process. Consistent with this perspective, the research seeks to derive knowledge through iterative processes of sampling guided by the iterative cyclic web, wherein the alternating cycles of activity (between practice and research) includes sub-cycles of repeating elements of practice (Smith and Dean, 2009, p.8). The model's web-like structure of 'multiple entryways and exits' accounts for the repeating cycles of processes in the research of idea generation, experimentation, data gathering, analysis and theoretical conceptualisation that lack clearly defined beginning and end points (ibid., p.21).

Processes of improvisation, specifically in the field of musical improvisation, can be characterised as a series of algorithmic steps that comprise iterative cycles of memory processing and reprocessing, suggests Philip Johnson-Laird (2002). In devising a 'computational theory' of the creative process (where computational refers to the development of models of the creative process akin to scientific models, subject to verification or rejection by hypothesis testing), Johnson-Laird proposes that creativity is primarily an act of free will, where 'to be creative is to choose among alternatives' (Johnson-Laird, 1988, p.203). The capacity to reflect upon the decision-making process, he proposes, is central to the notion of free will: 'we are free … because we know we can choose how to

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[9] Bolt (2007, p.34) asserts that praxical knowledge involves a form of 'reflexive knowing' described as tacit knowledge or understanding achieved by handling that is grounded in material practice rather than in conceptual thinking. Bolt (2004, p.166) developed the notion of 'materialising practices' based on Martin Heidegger's notion of praxical knowledge developed in *Being and Time* (1927/1962) that describes the material basis of an understanding of the world, wherein new knowledge results from engagement with objects and implies that ideas and theory are the result of practice.

choose' (ibid., p.208). He proposes that the specific demands of a creative task will determine one of three possible types of procedure that govern how a decision will be made: whether a creative act is taking place in real-time (with no possibility for revision), whether a creative act is taking place within a framework in stages (where revision and correction is possible) or whether an entirely new framework (genre or paradigm) is being devised. He discusses musical improvisation as an exemplar of creation in real time, where he proposes, time pressure on the creator tends to determine the selection of the procedure. In the current research, I suggest that the creative practice falls within the second of the procedures listed where I endeavour to minimise processes of correction and revision during production of the artworks.

As part of the making process in the research, I use digital tools, which I propose prompts consideration of the potential role of technology as an intermediary in improvisatory processes as highlighted in the arts by Haworth, Gollifer, Faure-Walker, Coldwell, Kemp and Pengelly (2005). In my handling of tools in the research, I acknowledged the need to recognise the specific constraints presented by digital tools when engaging in an improvisational practice, an area that has been neglected in discourse, Andrew Goldman and Mark Hannaford (2016) assert.

The process of using tools to rework source materials is central to my practice in the research, which I conceive of as a form of 'handling', as described by Bolt (2004). Bolt advocates for the performative potential at the heart of creative practice, although she acknowledges that 'art is a representational practice, and its products are representations'. She proposes that an alternative view of research can be realised from the perspective of Martin Heidegger's notion of 'handlability' and suggests that handling materials and developing ideas into practice, then art becomes experience, and 'the work of art is the particular understanding that is realised through our concernful dealings with tools and materials of production' (ibid.: p.51-52). Accordingly, we come to understand the world on a theoretical basis only after the preliminary step of 'handling' (ibid., p.48-49).

4.3   Practice Considerations: Sampling and Improvising with Cel Animation

Within the PhD research I rework *Tom and Jerry* audiovisual source material that was originally created using cel animation techniques in the 1940s and 1950s. Although my practice uses a completely digital workflow, I propose that an understanding of the ideological and technological underpinnings of cel animation is important when intervening into the material, not least because the material possesses characteristics unique to the

medium, as I discuss. Following this, I outline key aspects of my improvisational approach to reworking the sampled source material.

4.3.1   Ideological and Technological Considerations of Cel Animation

Tom and Jerry shorts were produced using cel animation techniques throughout the first Hanna and Barbera period of production. As Kristin Thompson (1980) observes, production of cel animation, although labour intensive by contemporary standards, was considered highly economical in the period due to processes of standardisation and specialisation of roles that ensured an economy of labour. Despite the technical advances of cel techniques, Thompson (ibid., p.108) observes that animation became defined in narrow terms, partly due to an emphasis on the mechanics of its production and partly because Hollywood regarded it as secondary to live-action film as demonstrated by its presentation as a short prior to the main feature in film theatres. Ideologically, animation came to be defined by its difference to film – 'animation could do things live-action could not, and hence it came to be assumed that it should do only these things' (ibid., p.110).

Noting important aesthetic features that differentiate cel animation from live-action film (for example, use of anomalous perspectival cues, false depth cues, temporal construction) Thompson (ibid., p.112-114) states that cel animation possesses unique and potentially disruptive features that were largely subordinated by the classical Hollywood system in favour of the restricted ideological conventions imposed upon the medium. She describes an unrealised potential of the medium in a pre-digital era wherein cels enabled animators a high level of control and the possibility to intervene to create contradictions and seemingly impossible spaces, citing Breer's work *Fuji* (1974), as a rare example that opposes classical Hollywood ideology and fully embraces the disruptive qualities of the medium. Therefore, I was also interested to explore how my intervention through practice, could also embrace the disruptive potential of the *Tom and Jerry* source material.

4.3.2   Sampling and Improvising with *Tom and Jerry*

The research followed a stepwise approach starting with an initial phase of testing followed by an experimental phase. In the test phase, I identified samples of the original source *Tom and Jerry* animation that exemplified key audiovisual conventions guided by my subjective evaluation of *Tom and Jerry* animation as characteristic of zip-crash animation (Taberham, 2018). Following this, I used Chion's structural outline of audiovisual analysis to guide my analysis of samples taken. Across both phases of the research, my practice involved

experiments utilising processes of sampling and masking using a limited number of digital tools in the Adobe Creative Cloud suite of programs including Adobe After Effects (2019), Adobe Audition (2019) and Adobe Media Encoder (2019). By modifying the synchronisation of sound and image in the samples, it offered the opportunity to reconfigure the reading of violent slapstick themes present. Each experiment comprised sub-cycles of activity, and constraints and limitations were encountered using editing tools which I documented during the production process.

In considering the use of cel animation in my sampling practice, I was aware that certain unique properties of the medium were emphasised when sampling the visual images that related to the flat representation of space and the splitting of depth cues between backgrounds and figures in the foreground. The cel animation of *Tom and Jerry* is characterised by a flat representation of space with a relative emphasis on depth and perspectival cues in the backgrounds rather than on the figures. This meant that when I removed the backgrounds through masking, the depth cues were typically removed rendering the masked elements as typically more two-dimensional than when they appear in the shorts, which I suggest increased the abstract nature of the masked elements.

Improvisational use of sampling and masking procedures facilitated my investigation of the prototypical conventions of sampled zip crash animation. I propose that the open-ended and improvisational nature of the creative process in this research, without predetermined end goals in mind, enabled the emergence of unpredictable audiovisual relationships. In 'Improvisation and art-based research', Nisha Sajnani (2012) posits that improvisation facilitates skills that are universal across art-based researchers, including an openness to uncertainty and an attunement to difference. Citing parallels between the scientific method of repeated hypothesis testing (with its emphasis on points of confirmation and difference) and forms of 'aesthetic improvisation', Sajnani (ibid., p.82) refers to a process of focusing on 'what is emerging rather than on what exists already in action', so that knowledge becomes a process where information is gathered by paying attention to 'slippages, leakage and the spaces between carefully created forms'. She proposes that an improvisational approach to knowledge creation of inviting 'fleeting, emergent and evolving discoveries' draws attention to the context of discovery and the context of justification in research (ibid.). In the research, it was envisaged that an improvisational approach would facilitate both slippages and alteration of the sound-image relations of *Tom and Jerry* to enable new experiential knowledge to emerge.

4.4 Procedure for Preliminary, Test and Experimental Phases

Despite the improvisational nature of the making process, the procedure of the test and experimental phases was planned in a stepwise way for clarity (see Table 1). Within both phases, each experiment led to creative output in the form of a audiovisual artworks and reflective log entries.

Prior to the test phase, in the early stages of the research, comparisons were made of the sound design of *Tom and Jerry* shorts from 1940-1958 and 1960s. At this early stage, I undertook preliminary exploration of samples (preliminary phase) from the Hanna and Barbera shorts *Puttin' on the Dog* (1944), *Trap Happy* (1946), *Heavenly Puss* (1949) and later shorts, *Jerry Jerry Quite Contrary* (dir. Chuck Jones and Maurice Noble,1966), *Jerry-Go-Round* (dir. Chuck Jones, Maurice Noble, Abe Levtiow, 1966) and *Rock 'n' Rodent* (dir. Abe Levitow, 1967) prior to the final selection of Hanna and Barbera era shorts *Trap Happy* and *Saturday Evening Puss*.

Table 1: Steps of Preliminary, Test and Experimental Phases

Preliminary and Test phases	Experimental phase
1. Identification of shorts and samples of zip crash *Tom and Jerry* animation	1. Selection of software and digital tools
2. Identification of key characteristics of sound-image relations e.g., points of synchronisation	2. Sampling of *Tom and Jerry* shorts
3. Application of Chion's audiovisual analysis procedure	3. Iterative process of making
4. Initial exploration of masking process applied to samples	4. Concurrent completion of reflective log

4.5   Description of *Trap Happy* short

The following sections provide the description and analysis of the *Tom and Jerry* short *Trap Happy* (dir. William Hanna and Joseph Barbera, 1946) source material that I selected for reworking in the practice of the research (see Figures 14-15). I outline key characteristics of *Trap Happy* and outline my audiovisual analysis and identification of dominant sound-image relationships in the short, which I discuss from a broad, pan theoretical approach.

Figures 14-15: stills *Trap Happy* (1946), colour, sound, 7 min 8'

The *Tom and Jerry* short *Trap Happy* (runtime 7 minutes and 8') is a paradigmatic exemplar of the archetypal chase cartoon and comprises a stripped back narrative of increasingly frenetic set-piece gags that mirror the desperate mood of Tom as the action unfolds. *Trap Happy* arguably features more numerous violent gags than the typical *Tom and Jerry* short, although the violence does not appear thematically more extreme. The title appears to be a play on the phrase 'slap-happy', a US colloquialism that means 'dazed, punch-drunk, dizzy' or 'carefree, casual, careless, thoughtless, irresponsible' ("slap-happy, adj." *OED Online*, Oxford University Press, 2020). The notion of 'punch-drunk' is particularly apposite to the theme of the short in which intended acts of violence repeatedly backfire on Tom as the term derives from the neurological sequelae of repeated blows to the head suffered during competitive boxing.

The IMDb entry for *Trap Happy* states that the animated short refers to the films of the violent slapstick comedians *The Three Stooges* (1922-1970) who played hapless exterminators in several of their films. *Trap Happy* features *The Three Stooges* theme which is a variation of *The Three Blind Mice* nursery rhyme, and in terms of the Bradley soundtrack it is difficult to differentiate the two melodies due to their similarity. The voice artists for *Trap Happy* were Frank Graham, William Hanna and Dick Nelson. The soundtrack also features orchestration of a simple, upbeat jazz standard called *Ja-Da*, composed by Bob Carleton in 1918. *Trap Happy* is representative of Hanna and Barbera's hand drawn, cel animation releases of the period that were produced on 35mm film, in Academy aspect ratio (1.37:1) in Technicolor.

4.6   Rationale for use of Chion's Audiovisual Analysis Methodology

Prior to engaging in the sampling and reworking processes, I considered it important to interrogate the audiovisual source material to identify key characteristics of the sound-image relationships in *Trap Happy*. The methodology for audiovisual analysis outlined by Chion (1994, p.187) entails a procedure called the 'masking method' in which the sound-image structure in film is analysed by engaging in a process of discovery by analysing the sound and imagery separately. He suggests that the aim of the masking method is to invigorate the viewing and listening experience and asserts that sound and visual elements are not entirely fused: 'we should keep in mind that the audiovisual contract never creates a total fusion of the elements of sound and image; it still allows the two to subsist separately while in combination' (ibid., p.188). Chion proposes that the most challenging aspect is being able to listen to 'sound by itself, acousmatically', where a sound is heard without seeing its source (ibid., p.221). He provides an outline structure for audiovisual analyses that entails

identification of key characteristics of the sound-image relationship including the role of points of synchronisation and rendering (appendix I contains definitions of key terms).

I considered this approach highly useful in terms of the domain-specific insights offered by this method of analysis, given my interest in understanding the differential influence exerted on images by sound, and vice versa. I also considered the methodology to have face validity in terms of providing a logical and pragmatic means to interrogate different elements of the audiovisual material. I utilised the masking method and analysed the sound-image structure of film by viewing the material under three different conditions which, I suggest, facilitated effective and insightful comparisons between the different conditions of sound only (no image), image only (no sound) and image and sound together. The audiovisual material was viewed on a 27-inch Apple iMac computer monitor with sound through headphones in a darkened room with minimal environmental light.

The following sections present my observations from the masking procedure, and I also completed an itemisation of elements in the sound and image together (see appendix II). In the lengthy itemisation, I sought to identify dominant and foregrounded elements, itemise different audio elements (e.g., speech, music, sound effects), locate points of synchronisation and compare sound and image in terms of formal aspects of representation (e.g., materials and definition, differences in pace between audio and visual elements). I noted differences in 'consistency', which Chion (ibid., p.189) describes as the interaction between audio elements, and whether they combine in a general texture or are heard separately. He states that consistency is determined by the degree to which each audio element 'struggles to arise to intelligibility', and serves to 'complement, contradict or duplicate each other' (ibid.). As I discuss in the next section, the method lends itself well to the identification and detailed itemisation of changes in characteristics of rendering, congruity and the level of affect experienced as a viewer. Following this, I discuss processes of sound-image synchronisation in *Trap Happy*.

4.7   Results of Audiovisual Analysis of *Trap Happy*

The condition of sound-only highlighted different audiovisual characteristics to those discovered in the condition of sound and imagery together, and the images-only condition. In the sound-only condition, the analysis of *Trap Happy* revealed that the tonal characteristics of sound appeared different to when accompanied by images in the sound and image condition. The most striking finding was the overriding celebratory tone throughout, largely instituted through a recurring upbeat melodic orchestration that was repeatedly presented

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following a violent act. The upbeat musical theme functioned to reinstate a celebratory tone following musical phrasing that evoked feelings of rising tension featuring a crescendo and the rapidly executed rising pitch of piano glissandi ("A slurring or sliding effect produced by a musical instrument", *n*, OED Online, Oxford University Press, 2019). These sounds intensified my feelings of tension and typically concluded with a punctuating stinger-type sound that appeared to represent the impact of an object against a surface. A noticeable feature of the sound-only condition was the presence of multiple rapid changes in tempo; these had a destabilising effect on my listening, making the listening experience unpredictable at times.

I was also aware of an intensification of tension and discomfort in the sound-only condition, as I became acutely aware of human sounds of pain such as screams, gasps and choking that appeared incongruous with the upbeat orchestration. These sounds were less apparent in the sound and image together condition. Lastly, I experienced a sense of disorientation in response to being unable to discern the domestic setting of the cartoon, as the dominant sounds appeared industrial because of the use of sounds of transport vehicles (cars, steam trains) that suggested a physical materiality (clunking metal, flapping and crackling wood, flowing water). I suggest that the loss of spatial context is likely the result of a reduction in the rendering function of sound when the visual images are absent.

My level of engagement appeared to reduce when watching the images without sound (images-only condition), which I suggest resulted from a reduction in the suspension of disbelief, a characteristic that Cohen (2000) describes as a core function of film music. There appeared to be a stark loss of continuity both within and between scenes in *Trap Happy*, with transitions appearing clunky and unexpected, which I suggest resulted from the reduction in anticipation that the soundtrack typically cues. I suggest that this observation also supports the notion that the soundtrack to the short (music, sound effects, voices) performs a temporal linearization (of images by sounds) as described by Chion (1994) by suggesting a sense of succession in the sequence of shots; without sound the sense of the shots being in a successive sequence was significantly reduced. I also experienced feelings of disengagement from the visual images due to the divergent visual pacing between scenes, wherein the pace of chase scenes appeared impossibly fast, whilst other scenes appeared slow and directionless.

Notably I experienced an intensification of affect when watching the images without sound. It was rarely possible to anticipate the direction in which a scene was moving or the outcome of the action unfolding, which led to my experience of emotions of dread as the presentation

of onscreen violence appeared more barbarous, callous and unrelenting. The most noticeable difference, however, was the relative reduction in comedic value evinced by the absence of sound; although gags still appeared creative in terms of visual and physical comedy, the loss of sound in scenes such as the hammering toes gag, increased feelings of discomfort as the sense of pain and cruelty was more apparent, in contrast to when the gag was rhythmically matched to the accents contained within the song the *Yankee Doodle* (Richard Shuckburgh, 1755). This suggests that sound was critical in presenting the scenes of pain as comical and can be understood by reference to Chion's (2009, p.467) conceptualisation of anempathetic music as a form of diegetic music that cues a sense of 'indifference to the pathetic or tragic quality of the scene'. Lisa Coulthard (2017) likens anempathetic music to a 'callous indifference' that 'steers the spectatorial response in the direction of enjoyment and detachment' by self-reflexively creating a critical distance between violent action and the viewer's emotions. She states that it evokes pleasure because it 'frames violence as artifice to be consumed rather than a moment to be dwelt on in sorrow or trauma' (ibid, p.52). Therefore, I suggest that the absence of anempathetic music in original score (in the images-only condition) meant that the visual images appeared less comical without the music signalling a sense of indifference to the violence.

The intensification of affect I observed during the masking procedure is worthy of further discussion and I propose that it was mediated across the masking conditions in different ways; in the sound-only condition, feelings of tension and discomfort dominated in the absence of the images to contextualise screams, gasps and choking, whilst in the images-only condition, feelings of dread and discomfort dominated as the visual depictions of violence lost their comical value. I suggest this supports both Wells' (1998) and Peacock's (2014) discussion of how slapstick comedy relies on the presentation of the body as invincible and unharmed by violence and it implicates the sound-image relationship as a key mediating factor. Carl Plantinga (2013, p.96) also makes the point that audiovisual material such as film, are powerful triggers of affect because of the sensuality of film as a medium; film affects viewers directly via the 'perceptual qualities of images and sounds. Moods, emotions, and various automatic body responses make up the affective dimension of film'. Film narratives possess an inherent sensuality also, and because the viewer's perceptual experience of a film correlates with their direct perceptual experiences of the body, then this can lead the body to synchronise with heard sound via a process of auditory entrainment such that 'increases in tempo can literally speed up the rate of heartbeats' (ibid., p.103). Given that my predominant experience of the sound and image together condition was of comical amusement, I suggest that the masking procedure revealed the differentiable capacity of sound and image to trigger affect when viewed without the moderating effect of

being combined with either images (in the sound-only condition) or sound/music (in the images-only condition).

In conclusion, my analysis of *Trap Happy* revealed alterations to my viewing experience under the different masking conditions: differences related to changes in perceived congruity of sound effects in the soundtrack, heightened affect, and changes in the perception of sound as fitting the depiction of a spatial context. I suggest that the alteration in perception of spatial context in the absence of images occurred because the sound had no image to project an impression onto and thereby render the sound as fitting (a process Chion terms rendering). The finding of clear differences between the masking conditions yielded valuable insights from the audiovisual analysis procedure and therefore, I concur with Chion's description of the method as providing the ability to 'hear sound as it is' without transformation produced by the presence of the image, and conversely, enabling the image to be seen 'as it is' and 'not as sound recreates it' (ibid., p.187).

4.8   Synchronisation, Dynamics and Violence in *Trap Happy*

In this section, I discuss my analysis of sound-image synchronisation in the delivery of violent gags within the dynamic musical orchestration of *Trap Happy* by reference to Chion's concepts of consistency, synchresis and rendering. As previously discussed, I suggest that Bradley's scoring can be considered as an example of the integrated soundtrack, as described by Kulezic-Wilson (2020). Compared to other composers of cartoon music of the period, Bradley's idiosyncratic style of composing entailed greater use of orchestration to synchronise sound and visual elements and such synch points are embedded throughout the orchestration of *Trap Happy*. This characteristic of his scoring, I suggest, reflects high levels of consistency between audio elements resulting from Bradley's use of orchestration in the place of sound effects; sound effects were rarely heard as audibly separate from the music, and the soundtrack of *Trap Happy* similarly features high consistency in which audio elements are tied into a rhythmical structure. Indeed, Mervyn Cooke highlights Bradley's ability to 'catch the action in sometimes inordinate detail yet still bind his illustrative effects together in music that made autonomous sense' (2008, p.295). He cites the scene in *Trap Happy* in which the music is tied into the rhythmical action of the two cats pulling each other into the wall, which is achieved almost exclusively through the use of musical phrasing of trumpet and drum accents.

A point of synchronisation, or synch point, is the point at which synchresis occurs (ibid., p.58). Synchresis refers to the join between sound and image when they both appear at the

same point in time, which Chion suggests is a product of the Gestalt principle of organisation where meaning is derived by contextualisation processes. Synchresis effects arise most typically when either musical accents or sound effects punctuate a violent act. For example, when Tom is hit by the shovel and the sound of a cymbal is heard, this constitutes a synch point where synchresis occurs in the melding of the actions of the two surfaces being hit simultaneously. The process of rendering enables the sound of the cymbal to be accepted by the viewer as a 'truthful and effective' depiction of the impact of the shovel as it conveys the feelings associated with the situation (ibid., p.109). I suggest that the comedic effect is heightened by ludicrously extending the rendering effect past plausibility and comprises a form of hyperbolic exaggeration as described by Andrin (2010), by having Tom's head and the shovel vibrate like a struck cymbal. The tendency of the music to keep the narrative moving forward at pace, and the repeated return to the upbeat, fast-paced orchestration after each set-piece violent gag, I suggest, prevents the viewer from engaging more empathetically with the implications of the violence presented.

Throughout *Trap Happy*, overt changes in the musical dynamics in terms of pacing and the use of glissandi, foreground the anticipation and consequences of violent acts. The synchronising use of musical dynamics are used to convey an additional level of meaning of the violent acts however, wherein the tonal qualities of music that precedes violence tends to emphasise the fate of one character over another. Through careful shading in terms of the lightness and darkness of tone, the dynamics synchronise with imagery to differentially highlight and foreground one character's fate, state of mind and position as either victim or perpetrator. Interestingly, throughout *Trap Happy* the tendency for the tonal properties of the music to mirror the internal state or fate of a character preceding an act of violence does not solely reside with one character over another and shifts repeatedly between adoption of the victim and perpetrator's position throughout. This shifting of perspective seemingly inhibits over-identification with either character and simultaneously enables identification with both victim and perpetrator at different points. This seems to function independently of the dominant narrative of *Tom and Jerry* that overridingly positions Jerry as the victor.

4.9   Test Phase: Sampling Process

4.9.1   Selection of Samples

In selecting samples from *Trap Happy*, I was guided by my observation from the audiovisual analysis that the soundtrack to the short (music, sound effects, voices) appeared to serve the function of, in Chion's (2009) terms, temporal linearization and vectorization of images by sounds. As previously discussed, temporalization of images occurs when sounds serve to convey a sense that the images are occurring in succession, one after another, whereas vectorization of images by sound refers to how sound imprints a sense of temporal direction on images that do not possess a particular directionality. In animation, it can be argued that all sound may potentially serve a temporal linearization function, in so far as animated images are not a record of an event unfolding in time and do not possess natural sound per se (except for the medium of animated sound).

It becomes apparent when viewing *Trap Happy* without sound that several scenes do not possess a natural sense of sequential order and indeed the use of sound in the short imposes a sense of duration by virtue of the fixed rhythmical structure but also by using accents to punctuate actions. This is evident in the scene in which the cats slam each other into the wall; without sound there is a sense that the actions could be taking place simultaneously, or as Chion describes it – 'existing in a time analogous to the perfect tense in grammar' (1994, p.18). But the addition of the soundtrack imposes a rhythmical structure of cause and effect, that prefigures the repetitiveness of the violence and places it within a predictable sequence in time for the viewer.

Chion (ibid, p.19) proposes that sounds are inherently vectorized in that they comprise a trajectory with 'an attack and a slight fading resonance', which demarcates them as possessing a fixed duration in time with a 'beginning, middle and end' to a much greater extent than is true for images. However, he suggests that certain images are naturally highly vectorized including those 'that result from clear non-reversible forces (gravity causes an object to fall, an explosion disperses fragments). Within *Trap Happy* repetitive chase sequences arguably constitute an example of non-vectorized imagery, and in these instances, sound appeared to instate a sense of real time. During the test phase, my aim was to explore the impact of disrupting the perception of visual actions as having a clear beginning, middle and end in real time (temporal linearization and vectorization), therefore samples were selected where the soundtrack foregrounded the imminent onset and conclusion of an act of violence, e.g., through use of rising crescendo and glissandi or

punctuating accent sounds e.g., shovel hitting *Tom's* face. These moments represented linear temporal sequences as signalled by the soundtrack and the imagery. I sought to explore how a repetitive looping structure could alter the temporality of these action sequences and potentially instate a condition where violent action did not feel resolved, in contrast to the original source material, where violent sequences had a predictable durational quality and a clear end point.

4.9.2 Discussion of Works Produced in the Test Phase

During the test phase, I produced several short-duration test works by reworking samples from the *Tom and Jerry* episode *Trap Happy*. The test works, *Axe*, *Plank*, *Hammer*, *Iron*, *Mallet*, *Shovel*, were constructed by layering image and sound elements sampled using a masking procedure of frame-by-frame cut-outs of objects from violent gags (see Figures 16-21). The presence of characters' bodies was implied but unseen. The backgrounds were masked out completely so that the sampled objects lacked reference to spatial context which was aimed at focusing the viewer's attention on the objects.

Figure 16: still *Axe* (test work), colour, sound
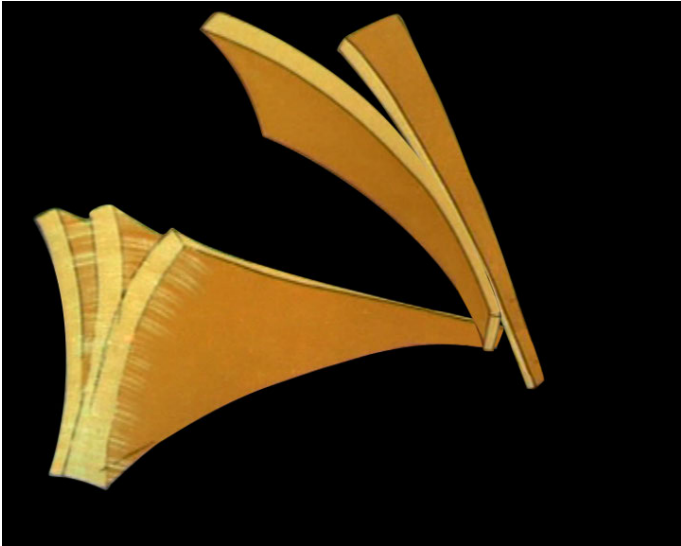
Figure 17: still *Plank* (test work), colour, sound
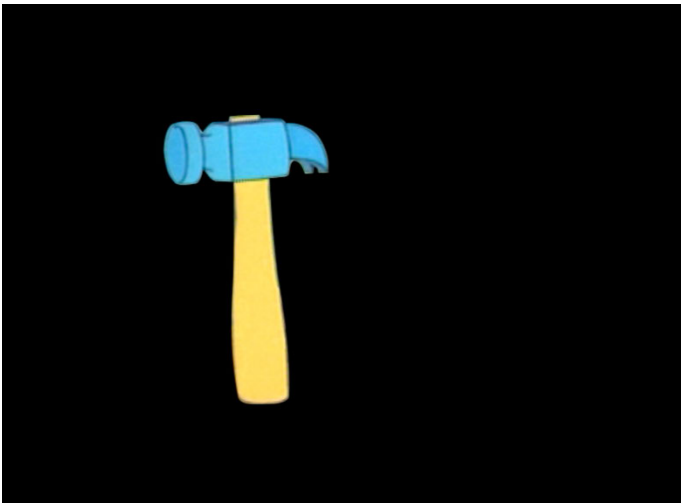
Figure 18: still *Hammer* (test work), colour, sound
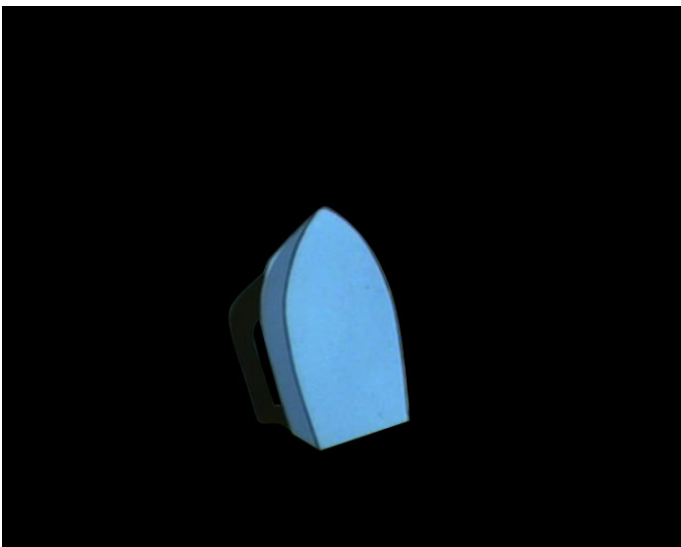
Figure 19: still *Iron* (test work), colour, sound
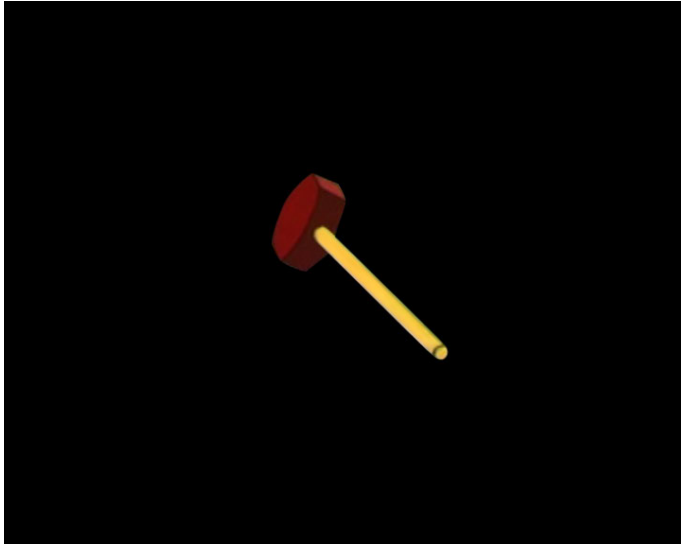
Figure 20: still *Mallet* (test work), colour, sound
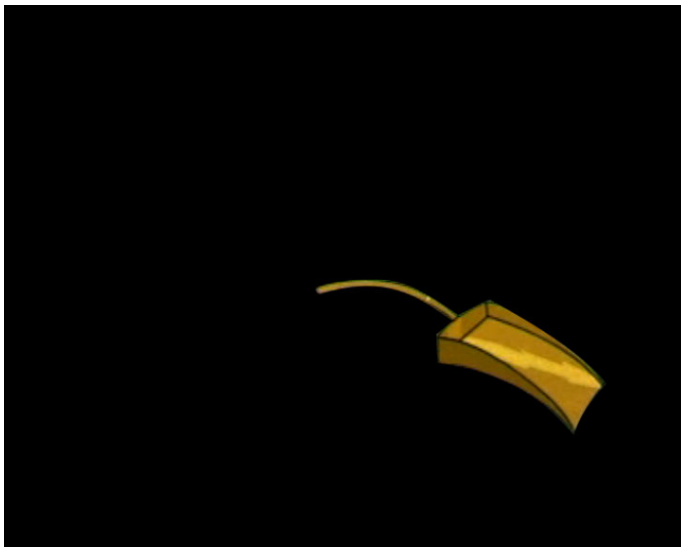
Figure 21: still *Shovel* (test work), colour, sound

A key insight gained from the process of creating the test pieces was developing a clearer understanding of the relative contribution of sound and image to the violent gags of *Trap Happy*. Specifically, the tests revealed that sound imprinted a strong and enduring sense of direction upon the images – a process referred to as vectorization (Chion, 2009, p.496). Due to the layering of samples, sounds and images overlapped and the sound was frequently out of synch with the images. It was expected that the desynchronised nature of the sampled elements would no longer possess a sense of directionality reflecting the disruption to the vectorizing function of sound on image. However, it was apparent that despite the lack of synchronisation, the test works remained highly vectorized – the sound, even when desynchronised – served to imply direction and possessed a sense of being temporalized or

oriented in time. The actions depicted in the test works appeared perceptually to have a consistent sense of a forward propulsion in time – a directionality, despite objectively lacking a clear beginning, middle and end to the action sequences. It is also possible however, that as Chion contends, certain imagery is implicitly highly vectorized to the extent that the role of sound is largely obsolete in creating a sense of directionality or orientation in time.

My intervention into the samples appeared to alter the relationship between violent acts and their comedic value and the test works lacked the sense of comic mayhem and exaggeration of the source material. By reordering the presentation of the soundtrack through the layering and looping procedure, I observed that isolating the sound from the image brought to the fore a sense of familiarity with respect to identification of the genre of Golden Era cartoons. However, unlike in the source material, the sense of aural familiarity was married with a sparse and repetitive image of an act of violence. As Andres Bermudez (2010, p.33) suggests, the use of sound for comedic value was a conventional practice of the slapstick tradition. Comic value was derived from inserting sounds that created an exaggerated, acoustic physicality at points of synchronisation with visual impacts such as blows, collisions, squashes and stretches, where physical violence was accentuated by the use of the exaggerated slapping sound of the 'slap-of-the-stick'. I suggest, therefore, that the lack of synchronisation between sound and image in the test works including the loss of the sense of comic exaggeration implied in the sound, created a point of rupture that reinstated a stronger sense of malevolence in the violence that was absent from the original source material.

4.10   Exhibition Considerations

I explored the exhibition of the artworks produced during the test phase by presenting them in a large lecture theatre that resembled a cinema space in terms of the screen size, speaker arrangement and the fixed seating. Arguably, this most closely resembled the original cinema theatre context in which the original *Tom and Jerry* shorts were shown. I was aware that my early experiences of *Tom and Jerry* shorts were on a television screen, and I experienced a stronger sense of familiarity viewing the test artworks on a standard definition television monitor. A key consideration was the retention of the parameters of my original encounter with *Tom and Jerry* shorts, whilst the exhibition testing suggested that the sense of familiarity triggered by the artworks was potentially partly influenced by the medium of the viewer's prior encounter with the source material. Therefore, I decided to retain the standard

television aspect ratio in the artworks[10]. Accordingly, I speculated that for viewers whose initial encounters with *Tom and Jerry* source material had been via the internet, then devices such as tablets, mobile phones and laptops would potentially serve to cue a sense of familiarity, in addition to the content of the artworks.

I undertook tests of different modes of exhibition throughout the production of the artworks *Plaster*, *Strike* and *Then Now* by exhibiting the works on a desktop monitor, standard definition television monitor and a large wall projection. These tests indicated that the large-scale projection intensified the immersive quality of flicker-type images in the artwork *Then Now* but did not appear to significantly alter the intensity of the other two artworks *Plaster* and *Strike*. Importantly, the experience of afterimages in *Then Now* appeared across the different formats of exhibition. Due to the onset of the Covid-19 pandemic it was not possible to proceed with a planned exhibition of the works involving large wall projections.

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[10] The *Tom and Jerry* source material was in industry standard aspect ratio 1.33:1 of the period on a DVD collection released by Warner Bros. For the research, the source material was transferred into the MP4 format for use in Adobe After Effects in 4:3 standard definition aspect ratio. The aspect ratio of 1.33:1 (also known as 4:3) was used in early 35mm silent film but changed to 1.375:1 with sound film. All large film studios shot 35 mm from 1932 to 1952 and differing ratios in usage were reconciled with the adoption of standardised Academy ratio of 1.37:1. In the 1940s, the advent of television retained an aspect ratio of 1.33:1 (or 4:3) for television material, allowed early 35 mm film to be shown on television, including the Hanna and Barbera (pre-1958) *Tom and Jerry* animated shorts, which although originally produced for projection in theatrical settings at 1.33:1, were similar to standard definition domestic televisions of 4:3. Widescreen formats were introduced in 1953, and film studios introduced wider ratios (1.6:1, 1.75:1, 1.85:1, 2.39:1). CinemaScope was introduced into *Tom and Jerry* production from 1955 to 1957 as an anamorphic format (double the width of the Academy ratio of 1.37:1) and were meant to be projected at 2.55:1. There are different versions of the animated shorts available from 1955 in both standard (1.33:1) and CinemaScope ratio (2.55:1). Some of the CinemaScope shorts are included in consumer DVD collections packaged with the 1.33:1 standard ratio versions of the shorts included.

4.11   Viewer Discussion Groups

4.11.1 Rationale for Viewer Discussion Groups

My key rationale for undertaking viewer discussion groups as part of the research was to elicit viewer responses in relation to the artefacts – the audiovisual artworks – produced in the creative practice. Therefore, I considered the viewer discussion groups as a means of accessing insights from viewers invited to engage in their own perceptual and reflective experiences of the artworks. Within the practice-based methodology of the research, the production of the artefact, the audiovisual artwork, both contains knowledge and allows further forms of knowledge to emerge from viewers' reflections in response to the artefact. Importantly, individual differences in subjective interpretations of the artworks were expected given the consistent finding of individual differences in the perception of mediated violence (Hopf, Huber and Weiss, 2008). Therefore, given the potential for individual variability in viewers' responses to the artworks, I considered that the viewer discussion groups would enable a wider range of responses to the artworks to be accessed.

I structured the viewer group discussions in an informal focus group format, which has been described as a collective conversation, in its simplest usage by Pranee Liamputtong (2011). Jenny Kitzinger (1995, p.299-300) describes the focus group method as helping the exploration and clarification of views that are often less accessible in one-to-one interviews and can enable a researcher to identify themes by comparing discussion responses. Kitzinger also states that the focus group method can be useful in encouraging discussion of taboo or less mainstream topics because of the mutual support that participants provide in expressing their views. I considered this characteristic of the group discussion format to be a useful attribute when undertaking discussion of possible perceptions of violence in relation to the audiovisual artworks in the research.

The group discussion methodology in the research broadly followed guidelines described for the facilitation of focus groups outlined by David Morgan (1997) and Richard Krueger and Mary Casey (2015). Krueger and Casey state that a key challenge of the focus group is balancing goals with the realities of time, available resources and availability of participants, which in the current research was an especial consideration due to the limitations imposed by the Covid-19 pandemic restrictions that were in place. The limitations related to the Covid-19 pandemic, included movement restrictions that had implications for the research in terms of the ability to exhibit artworks and facilitate in-person group discussion. I considered an informal discussion group format as an expedient means of gathering viewer responses

in the absence of opportunities to exhibit work and receive direct feedback. I was aware that there would be several uncontrolled-for variables in facilitating the discussion groups by virtue of contextual factors at the time related to the Covid-19 pandemic including, the artwork viewing conditions and co-ordination of group discussions conducted remotely over a video conferencing platform. However, I recognised the discursive potential of group discussion as a possible valuable source of qualitative information, both in terms of understanding an individual's response and in facilitating and promoting self-disclosure of opinions among group participants, which has been described by Krueger and Casey as a fundamental attribute of focus groups in general.

4.11.2 Methodology of Viewer Discussion Groups

I undertook group discussions to elicit viewer responses to the three artworks *Plaster*, *Strike* and *Then Now* produced during the creative practice of the research. Groups were formed as a multiple category design as described by Krueger and Casey, with aim to make a between-group comparison of the responses of a group of participants provided with background contextual information on the PhD research, compared to a group of participants without contextual information to check whether this was significant in altering viewers' responses to the artworks.

I considered the use of an online, remote group discussion to be a sufficient substitute for an in-person group, particularly a less structured group format, as described by Morgan (1997, p.40) as I aimed to enable a lively discussion, including reflection on the nature of subjective responses evoked by the exploratory and experimental nature of the artworks. The informal, less structured nature of group crits in the academic setting was considered to be an appropriate model for eliciting viewer responses in the current research. I scheduled the discussion groups in terms of dates and timings to fit with participant requirements.

In the context of the Covid-19 pandemic and the associated restrictions, the discussion groups were facilitated using an online videoconferencing platform. As the principal researcher, I acted as the moderator during each group discussion. Effective moderation is described by Kreuger and Casey (2015, p.104) as requiring skills in listening, communicating respect and openness for participants' opinions, eliciting self-disclosure, clearly communicating questions and capturing the group discussion.

4.11.3 Participants

In total, thirteen participants took part in the viewer discussion groups comprising eleven females and two males with an age range of 23 to 60 years. Two additional recruited participants were unable to attend the groups due to timing reasons and were not included in the viewer response data. Of those who participated in the viewer discussion groups, nine participants were directly recruited by the researcher and four participants were recruited indirectly via an associate. Seven participants received contextual information (group 1 and 3) and six participants did not receive contextual information (group 2 and 4). There were four viewer discussion groups held in total and the participants were distributed according to participants' availability, as follows: group 1 (2 participants), group 2 (4 participants), group 3 (5 participants) and group 4 (2 participants).

4.11.4 Viewing Conditions of the Audiovisual Artworks

I emailed links to the participants for viewing access to the audiovisual artworks *Plaster, Strike and Then Now*, that were available on an online video platform (Vimeo). Participants chose to watch the audiovisual artworks in several ways reflecting their personal preferences. Participant responses in the discussion group indicated that the artworks were viewed via desktop computer (3 participants), laptop (4 participants), tablet/iPad (5 participants), mobile phone (1 participant), though three participants indicated that they had started watching the artworks on a mobile phone and changed to a larger-screened device to aid the viewing.

4.11.5 Viewer Discussion Group Procedure

I provided all groups with an introduction, a brief welcome, an overview of the purpose of the discussion, the opportunity to ask questions and ground rules, in line with the guidelines of Krueger and Casey. The procedure for both groups comprised the following steps:

1. Welcome
2. Introduction
3. Overview of the purpose of the discussion
4. Ground rules
5. Questions
6. Summary of themes
7. Participant questions and thank you for participation

All participants were provided with a participant information sheet and a consent form prior to their participation (see appendix III & IV). Field notes were taken to document participant responses during the discussion (see appendix V). At the conclusion of the group, I provided a brief summary of the discussion, thanked participants and invited participants to ask any questions they had.

4.11.6 Questions to participants

The following list of questions guided the group discussion:

1. How did you feel watching the artworks? What was your viewing experience like?
2. What effect did the sound have on you?
3. Did the sound influence how you understood the imagery and vice versa?
4. To what extent did you consider the works violent? Against whom or what?
5. How familiar did the work seem, did you feel you had seen it before?
6. How did you view the artworks?
7. Would changing scale, volume, or how it was viewed, make a difference to you?
8. Were there themes that the artwork suggested to you?

4.11.7 Procedure for Analysis of Viewer Discussion Groups

Krueger and Casey (ibid., p.149) state that a field note-based analysis is sufficient for exploratory purposes or when the purpose of the research is narrowly defined, which I considered appropriate to the informal and exploratory nature of the group discussions in the research. They outline a strategy of analysis of responses based on identifying broad patterns and ideas that follows an approach of grouping responses on a similar dimension, which in the current research related to recurrent themes and ideas. The outcome of the discussion groups, in terms of participant responses indicating themes and ideas are discussed in detail in the relevant sections for each individual artwork.

4.12   *Plaster*: Production and Discussion

4.12.1 Sampling *Trap Happy*

My aim within the experimental phase, was to explore the role of sound-image synchronisation in onscreen violence in *Trap Happy*. It was important to identify samples of visual imagery that were not highly vectorized and did not have a strong sense of temporal directionality, given that this as an issue in the test phase. For the experimental phase, I selected samples with a fixed durational quality whose visual temporality was more ambiguous due to the absence of clear markers of beginning, middle and end.

I selected scenes in *Trap Happy* where interiors were destroyed due to the impact of bodies slamming against them, explosions, walls prised apart with a crowbar and windows shattered by gunfire. These collisions and impacts featured shots of the aftermath of debris flying into the air and the motion of the debris was not necessarily predictable in its movement. I also considered the absence of spatial context important, and I masked out the backgrounds to remove direct reference to domestic interiors, though traces were discernible in the visual elements of the debris. My selection of samples from *Trap Happy* was largely based around identifying visual elements from the narrative where violence is implicit though not necessarily overtly present, but the aftermath of violence is palpable.

4.12.2 Production Process of *Plaster*

As discussed, my analysis of the artworks from the test phase suggested that the degree of synchrony between sound and image dictated changes in the comedic value and perceived barbarity of the onscreen violence. The mechanism of this was unclear, though it appeared that the lack of a sense of a natural progression in movement, or sense of linear time, functioned to reinstate inherent properties of violence that had been occluded by the use of synchronous sound and light-hearted music in the source material. The selection of samples in the production of *Plaster*, was guided by my aim to excavate and isolate hidden, inner properties of synchronisation the material, akin to those described by Eisenstein, Pudovkin and Alexandrov as described in 'Statement on Sound' (1928). Accordingly, I isolated brief samples of sound and images from *Trap Happy* and applied processes of looped repetition to alter the perception of the actions. Throughout *Plaster*, the samples retained their original synchronised image-sound relations but approached asynchrony due to the repeated layering. The samples were largely decontextualised due to the removal of the narrative structure and masking out of visual elements including the backgrounds and characters. My

erasure of the characters' bodies was prompted by Wells' (1998) notion of the role of the invincible body in cartoons creating a comical frame. This prompted my question of whether erasing the body from the samples would alter the reading of violence in *Tom and Jerry* as hyperbolic comical exaggeration by removing the reassurance of an unharmed body.

4.12.3 Viewer Discussion Group Comments on *Plaster*

Viewers' responses to *Plaster* tended to sit within the following categories: emotional and affective responses, interpretations of content, relationships between sound and image, recognisability and familiarity, and technical issues. The themes of emotional and affective responses to *Plaster* included descriptions of it as disturbing, uncomfortable, unsettling, chaotic, sinister, anxiety-provoking and confusing. In terms of the shift from themes of comedy, responses suggested a shift towards experiencing the material as anxiety-provoking, though it did not appear to evoke themes of horror. Mostly the viewers identified the underlying theme of *Plaster* as containing violence, although several viewers stated it did not appear violent, instead they saw it within a comedic frame due to the recognisability of the images and sounds as vintage cartoons.

In terms of viewers' interpretations of content, the most frequent responses were of a form of assault, an explosion, something being broken, whilst less frequent interpretations were related to it being a prank call and sexual violence. Several viewers stated that they thought that the images contradicted the music and sound; they stated that the music conveyed something happy, but the imagery and sounds of breathing conveyed something unsettling or sinister underneath. This suggests that *Plaster* triggered a sense of cognitive dissonance in some viewers, therefore.

The breathing and the sound of a voice appeared to be the most salient aspect of *Plaster* for many viewers, and both were identified exclusively as female, despite the voices in the samples of the source material being male. One viewer described the breathing in *Plaster* as making them feel uncomfortable due to their concern that other people in their vicinity could hear the soundtrack of *Plaster*. The themes of responses in relation to the recognisability and familiarity of *Plaster* related to vintage or old cartoons, comedy, nostalgia, clowns, fairgrounds, *Tom and Jerry* and comics. The most frequent technical themes related to suggestions that the work would have greater impact if presented as a large-scale projection with surround sound or presented in darkness. Several viewers stated that not being able to see the characters was unsettling and made them aware of wanting to see the violence,

which they experienced as disturbing, whilst another stated it was unsettling not being able to see and therefore evaluate the impact of the violence in *Plaster*.

4.12.4 Discussion of *Plaster*

A key insight that arose from the making of *Plaster* related to the tacit knowledge gained by the process of directly handling the materials, and arguably this knowledge could only have emerged through the direct manipulation of the sampled material. Rather than imposing a meaning on the materials at the outset, this process of handling allowed meanings to emerge, in line with Bolt's definition of 'material thinking' as a 'particular understanding that is realised through our dealings with the tools and materials of productions and in our handling of ideas' (2007, p.31). My handling of the samples from *Trap Happy*, revealed that despite using a sample in which the original sound-image relationship was retained, the meanings contained within the sample were easily destabilised through processes of repetition.

When the sound-image unit of the physical impact of a gag (of a wall was being hit) was looped repetitively and layered with another looped gag, the synchronisation of sound-image become indistinct; sounds overlapped, and the overall effect was of frenzied action. By varying the synchronisation, it approached a condition of asynchrony I propose, and it appeared to invoke what Donnelly (2014) refers to as a rupture of the unity of sound and image. Viewer responses indicated there was a sense of chaos and confusion that felt unsettling, and they described the discomfort as being caused by the looped repetition. The use of repetition and looping appeared to reduce the capacity of sound to vectorize the images, and without the forward sense of directionality and progression this appeared to reinstate the subtext of violence within the material in *Plaster*. The underlying violence of the sample appeared clearer therefore, and the comedic framing disappeared, although viewer responses in the discussion group indicated that the actions were read in different ways e.g., something being smashed, explosion or assault. The underlying violence of the scene was clearly preserved by the retention of the synchronised sound-image unit, but the interpretation of the underlying actions appeared ambiguous to different viewers.

The affective responses of viewers indicated feelings of tension, discomfort and anxiety when watching *Plaster*, and several indicated that they would prefer to see the bodies. I suggest this supports Well's (1998) discussion of how comical framing of violence in animation is typically achieved by presenting an indestructible body that does not show signs of harm. In *Plaster*, viewers were unable to assess whether the body was indeed

unharmed, which I propose contributed to the loss of a comedic interpretation. Within the group discussions of *Plaster*, a theme emerged from viewers' comments that the work made them aware of their desire to see the acts that were heard but unseen. The heard, but unseen sound of breathing in *Plaster*, I suggest, represents a form of acousmêtre that Chion (1999) describes as increasing the viewer's desire to see the source of the voice.

It can also be argued that the presentation of offscreen voices in the form of sounds of heavy breathing, screams and gasps, in the absence of images of the bodies emitting the sounds, constitutes a condition of eavesdropping. Elisabeth Weis (1999) describes how eavesdropping as a plot device in film can foreground the voyeurism implicit in the medium of cinema itself. Weis suggests that in addition to its typical diegetic function, the presentation of eavesdropping in film has a reflexive role due to it fostering an intensive identification with characters onscreen: 'like voyeurism, eavesdropping can reflexively question our prying relationship to film, our love of listening in, our complicity with the eavesdropper' (ibid., p.79). A similar device occurs in the horror film, *The Neon Demon* (dir. Nicolas Winding Refn, 2016), when the protagonist is depicted as overhearing a violent assault, which she listens to through the wall of her motel room. The violence unfolding in the adjacent room is never shown, instead the framing of the shot emphasises it as an act of voyeuristic aural eavesdropping. Implicit in the framing of the protagonist as eavesdropper is a doubling of voyeurism, where the viewer is analogously positioned as a voyeur to the protagonist's eavesdropping. In *Plaster*, visualisation of the characters is withheld and ambiguity in the sounds heard by the viewer seemingly increased their awareness of their own desire of see. One participant described a heightened sensitivity of possibly being observed by others when listening to the sounds of *Plaster*, seemingly confirming a redoubling of a sense of being caught in an act of voyeuristic eavesdropping.

4.13   *Saturday Evening Puss* short: Selection, Analysis and Sampling

4.13.1 Selection and synchronisation

The selection of the short *Saturday Evening Puss* was grounded in my observation that the sound-image synchronisation in the short comprised a more exaggerated form of Bradley's characteristic tightly synchronised scoring. The orchestration of *Saturday Evening Puss* abounds with synch points constructed to produce fully rendered, synchresis effects using musical accents and sound effects to sonically punctuate visual gags, in keeping with Bradley's typical orchestration for *Tom and Jerry*. Thematically the gags of *Saturday Evening Puss* represent set-pieces that revel in the delights of sound-image synchronisation and function simultaneously as both visual and sound gags. Unlike *Trap Happy*, the musical scoring of *Saturday Evening Puss* is presented diegetically with the musical soundtrack seemingly generated by Tom's gang of cats playing household objects and body parts as instruments. Simultaneously, the rhythmical structure of the music seems to choreograph the behaviour of the gang producing highly absurdist set piece gags. Throughout Bradley's orchestration dominates and appears to direct the visual narrative – a seeming reversal of the real-life dominance of visual narrative over sound scoring.

4.13.2 Description of *Saturday Evening Puss* short

Saturday Evening Puss (dir. William Hanna and Joseph Barbera, 1950) was initially titled 'Party Cat' (Brion, 1987, p.91) and later retitled as *Saturday Evening Puss* which appears to be a play on the title of the 'Saturday Evening Post' magazine of the period. The short is mostly set within the domestic setting of Tom's house and depicts Tom inviting three cats to play music in his home whilst his owner, Mammy Two Shoes (Lillian Randolph) plays cards at a bridge club. The cats' musical antics disturb Jerry's sleep who initially protests, but then retaliates violently (see Figures 22-23), triggering several cat and mouse chase scenes until Mammy Two Shoes returns to restore order. The short features the voices of Lillian Randolph and William Hanna and the jazz standard *Darktown Strutters' Ball* (Shelton Brooks, 1917) plays throughout. *Saturday Evening Puss* was originally filmed on 35mm film, in Academy aspect ratio (1.37:1) in Technicolor with a runtime of 6 minutes and 18 seconds (Brion, 1987).

Figures 22-23: stills *Saturday Evening Puss (*1950) colour, sound, 6 min 18'

Saturday Evening Puss is notable for being the only *Tom and Jerry* short to ever show the face of Mammy Two Shoes*,* as she was typically shown from the waist down only. Her face appears briefly for two seconds in a scene in *Saturday Evening Puss* where she is depicted running hurriedly down the middle of a road as she returns home accompanied by the sound of a car's revving engine. In later edits of *Saturday Evening Puss* by MGM Animation Studio in response to constitutional changes in the Civil Rights era in the 1960s, the character of Mammy Two Shoes was subject to several acts of erasure; the original voice of African American actor Lillian Randolph was overdubbed by the Irish accented voice of actor June Foray and erasure of the character's body entailed replacement with a white, teenage female character by rotoscoping and repainting of the original cels.

4.13.3 Point of Impact and the Single Frame in *Saturday Evening Puss*

The *Tom and Jerry* short *Saturday Evening Puss* was analysed using Chion's (1994, p.189) audiovisual analysis to identify dominant tendencies and sound-image relationships, during which I discerned many instances of a visual point of impact device. As part of the practice, I sampled this visual device from *Saturday Evening Puss* and the subsequent reworking of these samples formed the basis of the next two audiovisual works *Strike* and *Then Now*.

When analysing *Saturday Evening Puss,* I was intrigued to discover a three-frame sequence in the middle of a gag that represented the point of impact of a collision (between two characters) by complete erasure of the background of the scene (see Figures 24-26). This depiction of the point of impact entailed the insertion of a replacement blank background, which alternated between a black and white background. The collision also featured the addition of a brief abstract visual illustration (coloured yellow and outlined in red) of the type frequently found in comic art typically accompanied by text, to emphasise a physical impact as a form of visual onomatopoeia.

Figure 24: still *Saturday Evening Puss* (1950) colour, sound, 6 min 18'

Figure 25: still *Saturday Evening Puss* (1950) colour, sound, 6 min 18'

Figure 26: still *Saturday Evening Puss* (1950), colour, sound, 6 min 18'

Further analysis of *Saturday Evening Puss* revealed that the visual device was used throughout the short to depict the point of impact of each gag, and to accentuate the sound of an action involving an object, such as Jerry pulling an electrical plug from a wall socket. There were thirty-six examples of the use of this device in the short, though its predominant function appeared to be as a climatical visual accent for the point of impact during violence. I propose that the relationship of this visual device to sound in the genre of slapstick comedy has not, as yet, been explored within an artistic moving image practice. However, similar

visual devices of comic art have been appropriated by contemporary artists, as Valerie Cassel (2003) highlights in her essay for the Contemporary Arts Museum Houston Splat Boom Pow exhibition catalogue. She proposes that strategies of appropriation of comic and cartoon art by Roy Lichtenstein (see Figure 27), and Andy Warhol in his *Myths* (1981) series, represented a push back against 'lofty ideals' of the 'authority of aesthetics' (ibid., p.20-21).
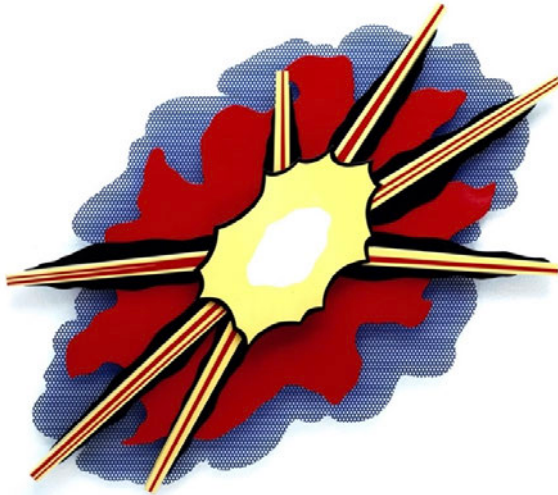
Figure 27. *Wall explosion ii* (1965) Enamel on steel, 170.2 x 188 x 10.2 cm

In terms of my use of strategies of abstraction and decontextualisation in my sampling-based practice, I was interested in the notion of an embedded or deep image within a sample, which has been discussed by Dave Hickey (2007) in relation Arturo Herrera's use of collage. Hickey identifies how the cartoon image in Herrera's practice represents a deep image, in an almost geological sense, that is occluded by the act of collage but persists as a subliminal, figural presence. In terms of my own sampling practice, this suggested the possibility to maintain a deep image or presence of the source *Tom and Jerry* material despite the erasure of identifying features by my removal of visual contextual information.

Strategies of abstraction and decontextualisation are applied by Herrera specifically to the iconography of cartoons, wherein his work offers a critical reading of the underlying themes typically associated with Disney characters. In Herrera's wall painting *Untitled* (2001) he samples images from Disney's *Snow White and the Seven Dwarfs* (dir. Walt Disney, 1937) to create a melange of characters' body parts as a disturbing counterpoint to themes of innocence in the original source material (see Figure 28). Marcoci (2007, p.26) notes that Herrera's use of collaged fragments questions the readability of the image and the implied narrative associated with the deeply ingrained iconography of Disney within the American

psyche, and suggests that the work can never attain a position of complete anonymity despite Herrera's acts of reconfiguration.

Figure 28: *Untitled* (2001) Enamel on wall, 405.1 x 689.6 cm

The point of impact visual device in *Saturday Evening Puss* appears to have originated in the silent world of the printed comic book, functioning as a visual stand-in for unheard sound. However, in the moving image context of a *Tom and Jerry* short that has a sound score, the device arguably represents the sheer excess of comedic hyperbolic exaggeration that Andrin (2010, p.228) suggests typifies slapstick. Similar graphical devices are identified by Marina Warner (2008, p.108) in comic book artists' onomatopoeic visual renderings of sound in text (e.g., 'Ouch', 'Oooh' and 'Aah') that she refers to as 'acoustigrams' that attempt an 'embodied orality, less verbal sign than somatic symptom'. She suggests onomatopoeia and mimetic representation in acoustigrams work together to embody the sound of 'bodies as they are blown apart' (ibid., p.110). The comic strip shares with film a need to relay weight and substance, as well as the experience of the pain of characters, she asserts, noting that 'they reached for sonics to do it' (ibid., p.121).

I propose that the use of tightly synchronised, and predominantly light-hearted, musical scoring deployed in *Tom and Jerry* undermines the emotional resonance of onscreen violence. The use of the point of impact device in *Saturday Evening Puss is*, I propose, rendered redundant in conveying weight and texture of the violence by its pairing with the light-hearted score. In the practice-based works *Strike and Then Now,* I sought to reinstate the function of this visual device as a hyperbolic violent gesture without having Bradley's light-hearted scoring to modulate affect. I discuss the results of my interventions into the source material in producing the artworks *Strike* and *Then Now*, in the next section.

4.14   *Strike*: Production and Discussion

The following sections comprise my critical reflections on the process of sampling and reworking the *Tom and Jerry* source material to create the artworks *Strike* and *Then Now* using samples of the point of impact device in *Saturday Evening Puss.* Following this, I present my analysis of sound-image relationships in each artwork respectively, including my subjective reflections and those of viewers from the discussion groups.

4.14.1 Production Process of *Strike*

The production of *Strike* commenced with the sampling of sequences of the visual point of impact device in *Saturday Evening Puss.* All visual information was masked out from each selected frame, leaving only the visual device representing the point of impact of a gag and its accompanying soundtrack. In terms of the audio, the sample typically comprised a few notes of a musical phrase and a sound effect of an impact – either a musical accent or a foley artist produced sound (e.g., hard object impact, human scream). The predominant use of the visual device in *Saturday Evening Puss* was the infliction of violence by one character on another or collisions between bodies and objects or walls.

By isolating points of impact in the source material when sound and visuals synchronise, I sought to emphasise the climatic point of a violent gag. As the sound score develops towards these points, a sound-image synch point punctuates the physical force of one material encountering another, typically an object against a character's body. By erasing all background contextual information from the frames including the characters' bodies, this created a sense of ambiguity regarding the violence, and a straightforward reading of the action was not possible. Decontextualising the violence constructed a space where a sense of stasis competed with the viewer's expectation of a forward progression in the action.

As previously discussed, my process of making is improvisational and takes place in an iterative, stepwise way. In practical terms, I do not produce works by storyboarding and planning sequences in advance, instead I work using a process more akin to animating straight ahead where each frame is completed in sequential order. I follow a process of responding to the properties of samples through trial and error in an iterative way, which involves appraising results and feeding this information into the next iteration. I worked through several iterations of the artwork *Strike*, in which I aimed to emphasise the sense of violent climax embedded within each violent gag. In the third (and final) iteration of *Strike* my aim was to present sustained and repetitive points of impact that would retain a violent

resonance when viewed. Samples were slowed in the early scenes of *Strike*, then I
increased the pace and intensity by including highly synchronised loops that reached a
musical climax. At the mid-point of *Strike*, alternating sequences alluded to bodily violence.
In the later phases of *Strike*, the samples were slowed to generate different possible
readings of the impacts.

In conclusion, the final iteration of *Strike* led to several new observations related to the form
and reading of violence in the samples. Specifically, I observed that decontextualisation of
the samples enabled a shift in the reading of the iconography of the visual point of impact
device wherein the device appeared to function variously as a sign of threat, a sign of a
bodily function (such as a heartbeat), and as an illustration of a mechanical process. I also
observed that the decontextualised sound-image relations in *Strike* enhanced a sense of
ambiguity around the type of violence implied in the work compared to the original *Tom and
Jerry* source material (where violence is clearly and consistently enacted upon the
characters' bodies).

4.14.2 Discussion of *Strike*

The use of the decontextualised samples of the point of impact device from *Saturday
Evening Puss* fostered a sense of ambiguity in the work whilst the lack of a narrative
structure created a space for the viewer to make their own interpretations of the connections
between different scenes and between the looped samples within scenes. This ambiguity
extended to points in *Strike* that suggested bodily impacts by the inclusion of visual imagery
of fluids paired with the point of impact device and sounds suggesting a physical impact. The
ambiguity of the fluid gave rise to different interpretations of the fluids to the original short in
which the fluid represents jam and saliva; within *Strike* the same imagery was interpreted as
blood and signalled injury. Injuries in the original *Tom and Jerry* source material were
presented in cartoonish, hyperbolic ways involving rising bodily lumps and body parts that
were grotesquely reshaped by the impact of an object. Injuries consistently resolved almost
instantaneously in the original material, and body integrity returned by the onset of the next
scene, whereas the interpretation of fluid as blood suggested a more realistic depiction of
injury in *Strike.*

Importantly, decontextualisation of the samples and the repetitive looped structure reduced
the sense of the comical in *Strike*. I handled each sample as a self-contained sound-image
unit when making *Strike* and I did not superimpose extraneous sound on top of the
soundtrack. This reduction of Bradley's original soundtrack to brief samples eliminated a

sense of linear directionality in the sound, so that the soundtrack no longer moved attention on to the next scene and away from the violence at a point of impact. In my experience of the work, the sound of *Strike* appeared to reinstate the violence of the impact most intensely during highly synchronised sequences wherein the repetitive looping of the sample intensified the perceived violence of the impacts.

4.14.3 Viewer Discussion Group Comments on *Strike*

The emotional and affective responses described by viewers in relation to *Strike* related to a sense of it as dark and aggressive, trance-like, repetitive and engendering a sense of foreboding. Interpretations of *Strike* referred to it as like a nuclear attack or aerial bombardment, warning alarms, explosions and fireworks. In terms of viewers' level of engagement, responses suggested *Strike* was perceived as easier to watch than *Plaster*, more attention-grabbing or alternatively experienced as monotone, repetitive, and confusing. A viewer stated that they felt an eagerness to see what was happening, and imagined an industrial ironworks based on the sounds. There appeared to be a difference between those viewers who felt the images and sounds were familiar, and those viewers who experienced the artwork as unrecognisable and confusing, though this difference may have been linked to the provision of contextual information. *Strike* was described by one viewer as reminding them of visual artefacts that 'appear when closing your eyes to go to sleep', or of a 'memory of light that changes shape'. *Strike* was also described by a viewer as being reminiscent of comics that featured graphic 'kapow' illustrations of characters' punches.

There was a split in terms of viewers' perceptions of violence; several stated *Strike* appeared violent, and they perceived red fluid as a blood splatter, whereas others did not perceive *Strike* as violent. There was no clear suggestion of a shift towards themes of horror, except for one viewer who likened the sound in *Strike* to the sound of torture. Instead, several viewers stated that *Strike* reminded them of forms of music, or the visual devices used in comics. Several viewers described being reminded of the violence of cartoons such as Looney Tunes shorts or *Tom and Jerry*, though one viewer pointed out that *Strike* did not feel like slapstick and *Plaster* had more references to slapstick.

I suggest that the split in viewer response in relation to *Strike* may be partly understood by reference to the concept of musicality, and potential individual differences in the perception of musicality in *Strike*. Viewer responses appeared to be divided between interpretations of the work as trance-like, possessing a rhythm, sounding like a musical score or techno music, versus interpretations in terms of a large aerial bombardment, an invasion or warning

alarms, suggesting a split between those perceiving a sense of musicality and those not. I propose that within *Strike*, the synchronised looped repetition of visual and sound elements can be interpreted as either rhythmical and musical, or alternatively, simply as a repeating sound.

In terms of musicality, I suggest that Kulezic-Wilson's (2020, p.16-17) discussion of the musicalisation of the integrated soundtrack offers a means to understand viewers' responses that focused on the musicality of *Strike*. Her notion of the integrated soundtrack encompasses a conception of the soundtrack as a musical entity and operationalises a definition of film rhythm that comprises both visual and aural elements. In terms of the perception of rhythm, Kulezic-Wilson (2015, p.41) had previously described processes of grouping that occur when aural stimuli are repeated in music wherein individual sounds are mentally organised into structural patterns, based on factors such as proximity (nearness of sounds to each other), similarity and difference (timbre, volume), leading to the formation of a temporal Gestalt. Film may also constitute similar processes related to visual musicality, she suggests. In this regard, Chion's (1994, p.136) concept of 'transsensorial perception' is a potentially useful explanatory construct in its articulation of how the perception of film rhythm is not specifically visual or aural. According to Chion, audiovisual information is perceived through a single sensory channel (either visual or aural) but the perception of rhythm is the outcome of subsequent processing in the motor areas of the brain and stimuli are interpreted as rhythmical only at that point. Notably, Chion's account is supported by neuroscience research on the sensory-motor theory of rhythm and beat induction that suggests rhythm perception is mediated by the integration of sensory representations of auditory input and a motor representation of the body, and the vestibular system is responsible for the perception of motion in sound (as summarised in Todd and Lee, 2015). I suggest that it is possible that transsensorial perception or indeed the propensity to form a temporal Gestalt in response to sonic and visual rhythms (or musicality) may be subject to individual variation, and therefore would explain the different viewer responses to *Strike*.

4.15   Discussion of the Voice in *Plaster* and *Strike*

In the works *Plaster* and *Strike,* voices and screams are heard but their source is unseen, a form of sound that Chion (1999) refers to as offscreen. The presence of the voice in *Plaster* in the form of breathing elicited the strongest responses from participants in the viewer discussion groups, appearing to invest the work with malevolence and ambiguity. As previously discussed, Chion (ibid., p.24) describes the unseen sound as 'acousmatic', proposing that it creates sense of 'disequilibrium and tension'. The viewers responses to *Plaster*, I suggest, support Chion's conceptualisation that the unseen voice in film generates an 'acousmêtre', a 'bodiless voice', that increases tension and provokes in the viewer a wish to see what is being heard (ibid., p.21). When the voice is yet to be seen by the viewer, the limits of the bodiless acousmêtre's sense of being and body are undefined, he suggests. I propose that in *Plaster* the gasping sound of breathing functions as an acousmêtre, instilling feelings of tension in viewers, as reflected in the viewer responses that frequently described the sound of breathing as anxiety provoking. Similarly, responses suggested that several viewers experienced a desire to see where the sounds where emanating from, which for some, generated feelings of discomfort that were described as disturbing, and again supports Chion's conceptualisation of the effects of the acousmêtre on the viewing experience.

The research findings also suggested the operation of possible gender-based expectancies when offscreen voices are decontextualised. Screams heard in both *Plaster* and *Strike* were identified by viewers in the discussion groups as exclusively female, suggestive of a possible gender bias in the perception of the scream. In cinema, Chion (ibid., p.77) identifies a gender difference in the function of the scream in narrative, referring to the notion of the 'screaming point' that is typically a female scream that represents 'the indeterminate inside the spoken...unrepresentability inside representation' that suspends time. He suggests that the female scream implies a sense of 'limitlessness', though its placement is more important is than its content (ibid., p.79). In contrast, the male scream tends to be designated as a shout rather than a scream, and functions more as structuring device, and a demarcation of power. In both *Plaster* and *Strike* the scream can be considered as a form of acousmêtre whose body limits, as Chion contends, are undefined, but I suggest that it is the quality of limitlessness of the body of the acousmêtre, that when presented as a scream in *Plaster* and *Strike*, identifies it to the viewer as female. I suggest this tendency is determined by pre-existing gender biases resulting from viewers' prior experiences of how the female scream is depicted in film.

4.16   *Then Now*: Production and Discussion

During the process of working on *Strike*, I began to form ideas in my practice about the representation of violence in decontextualised samples. Specifically, I began to consider ways to excavate the violence inherent in the sample to suggest traces of the immediate aftermath of the impacts. Partly this was prompted by my observation of the tendency in the original *Tom and Jerry* source material to use the soundtrack to move the action on immediately after violent gags, maintaining a forward directionality that retained the comedic value by not lingering on the effects of the violent impact.

When watching the flickering frame sequences at the point of impact in the *Tom and Jerry* source material and in *Strike*, the blank backgrounds reminded me of the blank backgrounds that feature prominently in comic art and graphic novels, where the blank space can be used to represent violence in an abstract way or suggest absence. In his article, 'Confronting the whiteness: Blankness, loss and visual disintegration in graphic narratives', Xavier Marcó Del Pont (2012, p.254) states that whilst the whiteness of the spaces between images and texts in graphic novels reveals the materiality of the page, they also function to 'rehearse loss'. Golnar Nabizadeh *(*2019, p.89-91) identifies Marjane Satrapi's use of an 'abstracted, non-realistic representational style' and blank backgrounds in her autographic, graphic novels *Persepolis* (2003) and *Persepolis 2: The Story of a Return* (2004) as carving out absences, to afford the reader access to 'affective truths' (see Figure 29). She notes that Satrapi chose to depict violence in an abstract, monochrome form to avoid the banality of contemporary, hyper-real representations of violence, whilst simultaneously emphasising loss through abstraction (ibid., p.91).

Figure 29: Panel from *Persepolis 2: the Story of a Return* (2004)

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She observes that Satrapi's omission of details forms an 'abstract visual lexicon' and refers to a panel in the novel *Persepolis 2: The Story of a Return* depicting the main character Marji's visit to her uncle Anoosh's unmarked grave outside Evin prison where the blankness of the space surrounding the prison (see Figure 30), evokes absence and loss 'rendered through the absence of signification' (ibid., p.92). Nabizadeh suggests that the blankness, and the emptiness it conveys, are replete with meaning (ibid., p.92). This insight prompted my consideration of the potential of blank frames in *Then Now* to similarly evoke an affective engagement by the viewer with the underlying themes of violence.

Figure 30: Panel from *Persepolis 2: the Story of a Return* (2004)

Therefore, my observations of *Strike* prompted, in an iterative way, the creation of the next artwork *Then Now*, which I considered as a more focused attempt to shift the meanings associated with violent subtext of the slapstick comedy of *Tom and Jerry*. In particular, I was interested in investigating the abstraction of violence afforded through the use of the blank background and, as I discuss, I was also interested in exploring the use of the single frame to produce a flicker-type effect as observed in the source material.

4.16.1 Blank Backgrounds and Afterimages in *Then Now*

The use of the blank background at the point of impact or collision in *Saturday Evening Puss* can be interpreted as a device to induce visual shock when viewed at the original frame rate of 25 frames per second; the alternating black and white backgrounds provide a brief flickering or strobing effect, adding to the visual impact of the violence of the characters' collision. The blankness of the background in the frames represents an act of erasure, a

removal of visual contextual information that seems to invoke a momentary stasis where it is not possible to ascertain the temporal directionality of the action.

In the production of *Then Now*, I aimed to explore if the insertion of blank and coloured frames, and the removal of contextual information from the frame could suggest the presence of visual afterimages following a violent gag in the *Saturday Evening Puss* source material. Thus, I aimed to explore how altering the sound-image relationships in the samples could potentially shift the perception of the point of impact from solely being in the present to being perceived as an after-effect of the point of impact. In terms of alterations to the sampled sound, I isolated brief segments of the violent impacts of gags in *Saturday Evening Puss* using Adobe After Effects and integrated two versions of the sample at different speeds. By slowing the sample, it was possible to create an ambiguous non-melodic soundscape that no longer served a temporalizing function or a sense of forward progression in the action. I aimed to construct a sense of an interior psychological space in relation to the violent impacts, where the soundtrack would not obviate the tension of the violence. I suggest that the slowed-down soundscape paired with the images, functioned as a means of constructing a sense of interiority in the work.

In terms of the alterations to the sampled images, my main aim was to create an ambiguous space where the violent impacts would be experienced in a decontextualised way. Referring to Conrad's work *The Flicker*, Duncan White (2011, p.232) highlights the capacity of flicker to 'cause images to be seen that are not present or as a means of stimulating an otherwise absent content', whilst recognising its capacity to also suggest another cinematic location that fosters 'uncertainty (over where technology and physiology merge) over where the film is located'. I aimed to foster a sense of perceptual ambiguity in the work primarily by invoking a sense of afterimages being produced and used colour as a device to emphasise differences between the initial presentation of a sequence representing a violent impact and the suggested afterimages of the impact. I aimed to evoke a sense of retinal persistence akin to afterimages, similar to entoptic phenomena. The choice of colours was guided by visual perception research that characterises afterimages as an adaption of the human visual system; illusory afterimages are produced as complementary colours in RGB space primarily as a result of retinal fatigue (Manzotti, 2017). I utilised an online RGB colour chart calculator to determine the complementary colours to those contained within the original sampled sequences and produced complementary colour variations of the sequences using the RGB colour correction tool in Adobe After Effects. In terms of the editing of the colour variations, I chose to sequence these in a quasi-randomised way given the aim of creating an ambiguous, disorderly space.

4.16.2 Discussion of *Then Now*

In *Then Now*, the repetitive layering of differently coloured single frames, sampled from the point of impact in a violent gag, produced the unexpected consequence of evoking the visual iconography of comic art more strongly than in *Strike*. The layering also altered the perception of temporality as a sense of stasis was pronounced throughout. The decontextualised relationship between sound and image in *Then Now* appeared to intensify a sense of ambiguity, and references to *Tom and Jerry* lessened. The overall impact of this erasure of context, I propose, intensified the sense of an atemporal, interior space.

In my testing of the exhibition of *Then Now* by projection and on a computer desktop monitor, I perceived the presence of seeming afterimages across the different exhibition formats. However, the intensity of the flickering frames appeared stronger when experienced as a large-scale projection, potentially due to a more immersive visual experience. The perceived intensity of the flickering frames in *Then Now* varied across formats but also between different viewings of the same presentation format. Therefore, I suggest that factors such as my own subjective levels of concentration, tiredness and engagement appear likely to have been contributing factors.

The soundscape of *Then Now* was comprised of brief bursts of the original audio sample during the point of impact sequences, followed by extended segments of repetitive layering of slowed samples. The slowed samples had a lowered pitch of barely discernible musical notes that was evocative of white noise. From my own subjective reflection, this form of sound appeared to function both as a representation of an interior psychological state and as a representation of the noise of an environmental event such as a storm or alternatively as the sound of a distant bombing. The extent to which the sequences of *Then Now* excavated a sense of violence in the original *Saturday Evening Puss* source material was different to *Strike*; the decontextualised soundtrack appeared to contribute to the emptying of meaning and greatly reduced linear directionality in *Then Now*, in contrast to sequences in *Strike* that emphasised affective states of tension.

4.16.3 Viewer Discussion Group Comments on *Then Now*

Viewer responses to *Then Now* suggested that the viewers perceived the differently coloured single frames as flickering or strobe-like and experienced the artwork as more difficult to watch than *Plaster* or *Strike*. The themes of emotional and affective responses of

viewers were diverse and included a sense of the work as euphoric, trance-like, psychedelic, abstract, assaultative, neurological, and evocative of dizziness and nausea. Viewer responses also differed in identifying *Then Now* as either seeming lighter in mood than the other works, or alternatively, darker and more intense, and one viewer described the colours in *Then Now* as more affecting than in *Strike* or *Plaster*.

Most viewers did not identify *Then Now* as containing violence, though several viewers did suggest it had a sense of violence or depicted explosions. There did not appear to be a suggestion that the works evoked themes of horror in viewers. One viewer interpreted *Then Now* as being related to internal feelings of anger, whilst another referred to a scene depicting aversion therapy in the film *A Clockwork Orange* (dir. Stanley Kubrick, 1971). The relationship of the work to the viewer was discussed more frequently in the group discussion of *Then Now* than the other works; some viewers described *Then Now* as functioning in an assaultative way on the viewer, or oppositely, that the flickering-type frames depicted a euphoric state. The description of *Then Now* as evocative of a euphoric state, I suggest, appears consistent with Gunning's (2017) identification of the capacity of flicker in Kubelka's work to invoke states of ecstasy by intensifying perception in the viewer.

A further theme of several viewers' responses to *Then Now* related to properties of vision and internal physiological sensations; viewers described the work as akin to seeing afterimages or similar to images that appear when the eyes are closed. These responses appear to suggest that viewers experienced the visual images as akin to entoptic phenomena, which are visual perceptions that originate within the eye, such as floaters caused by deposits within the vitreous body of the eye, pressure phosphenes produced when the eyes are rubbed, or flick phosphenes that are flashes of light seen during movement of the eyes (Hildebrand, 2017). Entoptic phenomena have also been implicated in hypnotic induction procedures that use 'inner focusing' techniques where entoptic phenomena are utilised as a focus of visual attention to induce trance-like states (Hunchak, 1980, p.223). Taberham (2018, p.103) discusses entoptic phenomena in relation to the film work of Stan Brakhage and suggests that Brakhage evokes entoptic effects in his film *Dog Star Man* (1961-1964) and potentially reflects Brakhage's aesthetic concerns related to notions of the 'untutored eye' and his attempts to 'refamiliarize the viewer with the actual act of seeing'. He suggests Brakhage's work serves 'to reawaken the viewer to the subjective dimensions of human vision that we typically ignore' (ibid., p.106). Similarly, I suggest that the visual images in *Then Now* appeared to evoke associations for viewers of the sensations of vision generated from within the body, whilst viewers also made associations between these images and trance-like states.

The sound of *Then Now* appeared to be perceived by viewers as less dominant than the images, though one viewer described it as portraying mania. I suggest that the ambiguous properties of the slowed-down soundscape and the pairing of the flickering visuals in *Then Now* functioned to construct a sense of interiority in viewers. Viewer responses to the flickering of single colour frames suggested viewers did not see the visual images as representative of the content of *Tom and Jerry,* but evocative of bodily sensations and perceptual experiences. The sound in *Then Now* exerted less influence in directing viewers' interpretations towards the original source material, I suggest, reflected in the descriptions of the work as less familiar compared to *Plaster* and *Strike*. De Bruyn (2014, p.123) refers to Breer's use of flickering frames in his work *69* as working at the 'ambiguous threshold' between 'making and not making sense' and described the experience of viewing the work as 'immediate and fleeting, not analytic'. *Then Now* similarly appeared to invoke a sense of immediacy, an interior state, and most viewers did not associate *Then Now* with the slapstick comedy or underlying violent subtext of *Tom and Jerry*. Instead, *Then Now* appeared to emphasise a sense of assaultiveness in the perceptual act of seeing, I suggest. Therefore, I propose that a key insight from the creation of *Then Now* relates to how its asynchronous sound-image relationships occupy an ambiguous threshold, where the source material is defamiliarised and the viewer's connection to the slapstick comedy and the violent subtext of *Tom and Jerry* is diminished, and instead a heightened sense of interiority and an emphasis on the act of perception is evoked.

4.17   Contextual Information and Viewer Responses to *Plaster, Strike, Then Now*

In terms of viewers' emotional and affective responses, there were no discernible differences between the responses of viewers provided with contextual information and those without. Commonalities were observed between both groups in their experiences of the works, for example, the impact of coloured, single frames in *Then Now* was described as physically challenging to watch by most viewers. Viewers provided with contextual information referred slightly more frequently to the era of animation, their own encounters with the source material in childhood and the ethical implications of cartoon violence. In terms of interpretations of violence, viewers without contextual information seemed to make more diverse interpretations of the underlying violence of *Plaster*, whereas in relation to *Strike*, the lack of contextual information was associated with fewer references to violence and more emphasis on perceptions of tension and anticipation. Both groups gave similar responses to *Then Now* which appears to suggest that the contextual information did not significantly alter their engagement with the work.

4.18   Conclusions from *Plaster, Strike* and *Then Now*

In conclusion, the artworks *Plaster*, *Strike* and *Then Now* provided insights into how a practice of altering sound-image relationships, using processes of decontextualisation, desynchronisation and repetition, transformed the reading of the comedic themes of *Tom and Jerry* source material. Strategies of repetition and looping reduced the capacity of sound to vectorize images, and without the forward sense of directionality and progression, this reinstated the subtext of violence within the source material in *Plaster* in particular, I suggest. Although I approached the sampling and reworking of the source material in a broadly similar way (using strategies of looping and erasure), the iterative process of making facilitated changes in the sampling process during the production of each artwork, which led to changes in the sense of familiarity that each artwork evoked. It must also be acknowledged that across the artworks, viewers' responses demonstrated individual differences in the perception of violence, however across the research there was no significant evidence of a shift towards themes of horror in the artworks produced. I also suggest that identification of causal factors responsible for the observed individual differences in the perception of violence in the artworks is beyond the scope of this PhD research.

In summary, the key insights that emerged from the production of the artworks *Plaster*, *Strike* and *Then Now* related to the role of repetition and asynchronous sound-image

relations in reducing the comical framing of the source material and reinstating the inherent subtext of violence in *Plaster*. Viewer responses to *Strike* varied with respect to the perception of violence and I propose the notion of musicalisation as a potential useful explanatory construct in understanding viewers' responses. In terms of *Then Now*, a key insight related to how the asynchronous sound-image relationships defamiliarised the source completely including the link to slapstick comedy and the violent subtext of *Tom and Jerry*; instead, the work evoked a heightened sense of interiority with an emphasis on the act of perception. A further insight from the research relates to the finding of gender-based expectancies in the perception of the offscreen voices in *Plaster* and *Strike* and appears to support the notion of the potential influence of a pre-existing gender bias in how the female scream is depicted in film.

5. Conclusion

5.1 Summary and Conclusions

This research aimed to investigate how a practice of decontextualisation and desynchronisation of sound and image elements of the violent gags of *Tom and Jerry* could unmask the underlying violent subtext within the comedic slapstick of *Tom and Jerry*. I propose that this practice-based research can be viewed as a case study that demonstrates the potential of a sampling-based creative practice to excavate the underlying subtext of violence by reconfiguration of the sound-image relationships in *Tom and Jerry*. The findings of the research support the notion that intrinsic and covert processes of sound-image synchronisation, as described by Donnelly (2014), play a key role in the delivery of gags and the reading of slapstick violence as comedic. By disrupting the linear narrative structure of the source material using strategies of sampling, looping and repetition in the creative practice, I propose that the research enabled new readings to emerge from the *Tom and Jerry* source material. The novel artefacts produced in the research, in the form of audiovisual artworks, embody new knowledge related to how reconfiguration of sound-image relationships altered the reading of the comedic violence. Importantly, differences emerged between the artworks in terms of the extent to which they unmasked underlying themes of violence, which I propose, implicates possible mediating factors including the influence of asynchrony on comical framing, the role of the unseen voice, perceived musicality and perceptions of interiority in the audiovisual artworks.

This research presents new knowledge derived from the application of an audiovisual analysis that, I propose, can be understood from a pan theoretical perspective. The findings suggest that sound-image synchronisation is critical for the perception of violent gags as comedic; when sound-image synchronisation was disrupted this led to changes in the comical framing of gags, reduced congruity of sound effects in the soundtrack, reduced continuity between shots, heightened affect, changes in the level of engagement, and a reduced sense of the sound as fitting the spatial context. My analysis also identified key elements within the dynamic musical orchestration of *Tom and Jerry* that I propose are critical to the comic timing of violent slapstick gags related to consistency, synchresis and rendering. These findings represent a new application of concepts derived from Chion's theorisation of the role of sound in film to the field of animation. The findings of the research are also consistent, I suggest, with the cognitivist approach of Cohen that proposes that film music operates through processes of congruence and association to direct a viewer's

attention, generate expectations and suspend disbelief by providing an affective component that influences the viewer's level of engagement.

A further contribution of this research to knowledge was derived from findings of the audiovisual analysis that an intensification of affect and reduction of comedic value occurred when the audiovisual relationship was split during the masking procedure. This supports the notion that it is the combined effect of sound and image together that contributes to the reading of violence as comedic in *Tom and Jerry*. Without sound to contextualise violent gags, the violence appeared more barbarous, callous and unrelenting, while sounds of pain were emphasised that intensified affective responses of discomfort in viewing the material. I propose that the intensification of affect was mediated across the different masking conditions in distinctive ways; when music and sound was absent it reduced the framing of images of violence as comical, whereas when images were absent this meant sounds of pain where not rendered as fitting or contextualised as comical and harmless. I suggest this supports and extends Wells' and Peacock's theorisation of how slapstick comedy relies on the presentation of violence to the body as innocuous. Therefore, the findings of this research implicate the sound-image relationship as a key mediating factor in the reading of violence as comedic.

This research can be viewed as a case study that demonstrates the novel application of an improvisational and iterative practice-based approach to investigating the role of sound-image relationships in the reading of violence in animated audiovisual material. The insights gained from the preliminary audiovisual analysis influenced the production of artworks by prompting key lines of enquiry. In practice terms, this facilitated my engagement with processes of making and through my praxical engagement with iterative, improvisational processes across the different phases of the research, then new, praxical knowledge was derived as a form of material thinking as conceptualised by Bolt (2004). I propose that the artworks, my subjective reflections and viewer responses represent different forms of emergent knowledge enabled through these processes of handling and contributes to theoretical discourse on methodological approaches to investigating sound-image relationships in moving image.

In addition to fostering the emergence of new knowledge, the improvisational, sampling-based approach of the practice represents a novel approach of intervention into the sound-image relationships of the *Tom and Jerry* source material. The act of sampling led to decontextualisation and desynchronisation of the source material, and despite the constraints imposed by digital tools, the extracted frame-by-frame sound-image units

assumed different properties when isolated from the original visual and sonic background context of *Tom and Jerry*. I propose that in my approach of sampling at a frame-by-frame level and reanimating using devices of looping and repetition generated new readings of the *Tom and Jerry* source material that was reflected in my subjective experiences and the responses elicited in viewer discussion groups.

Within the research, new insights were generated by the approach of focusing exclusively on the point of impact in violent gags of *Tom and Jerry*. I propose that the disruptive qualities of the gag are largely nullified in the source material by the imposition of a powerful, rhythmical structure of cause and effect in the highly synchronised soundtracks of *Tom and Jerry*, where sound produces a vectorizing effect of imprinting a sense of directionality and expectation on the images. I suggest that sound functions to reinstate a sense of order and resolution after the tension and threat inherent in the structure of a violent gag. Therefore, this research contributes to an understanding of the comical framing of *Tom and Jerry*. I propose that sound also serves to imbue images with a sense of comical excess that denies reality and the consequences of violence, supporting Wells and Andrin's characterisation of the excessive, hyperbolic gesture as key to the comedic framing of violence in slapstick comedy. The findings of the test phase contribute to knowledge of the role of sound-image synchronisation in animation by demonstrating that certain audiovisual samples remained highly vectorized with a clear trajectory from beginning to end, despite the desynchronisation of sound-image elements. This suggests that despite altering the synchronisation, certain imagery retains a highly vectorized form, even where there is a significant shift in the overall thematic content being depicted from slapstick comedy to violence.

As discussed, viewer discussion groups provided important insights into the range of responses to the artworks evoked in this practice-based research and contribute a form of knowledge on subjective responses to experimental animation. Providing contextual background information did not lead to significant differences in viewers' responses, and there were commonalities across all viewers in their experiences of the artworks that appeared independent of whether they received contextual information. Taken overall, the viewer discussion groups provided valuable insights, and also demonstrated that this methodology provided evidence of high individual variability in the perception of themes of comedy and violence in artworks.

The production of the three artworks *Plaster*, *Strike* and *Then Now* using an iterative, improvisational approach yielded new knowledge of how processes of sampling and looping restructured sound-image synchronisation and destabilised the latent meanings of the

original *Tom and Jerry* source material. In *Plaster*, the sampling of the *Tom and Jerry* source material erased the characters' bodies and background information, rendering the forms more two-dimensional and abstract in form, and whilst the original synchronised sound-image relationship was retained the repetitive layering of samples created asynchronous sound-image relations. The production of *Plaster* revealed that despite the decontextualisation of the sample, the music, sound, colours and shapes remained highly evocative of the era of animation, as evidenced in viewer responses. I suggest this implicates the presence of a deep image of the source material within the samples. The asynchronous sound-image relations reduced both the sense of the comedic and the sense of forward directionality; this functioned to reinstate the inherent properties of violence I suggest, whilst the loss of comical framing was reflected in viewer responses indicating the perception of violent themes. The erasure of the body in *Plaster* prevented viewers from being able to assess the impact of violence and altered the sense of the violence as harmless slapstick, which is consistent with Wells' (1998) discussion of the role of themes of invincibility in cartoon violence.

My handling of the source material in the making of *Plaster*, highlighted that repetition and looping were key strategies in creating asynchronous sound-image relations that destabilised the reading of comedic elements and emphasised an underlying sense of malevolence. This facilitated the decontextualisation of the violent gags in *Plaster*, I suggest and prompted contradictory viewer responses. Although most viewers described *Plaster* as violent and disturbing, there was no significant evidence of a transition in themes from comedy to horror; several viewers considered it within a purely comedic, cartoonish frame suggesting the influence of individual differences in the perception of violent themes when viewing the decontextualised material. This finding supports Donnelly's (2014, p.23) assertion that the audiovisual language of film triggers the formation of a perceptual Gestalt in line with the concept of the minimum principle, where film's rendering of only limited details of the real world fosters a tendency in the viewer to 'fill in the gaps' of missing information. Moreover, in the absence of unambiguous visuals, *Plaster* appeared to activate the acousmatic imaginary which was described by several viewers as more disturbing because it increased their awareness of both wanting to see the violence yet being unable to assess the extent of the damage caused by the violent acts.

Within the practice, the use of samples of breathing and screams provided insights into the influence of the perceived saliency of voices in unmasking the underlying subtext of violence in *Plaster* and *Strike*. The presence of repetitive breathing and screams appeared more salient than other sounds which, I suggest, supports the general finding of vococentrism in

viewers' perceptions of film. Importantly, the findings also support Chion's (1999, p.21) conceptualisation of the unseen voice as generating an acousmêtre, a 'bodiless voice', that evokes increased feelings of tension and a desire to see what is being heard. In both *Plaster* and *Strike*, viewers indicated that they experienced a strong desire to see the source of the unseen voice, and the artworks also appeared to prompt self-reflexive engagement with the artworks, where viewers reported an awareness of their desire, to see the unseen.

The research findings also yielded new knowledge regarding a possible gender-based bias in the perception of the human voice in animated artworks. In response to *Plaster* and *Strike*, viewers inaccurately identified the heard voices as exclusively female. I explain this finding with reference to the bodiless voice of the acousmêtre whose bodily limits are undefined and perceived as limitless. The tendency to characterise the female scream in cinema as embodying a sense of limitlessness represents a gender-based bias that I suggest was activated by the presence of the acousmêtre in the artworks *Plaster* and *Strike*.

A key insight, that can be considered emergent knowledge, from the creation of *Plaster* relates to the role of the unseen voice in excavating an underlying sense of violence in the samples. This finding, I suggest, supports Chion's conceptualisation of the acousmêtre as generating disequilibrium and unease in the viewing experience. The absence of visual images of the bodies emitting the heard sounds of heavy breathing, screams and gasps unarguably intensified the ambiguity within the decontextualised form of *Plaster*. As Andy Birtwistle (2010, p.208) proposes, the cartoon sonic landscape is one of foreground, flatness and amplified 'micro textures' of sound, and the experience of watching a cartoon is highly influenced by the emphasis on these amplified textures of sound and image. The discomfort elicited by the emphasis on the sound of breathing and the reported sensitivity of being observed by others when watching *Plaster,* suggested the work increasing an awareness of the desire to see the violent acts but also increased self-reflexivity by triggering a sense of being caught in an act of voyeurism. This experience of the repetitive sound of breathing in *Plaster*, I propose, prompted an experience of aural eavesdropping, which I suggest, further exacerbated the feelings of tension associated with viewing *Plaster*. These findings represent new knowledge on the role of the acousmêtre in relation to animation.

Several insights emerged from the production of the artwork *Strike* related to factors that influenced viewers' perceptions of violence in the work including ambiguity in the abstracted visual forms and the role of musicality in the sound-image relationships. I propose that, in addition to serving as a visual punctuation of a gag, the point of impact visual device represents excessive, hyperbolic exaggeration that Andrin (2010) identifies as characteristic

of slapstick comedy, but in an abstracted, visualised form. In response to *Strike*, viewers formed diverse interpretations of the iconography of this visual device and evidence of individual differences emerged in terms of viewers' reading of themes of violence in the work although there was no evidence of a shift towards themes of horror. I propose that the split in viewers' perceptions of the underlying subtext of violence within *Strike* can be understood by reference to Gestalt principles applied to musicality. Kulezic-Wilson (2015, p.41) describes a process of grouping that occurs when aural stimuli are repeated in music, wherein individual sounds are mentally organised into structural patterns, leading to the formation of a temporal Gestalt. I suggest that in *Strike*, some viewers tended to group the separate sequences of shots by reference to concepts of tempo and rhythm, seemingly grouping all elements under a rubric of musicality. The repetition of samples of highly synchronised sound-image units can be perceived in rhythmical terms and therefore, it is possible that the interpretation of *Strike* as musical by some viewers but not others, reflects individual differences in the perception of rhythm, musicality and transsensorial perception as described by Chion (1994). Clearly the identification of causal factors that would explain the observed individual differences is beyond the scope of this PhD research, although I suggest that the increased sense of ambiguity of the work may have fostered a greater tendency for viewers to draw on their own subjective experiences in forming their interpretations of *Strike*.

The artwork *Then Now* yielded key insights regarding the role of asynchrony and the use of the single frame in shifting meanings of the underlying source material. *Then Now* fostered a greater sense of ambiguity than *Plaster* and *Strike*, and whilst it did not unmask the violent subtext of the slapstick comedy of the *Tom and Jerry* source material, I propose that my reconfiguration of the sound-image relationships yielded a more directly assaultive viewing experience, implicating the influence of the single frame and flicker-type effects. I suggest that the pairing of defamiliarised flickering images with slowed sound achieved a condition of asynchrony that viewers did not tend to associate with the slapstick comedy or underlying violent subtext of *Tom and Jerry*, nor were themes of horror associated with the artwork. Instead, the findings highlighted the role of asynchrony in invoking a sense of immediacy, and interiority, as evidenced in viewers' responses that referred to internal bodily sensations, visual processes and visual afterimages. The findings also suggested that the imagery of *Then Now* was interpreted by some viewers as entoptic images, which again supports the notion that the artwork conveys a sense of interiority. I propose that a key insight from the creation of *Then Now* relates to how asynchronous sound-image relations in the artwork occupy an ambiguous threshold that diminished the viewer's connection to both comedic and violent themes of *Tom and Jerry*, and instead emphasised the act of perception.

5.2   Contribution and Future Directions

This practice-based research contributes new knowledge of how sound-image relationships shape the perception of violence in the animated form. This was achieved by exploring how shifts in viewer interpretations of thematic content varied in response to processes of decontextualisation and desynchronisation of sound and image. This research highlights how the perception of violence as comedic is defined considerably by the framing provided by synchronised sound and image.

A further contribution of this practice-based research was the development of an iterative methodology that utilises processes of looping, repetition and erasure in an improvisational way, to reveal underlying subtexts and themes within pre-existing animated material. The use of digital tools within an iterative, improvisational mode of production, without a pre-determined outcome in mind in this research revealed the potential to work in a generative mode and reveal tacit, emergent knowledge. This sampling practice also demonstrated the potential of processes of decontextualisation and desynchronisation of sound-image relationships to foster new meanings of the violence depicted in the slapstick comedy of *Tom and Jerry*. In practice, acts of erasure gave rise to unpredictable and destabilised relationships between sound and image that created ambiguity around the interpretation of violence.

Within the research, viewer discussion groups provided valuable insights in terms of individual variation in viewers' experiences of the audiovisual artworks produced and represents a novel application of the methodology of group discussion to the viewing of audiovisual works in this research. There was evidence of individual differences in viewers' perceptions of the themes of the artworks and therefore it could be considered a limitation that a more comprehensive analysis of individual differences was not possible within the scope of the current PhD research.

Through this practice-based research, several potential lines of further investigation were prompted. The representation of trauma in animation constitutes a potential extension of the current investigation into the sound-image relationships of violent slapstick comedy but was beyond the scope of the current practice-based research. Future research could potentially extend the current investigation by exploring mediating factors in sound-image relationships in the representation of themes of absence and loss in animation and would be of interest across the field of animation and film studies. The research highlighted the role of intra-animation dimensions pertaining to the use of the single frame, the use of blank spaces and

the relationship of sound-image synchronisation to the acousmatic imaginary. The concept of the acousmatic imaginary is particularly important in terms of understanding viewer responses to animated forms of violence but remains relatively neglected and undertheorised in animation studies and would constitute an important potential direction for future research.

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69 (1968) [Film]. Directed by Robert Breer. USA.

A Clockwork Orange (1971) [Film]. Directed by Stanley Kubrick. UK, USA: Warner Bros.,
        Polaris productions, Hawk Films.

Alone. Life Wastes Andy Hardy (1998) [Short]. Directed by Martin Arnold. USA.

Arnulf Rainer (1960) [Short]. Directed by Peter Kubelka. Austria.

Baby Puss (1943) [Short]. Directed by William Hanna and Joseph Barbera. USA: Loew's,
        MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-Hanna/Barbera.

Background Check (2020) [Short]. Directed by Martin Arnold. Austria.

Blinkity Blank (1955) [Short]. Directed by Norman McLaren. Canada: National Film Board of
        Canada.

Decasia (2002) [Film]. Directed by Bill Morrison. USA.

Dog Star Man (1961-1964) [Film]. Directed by Stan Brakhage. USA.

Fantasia (1940) [Film]. Directed by Samuel Armstrong, James Algar, Bill Roberts, Paul
        Satterfield, Ben Sharpsteen, David Hand, Hamilton Luske, Jim Handley, Ford Beebe,
        T. Hee, Norman Ferguson, Wilfred Jackson. USA: Walt Disney Productions.

Felix turns the Tide (1922) [Short]. Directed by Otto Mesmer. USA: Pat Sullivan Cartoons.

Fine Feathered Friend (1942) [Short]. Directed by William Hanna and Joseph Barbera. USA:
        Loew's, MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-
        Hanna/Barbera.

Fountain (1994) [Short]. Directed by Guillaume Paris. France.

Fuji (1974) [Short]. Directed by Robert Breer. USA.

Haunted House (2011) [Short]. Directed by Martin Arnold. Austria.

Heavenly Puss (1949) [Short]. Directed by William Hanna and Joseph Barbera. USA:
        Loew's, MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-
        Hanna/Barbera.

Humorous Phases of Funny Faces (1906) [Short]. Directed by James Stuart Blackton. USA.

Image by Images 1 (1954) [Short]. Directed by Robert Breer. USA.

Jerry Go-Round (1966) [Short]. Directed by Chuck Jones, Maurice Noble, Abe Levtiow. USA: Sib Tower 12 Productions.

Jerry Jerry Quite Contrary (1966) [Short]. Directed by Chuck Jones and Maurice Noble. USA: MGM Animation/Visual Arts.

Le Voyage de la Lune (1902) [Short]. Directed by Georges Méliès. France: Star-Film.

LMNO (1978) [Short]. Directed by Robert Breer. USA.

N:O:T:H:I:N:G (1968) [Short]. Directed by Paul Sharits. USA.

Our Hospitality (1923) [Film]. Directed by Buster Keaton and Edward F. Cline. USA: Joseph M. Schenck Productions

Passage à l'acte (1993) [Short]. Directed by Martin Arnold. Austria.

Pauvre Pierrot (1892) [Short]. Directed by Charles-Émile Reynaud. France.

Pièce Touchée (1989) [Short]. Directed by Martin Arnold. Austria.

Pinocchio (1940) [Film]. Directed by Ben Sharpsteen, Hamilton Luske, Bill Roberts, Norman Ferguson, Jack Kinney, Thornton Hee, Wilfred Jackson. USA: Walt Disney Productions.

Psycho (1960) [film]. Directed by Alfred Hitchcock. USA: Paramount Pictures.

Puss gets the Boot (1940) [Short]. Directed by William Hanna and Joseph Barbera. USA: Loew's, MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-Hanna/Barbera.

Puttin' on the Dog (1944) [Short]. Directed by William Hanna and Joseph Barbera. USA: Loew's, MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-Hanna/Barbera.

Ray Gun Virus (1966) [Short]. Directed by Paul Sharits. USA.

Recreation (1957) [Short]. Directed by Robert Breer. USA.

Rock 'n' Rodent (1967) [Short]. Directed by Abe Levitow. USA: MGM Animation/Visual Arts.

Saturday Evening Puss (1950) [Short]. Directed by William Hanna and Joseph Barbera. USA: Loew's, MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-Hanna/Barbera.

Self Control (2011) [Short]. Directed by Martin Arnold. Austria.

Shadow Cuts (2010) [Short]. Directed by Martin Arnold. Austria.

Snow White and the Seven Dwarfs (1937) [Film]. Directed by Walt Disney. USA: Walt
    Disney Productions.

Soft Palate (2011) [Short]. Directed by Martin Arnold. Austria.

Sync (2010) [Short]. Directed by Max Hattler. UK.

Solid Serenade (1946) [Film]. Directed by William Hanna and Joseph Barbera. USA: Loew's,
    MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-Hanna/Barbera

The Big Swallow (1901) [Short]. Directed by James Williamson. UK: Williamson
    Kinematograph Company.

The Cat that Hated People (1948) [Short]. Directed by Tex Avery. USA: MGM Cartoon
    Studio.

The Electric House (1922) [Short]. Directed by Buster Keaton and Edward F. Cline. First,
    USA: National Pictures

That Fatal Sneeze (1907) [Short]. Directed by Lewin Fitzhamon. Hepworth Manufacturing
    Company: UK.

The Flicker (1965) [Short]. Directed by Tony Conrad. USA.

The General (1927). [Film]. Directed by Clyde Bruckman and Buster Keaton. USA: Buster
    Keaton Productions, Joseph M. Schenck Productions.

The Navigator (1924) [Film]. Directed by Buster Keaton and Donald Crisp. USA: Metro-
    Goldwyn.

The Neon Demon (2016) [Film]. Directed by Nicolas Winding Refn. USA, Belgium, Denmark,
    France: Space Rocket Nation, Vendian Entertainment, Bold Films.

The Phantom Carriage (1921) [Film]. Directed by Victor Sjöström. Sweden: Svensk
    Filmindustri (SF).

Tom Tom, the Piper's Son (1969) [Film]. Directed by Ken Jacobs. USA.

Trap Happy (1946) [Short]. Directed by William Hanna and Joseph Barbera. USA: Loew's,
    MGM Cartoon Studio, Metro-Goldwyn-Mayer (MGM), Quimby-Hanna/Barbera.

Vexation Island (1997). [Short]. Directed by Rodney Graham. Canada.

Werckmeister Harmonies (2000) [Film]. Directed by Béla Tarr and Ágnes Hranitzky.
    Hungary: ARTE, Fondazione Monte Cinema Verità, Goëss Film.

Appendix I: Key terms (Chion, 2009)

'Acousmatic' refers to sound whose source not shown to the viewer and is considered by Chion (Chion, 2009, p.465) as a defining characteristic of both radio and the telephone as well as moving image media. He argues that the effects of acousmatic sound depend on whether the source was previously seen by the viewer or not.

'Dissonance' refers to an effect in which a sound appears at odds with a visual image. In reference to cartoons, Chion (2009, p.475) gives the example of the contradiction of the animated kitten roaring in *The Cat that Hated People* (dir. Tex Avery, 1948). Chion suggests dissonance can be difficult to produce because viewers accept sounds as being realistic when accompanied by a visual image, but also due to the tendency to fuse sound and visual percepts.

'Rendering' refers to a process that Chion (2009, p.488) asserts, arises in the context of the audiovisual relationship, related to a sound being perceived as fitting a situation and often conveys an impression rather than being an actual reproduction of a sound e.g., use of sound effects of punches during a fight to convey violence.

'Temporalization' refers to the effect of sound adding a sense of duration to specific images that lack temporality such as still images but is dependent on the extent to which the sound possesses temporal vectorization (Chion, 2009, p.495). 'Temporal vectorization' refers to whether sound acts to 'orient' images 'in time' or imprint upon them a sense of 'expectation, progression, advancement, imminence' they otherwise do not possess (Chion, 2009, 494); He states that images lacking vectorization may contain movement that lacks directionality or is reversible in time (e.g., a tree moving in the wind). When sound vectorizes an image, then the viewer can be led to anticipate a forthcoming action.

'Temporal Linearization' (of images by sounds) relates to a process of 'temporal sequencing' in sound film, where images take on a sense of 'occurring in succession' when sound is added, whereas images in silent film are considered atemporal (Chion, 2009, p.494).

Appendix II: Visual and sound itemisation of *Trap Happy* (1946)

The short opens with an upbeat orchestration featuring a prominent fast-paced trumpet melody as the pastel-coloured domestic interior of a hallway is presented. Jerry appears suddenly on a wooden staircase and rapidly descends the staircase with Tom in close pursuit. Loud repeated thuds foreground Tom tumbling head over heels down the staircase after Jerry. Tom continues this uncoordinated motion by tripping over his paws as he reaches the ground floor. Whizzing sounds highlight the action as Tom chases Jerry under a chair. Tom slams heavily into the chair and becomes lodged underneath, whilst Jerry goes behind him and smacks his exposed rear with a plank of wood accentuated by a prominent loud sound effect of a hard material impact.

The upbeat orchestration repeats as Tom follows Jerry to his mousehole in the wall of the lounge and a screeching tyre noise emphasises Tom sliding to a stop at the mousehole. As Tom is seen attempting to light a stick of dynamite outside Jerry's mousehole, the pace of the music slows and quietens seeming to underline that unbeknownst to Tom, Jerry secretly mirrors Tom's action lighting a much larger stick of dynamite placed under Tom's rear. A whizzing sound punctuates Jerry's exit from the dynamite stick. As Jerry's dynamite ignites, the explosion is punctuated by what sounds like a thunderclap, the scene flashes yellow and red fading to a fog of clearing smoke.

The upbeat melodic orchestration repeats and quickens as Tom chases Jerry through the lounge until Jerry stops and Tom slides to a stop which is again marked by a screeching tyre sound. The music changes to a light and playful phrasing seemingly mirroring Jerry's mood as he stretches his arms out fully, offering himself up for Tom to hit him with the shovel. As Tom strikes out with the shovel a loose slapping sound is heard whilst Jerry effortlessly avoids each strike whilst mockingly adopting balletic poses. Jerry proceeds to hold down the shovel with one hand and the music signals the mounting physical tension, when Tom responds by attempting to pull the shovel away from Jerry's grip. The music builds to a crescendo until Jerry releases his hold, causing the shovel to hit Tom squarely in the face. Mirroring the impact, the sound of cymbals clashing, and reverberating can be heard as Tom's face and shovel are shown vibrating in tandem back and forth.

The upbeat orchestration returns, and the pace increases as Tom pursues Jerry into his mousehole. Tom slams into the wall and the impact is emphasised by the sound of a dull drum-like thud. The sound of a reverberating cymbal underlines the aftermath of the impact as Tom is shown with his head trapped inside the mousehole. Jerry proceeds to mock Tom

by slapping Tom's lips back and forth with his hand as the sound of a human strumming their lips is heard. As Tom extricates himself from the hole with force, a loud thud is heard. Tom is seen gasping, accompanied by the sound of heavy breathing, whilst Jerry smiles nonchalantly and casually checks his nails as a relaxed, string-based melody is heard.

At this point, Tom's overt frustration is accentuated by the sound of rising trumpet blasts. A new fast-paced string melody taken from the opening theme of *The Three Stooges theme* is heard when Tom starts leafing through a telephone directory foregrounding a change of direction in the narrative. The music is quickly replaced by a slowed refrain from the *Three Blind Stooges* theme which seemingly betrays Tom's happy discovery of a mouse exterminator in the telephone directory. As Tom proceeds to make a telephone call to 'Ajax Mouse Exterminator' a laid-back jazz trumpet solo is initially heard and rapidly replaced by a speeded-up variation of *The Three Stooges* melody as Tom appears to mime a woman terrified of a mouse during the telephone call. Whilst Tom's facial expression is both fiendish and delighted, Jerry is seen gulping heavily as the sound effect of a speeding car and screeching brakes is heard, followed by the sound of a doorbell. A frantic melody reaches a crescendo as Tom answers the door.

The upbeat melodic orchestration of *Ja-Da* repeats as the exterminator enters the home. The exterminator is presented as a cigar-smoking, bowler hat wearing black cat who proceeds to wash his hands in a fishbowl accompanied by tinkling watery sounds. The musical tone changes to one of uncertainty and tension as the exterminator throws a bolt disguised as a piece of cheese into Jerry's mousehole signalling a sense of danger. The orchestration of *Ja-Da* returns in a slowed-down version seeming to signal intoxication, as Jerry, unaware of the danger, takes the bait swallowing the bolt whole. The music changes to a rising crescendo accompanied by metallic sound effects as Jerry is extracted from his mousehole by the exterminator using a magnet. *The Three Stooges* melody portentously alludes to Jerry's fate and repeats over. As the exterminator holds Jerry down with one hand, a rising crescendo mirrors the lifting of an axe intended to kill Jerry. Tom is seen gasping in horror and the sound of a human gasping out loud is heard as Tom looks away. At this point, Jerry pulls Tom's tail under the exterminator's hand and as he jumps to safety, a loud bang punctuates the axe blow. The sight of Tom howling in pain is accompanied by the sound of a male voice screaming and is further accentuated by a loud trumpet blast.

A light, frantic paced chord sequence accompanies Jerry escaping into the mousehole, punctuated by a loud trombone blast as he disappears just in time. A rising crescendo of string instruments appears to warn of Jerry's perilous situation as the exterminator drills into

the wall almost impaling Jerry in the process. Jerry attaches live electric wires to the drill and a crackling sound effect is heard as the electricity passes into the drill causing the drill to hit the exterminator's face as it rotates out of control. Next both the exterminator and Tom attempt to fill Jerry's mousehole with gas to the sound of a march-like rhythmic phrase in time to the pumping action of the gas canister. Jerry appears exiting the mousehole wearing a gas mask and casually gives them a salute and they return the salute, as a militaristic bugle call is heard. The march-like rhythm continues reaches a crescendo when the exterminator realizes Jerry has escaped and he slaps Tom in the face which is heard as a dull thud sound effect. The exterminator motions towards Jerry, who sticks his tongue out at both, and a human making a mocking sound is heard, sharply followed by blaring trumpets when Jerry realizes he is being pursued.

Tom and the exterminator are seen pursuing Jerry to an upbeat stringed melody, but is replaced by tense, slowed violin chords foregrounding danger as Jerry holds an iron with an outstretched arm. As both slam into the iron, a heavy metal clanging sound punctuates the impact and it is shown that the exterminator has swallowed Tom whole due to the force of the collision.

Jerry is pursued into another mousehole accompanied by the *Ja-Da* orchestration. The exterminator uses a crowbar to lever up the wall from the floor, which exposes Jerry who is standing holding a hammer. As Jerry hits Tom's paw with the hammer a loud bang and human screams are heard. Jerry uses the hammer to hit both exterminator's paws which have become trapped under the wall; he hammers, toe by toe, to the tune of *Yankee Doodle Dandy* played on a glockenspiel. The exterminator's paws are shown turning bright red and his claws flip backwards with the force of steam emanating from each toe is mirrored by the sound of a stream train horn.

A darker, ominous variation of *The Three Stooges theme* is heard as the exterminator passes Tom a sledgehammer. A tentative musical refrain is heard as Jerry is seen hiding inside the wall. A menacing sounding blast of horns is heard as the exterminator enters the wall through a ventilation grate. Bangs and the sound of breaking crockery foregrounds the chaotic action inside the wall which is only seen from the outside. A rising crescendo of horns adds tension to the chase as plaster cascades down onto the ground as the exterminator pursues Jerry inside the wall and across the ceiling. As Jerry exits the wall, Tom attempts to hit Jerry with a sledgehammer but instead hits the exterminator over the head causing a large lump to rise from his head accompanied by the rising sound of stringed

instruments. A rattling noise is heard as his bowler hat dangles on top of the protruding lump.

The exterminator leaves a lit bomb at the mousehole entrance, but tentative and light musical phrasing appears to signal a lack of seriousness as Jerry playfully throws the bomb back to the exterminator. The music alternates between rapidly ascending and descending glissando as confusion ensues when the bomb becomes mixed up with the bowler hat as it is passed back and forth between them, with a gradually rising crescendo discernible in the background as the bomb eventually explodes on the exterminator's head and a drawn out bang is heard.

The music returns to the original upbeat orchestration once again accompanies the chase as Jerry is pursued and cornered inside a wall. Both Tom and the exterminator extend hands from their respective mouseholes but end up grabbing each other's hand. Within the orchestration, stinger-type chords are used to punctuate and mirror closely the repeated slamming of their bodies against the walls as they attempt to pull their hands free. As a broom handle is forced into Tom's throat the sound of a human choking is heard. As a musical crescendo is reached, Tom manages to pull the exterminator through the wall causing the wall to collapse into a pile of bricks, plaster and wood. An oscillating clock-like chord is heard as Tom repeatedly strikes the pile of rubble with a wooden plank seemingly counting down to danger, then the music becomes increasingly frantic until Tom's realization that he is hitting the exterminator under the rubble, not Jerry. The musical tone changes drastically to a whimsical and mournful refrain as the exterminator is seen changing the title on his briefcase from mouse exterminator to cat exterminator. The sound goes silent as Tom reads the writing and points at himself gulping heavily. The exterminator then pulls a large double barrel shotgun from his case and the music becomes rapidly paced and frantic as Tom is chased. Tom jumps through a glass window, breaking glass and gunshots are heard as Tom is shown being shot at repeatedly as he tries to escape into the distance.

Appendix III: Participant Information Sheet

INFORMATION SHEET FOR PARTICIPANTS

A copy of this sheet will be made available to you via email.

PhD Fine Art Research project 'The sound of violence, the violence of sound'
You are invited to participate in a group discussion as part of a PhD research project being undertaken by PhD student Sharin Garden at the Glasgow School of Art. The group discussion will be undertaken online with other participants and the moderator of the group discussion.
During the discussion if you choose to have your camera on, then you will be identifiable to other participants. If you wish to participate anonymously, then please contact the researcher before the group to discuss having your camera off and choosing a pseudonym to ensure your anonymity.
You should only participate if you want to; choosing not to participate will not disadvantage you in any way. Before you take part, it is important for you to understand why the research is being done and what your participation will involve.
Please take time to read the following information carefully and discuss with others if you wish. Please ask questions if there is anything that is not clear, or you would like further information.

What is the purpose of the PhD research project?
The research aims to study the relationship between sound and imagery and the perception of onscreen violence in animation. The PhD research is practice-based art research and involves the creation of artworks as part of the research. The aim of the group discussion is to understand viewer responses to the artworks created as part of the PhD research.

Why have I been invited to take part
You are invited to take part because the aim is to understand viewer responses among the general population in response to the artworks.

Do I have to take part?
Participation is the research is voluntary and you do not have to take part. Please read this information sheet and if you have any questions, you can ask the researcher S. Garden via s.r.garden1@student.gsa.ac.uk.

What will happen to me if I take part?
If you would like to take part in this research, you will be asked to watch three moving image artworks and attend an online group discussion. During the group discussion you will be asked about your response to the artworks. The researcher will record your responses in written notes and will be able to identify your responses, but no identifiable information will be recorded, and all responses will be anonymised.
If you wish to take part having read the information sheet, then you can contact the researcher and you will be asked to complete a consent form before participating in the group discussion.
The consent form will be emailed to you, and you will be asked to return the consent form by email to the researcher.
A suitable date and time for the group discussion to take place will be identified. Upon joining the discussion, you will be asked to verbally confirm that you are still happy to participate and consent to the discussion in line with the completed consent form.

What are the possible benefits of taking part?
There is no direct benefit to you individually. There may be some individual indirect benefits when taking part. People often value the opportunity to disclose their opinions and contribute to research.

What are the possible risks of taking part?
There are no direct risks anticipated by you taking part in this research, however the nature of the research topic on film violence may cause you distress.
There is flickering and strobing effects in the artworks and this could pose a risk to a person suffering from epilepsy or sensitivity to flashing lights. If you experience sensitivity to flashing lights or suffer from epilepsy it is not recommended that you participate.

Will my taking part be kept confidential?
Your responses in the group discussion and data will be processed in accordance with the General Data Protection Regulation (GDPR).
Your consent form will be stored securely electronically in a locked folder during the duration of the project and for 6 months after the PhD VIVA examination, then it will be securely destroyed in line with GSA Research Data Management policy.
No research data will be available in any identifiable format to anyone except the researcher. All data for analysis will be anonymised.
In reporting on the research findings, the names of participants will not be revealed.

What if I change my mind about taking part?
You can withdraw yourself or your data from the study anytime until the end of the study without giving a reason by contacting the researcher S. Garden via s.r.garden1@student.gsa.ac.uk. Withdrawal of the data will not be feasible if your data has already been published.

What if I have further questions, or if something goes wrong?
If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact GSA using the details below for further advice and information: Prof. Sarah Smith, The Glasgow School of Art, 167 Renfrew Street, Glasgow, G3 6RQ, email: sa.smith@gsa.ac.uk , telephone: 0141 353 4430 .

Who should I contact for further information?
If you have any questions, require more information about this study or wish to make a complaint, please contact the researcher S. Garden via s.r.garden1@student.gsa.ac.uk.

Thank you for reading this information sheet and for considering taking part in this research.

Research Consent Form

GS⁰ᶠA

Research Project Title: The sound of violence, the violence of sound

Lead Researcher: S Garden

Contact Details: s.r.garden1@student.gsa.ac.uk

Please initial boxes

1. I confirm that I have read and understand the participant information sheet for the above study;

2. I have had an opportunity to consider the information, ask questions and have had these answered satisfactorily;

3. I agree to field notes being taken as part of the research and understand that these will be kept anonymous;

4. I agree to field notes taken being made public / available in publications, presentations, reports or examinable format (dissertation or thesis) for the purposes of research and teaching – I understand that these will remain anonymous;

5. I agree to the results being used for *future* research or teaching purposes;

6. I agree to take part in the above study.

_____	_____	_____
Name of participant	Date	Signature

_____	_____	_____
Name of person taking consent (if different from researcher)	Date	Signature

_____	_____	_____
Researcher	Date	Signature

Appendix V: Field Notes

<u>Group 1</u>
P1
Plaster felt disturbing, chaotic, disturbing in a weird way, music towards end reminded me of that era of cartoon. Made me feel uncomfortable; Hear something is happening but can't see it and can't tell the damage; you hear it is happening though.
P2
Plaster - music reminded me of a cartoon. I was feeling what was happening, thought they were explosions, hitting each other, sound of breathing, woman saying help, it was disturbing, unsettling.
Music normally associated with laughing but this not funny, not funny to not see the action, But in Plaster, it is not that feeling, very intense, scary, induced a feeling of panic, it kept repeating.
Plaster and Strike reminded me of being a child when Tom and Jerry on tv and we watched a lot of violence in cartoons as children.
P1
Plaster, music uncomfortable, way it was looped it was sinister. Reminded me of fear of clowns, something that should feel happy but doesn't.
Strike - industrial, alarms, repetitive, not music, the shapes, if watched without sound, take on a life of their own. It seemed to be an industrial ironworks.
I never recognised Strike imagery as being blood, I felt an eagerness to see what was happening. I wanted to see what was going on.
Then Now - Visually most difficult to watch due to the flashing images, sound less obvious.
P2
Then Now - sound felt very different to the other two. Not as intense as other two, more abstract.
Plaster- I could see slapstick violence, but not in Strike or Then Now
less slapstick it became more violent. Sound like 1940s or 1950s animation and the colours.
P1
Couldn't see a violent act. It was more of an unsettling feeling and disturbing feeling, more of a hint of violence. The music is so influential.
I thought about cartoons, if I saw Tom hitting Jerry, then that is something I used to enjoy as a child. If I see them in the context of a cartoon, I know there is violence I want to see.
P2
All three animations seemed violent to me. Not knowing where the violence was coming from, where it was aimed at was unsettling.
When images changed, there was new violence, it felt like there was violence all the time.
Plaster -seemed familiar, Strike or Then Now had no sense of familiarity in either.
P1
Someone hurting someone else a cartoon is one thing, but you don't see the whole thing here, who is hurting who. I couldn't see. It was more disturbing and upsetting for me that I wanted to see it. It's unsettling wanting to see it.
You think the animation will go somewhere but it doesn't, it doesn't unveil itself. You are left with that feeling, like frustration.
It makes you wonder what a young child or baby sees, what are they seeing when they watch this, do they see it in context or do they only see the crashes and the boings.
P1
Started on mobile phone and switched to watching on a laptop to see it more clearly.
P2
Watched on a tablet.
P1
If all three had been longer it would add to the intensity, sound would be better with speakers than on a laptop but think it would be same visual impact.
P2

If it was larger screen would add to the intensity.
Music seems very influential in all the works

Group 2
P1
Then Now - strobing couldn't watch it at night, I had to watch during the day, with audio was confusing.
I know I am seeing cartoons, it felt menacing
Plaster – I felt anxious, especially because of the breathless woman, domestic, in a constant state of tension
P2
Plaster- tense, it seemed to be people, confusing
Strike/Then Now- both felt better to watch, I could adjust to the sound
P3
Strike – it was very trance like
Plaster – breathlessness of woman, I connected to this more, it was difficult to listen to
Then Now – pulsating, less violent
P4
Plaster – I felt discomfort, it was beginning with the sound, there was a sense of different perspectives, and I missed having context
I was asking myself is it from a cartoon, but it has so many perspectives
I thought it misleading in terms of what is going on, seemed violent.
Strike- this was good, it got my attention
The background sound, and the water sound was a different perspective, red colours sent me to violence.
P3
The strobing in Then Now - had a physical effect on me as I had started to watch in evening but couldn't watch it, and it generated anxiety, I felt sense of worry watching it.
Plaster- the woman's voice, it was really uncomfortable, hearing her breathing and scream are not pleasant sounds,
I was questioning what's happening, it was uncomfortable.
P1
Felt there were contradictions in all of them between sound and images
All felt violent
All had feeling of something familiar, there was something that it generated
The sound, the noises were a contradiction.
I liked knowing there was a nostalgia feeling, it gave me a sense of safety, but there was
Strike- feeling of aggression
A feeling of violence in all of them.
P2
When I watched the Plaster, it was very difficult to understand it, the theme of it, difficult to connect.
Plaster – uncomfortable watching it. I heard the sound as opposed to the imagery, would have been different if had information to contextualise it.
P4
Plaster- discomfort, violence
Strike- violence, sound mashed up here
Then Now – sound and light flashing, I was myself is this the bright side, or is it something else, unsure.
P1
The light flashed in Then Now I felt like euphoria, the colours are more affecting.
Then Now throughout it seemed to be like an afterimage in the strobing, flickering, overall was a good feeling.
I had feelings of nostalgia from all of them, felt like cartoons from youth.
P4

It sounded like Tom and Jerry in Plaster especially the sound of screaming as woman in Strike.
Then Now was not familiar
P1
Strike - Symbols also sounded like musical scores
P2
Watching it feels more mature than just cartoon than what we are used to watching
P1
Plaster triggers more sense of the violence of cartoons.
Laptop at night no lights
P2
On phone then iPad
P3
iPad
P4
Laptop
P1
Projection with sound would have more impact, increase distress, anxiety inducing
P2
Bigger screen would amplify it
Their use of sound effects already very effective but speakers would make a difference
P3
Plaster- themes of violence, assault, possible sexual violence, it isolates the violence.
Strike- trance like, didn't seem violent, had rhythm
Then Now – Euphoric, trance like too, but a high state, psychedelic.
P1
All had a Looney tunes theme I can hear that in all,
Thought about exposure to violence when young in cartoons.
All seemed to be violent comedy, but more violent than comedy
P2
Plaster, I couldn't connect to what I saw at first, confusing
Strike/Then Now- these had more sense of violence, and I could connect it to Plaster most
Strike more abstract, I was unsure what to make of it, Strike theme seemed like fireworks, explosions.
P4
Plaster – the themes seemed to be a violent, assault, someone hitting someone else.
Strike – less violent
Then Now – unsure, ambiguous

Group 3
P1
The experience of Plaster – different, unclear, unsure what is represents. There is humour in the sound.
P2
Plaster seems violent, chaotic, confusing, represents an act of violence but unknown against whom, made me feel uncomfortable more aware of who was around me because sound of breathing was noticeable in it. Things breaking.
Strike seems to be an aerial bombardment, or explosions.
Then Now, the flashes are an assault on the brain, feels neurological
Strike seems to be an alien invasion
P5
Plaster- the women's breathing affected stood out
Then Now- Reminded me of being in a dizzy state, when things are going fast
Strike -didn't feel frightening at all, the low volume may have been a factor; the exploding circles reminded of lights or represented light or images you see when closing your eyes to

go to sleep, a memory of light that changes shape, by looking at the shape it helps you to go to sleep.
P1
Plaster is chaotic, can't see what is happening, prefer to see.
Plaster the heavy breathing had most effect, and it felt like someone being punched but then there was a happy sound and violence, it was happy and jaunty but also underneath unsettling.
P2
Plaster – the repetition of the sound completes an arc, but aware of where it is cut off, woman's breathing stands out.
Paradoxical effect of increasing arousal and there not being a sense of it being real.
P3
Strike-has deeper sounds, bassy, seems to suggest bigger sense of violence, aerial bombs have been dropped, huge and massive assault not domestic
Increased feelings of arousal
Then Now – too quiet to get a sense of it, more disturbing to watch, sound quiet, was responding to the visuals, the speed, colours had an effect, like dizziness, created an internal feeling as if it was a headache, migraine, like pain sensation.
P2
Strike- Very familiar, grew up with traditional cartoons, not seen as violent when young. I was familiar with the kapows, it reminded me of Lichtenstein and comics.
seems to be the visual effect of a splat or someone firing or hitting a wall.
Raised question of how it was made.
Familiar like Tom and Jerry,
Also, in comic books - zap, pow
P5
Plaster had a sad feeling in the music but comedic too, more drama, sense of corrupt and violence.
P4
Strike the images did not seem violent and I thought of old cartoons with this kind of violence. Strike -even the blood splatter didn't come across as violent, more like comic book.
P1
watched on a phone.
It would be better in a room in the dark. It could be very intense, unpleasant and overwhelming. If it was dark could change feelings of balance.
Then Now -It didn't seem to be a realistic representation of anything.
P2
Watched on laptop.
P4
Watched on desktop computer. Would work well in dark, colours would be more vivid.
P3
Watched on desktop, it worked well on a computer, but it could work in dark cinema too.
Plaster - has fairground, clowns type theme.
P5
Watched on desktop. There is a feeling of agitation across them all related to the tempo.
P2
Overall theme unsure, it has different sound compared to what seeing.
P1
Could be more alarming if on larger scale, difficult to tell.
P3
Changing the surroundings would be embarrassing to watch if others are around, also if in cinemas and lights down, but maybe you would forget that people were there
P1
Then Now -If dark then might affect the sense of balance, and if there was not a clear horizontal line may create dizziness

P5
If it was larger the colours would be more prominent
P1
Theme of psychological effect related to the tempo, getting you agitated, creates sense of subjective agitation

Group 4
P1
Plaster- Not an easy watch but easier to watch than the other, possibility has a bit more of a sense of a story.
Strike -seemed long, difficult to understand, repetitive.
Then Now – flashes appeared obvious, lighter in mood, very bright images.
P2
Plaster- seems related to cartoon characters, cartoony, woman's voice noticeable.
Strike -the tempo noticeable, feeling something bad is going to happen, a monotone being repeated. Couldn't wait for it to move on, couldn't understand.
Then Now - difficult on the eyes, felt nausea
P2
Plaster – It seemed more light-hearted than the others like a cartoon character.
Strike – I didn't see it as violent, it was hardest one to watch due to repetitive imagery, felt indifferent towards it, like it was a fireworks display, couldn't picture who would be in it. Nothing to relate it to, no sense of familiarity. Chaotic imagery.
Then Now - an individual feeling their own anger, someone who was angry at self not violence, an individual on their own. Sound was more feeling of manic.
P1
Then Now -seemed darker, explosions.
Plaster - seemed mixed, on one hand a comedy sketch. If closed eyes was like comedy prank caller on a phone call, voice stood out most.
Strike – dark, was an alarm going off, starting to build up, like a nuclear bunker alarm going off. The voice sounded like torture going on, a horror film. Tempo was building up, something is about to happen.
P2
Plaster – theme of the circus, a comedy theme or cartoon sketch, it seems familiar.
P1
Strike – it's like a kapow moment and the voice seems to relate to pain in a moment, starts slow and the tempo rises, starts to pick up, like a warning alarm, that violence is coming. Also had techno music feel, or like vj-ing with screen visuals.
Then Now - not good on the eye, a darker theme, explosions, fireworks going off.
Then Now - was darker, more intense and building up.
Then Now - felt like a Clockwork orange scene of eyes forced to stay open, possibly a torture feeling and something hypnotic.
P2
If watched all of them in a dark cinema would have different impact, feeling compared to watching on light conditions, would be more visual experience and full-on experience. Watched them on tablet.
P1
Watched on phone then tablet.
P2
Plaster theme seemed to be characters not being shown.
P1
Plaster had a cartoon theme, road runner.
P2
Strike felt dark, heavy in sound.
Then Now -didn't seem to have violence, more about the flickering to the next stage.

PRACTICE WORKS PORTFOLIO LIST

Portfolio on USB flash Drive insert

Preliminary Test Phase:
These tests entailed sampling and decontextualising objects by masking out visual background contextual information. Static single-frames were layered to disrupt linearization. Although each frame comprised a synchronous sound-image unit, the layering process induced a sense of audio distortion and produced asynchronous sound.

Brick (17')   Sampled from *Jerry Jerry, Quite Contrary* (1966)
Wave (32')   Sampled from *Rock n' Rodent* (1967)
Still window (51')   Sampled from *Rock n' Rodent* (1967)
Tear wall (39')   Sampled from *Jerry Go Round* (1966)
Dagger (26')   Sampled from *Heavenly Puss* (1949)

These samples were used to create sound-image forms to disrupt linearization and vectorization by sound.

Sound cell 1 (6')   Sampled from *Puttin' on the Dog* (1944)
Sound cells 2 (3')   Sampled from *Puttin' on the Dog* (1944)
Sound cell 3 (15')   Sampled from *Puttin' on the Dog* (1944)
Conjoined cell ('16)   Sampled from *Puttin' on the Dog* (1944)
Puttin' On (11')   Sampled from *Puttin' on the Dog* (1944)

Test Phase: Tests of decontextualisation, asynchrony violent themes
These works entailed decontextualisation by masking out visual background contextual information and retaining only the objects used in violent gags. Looping was explored and production of asynchronous sound.

Brickfire (1 min 47')   Sampled from *Trap Happy* (1946)
Desynchronised Axe (48')   Sampled from *Trap Happy* (1946)
Offscreen (39')   Sampled from *Trap Happy* (1946)
Plank (17')   Sampled from *Trap Happy* (1946)
Smash (16')   Sampled from *Trap Happy* (1946)

Experimental Phase works (sampled from Saturday Evening Puss)

Plaster (2 min 17')   Sampled from *Trap Happy* (1946)
Strike (4 min 31')   Sampled from *Saturday Evening Puss* (1950)
Then Now (1 min 45')   Sampled from *Saturday Evening Puss* (1950)

Earlier Iterations of Strike:
Iteration 1 of *Strike*   (3 min 38')   Sampled from *Saturday Evening Puss* (1950)
Iteration 2 of *Strike*   (1 min 44')   Sampled from *Saturday Evening Puss* (1950)