Transmedia Directors

Artistry, Industry and
New Audiovisual Aesthetics

EDITED BY
CAROL VERNALLIS, HOLLY
ROGERS AND LISA PERROTT

BLOOMSBURY ACADEMIC
NEW YORK • LONDON • OXFORD • NEW DELHI • SYDNEY

CHAPTER 11

Risers, drops and a fourteen-foot cube: A transmedia analysis of Emil Nava, Calvin Harris and Rihanna's 'This Is What You Came For'

Brad Osborn

British director Emil Nava has directed over one hundred music videos, several of which have won MTV Music Video Awards. Scottish musician Calvin Harris started out as a DJ and singer but has quickly grown into one of the most sought after electronic dance music (EDM) producers of the last decade. The two have collaborated on fourteen music videos since 2013. Table 11.1 shows these fourteen videos in chronological order.

Watching these fourteen videos in chronological order reveals several distinct changes in style in both cinematography and musical design. Here, I begin by describing what I see as the broadest continuities and changes in these clips. Though Harris's oeuvre suggests two broad phases while Nava's suggests three, each artist enters into a distinctly new phase after Rihanna's 'This Is What You Came For' (2016). After this, I move to a close reading of Rihanna's video in order to show how both Nava and Harris begin to adapt their previous styles in order to better respond to each others' changing style, focusing specifically on the ways in which Nava's changes in setting either align or do not align with Harris's sectional changes in musical form. Since the specific musical form

Table 11.1 Nava/Harris Collaborative Music Videos

Year	Title	Singer(s)	Nava Phase	Harris Phase
2013	I Need Your Love	Ellie Goulding		
2014	Outside	Ellie Goulding		
2014	Blame	John Newman	1	
2014	Slow Acid	(none)		
2014	Summer	Calvin Harris		1
2015	Pray to God	HAIM		
2015	How Deep Is Your Love	Disciples		
2016	My Way	Calvin Harris	2	
2016	This Is What You Came For	Rihanna		
2017	Feels	Pharrell, Katy Perry and Big Sean		
2018	Nuh Ready, Nuh Ready	PARTYNEXTDOOR		
2018	One Kiss	Dua Lipa	3	2
2018	Promises	Sam Smith		
2019	Giant	Rag'n'Bone Man		

Nava had become accustomed to accommodating in Harris's music since 2013 (what I will call *EDM form*) was beginning to change around this time, it is interesting to note the ways in which Nava's particular rhythm of introducing and cutting between settings adapts to this change.

Continuity and change in Nava, Harris and their collaborations

Cars, motorcycles and horses run throughout Nava's output, but in his early videos with Harris these are mere symbols of luxury, acting as signifiers for excessive wealth, partying and hedonism. Harris's song forms in this period are what I call *EDM forms*, in which songs are built from one or more rotations of a *verse*, a tension-building *riser* (usually featuring the song

title), and a massive, climactic *drop* – the moment of ecstatic dancing to a four-on-the-floor house beat. Nava's video for 'Blame' (2014) shows Harris performing these EDM forms in opulent clubs. Indeed, Harris was for six consecutive years (2013–18) the highest-paid EDM musician in the world, and held standing gigs at elite Las Vegas casinos.¹

From 2015 onwards, most of Nava's videos with Harris centre on the construction of virtual worlds, but through two different techniques. In the four videos from his second phase (2015–16), Nava creates expansive, open, often 'natural' sets that nevertheless bear a strange relationship to reality. 'Pray to God' (2015) features the three members of HAIM in simulated nature scenes with real exotic beasts but unreal backdrops. 'My Way' (2016) foregrounds this virtual aesthetic through extended scenes of VR goggles and extensive visual glitching, blurring the line between reality and the virtual. Harris' EDM forms in this era always save their loudest, most bombastic drop for the end, which Nava responds to by cycling through most if not all previously introduced settings with blinding speed and virtuosity. Harris's process of cycling through the same samples in different arrangements (a hallmark of EDM) is thus remarkably akin to Nava's approach to temporality. In 'How Deep Is Your Love' (2015), for example, Nava introduces several distinct settings each at the on-set of Harris's sections – a club (drop, 1:04), yacht (riser, 1:20) rooftop pool (drop, 1:35), hydroponic farm (drop, 2:05) and tattoo parlour (riser, 2:24) – before revisiting each of them in the final drop from 3:40 on.

The 2017 video for 'Feels' (featuring an all-star cast of singers) represents a palpable change for both artists. Moving away from EDM forms with huge drop sections, Harris begins adopting standard *verse/chorus forms* to highlight the contributions of the singers he's now collaborating with. Verse/chorus forms consist of one or more rotations of familiar *verse*, *pre-chorus* and *chorus* sections. Instead of the four-on-the-floor drop being the climactic highpoint (as in EDM forms), from 2017 onward we now hear three or four memorable sung choruses (usually featuring the song title) with Harris providing less bombastic beats beneath. This is part of a larger trend in EDM-pop to move away from the hard-hitting house beats – made popular almost a decade ago by hits from David Guetta such as 'Titanium' – towards softer beats that showcase vocal hooks.

Figure 11.1 shows the differences between Harris's two formal designs side by side. In EDM forms like 'Outside' (2014) the verse (0:10) advances a narrative story; the riser (0:38) begins quietly without a beat, gradually builds rhythmic propulsion and presents the title lyric; and the drop (1:09) features a powerful four-on-the-floor dance beat.² In verse/chorus forms like 'One Kiss' (2018) the verse (0:31) still advances a story, but the pre-chorus (0:46) presents a contrasting vocal hook that prepares for the memorable sung chorus (1:02) prominently featuring the title lyric. Harris uses EDM forms in nearly every video in his first phase ('Pray to God' is the

FIGURE 11.1 Comparison of formal functions of EDM and verse/chorus forms.

exception), then begins using verse/chorus forms exclusively in his second (2017 onwards). In these later songs and music videos, verse and chorus forms combine their moment of greatest sonic intensity with their moment of greatest lyrical-melodic memorability (the chorus), while the earlier EDM videos separate these two functions, with the memorability occurring in the title-containing riser and the sonic intensity waiting until the drop.³ So then the question arises: How does Nava respond to this change in song form?

As if responding to Harris's use of a 'throwback' form (verse/chorus has been a hallmark of pop music since the 1960s), 'Nuh Ready Nuh Ready' resurrects many of the same techniques seen in hip-hop videos of the early 1990s.⁴ The post-production animation overlaid onto several of the video's dancing scenes recalls PM Dawn's 'Set Adrift on Memory Bliss', while the black light used to accentuate the dancers' make-up borrows from Monie Love's 'It's a Shame'. Nava's virtual sets in his third phase (2017 onwards) become shallower, less expansive and full of two-dimensional artifice. Pastel colours dominate 'Feels' and 'One Kiss'. Hung tapestries act as artificial backdrops of 'Promises' (a cityscape) and 'One Kiss' (a pool), both of which reveal to the viewer the rigging used to hang these sets, essentially breaking the fourth wall and making the artifice a focal point.

Having given an overview of the evolution of these collaborations between Nava and Harris, I will now focus on a video that I see as a turning point for both, 'This Is What You Came For' (featuring Rihanna). It is here

that Harris begins infusing EDM forms with verse/chorus attributes, neatly synthesizing the two in a way that foregrounds both his production skills and Rihanna's infectious melodies. For Nava, this video is the last of his Harris collaborations to feature expansive worlds that contra-pose large physical spaces with virtual artifice. In examining this pivotal video, I hope to demonstrate each artist's flexibility in adapting to each others' changing style. Throughout the analysis, I will also draw the reader's attention to threads of continuity in the other thirteen videos by Nava and Harris, which might be seen as hallmarks of their personal style(s).

Close reading: 'This Is What You Came For' (Nava, Harris and Rihanna)

'This Is What You Came For' is a collaboration between artists Nava, Harris and Rihanna. At the time of this writing, the video has received over two billion hits on YouTube. We encounter at the very on-set a multitude of spaces, including a desert, a clearing in the Cascadian forest, and a massive white cube, closed on all sides except one. Roughly two-and-a-half times Rihanna's height on all sides, I estimate it to be over 14 feet tall with a volume of nearly 3,000 cubic feet. A remarkably similar cube opens 'My Way' from the same year.

The video was filmed near Big Bear Lake in California. Forest settings are common in several of these videos, including 'Blame', 'Pray to God', 'My Way' and 'Giant' (2019). But the video is just as notable for its virtual spaces. Using an innovative 360-degree camera technology and projection mapping, Nava is able to project realistic environments into the cube which are captured entirely in-camera (i.e. no post-production, no CGI). Such virtual spaces, which include dance clubs, desert scenes and even a simulacrum of the aforementioned forest, are so convincing that the viewer sees Rihanna, the video's constant focal point, to be interacting with them in real time.

Several scholars have suggested breaking down a music video into its component parts (cinematography, music, lyrics, etc.) before interpreting the artwork as a whole.⁵ In measuring several different parameters, we might deem such an approach 'parametric'. Building on this approach, Table 11.2 shows what I call the parametric form of the video.⁶ By demonstrating how the onsets of each section of the song either do or do not align temporally with shifts in the video's setting, the parametric form graph enables us to compare how song form interacts with visual form. In this particular graph I have also included the visual-musical-lyrical text-paintings that occur throughout (to be discussed shortly). Parametric form allows us to better appreciate what I see as the two crucial aspects of setting in 'This Is

What You Came For': (1) the distinction between the physical cube and the projections mapped onto it; and (2) Rihanna's interaction with the cube (and its virtual augmentations), expressed both through her movements and her lyrics.

What makes 'This Is What You Came For' so interesting formally is how Harris seamlessly blends compositional techniques derived from EDM form (phase one) and verse/chorus form (phase two). This results in some rather idiosyncratic section names in Table 11.2.⁷ Harris's climactic drop sections (1:01, 2:18 and 3:20) exemplify what Charlie Harding has called the *popdrop* – a type of drop that is less hard hitting than the massive side-chained house drop heard in earlier EDM tracks (e.g. 'Summer' (2014) at 1:01). Crucially, a standard EDM drop, unlike the chorus, does *not* contain a memorable vocal hook, and frequently contains only chopped up, sampled vocals (if it contains vocals at all). But according to Harding, the popdrop functions as 'the new climax of the song, right where you would *expect* to hear the chorus'

Table 11.2 Parametric Form in 'This Is What You Came For'

Time	Section	Setting	Text Painting
0:01	Video intro	<i>Mise-en-scène</i> : cube in desert–soundstage–nature	
0:16	Chorus	R inside cube, virtual colours	'she moves'
0:30	Post-chorus	R looks at us, cube goes black	'you', filter sweep
0:46	Riser-chorus	Virtual dance party, lasers	'what you came for' (party)
1:01	Popdrop	R leaves cube; soundstage, lasers, dancers	Claps=sampled claps
1:32	Verse	R in cube; virtual nature versus actual nature Car, desert projection; soundstage, Harris cameo	'when we meet'
2:03	Riser-chorus	Horse, dancers, desert	
2:18	Popdrop	Car on road (projected and real); R at edge of box	
2:49	Riser-chorus	Album cover projection	'lightning'
3:06		lights coming on with riser, shattering panes right before drop	Riser=lights come on
3:20	Popdrop	Accumulative, cycling through all the things that were introduced	Drop=tiles dropping

(emphasis his).⁸ Contrast this with what I've called the *riser-chorus*, which is where we actually hear the song title (a function of the chorus), but combined with the sonic characteristics of an EDM riser, in which a rising pitch and building rhythm produce tension leading up to the drop.⁹

So, which section draws viewers in the most? Is it the quiet riser-chorus on the song title (0:46) or is it the energetic popdrop (1:01), which *also* features memorable vocals (albeit monosyllabic and sampled)?¹⁰ The former blends riser and chorus function, building up tension yet containing the title lyric, while the latter blends chorus and drop functions by combining somewhat memorable lyrics with a popdrop. Why this matters for the analysis of music video is simple. A section that piques our auditory interest is likely to, consequently, attract our visual attention as well, and may even lead to the formation of distinct audiovisual memories.¹¹ A listener anticipating the syntactical highpoint (sung vocal hook and song title) in the riser-chorus at 2:03 is likely to perceive the corresponding change in scenery (desert and horse) more saliently than a listener who is still waiting until 2:18 for the beat to drop.

One utility of the parametric form chart is its ability to show the moments in which musical timing (e.g. when a section changes) and cinematic timing (e.g. when a setting changes) either do or do not line up.¹² Several of Nava's cuts occur mid-section in this video. He does tend to align big changes in scenery with Harris's changes in formal sections (e.g. the sports car arrives with the on-set of the popdrop at 2:18), but others are introduced mid-section (e.g. the car and desert arrive in the middle of the verse). Nava's particular rhythm of introducing these settings does have an interesting parallel to EDM production. Harris, like most EDM producers, begins a track by introducing only a handful of samples, adds additional samples slowly as the song unfolds, then combines them more freely in at the end.¹³

In several of these videos, Nava reserves this celebratory moment – cycling through virtually all previously introduced settings – for the final drop. Here, the cuts move so quickly that they occur not only mid-section but also mid-phrase, providing a syncopated counterpoint to the regular four-on-the-floor beat. For example, there are six cuts lasting, on average, less than a second from 3:47–3:52, cycling through the forest, the cube, the desert and the dance party settings. We might also understand Nava's increase in the speed of cuts near the end of the video as giving the viewer 'what they came for' – namely the so-called 'quick MTV cut' that Emily Caston describes as a hallmark of music video.¹⁴

Throughout all of these setting changes, Nava's unequivocal focus is on Rihanna's performance.¹⁵ Ellie Goulding takes up a similarly centred role in 'Outside', in which the space she occupies, which, though centred in the frame is notably 'outside' of the home she used to share with her lover, is essential to the video's meaning. Understanding Rihanna's constantly changing relationship to the cube, both its physical and virtual space(s), is similarly essential to understanding this video. Nava describes Rihanna as

being 'transported' through these spaces. I would like to argue that she also acts as a guide for us, the viewers, as we visually navigate the same spaces. Gillian Rose suggests an image such as this, with complex geometrical perspective, 'offer[s] a particular position to its viewers'.¹⁶ Her relationship to the physical edges of the cube and her interactions with the virtual projections help us to appreciate the complexity of the real and the virtual in the video, and also help the viewer position herself in relation to the space.

Rihanna begins the video fully encased in the cube. During the intro we see the cube in three different settings: the desert, the soundstage and the forest. So, where is Rihanna?

A remarkably long cut that takes up nearly an entire section (0:34–0:57) helps the viewer to understand her relationship to the cube. The dark background focuses our attention on the flashing neon lights of a dance club behind her. But why is the doorway to this club getting closer (or at least bigger)? Just as she appears to turn and walk through the doorway, we realize that the dance party is virtual – a 360-degree projection onto the cube. The doorway wasn't getting closer, and Rihanna didn't walk through it. She now walks towards the back of the cube until 0:56 when we see a projection of the soundstage, giving the viewer a curious *misunderstanding* of the space: the cube must be translucent, and it's sitting in the soundstage. This turns out to be half true. Just before the drop, Rihanna walks out the front of the cube for the first time and we realize that, while she (and the cube) *are* in the soundstage, the cube is not translucent, and all of the spaces we have experienced thus far have been virtual projections inside of it.

In the analysis of song, 'text painting' connotes the use of musical gestures to reflect the meaning of a word or phrase.¹⁷ But in music video we can also interpret a video's visuals in concert with the song's lyrics. Surely Rihanna's gentle sway at 0:23 must be interpreted as animating the lyrics 'she moves' just like her eye contact with the camera at 0:33 relates to the lyric 'you', the viewer now suddenly feeling put on the spot, especially given the simultaneous dimming of the background. These changing spaces also give deeper meaning to the song's title. In the beginning, we might assume that Rihanna herself is 'what (we) came for', but when she walks into the club at 0:48, glancing over her shoulder at the viewer as she does so, we might assume that it's the *party* we came for.

The possibilities for text painting in music videos are not limited to utterances involving lyrics. If we understand music video as a synthesis of three media (lyrics, visuals and music),¹⁸ then a cross-domain mapping between any two or more of these 'texts' becomes text painting. Harris applies a filter sweep to text paint Nava's gradual zoom on the dancing crowd from 0:40 to 0:47. The filter sweep, which gradually introduces higher frequencies into the mix, is the sonic analogue of walking into a dance club. Because of the occlusion principle you can initially only hear the deep bass notes – the full frequency range is only revealed once you have

fully entered the space. Nava similarly text paints the rising pitch (riser) at 2:17 with a left-to-right camera pan that mimics turning the volume and/or tone knobs on a radio clockwise. Carol Vernallis suggests that such connections between camera and musical motion – in this case a panning shot that follows the same curve as the track's volume profile – help to establish continuity in music videos.¹⁹

At the first popdrop we finally fully understand the relationship between Rihanna, the cube, the soundstage and the projections. Distinguishing between the physical and the virtual is now less taxing, and we celebrate with flashing lights and confetti. Rihanna finally joins the dancers in this celebration (ironic, because she's now outside of their space), her visual handclap at 1:17 aligning with Harris's sampled handclap in the track at precisely the right moment, what Michel Chion would describe as a *synch point*.²⁰

The relationship between song form and video form gets more complex at the on-set of the verse. Rihanna looks somewhat surprised at 1:35 when the projected party changes abruptly to a forest projection. This reinforces the explanation given by Nava that these virtual spaces are outward projections of Rihanna's inner imagination,²¹ and, after all Nava used a similar technique to portray a disoriented central subject (Gigi Hadid) in 'How Deep Is Your Love?' from the previous year.

At 1:43 we see the cube in the Cascadian forest clearing. Are we now to assume that Rihanna is in that box? Swapping the falling confetti from the dance scenes with falling green leaves suggests so. Indeed, floating particulate matter helps establish settings in several of Nava's videos, especially the snow in both 'Pray to God' and 'Giant'. Halfway through the verse the projections change again, this time to a sports car in the desert. Then we're back to the soundstage for Calvin Harris's cameo. In several of his early videos (especially 'I Need Your Love') Harris is quite animated, smiling frequently and interacting with other characters. But when Rihanna sings 'your place when we meet' the stoic, reserved stance he takes in this and later videos makes it unclear if she's actually *meeting* Harris, or if he too is a projection. Perhaps the car speeding down the road simply text paints 'fast' in the lyrics, but then again perhaps it's a date, or even a road trip.

The third chorus adds a horse and rider to the aforementioned desert scene. With the exception of a single live shot (the sports car driving down a highway), the rest of the video cycles through previous settings. Though horses, desert and cars are all well-worn tropes from Nava's phase one, here they take on different meaning in relation to Harris's form. Nava text paints Harris's final riser-to-drop sequence brilliantly starting at 3:15 (riser) with pairs of lights that turn on row by row, rising upwards through the frame, followed by the projected panes shattering and dropping to the floor at 3:22 (drop). This final popdrop delights in visual excess, combining nearly all previously seen settings with quick cuts, lasers and even a projection of the duo's album artwork (Figure 11.2).

FIGURE 11.2 Album cover projection in 'This Is What You Came For' (Emil Nava, Calvin Harris, Rihanna: 2016, 3:24).

Conclusion

A close reading of a video like 'This Is What You Came For' may be, on its own, a worthy exercise in audiovisual analysis, but the analysis is surely enriched by contextualizing the rich interpretive moves each artist makes within a larger history of their collaborations. Sectional boundaries, largely the provenance of producer Calvin Harris, tend to align with changes in scenery orchestrated by director Emil Nava. Rihanna plays a pivotal role throughout the video in adding further meaning to the overall formal design by animating – both with her lyrics and her movements – aspects of both. Adapting the techniques of formal analysis to the audiovisual medium, while also drawing upon established visual analytical methods from scholars such as Vernallis, Caston, Chion and Rose, allows us to appreciate the video's form in visual and musical domains simultaneously. Music video analysts who adopt and further adapt these tools will likely find them helpful for analysing all three of these domains first separately, then together.

- 16 Fincher quoted in Bill Desowitz, 'Fincher Talks *'Benjamin Button'* and VFX', *VFXWorld* (9 January 2009), at <http://www.awn.com/vfxworld/fincher-talk-s-benjamin-button-and-vfx> (accessed 28 March 2019).
- 17 Baxter quoted in Ian Failes, 'Maintaining the Mystery: Editor Kirk Baxter on *Gone Girl*', *FXGuide* (2 October 2014), at <https://www.fxguide.com/featured/maintaining-the-mystery-editor-kirk-baxter-on-gone-girl/> (accessed 28 March 2019).
- 18 Galloway quoted in Eugene Thacker, 'Protocol is as Protocol Does', foreword to *Protocol*, xix.
- 19 See David Geffner, 'To Catch a Killer', *ICG Magazine* (March 2007), at <http://www.icgmagazine.com/2007/march/march07.html> (accessed 28 March 2019).
- 20 Nelson quoted in Oliver Peters, 'Crime Scenes: Evolving the Postproduction Process on "Mindhunter"', *Digital Video* (November 2017), 13–15.
- 21 Fincher quoted in Ryan Dombal, 'Trent Reznor and David Fincher', *Pitchfork* (27 September 2010), at <https://pitchfork.com/features/interview/7862-trent-reznor-and-david-fincher/> (accessed 28 March 2019).

Chapter 10

- 1 I've interviewed color grader Aubrey Woodiwiss. Speaking with him has given me a sense of color's power and its close relations with music. Woodiwiss says he wants to take viewers on a ride. We can see this in 'This Is What We Came For,' as color is dampened and brought up. The effect is similar to a composer or conductor working with a symphony's instrumentalists. Aubrey and Emil want people to feel color, and many of their choices are made right on set. Calvin Harris's 'Feels' (ft. Pharrell Williams, Katy Perry, and Big Sean) is a video that pays homage to Gilligan's Island and Tim Burton's *Ed Wood*. In this clip, Emil and Aubrey continuously "spun the color wheel," which nicely fits with the song's psychedelic-sounding backward guitar. It also seems to fit the loping feel of the rhythm guitar, which emphasizes the offbeats. (The color wheel can offer a spin-the-bottle-like game, since it's comprised of a circle made up of analogous and complementary relationships). Some intermediary touches were added later, like a lavender bearded dragon.

Chapter 11

- 1 See Kat Bein, 'Calvin Harris Tops the "Forbes" Highest-Paid DJ List for Sixth Straight Year', *Billboard Magazine* (31 July 2018), at <https://www.billboard.com/articles/news/dance/8467942/calvin-harris-top-paid-dj-forbes> (accessed 18 March 2019).
- 2 Most EDM tracks in this style feature a recurring lyric halfway through the verse (e.g. 0:24, 1:39 in 'Outside') that behaves somewhat like a pre-chorus. But with little to no contrast in accompaniment material or texture, the similarities to a true pre-chorus end there. In any case, the presence or absence

- of this feature in no way detracts from the broader three-part (verse, riser and drop) sonic trajectory.
- 3 The difference between the chorus and the drop can be expressed neatly as the difference between two different kinds of climax: syntactical and statistical (respectively); see Brad Osborn, 'Subverting the Verse/Chorus Paradigm: Terminally Climactic Forms in Recent Rock Music', *Music Theory Spectrum* 35, no. 1 (2013): 23. Choruses fulfil their role within the syntax of verse/chorus forms as the memorable lyrical-melodic hook. Drops present the highest value in several measurable parameters, especially loudest volume and thickest texture.
 - 4 See Jason Summach, 'The Structure, Function, and Genesis of the Pre-chorus', *Music Theory Online* 17, no. 3 (2011), at <http://www.mtosmt.org/issues/mto.11.17.3/mto.11.17.3.summach.html> (accessed 1 March 2019).
 - 5 See especially David Bordwell, *Film Art: An Introduction*, 11 ed. (New York, NY: McGraw-Hill Education, 2016).
 - 6 See Brad Osborn, 'Music Videos as Music Theory: Teaching MTV's Buzz Clips', Paper presented at the Teaching and Learning Popular Music Symposium, Ann Arbor, MI, 18–21 November 2015.
 - 7 Asaf Peres labels the sections of a three-part EDM design as verse, chorus and post-chorus rather than verse-riser-drop or the conventional system of verse-pre-chorus-chorus; see Asaf Peres, 'The Sonic Dimension as Dramatic Driver in 21st-Century Pop Music', PhD dissertation, University of Michigan (2016). The 'post-chorus' was popularized first by Mark Spicer to account for the presence of four distinct sections (verse, pre-chorus, chorus and post-chorus) in tracks like Lady Gaga's 'Alejandro'. See Mark Spicer, '(Per)Form In(g) Rock: A Response', *Music Theory Online* 17 March (2011), at <http://www.mtosmt.org/issues/mto.11.17.3/mto.11.17.3.spicer.html> (accessed 3 April). However, recent EDM forms almost never contain the sort of explicitly contrasting pre-chorus heard in 'Alejandro'. This can be seen as part of a larger trend to remove 'filler' sections such as intros, bridges and solos (it is no coincidence that more songs are now beginning directly on the chorus). With the second section of a four-part design removed, several scholars have opted to stick with section names one, three and four for EDM songs (verse, chorus and post-chorus); see Jeff Ensign, 'Form in Popular Song, 1990–2009', PhD dissertation, University of North Texas (2015); Harding, 'Pop Drop'; Peres, 'The Sonic Dimension'; and Alyssa Barna, 'The Dance Chorus in Recent Top-40 Music', paper presented at Music Theory Midwest (2018).
 - 8 Harding christens the popdrop 'the sound of 2016', finding it in hits by Justin Bieber, The Chainsmokers, Selena Gomez and others; see Charlie Harding, 'How the Pop-Drop Became the Sound of 2016', *Switched on Pop* blog (2016), at <https://www.billboard.com/articles/columns/pop/7625628/pop-drop-sound-of-2016-chainsmokers-justin-bieber-switched-on-pop> (accessed 3 April 2019).
 - 9 Two issues complicate this formal design even further. First, Harris *begins* the track with quiet versions of both the chorus and post-chorus, devoid of the EDM functions (riser, build and drop) they will eventually contain. Second, quite unusually for either pop or EDM songs, this track contains only one full rotation of its verse-riser-chorus-drop 'core' (1:32ff), making its constituent sections even harder to identify; see Mark Butler, *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music* (Bloomington, IN: Indiana University Press, 2006). Harris and Rihanna have previously used a remarkably similar formal arrangement in their 2011 collaboration 'We Found Love' (1:22ff).

- 10 The only example in these videos that comes close to splitting the difference between drop and chorus so closely is heard in 'How Deep Is Your Love', in which the song title is initially presented alongside a quiet riser, but then reappears at the end of each phrase of the drop, giving the latter section a chorus-esque quality.
- 11 Nine Inch Nails' video for 'Hurt' (1995) ends with an instructive example of this (4:20), in which the musical track's volume climax coincides perfectly with a fish being speared by a diving bird, creating a combined multimedia stimulus. Every time I hear that music, I picture the dive-bombing bird and that poor fish.
- 12 While music is perceived *metrically* – four beats form a phrase, four phrases form a verse and so on – cinematography is less predictable. Cuts are, of course, rhythmic, but do not follow a predictable metre, though important phrase and formal breaks tend to be sufficient (yet not necessary) conditions for a cut. Music video cuts are notoriously quick, relative to film. For more on the similarities and differences between musical rhythm and the rhythm of cuts, see Carol Vernallis, *Experiencing Music Video: Aesthetics and Cultural Context* (New York: Columbia University Press, 2004).
- 13 This typical formal process neatly blends Spicer's 'cumulative' beginnings with his 'accumulative' endings; see Mark Spicer, '(Ac)Cumulative Form in Pop-Rock Music', *Twentieth-Century Music* 1 (2004): 29–64.
- 14 See Emily Caston, "The First Cut Is the Deepest" Excerpts from a Focus Group on Editing Music Videos, with Explanatory Historical and Theoretical Notes', *Music, Sound, and the Moving Image* 11, no. 1 (2017): 99–118.
- 15 See Vernallis' interview with Nava elsewhere in this book.
- 16 See Gillian Rose, *Visual Methodologies: An Introduction to the Interpretation of Visual Materials* (London: Sage, 2007), 46.
- 17 See Tim Carter, 'Word Painting', *Grove Music Online*, at <https://doi.org/10.1093/gmo/9781561592630.article.30568> (accessed 3 April 2019).
- 18 See Lori Burns, 'Multimodal Analysis of Popular Music Videos', in *Coming of Age: Teaching and Learning Popular Music in Academia*, ed. Carlos Xavier Rodriguez (Ann Arbor, MI: University of Michigan Press, 2017), 81–110.
- 19 See Vernallis, *Experiencing Music Video*, 190.
- 20 See Michel Chion, *Audio-Vision: Sound On Screen* (New York: Columbia University Press, 1990), 223.
- 21 See Vernallis' interview with Nava elsewhere in this book.

Chapter 12

- 1 Carol Vernallis writes that digital intermediate (DI) 'functions like Photoshop's processes for altering images, but it works with real-time moving media. You can tweak an individual pixel's colour, isolate it and modulate it, thereby fracturing the moving image, pulling it away from its referent in the world': *Unruly Media: YouTube, Music Video, and the New Digital Cinema* (New York, Oxford University Press 2013), 333. Brown and Kutty continue: 'The technique (which is sometimes referred to as 'bleeding pixel effect') involves using compression artifacts as a visual style', a pioneering example of which is Takeshi Murata's *Monster Movie*