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Bullet-Time
A Temporal Icon

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Abstract

The Matrix's use of bullet time, the extreme slowing down of the cinematic image, instantly became iconic for action cinema and has almost become as recognizable as Hitchcock's famous dolly zoom in *Vertigo.* Circulated so much as to almost render the effect meaningless, this paper proposes the question of what purpose, in a time of incessant acceleration, could the slowing down of time mean and why has it become so iconic? This paper argues that bullet time in action films is, paradoxically, an intensification of speed, a different but related way of making movement felt. Although difficult to delimit, speed and its felt sensations are central concerns for contemporary culture. These intensifications of moments are ways not only to express narrative momentum but also to provide distinct payoffs, durations of pure sensation and astonishment. Time is tamed in bullet time. Rather than the transcendent desire of slow cinema, we find a kinesthetic desire in cultural acceleration, a desire which is attenuated in contemporary action films and their use of bullet time.

Keywords action film, bullet time, sensations, slow-motion, temporal icon

Slow-motion has always been part of cinema's repertoire, but with *The Matrix's* use of bullet-time, the extreme slowing down of the cinematic image instantly became iconic for action cinema and has become as recognizable as Hitchcock's famous dolly zoom in *Vertigo*. Circulated so much as to almost render the bullet-time effect meaningless, one must consider what, in a time of incessant acceleration, can the slowing down of time mean? Considered in relation to most other studies of icons, a temporal sequence gains prominence and iconicity when its effect can be translated between different narratives, genres, and even media. While the iconographic content differs, the unfolding of this content remains reproducible. Hence, it is feasible to speak of a temporal icon, despite the content not resembling each other. Reproducibility and recognizability are paramount in relation to any form of icons and bullet-time and super-slow have that in spades.

I argue that the iconicity of bullet-time comes from the mixing of control and intensity. Bullet-time, and super-slow more generally, places the spectator in an exhilarating position, a position that is reproducible as an action for us and on us. By tracing the development of bullet-time from *The Matrix* onwards, it becomes clear that this effect has become iconic for the way it allows for an intensified spectator position — a position in which control over speed becomes the central pleasure. This is also a recognizable position, on two counts. First, placing the spectator in a position of control and power is recognizable as a favored strategy of much popular cinema. Second, as spectators we recognize the sensation of experiencing super-slow, precisely because it is a reproducible sensation. In this way, super-slow becomes a temporal icon.

For the term icon, I draw on the work of the self-proclaimed iconologist W.J.T. Mitchell, who argues in his early book *Iconology* that icons are images, pictures, or likenesses (1). Mitchell is interested in the study of images, broadly defined (meaning that he includes verbal images in his definition of images). He proposes that icons are images and that images are "not just a particular kind of sign, but something like an actor on the historical stage, a presence or character endowed with legendary status" (Mitchell 9). Icons, in other words, do things. Their presences are more than symbols to be interpreted and deciphered, they are also actions. Actions because images do things for us and to us. For bullet-time, this image-action is

paradoxically an intensification of speed, a way of making movement felt. Making movement felt has been cinema's central occupation since its inception.

Cinema and Time

Time is central for cinema. André Bazin argued that the long take is crucial to film, Sergei Eisenstein emphasized the use of montage to splice different times together, and Andrei Tarkovsky called cinema sculpting in time. Early cinema was fascinated by visual change, a fascination clearly connected to a more general fascination with time and our ability to manipulate and control it. As Mary Ann Doane makes clear in *The Emergence of Cinematic Time*, cinema and the archiving of time is paramount for modernity. Discussing a wide array of technologies and cultural techniques, Doane points out that the late 19th century was obsessed with standardizing and rationalizing time. Everything from train schedules to pocket watches made time external and measurable. Time was conquered, argues Doane, and cinema was simply one of many technologies to do so (Doane 9).

Cinema conquered and repossessed time through its ability to represent time, but there was another dimension to time which also opened up during the early 20th century — the sensation of speed. Enda Duffy asserts that the experience of speed was the only wholly new experience engendered by modernity — the ability to move at a speed one is not normally used to, while also having the sensation of controlling that movement (Duffy 2009, ch. 1). A felt experience more than the representation of speed, cinema nonetheless serves as a node that allows the sensation of speed through representations.

Duffy tends to equate speed with rapidity, but as Vivian Sobchack argues in her essay "Cutting to the Quick", slow and fast are different articulations of the category speed (Sobchack 338). What matters is how tempo and rhythm manifest as concrete historical and cultural phenomena. Sobchack points out the acceleration of still images into moving images was the shock of the new in early cinema, but that today, the reverse situation of moving images slowing down has become more prominent (Sobchack 340). As Sobchack argues, this is because we are acclimated to a culture of fast to faster, which makes slow-motion an attenuation of movement in itself. We do not notice acceleration anymore; it has become second nature to us. Only when things slow down do we notice them.

As slow-motion becomes a way of heightening intensity in cinema, it makes sense to examine how such intensity plays out in action films, a genre which trades on intense sensations. As a special effect and a moment of excess or astonishment, slow-motion cannot retain its astonishing effect, but necessarily becomes familiar to us. *The Matrix* rejuvenated the use of slow-motion by speeding time down more than ever before with an effect that came to be known as bullet-time, or super-slow motion.

Bullet-Time

Despite earlier examples, *The Matrix* from 1999 represents the first major film to employ bullet-time, particularly as a significant component of the film's story. Used sparingly but effectively, bullet-time is first introduced briefly in the opening scene which shows Trinity (Carrie-Anne Moss) escaping from an Agent of the matrix. This scene not only serves as an impressive opening but also hints at what is to come later in terms of visual effects.

The primary use of bullet-time comes late in the film. Thomas 'Neo' Anderson (Keanu Reeves) chooses the red pill and joins the resistance to become the messiah who will lead humanity out of machine slavery. While the pinnacle of Neo's insight and power comes when he can see through the code of the matrix and manipulate it at will, this moment is overshadowed by his ability to slow down time while fighting the Agents of the matrix. More than the code lines scrolling down the screen, the iconic moments of *The Matrix* are the majestic bullet-time scenes, where Neo's power is made visible and the astonishing super-slow is felt by the audience as Neo's total control over the environment.

Neo's ability to slow time visualizes his struggle against the matrix and underlines his messianic powers. From a narrative perspective, Neo's time warping comes at crucial, high tension moments and so extends the tension felt in these scenes.

A good example is when Neo confronts an Agent on a rooftop during Trinity and Neo's attempt at rescuing Morpheus. At this point, Neo has never before slowed down time outside the training room, and so the scene functions as a test of Neo's abilities. When the agent shoots his gun at Neo, the slowing down of time is filmed to emphasize the uncertainty of whether or not Neo will actually succeed. As the bullets fly toward Neo, the camera travels a full

circle around him, simultaneously zooming closer and closer. The constant near misses as the image slows down prolongs the tension almost unbearably. The speed ramps back to normal as two bullets graze Neo and he falls to the ground. The effect is in excess of narrative information: it intensifies the scene, while also showing us that Neo's strength is increasing.

The use of bullet-time increases towards the end of the film and also takes on even more astonishing qualities. When Neo and Trinity attack the Agent stronghold to free Morpheus, there is a shot from below looking up at the rebel helicopter as shells from Neo's machine gun rain down. The camera position is humanly impossible and does not belong to any character point-of-view, and the bullet-time effect lends an epic quality to the shot. A trivial shot is turned into an occasion for spectacle. Similarly, the final showdown between Neo and Agent Smith not only employs bullet-time, but also speed-ups of Neo's fists, and even more spectacularly, a shot where time stands still except for the camera. As Neo and Agent Smith jump toward each other, time slows down until it stops completely. The camera swirls around the two, from Neo's side to behind Agent Smith. Particularly the camera's circling movements are breathtaking and provide spectacular shots that extend beyond the regular capacities of film cameras.

Paradoxically filmed through the use of still cameras placed in a circle around the actors and shooting quickly, these photos were then composited in postproduction to produce the spectacular effects. These scenes produce an interesting double temporality, where time stands still (the characters do not move) while simultaneously passing (our perspective moves). Time and space meld together, taking us beyond human perception. Bullet-time thus appears to transcend both time and space, soliciting sensations in excess of mere speed and producing a cinematic subject that may move freely.

The iconicity of bullet-time is understandable from this perspective, as the film gives us access to sensations that were hitherto insensible. While the bullet-time sequences intensify our experience, they also transport us out of our everyday sensory experience into an amplified state of excitation. We cannot normally see bullets fly through the air nor can we flit about as if we were weightless, but bullet-time produces a sensation of what this might feel like. As a

new experience, one might find it either elating or sickening but it is unique. While bullet-time is visually stunning and easily recognizable, I believe its iconicity comes from the distinctive sensations it offers. More than a recyclable image, bullet-time is memorable for how it makes us feel, which, as it turns out, is far harder to duplicate.

Suspended Suspense

Soon after *The Matrix*, action films such as *Swordfish* (2001), *Charlie's Angels* (2000) and *Charlie's Angels: Full Throttle* (2003), *Ultraviolet* (2006), and *Max Payne* (2008) began copying the iconic effect for their own purposes. Due to its distinctive look, Warner Brothers quickly trademarked the term bullet-time, but the effect of slowing down time cannot be trademarked. Instead, one refers to super-slow motion or alternatively speed ramping if speed changes within the shot. Out of all of these *Max Payne* is interesting, because it is an adaptation of a computer game, which was the first game to feature super-slow effect, a design decision made before *The Matrix* was released. The game is a third-person shooter with a detective story, distinguished from other similar games primarily by the use of super-slow in the gunfights. Super-slow is part of the gameplay and represents an innovative and engaging way of conducting gunfights.

For the *May Payne* film, this signature effect had to be recreated. Used far less extensively than in *The Matrix* and particularly other films such as *Charlie's Angels*, a different technique was used. High-speed cameras were used during shooting and then morphed with other footage. Necessary in part due to the film's heavy reliance on CG sets, shooting high-speed meant that speed ramping was not possible. Considering the innovation of the game it is somewhat surprising to see how little super-slow is actually used in the film. More surprising is the fact that there is no real integration between the story and the use of super-slow. Used only as an intensifier, super-slow appears sporadically in the film.

The first use is when Payne attempts to stop Owen Greene from falling out the window, where the camera moves from left to right in a slow tracking shot. On the left-hand side, Payne moves towards Owen. As the camera tracks past the wall into the air on the other side, we see a valkyrie (a demon in the film's universe) pulling Owen through the window. The point-of-view changes from Payne's to Owen's in the moment the camera tracks past the wall. An astonish-

ing sequence, the super-slow extends the tension of whether or not Payne will reach Owen in time, combined with the spectacle of the valkyrie pulling Owen backwards out the window. This use of super-slow is therefore a clear-cut example of intensifying the suspense of the scene and emphasizing the valkyrie creature effect.

Two scenes where super-slow works in essentially the same manner are when Jason Colvin and BB Hensley are shot. Colvin is a crony for the villain corporation in the film, and Payne interrogates him to learn more about the murder of Payne's wife. Colvin is shot by the response team sent to help him. Super-slow is employed as the shot is fired and punches through Colvin's body, emphasizing the surprise that the team sent to help him is willing to sacrifice him for a chance to get at Payne. Similarly, BB Hensley is Payne's closest friend but in an unsurprising twist turns out to be behind the drug experiments to make better soldiers and he is directly the cause of Payne's wife's death. When this betrayal is revealed, Payne sees fit to kill Hensley for his misdeeds and the execution is filmed in super-slow, clearly meant to draw out the climactic moment to allow us to savor the righteous vengeance.

Super-slow becomes a cheap way for *Max Payne* to draw out spectacular, astonishing, or narratively poignant scenes. The inherent fascination of slowed-down time is exploited to capture the audience's attention, while also paying lip service to the game's innovations. What was iconic for the game ends up as trivial for the film. *Max Payne* is not a particularly good film, but it is a good example of how super-slow has become part of action cinema's repertoire. While the film had every reason to make much of the device, its uses of super-slow fizzled and never added much to the impact of the film. The iconicity of the game was lost in translation, as was the genre tradition the film so clearly wanted to activate.

The problem with using super-slow in the way that most films immediately after *The Matrix* did, was that there was little understanding of the effect super-slow has on the rhythm of the film's pacing. Viewed solely as an intensity effect, filmmakers disregarded the dilation effect of super-slow. As time dilates, the narrative slows to a halt. In excess of narrative, bullet-time provided plenty of thrill and astonishment for the spectator. In contrast, *Max Payne* halts the narrative at crucial moments. When Colvin is shot, a surprising

moment is protracted, which ends up lessening the intensity of the scene rather than increasing it.

While slow-motion is inherently fascinating, simply because it gives us access to a world we cannot normally see, this slowness can easily feel turgid. Using super-slow for exhilarating action scenes is a balancing act, since these scenes are meant to pull us along for the ride. Slowness when we want to go fast easily becomes more frustrating than intense. Case in point would be *Charlie's Angels: Full Throttle* (2003), which constantly slows down chase scenes and fight scenes for moments of super-slow. Much like with *Max Payne* the super-slow moments feel mostly superfluous and actually get in the way of the expected sensation of — precisely — full throttle.

Contrapuntal Speed

There are, however, examples of super-slow being used successfully in recent cinema, primarily in films featuring protagonists with extraordinary powers, such as *Sherlock Holmes* (2009), *Sherlock Holmes: Game of Shadows* (2011), *Spider-Man* (2002), and *The Amazing Spider-Man 2* (2014). While there are immense differences between Sherlock Holmes, sleuth extraordinaire, and Peter Parker, your friendly neighborhood Spider-Man, the recent adaptations of these two characters have one thing in common: they all employ super-slow sequences to visualize the superhuman powers of their protagonist.[1]

For Guy Ritchie's *Sherlock Holmes* films, super-slow marks the sensation of Holmes' superior intellect working overtime, analyzing and deducing how events will unfold before they occur. Speed slows almost to a crawl as Holmes sees potential threats, openings, and opportunities. At this pace, everything becomes clear and the spectator can follow along with Holmes, getting a sense of what it would be like to be as quick-witted as Holmes. Significantly, however, once Holmes has perceived the outcome, time speeds back up and we see the events unfold in real time. This effect serves two purposes. Firstly, it serves to showcase how fast Holmes' thinking is, when we see the difference in speed between Holmes' deductions and the actions that take place. Secondly, the contrast between super-slow and full speed creates a contrapuntal relation between the two sequences. The super-slow sequence sets up what will happen, generating anticipation and excitement. Then comes the payoff of seeing the sequence at full speed. This replay serves as an

intensifier, showcasing the difference between Holmes' perception and our own.

An even more intense contrapuntal time effect is used in *The Amazing Spider-Man 2*, where the super-slow sequence comes when Spider-Man (Andrew Garfield) tries to save people from Electro's (Jamie Foxx) lashing out. Before Spider-Man acts, the camera travels in super-slow up the stairs, zooming in on all the points where people are in danger of being electrocuted as Spider-Man leaps to save the day. The long take speed ramps between super-slow, which shows Spider-Man's web shooter break and electricity spark up a metal bannister, and full speed moments of Spider-Man pulling people away from certain death, back to super-slow and so forth. However, as a way of visualizing Spider-Man's superpowers, when Spider-Man attacks Electro the scene is also undercranked to play slightly faster than normal.[2]

An exhilarating contrapuntal thrill comes from this alternation between three modalities of speed: first slower-than-human speed, then regular speed and finally faster-than-human speed. The intensities of speed are central to this scene and reveal how these intensities emerge more from the disparity between our everyday perception of the world and the perception presented by the film. What the Holmes films and Spider-Man films succeed in doing is to make this disparity felt. They make the audience feel superhuman in these scenes, and so provide their own version of superhuman sensations, much like we found in *The Matrix*.

The contrapuntal uses of speed indicate an elastic relation to time as category. No longer tied to a particular corporeal time of the spectator, speed ramping has become as second-nature to filmmaking as close-ups and long shots. Wile different spatial articulations have always been part of cinema's aesthetics, temporal articulations have usually been only a matter of editing. As much as slow-motion was always a possibility, it was rarely used as it tended to disrupt the narrative momentum. Only recently have super-slow and speed ramping become viable options, in cinema's quest to always find new ways to astonish.

Slow Burn

I have traced how super-slow has become iconic for action films, yet another addition to the repertoire of the genre. As is so often

the case, the device loses much of its meaning as it disseminates across a wide variety of films, sometimes adding only listless recycled images, and at other times taking on new scintillation. While *The Matrix* and bullet-time will forever be conjoined, it is clear that super-slow motion remains visually fascinating, even as its use is sometimes deplorably repetitive.

This larger shift marks the attenuation of speed as something to be manipulated and exploited. The slowing down of time to an extreme degree, in the way that this temporal articulation has disseminated across action cinema, speaks of a different relation to time. Time is tamed in super-slow. Rather than a contemplative pace, we find a kinesthetic desire for acceleration, a desire which is expressed in the use of super-slow. While it may sound paradoxical that super-slow can express a kinesthetic desire for acceleration, as we have seen super-slow ties in to two modes of desire for speed — representation of control, and the prolonging of sensation.

First is the glorified representation of speed. Watching every detail of time unfold represents mastery over time, it is something which we are in control of, despite its speed. For a culture of incessant acceleration, the representation of control over speed becomes a compensation for acceleration. Second is the prolonging of the sensation of speed. Super-slow is not only a matter of control, it is also a desire for increased intensity. While some films employ a contrapuntal contrast between super-slow and faster-than-normal images, in all cases we find an interest in intensifying a specific moment, or prolonging a certain event.

The iconicity of bullet-time and later on super-slow comes from the feeling of control mixed with intensity. While slow-motion has always opened up a new world of perception, super-slow not only goes further and opens up the world even more, it does so by placing the spectator in an even more powerful position than previously. The stylization inevitably involved in super-slow sequences becomes the safety of repetition, but a repetition that feels new. Super-slow, as an action for us and on us, makes time felt and makes us feel in control of time.

Notes

1. True to contemporary media culture's incessant cross-pollinations, remakes, and reboots, there are several versions of both characters currently on offer. For Sherlock Holmes, I only deal with Guy Ritchie's film versions, not the BBC series *Sherlock* (2010-) or CBS' *Elementary* (2012-).
2. Undercranking is the technical term for running a camera at slightly slower speed than the standard 24 frames per second. When played back at normal speed, the image is slightly faster.

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