Car With a Movie Camera:
Theorizing Dashcams, Cameraman Surrogates, and the Cameraman Caught Unaware

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Abstract: Dashcams are responsible for capturing some of the most bizarre content that goes viral on the internet. Through the dashcam apparatus, motorists capture unexpected incidents both relating to and outside of the flow of traffic. Dashcams account for a dominant place in the consumer landscape of video and photography today, and this article represents one of the first attempts to theorize dashcam media within the history of cinema and photography. I question how the dashcam and its associated filming practices distance the camera's physical orientation from the user's eye. The camera is not directly controlled by the user's hand-eye, but instead operates through the surrogate of the automobile. In other words, the motorist is not the filmmaker. Dashcam media epitomizes the wasteful whimsy of digital filmmaking and digital photography, whose technological advances in flash storage have enabled users to no longer economize precious film stock. Dashcam footage, in its ideal form, will never be watched, but deleted and re-recorded as motorists collect digital evidence of their daily drives. The article forwards the notion that dashcam media allows us to challenge a long held notion that film and media exist primarily in order to be seen.

Keywords: dashcam, *avtoregistrator*, digital video, apparatus theory, film theory, film history, Dziga Vertov, *Man with a Movie Camera*

Our first association with dashboard cameras (dashcams) may be influenced by the numerous videos currently shared online, which highlight an extraordinary array of footage, ranging from the comical to the disastrous. Countless car accidents, car chases, scenes of public violence, and most notably, the 2013 Cheliabinsk meteor impact and the

Image 1. Cheliabinsk meteor captured by motorist dashcam

Source: RT (2013).

Image 2. TransAsia plane crash from the point of view of a dashcam

Source: CNN (2015).

2015 crash of TransAsia Flight 235, were all caught on car-mounted cameras. Dashcams and similar models marketed for action sports occupy a dominant place in the consumer land-scape of video and photography. Their popularity marks a shift in which users in large numbers are ditching traditional single shot devices (film cameras, digital cameras, and cell-phones) in favor of a continually operating, wide-angle lens mounted device.[1] As of 2014, over one million motorists in Russia owned a dashcam (in Russian, *avtoregistrator*), using the device to protect themselves against corrupt police forces, unreliable and often expensive insurance companies, and liability from other drivers.[2]

The dashcam has seen a similar rise in popularity throughout India and Asia, as motorists similarly guard themselves with filmic evidence from the continuously running camera. Like-wise, police forces in numerous countries have institutionalized the use of these cameras in squad cars and attached them to officers, both as a way to document evidence and as a way to calm public fears over police brutality.[3]

What brings together the amateur and the institutional application of dashcams is that mo-torists, or more accurately, their cars, capture all of these videos on camera, which film regardless of whether or not there is anything noteworthy in the frame. Dashcams are often used to record one's commute and everyday activities, with flash memory recording each trip, only to be rewritten as the driver retraces his or her route on a daily basis. Thus, the ev-eryday footage of dashcams only becomes noteworthy or viewed when they capture something spectacular. What is famous and frequently shared on the internet is not entirely representative of the apparatus and its utilitarian use of filming any and every banality that surrounds the camera's wide-angle lens.

Dashcam media in a way epitomizes the wasteful whimsy of digital filmmaking and digi-tal photography, whose technological advances in storage have enabled users to no longer economize precious film stock.[4] I mention this instance of capturing, storing, and deleting, because I think it highlights a series of transformations that are occurring in the practices of how we create, *sometimes* view, and habitually destroy digital media. Dashcam footage, in its ideal form, will never be watched, challenging the notion that film and media primarily exist in order to be seen.

Despite their long-term presence in law enforcement, prevalent use by motorists, and ris-ing popularity in motion-filled videos of thrill-seekers, dashcams and body-mounted action sports cameras are almost absent in film studies scholarship.[5] In order to theorize dashcam media from its production to its eventual exhibition (or deletion), I will present a series of eye-camera and body-camera relationships across the history of photography, film, and digi-tal media. By looking at the technological developments of imaging across centuries—from

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[1] Companies such as GoPro allow for a single camera model to work across different shooting applications through a variety of specialized mounting devices that attach to dashboards, helmets, bicycles and even surf-boards.

[2] The Russian term differs from the English term in that it highlights the camera's automation and self-filming capability. English language terminology is more concerned with the mounting of the apparatus inside the vehicle, and the point of view from the dashboard. The pragmatic reasons behind Russians' prevalent use of dashcams have been discussed extensively. See Galperina (2012) and Real Russia (2013).

[3] For a brief history of police dashcams in the United States, see NBC News (2015).

[4] We can trace antecedents to this digital commonplace in tape recording technology, which can be written and rewritten. Security cameras utilized this technology, in which non-consequential footage was overwritten.

[5] For example, Iain Borden in his comprehensive history of the automobile in film, *Drive* (2012), does not men-tion the use of dashcams or amateur filmed content.

the 1st century magnifying glass to the 21st century dashcam—we begin to see changing relationships to the visual world, in how pictures are composed, shot, and experienced. In order to highlight how digital media has become detached from practices of viewing in both composition and in post-production exhibition, I will detail a history of the camera's attachment to the eye, and how this has changed over time to favor the body and various surrogates of the body as the leading controlling functionaries of the camera. I will focus on how technological developments in cameras, such as the use of remote-shutter releases and the LCD screen, distanced or obscured the user from the optical viewfinder, thus allowing for a bodily or haptic orientation to the camera.

My approach uses a digitally updated apparatus theory to understand how we create digital media and operate digital cameras today. I find that the dashcam is one of the most extreme examples where the camera becomes dislocated from the eye and distanced from the body through an array of camera mounts. The notion of a semi-autonomous filming vehicle, which existed since the origins of film with the phantom ride and exists today in both Google's camera-equipped mapping cars and self-driving cars, initiates discussions of how we relinquish control over the camera.[6] Through a discussion of the dashcam, I will specifically focus on what I call a cameraman surrogate: a device that controls the camera irrespective or distanced from the user's visual and bodily guidance. Here, I am precisely talking about the automobile, to which a dashcam is mounted. While the user controls and points the car, he or she does not necessarily aim the camera.[7] Throughout this article, I will trace how various cameraman surrogates such as tripods equipped or compensated for the body, and in effect, allowed for the distancing of the camera-eye relationship.

In addition to illustrating key developments in film technology, I will also provide close readings of films by Dziga Vertov, who employed one of the first and most famous dashcams in his 1929 film *Man With a Movie Camera* [Chelovek s kinoapparatom]. Although it may seem anachronistic to compare the ideologies of the 21st century apparatus of the dashcam with examples of early 20th century camerawork, productive readings emerge. For example, Vertov's notion of 'life caught unawares' (zhizn' v rasplokh) nicely dovetails with several major elements of dashcam media, in which the camera captures happenstance encounters on busy roads.[8]

Using Vertov's theories of documentary filmmaking from the pre-digital world in order to discuss contemporary media is by no means a new approach. Lev Manovich devotes multiple studies to Vertov in the context of new media, describing him as a 'database filmmaker' (Manovich 1999b). Manovich writes that Vertov differs from traditional filmmakers, who op-

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[6] See Tom Gunning (2010) on the visual pleasure of the phantom ride, a genre of early 20th century cinema that featured footage shot from a camera mounted on top of a moving train, without an onscreen subject present.

[7] One might draw immediate parallels to aerial drones, to which similar cameras are mounted. The drone, however, is aided by the camera and turned into a remote controlled device. The operator views video in real time in order to direct the craft. See Schmidt (2013) for a discussion of how the use of drones and aerial camerawork creates new perspectives of the world.

[8] Many other film and media theorists have used Vertov's manifestos and films as a departure point to discuss digital media and technology. Peter Ole Pedersen and Jan Løhmann Stephensen (2014) trace Vertov's *Man With a Movie Camera* and Russian constructivist projects as the origins of participatory culture of contemporary digital media. See also Daria Shembel (2008), for a discussion on Vertov's influence in videogames and Adelheid Heftberger (2015) for a hypothetical discussion of how Vertov's agitation serves as a predecessor for online journalism in the age of the internet.

erate from scripts, and instead construct film as an argument built from a filmic database: shelves of film reels composed of scenes from everyday life:

> Film editing in general can be compared to creating a trajectory through a database, in the case of *Man with a Movie Camera* this comparison constitutes the very method of the film. Its subject is the filmmaker's struggle to reveal (social) structure among the multitude of observed phenomena. Its project is a brave attempt at an empirical epistemology which only has one tool—perception. The goal is to decode the world purely through the surfaces visible to the eye (Manovich 1999b).

Manovich continues this idea in *The Language of New Media* (2001) with his preface titled 'Vertov's Dataset', which uses *Man With a Movie Camera* as a 'visual index' of the book's contents (Manovich 2001: VI). Despite Manovich embracing the database as the structural backbone of the film, he ultimately admits that it is the film's 'true orgy of cinematography' that elevates it beyond that of a simple cataloging of images (Manovich 1999b).

I hope that by re-viewing Vertov alongside the dashcam, we can finally move away from the totalizing image of the camera-eye to destabilize the relationship of vision as the foremost influence on media. Taking Vertov's idea of 'life caught unawares' one step further into the contemporary digital age, we can begin to even talk about a cameraman unaware, as our daily practices of filming,—or rather capturing the image onto a digital camera's sensor,—often go straight to the camera's memory card or the computer's trash bin without the operator even viewing or composing a shot. Theorizing dashcam media from both the ideology of the apparatus and its corresponding aesthetics leaves us questioning whether or not digital media today is created entirely for our viewing experience. Our larger picture of digital filmmaking thus moves away from the eye's control and practices of viewing, and towards an ideology of capturing, storing, and only much later recalling: dispositions that are more associated with the mind, the body and other containers such as the automobile, to which the camera as mounted.

Eye—Camera Relationships and the Rise of Apparatus Theory

It is not surprising that early cinema depicted the technology of new and long existing viewing apparatuses as a provider of visual empowerment that mechanically equipped the eye to see beyond its all too human capacities. Early 20th century films such as George Georges Méliès' *A Trip to the Moon* [La Voyage dans la Lune, 1902] depict how both the telescope and camera unlock hidden realities, revealing to its viewer things he or she cannot normally see (Image 3).

Image 3. The telescope prominently featured in early cinema

Source: George Méliès, *A Trip to the Moon* (1902).

Visual empowerment is two fold in *A Trip to the Moon*, as Méliès provides the audience of a glimpse into the future. The film's speculative ability visualizes both undiscovered worlds alongside the not yet invented technology of space exploration. In other interesting examples, we see films create this same type of speculation of futuristic visions regarding their own filmic technology. In the new Bolshevik state and in Weimar Germany, respectively, Iakov Protazanov's *Aelita* (1924) and Fritz Lang's *Metropolis* (1927) both envisioned future tech-nology of camera surveillance, closed circuit television networks, and video conferencing. Film simultaneously envisioned the new ways of seeing provided to the viewer through the camera apparatus which was endowed with the all-encompassing power of sight and surveil-lance.[9] These on screen imaginations regarding camera technology predated most actual cam-era practices of using hidden cameras, which Vertov would later employ.

    Despite these examples, we should not always assume the visual realm to occupy the privileged center of technological advancement and speculation. The magnifying glass, for example, was originally described as a crystal lens used to start a fire, before it was even identified for its ability to aid one's vision.[10]

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[9] See Dietmar Kammerer (2012) for more examples of the filmic representation of surveillance.
[10] Aristophanes writes of a conversation between Strepsiades and Socrates:
'Strepsiades: "Have you ever seen a beautiful, transparent stone at the druggists', with which you may kindle fire"? / Socrates: "You mean a crystal lens". / Strepsiades: "That's right. Well, now if I placed myself with this stone in the sun and a long way off from the clerk, while he was writing out the conviction, I could make all the wax, upon which the words were written, melt"' (148).
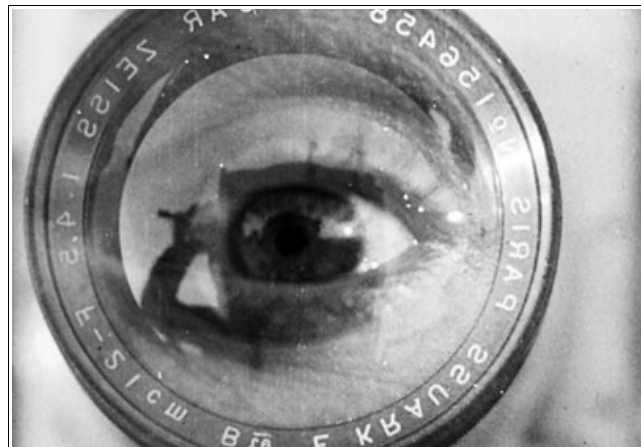
Image 4. Edison's Kinetoscope
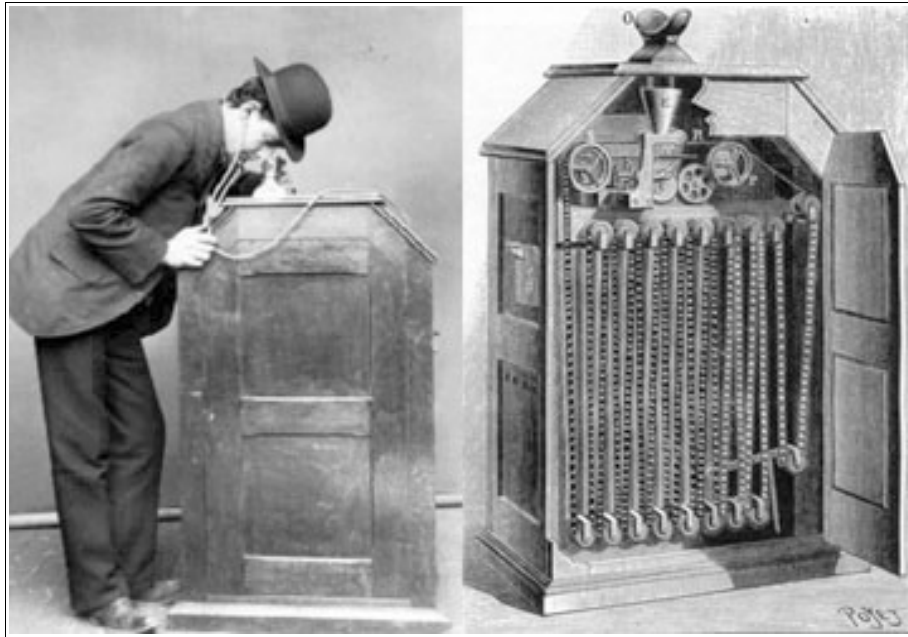
Source: 'Kinetoscope' (2007).

Image 5. The man composed by and within the camera

Image 6. Lens and eye
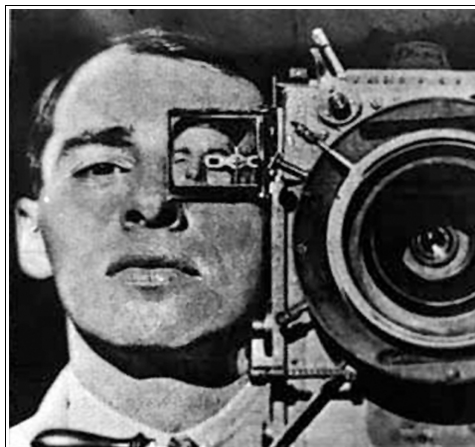
Source: Dziga Vertov's *Kino-eye* (1925).

Source: Dziga Vertov's *Man with a Movie Camera* (1929).

Seneca first wrote of the magnifying glass' aid in vision.[11] I would like to take one step backward and turn to the developing technology of the camera itself to illustrate how the eye itself, and not necessarily increasing vision, was prominently featured in advancing technology. The first motion picture film cameras and projectors intimately and physically connected the user's eye with the apparatus. Thomas Edison's Kinetoscope (1889-1892), for example, allowed for a singular person to view the moving image through an eyepiece (Image 4). The eyepiece situates the face, orienting it with the machine, forming a physical bond between user and device. Early versions of cameras and projectors equipped the user optically via the corporeal connection with the head. Filmmakers such as Vertov similarly envisioned the camera in their films as a mechanically retrofitted prosthetic to the eye, quite literally attached and mounted to the face (Images 5 and 6).

What is interesting to note in Image 5, taken from *Kino-Eye* [Kinoglaz, 1925], is how the user is recomposed within the viewfinder's mirror. The camera directs the user's vision as well as incorporates the image of his body. We can also see how the size of the camera dwarfs the smaller man, which it encloses and almost fully encompasses. The camera lens in Image 6, taken from the final shot of *Man With a Movie Camera*, fully covers the eye. The reflection on the glass partially obscures the eye from our view, conveying the primacy of the device over its user. The film ends not with the eye blinking, but with the mechanical iris of the lens closing, further reinforcing the notion that camera technology can equip the eye even to the point that it transcends and takes over for bodily function.

These examples of early cinema all highlight how new cinematic relationships to viewing and the eye itself were created by the camera. Apparatus theory intensively focused on how the camera (in French, *l'appareil*) both posited and obscured the viewer from the ideology of visual enablement, producing a situation in which the 'subject was presented with what looked like unveiled, transparent truth, whereby the camera substituted for the eyes' (Miller 2000: 405). Apparatus theory was a useful tool to critique how the spectator was enabled through vision, despite being simultaneously immobilized as a static, seated viewer: 'The spectator's loss of mobility was compensated by this promiscuous look, which traveled everywhere, to the most dangerous or painful as well as exhilarating places, and with impunity… the eye transcended the limitations of the body to roam across the multiple viewpoints and scenes of fiction feature film' (Miller 2000: 405).

Two famous apparatus theorists, Jean-Louis Baudry and Christian Metz saw the camera and its accoutrements as a mechanism (*dispositif*) that allowed one to escape the confines of the body.[12] In 'Ideological Effects of the Basic Cinematographic Apparatus' (1983), Baudry described the viewer as an 'eye-subject', and that cinema creates the 'transcendental subject' who is able to experience a world, from which he or she is removed (291): 'And if the eye which moves is no longer fettered by a body, but the laws of matter and time, if there are no more assignable limits to its displacement—conditions fulfilled by he possibilities of shooting and of film—the world will be constituted not only by the eye, but for it' (292). Likewise, in his influential article 'The Imaginary Signifier' (1975), Metz saw cinema as a type of prosthesis which completed the viewer who does not see himself or herself within the frame:

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[11] 'Letters, however small and dim, are comparatively large and distinct when seen through a glass globe filled with water' (Seneca 2013: 28-29).

[12] See Martin Lefebvre and Annie van den Oever (2014: 245-246) for how apparatus theorists such as Baundry and Metz delineated between terms *l'appareil* and *dispositif*.

Cinema is 'a veritable psychic substitute, a prosthesis for our primarily dislocated limbs' (5). Apparatus theorists situate cinema's illusory preoccupation with vision within the history of imaging dating back to the Renaissance, and it is not surprising that they draw on some of the very examples I have just presented.[13]

What apparatus theory failed to consider during its heyday was a hybrid producing-consuming subject, which still did not exist as a commonplace figure before the advent of digital media.[14] Apparatus theory was limited to describing a largely static spectator who watched films shot by distanced filmmakers and an absent camera, to which he or she had little to no access or knowledge as to the intricacies of its operation. Their theories of subject-object identification did not allow for the space of the amateur producer, the so-called "everyman" expert of modernity in the words of Michel de Certeau (1984: 2) or the "author as producer" by Walter Benjamin (1998: 90), nor could it consider the do-it-yourself mobilizing approach to media that motivates viewers to go out and shoot for themselves. Mimicry could only occur within the illusory on-screen world.

The cult-like obsession with the camera-eye would eventually give way, as the camera and the eye become separated from one another; throughout the 20th century, technological advances fundamentally changed the user's physical relationship to the camera, allowing for greater distance from the apparatus. Unlike Metz and Baudry, I will discuss how the camera became a prosthetic in service not just of the eyes, but of the body. In addition to enabling new forms of vision and the ability to picture ourselves, the evolving camera facilitated a bodily driven form of operation, in which picture composition became detached from our vision. Camera timers allowed for self-portraiture and face-fronting cameras easily facilitate selfies; the body, became just as important in both filming and viewing positions. In this next section, I will highlight how a camera-eye disjuncture occurs across photography, cinema, and later in digital media production.

Body-Camera Relationships and the Distancing from the Eye

Changing technologies and shooting practices produced new bodily relationships to the camera. The invention of remote shutter devices prevented camera shake from an unwieldy hand, allowing users to step away from the camera and pull a cord or push a remotely wired button.[15] Originally utilized to compensate for the body's inadequacy, the remote shutter release disconnected the eye from its home under the camera's hood or pressed against the viewfinder. It is interesting to note that this advance removed the eye from the camera, initially due to the complications of the body getting in the way and ruining the shot. Later, however, the eye

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[13] Jean Louis Comolli (1980) states that vision lies behind our notion of logocentrism: 'Undeniably, it was this hegemony of the eye, this specularisation, this ideology of the visible linked to Western logocentrism'. In Russia, we can see this same legacy expressed during the Enlightenment, most notably in Mikhail Lomonosov's 'Epistle on the Value of Glass' [Pis'mo o pol'ze stekla, 1752]. Lomonosov catalogs the uses of glass from its everyday uses to its pivotal role in the scientific method, which relies on observation aided by glass devices such as the telescope.

[14] Martin Jay (1993) situates apparatus theory within a lineage of philosophical thought that eventually begins to treat with suspicion the dominance and privileging of vision.

[15] Timers, cable releases, and infrared, radio, and wireless remote controls are more examples of this development.

became detached from the camera for other reasons, of which I will argue that the body be-came privileged over the eye as a means of structuring photography and film composition.

Body-oriented surrogates for the camera were ever-present from the beginnings of pho-tography and cinema, due to the size and weight of early cameras. The tripod, for example, was a type of surrogate that strengthened and stabilized the body. Camera cranes served as limb extenders, a device that sees a ubiquitous small-scale application today in the form of a selfie-stick. Likewise, dollies offered fluid camera movement along a singular plane, which the stand-alone body could not replicate. We can already see the idea of the tripod as pros-thetic and appendage to the arms and legs in Vladimir Stenberg's and Georgii Stenberg's posters for *Man With the Movie Camera* (Image 7).

Image 7. The Stenberg brothers' poster for *Man With a Movie Camera*

Source: https://www.kinopoisk.ru/film/45465 (accessed 21 February 2016).

While the familiar eye-camera relationship is highlighted at the top of the poster through the collage of a head and camera, the tripod, likewise, is juxtaposed with a pair of women's legs. Just like the head, the legs are detached from any coherent notion of the female cameraman's body. The human legs belong to the camera apparatus just as much as they do from the user, uniting and wrapping around the tripod's legs.

Image 8. Filming under Precarious Circumstances

Source: Dziga Vertov's *Man With a Movie Camera* (1929).

We can see that even the cult supporter of the machine-eye, Vertov, found an appreciation in the body's capability. Like the urban legend of the first audiences for Lumière's traveling *cinématographe*, the act of filming, was apprehended as a potential danger to the body. Vertov was so keenly aware of this notion in *Man With a Movie Camera*, detailing several scenes in which the cameraman Mikhail Kaufman, is depicted setting up the camera, often placing his body in dangerous situations (Image 8).

Vertov transformed the visual fears of bodily harm into physiological exhilaration, and I would argue that this goes beyond the visual pleasure of the safe, distanced spectator of the phantom ride, the point of view motion-oriented films shot from trains at the turn of the century. Pleasure is derived from a spectator who not only sees, but also vicariously controls the camera by identifying with the active cameraman. Rather than just capturing a cinema of on-screen attractions, Vertov was commenting on the role of the cameraman, whose body was still required to carry the camera to its shooting locations. The cameraman must set up the camera, physically positioning it. While the eye ultimately checks for composition, the body must transport the camera to the staging ground and often be in motion itself in order to capture phenomenon:

> Unlike the film-factory where the camera is almost stationary, where the whole of 'life' is aimed at the camera's lens in a strictly determined order of shots and scenes, life here does not wait for the film director or obey his instructions… The man with the camera must give up his usual immobility. He must exert his powers of observation, quickness, and agility to the utmost in order to keep pace with life's fleeting phenomena. (Vertov 1984: 287)

Man With a Movie Camera celebrates the body of the action-hero cameraman, who mounts speeding cars, climbs smokestacks, and rides across cable cars above the Dneprostroi dam project. Here, apparatus theory works to describe how a passive viewer is enabled by watching the physicality of the action hero Kaufman, but it does not fully account for new spatial discovery that occurs as a byproduct.

Apparatus theorists and their revisionists diverged from ocular obsessions, noting how the viewer's increasing ability to understand new visual representations led to new technologies that physically changed how cameras were positioned. Randall Halle, in his revision of apparatus theory, notes that inventions such as the camera crane represented new spatial configurations of the camera that emerged out of the viewer's desire for expanded vision capabilities (Halle 2014: 35). We can cite numerous instances across the 20th century, which finds that as the camera became more portable, filmmakers experimented more and more with new types of spatial configurations of the camera, including motion shooting, use of handheld camera techniques, use of body-mounted cameras, and continued use of tripods, dollies, and cranes. We can see a history of both photography and cinema playing out where new modes of viewing coincidentally contributed to a camera that was stabilized and directed without the user's controlling eye co-present.

In turn, however, new desires and corresponding 'innovations', which privileged smaller size and mobility, decreased camera capability by removing appendages from the shooting apparatus. Cameras operated without eyepieces and optical viewfinders, creating compact shooting devices akin to spy cameras in their most extreme forms. Here, I argue that the ability to transport the camera on the body, or even within it,—in a pocket—, became more important than the camera's relationship to the eye. The direct link of the eye pressed against the camera became further distanced with the inventions in digital cameras that feature digital screens. The current digital camera market as of 2016 sees the promotion of LCD touchscreens, often included in place of or at the expense of the viewfinder.[16] Viewfinder-less formats, especially in smaller camera packages, have become the norm rather than the exception in many non-DSLR camera formats. Touchscreens also have fundamentally changed the ways in which we take photos. While the viewfinder allows for the camera, the eye and the body to fully be in sync, as the user watches while he moves and shoots, the touchscreen creates an environment where the hand or finger of the user physically obscures vision on the screen in order for the shot to be taken. Helmet-mounted cameras likewise situate the camera above the eyes, displacing vision on the y-axis and featuring the neck as a controlling body part, and as I will now detail, the dashcam is displaced from the driver's vision on the both the x and z-axes, controlled not directly by the hand, but by the tires and steering wheel of the automobile.

Vehicle-Camera Relationships, Dashcams and the Cameraman Surrogate

While tracing the detachment of the camera from the eye, I have focused on various surrogates that aid the user, but alter his or her orientation to the camera. I call these intermediary devices surrogates, because the user's control of the camera becomes distanced from the eye. We can look at a contemporary example of the GoPro camera, in which the camera is controlled by the object or body parts to which it is mounted.[17] I am particularly interested in the

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[16] The digital screen allows for a greater emphasis on bodily control in a camera's operation, allowing users to haptically interact with the image on screen.

[17] These cameras emphasize just as much the physicality of being somewhere as they do the visual pleasure of the first person point of view. They portray one's physical ability to be in a certain place, whether it is climbing up a steep mountain, or skiing down its steep slopes. I argue that experiential qualities based on corporeal simulation is just as important as the visual orientation. In fact, the limbs of the body are often in full view no matter

car as a surrogate, because historically it served as one of the primary instances of the camera-cameraman detachment. The obsession of speed in early film led cameramen to mount the apparatus to moving vehicles, enabling the viewer to safely travel at great speeds. The novelty of movement in the horizontal plane through the automobile eventually gave way to the airplane, and other vertical means of transportation.[18] It is obvious how Vertov experiments with vehicle mounted cameras in *Man With a Movie Camera*. The first instance we see occurs toward the beginning of the film, as Kaufman jumps in the back of the car with his camera, filming both inline with the vehicle's motion and out the sides of the vehicle (Image 9).

Image 9. Filming from the car in *Man With a Movie Camera*

Source: Dziga Vertov's *Man With a Movie Camera* (1929).

In these scenes, Vertov takes advantage of dangerous situations in order to capture subjects unaware. Jeremy Hicks describes Vertov's notion of 'life caught unawares' not as the filmed subject being unaware of the camera, but rather being caught 'off-guard' (2007: 23-24). Hicks notes how Vertov's application of his theory was not created through the use of a hidden cameras, but through a type of 'swift attack'. Surprisingly though, Hicks does not mention one of Vertov's best uses of camera misdirection. Vertov is able to direct attention away from the camera apparatus by making another apparatus that much more visible: the automobile. Vertov creates the filming conditions for a 'life caught unawares' by almost hitting his subjects with the car. As the car races through the street, Kaufman films fleeing pedestrians, convincingly displaying Vertov's film theory of the "unaware" subject; these subjects are indeed unaware of the camera, yet fully aware of the car.

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where the camera is placed, due to its wide-angle lens.
[18] Today, aerial drone footage recreates this same excitement of the vertical plane while maintaining the first person point of view.

Later in the film, Vertov uses the film world's first true dashcam, mounting his camera between the handlebars of a motorcycle, which Kaufman rides for several scenes (Image 10).[19] While this is not a consequential moment in the film, for me it is the quintessential moment in film history when the dashcam is born and fully visualized from outside the perspective of the camera.

Image 10. A first-person view mounted camera in *Man With a Movie Camera.*

Image 11. Representation of the camera as head in *Man With a Movie Camera.*

Source: Dziga Vertov's *Man With a Movie Camera* (1929).

Source: Dziga Vertov's *Man With a Movie Camera* (1929).

In the scene Kaufman races his motorcycle counterclockwise around a circular track. The film cuts between multiple points of view on the racetrack, including shots from the motorcycle itself, giving the audience a first person point of view. Interestingly, Vertov includes shots of the race from outside of the driver's point of view and in one, positions the mounted camera to appear as if it is the driver's head (Image 11).[20] Vertov also juxtaposes this footage of the racetrack with footage taken from a carousel, which rotates clockwise. When combined together, the two scenes and their opposing directionality continually wind and unwind the camera movement. Thematically, the audience participates in the idea that motion and its ability to expand and contract space equals never ending visual amusement.

**The Cameraman Caught Unaware and the Happenstance Production of Digital Media**

At the close of *Man With a Movie* Camera, an on-screen audience is shown the product of Vertov's and Kaufman's shooting, and Irina Svilova's editing. The filmed events shot over

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[19] Manovich relates this frame in his datasets to new media's virtual camera and videogames: 'The incorporation of virtual camera controls into the very hardware of game consoles is truly a historic event. Directing the virtual camera becomes as important as controlling the hero's actions. . . . [In computer games], cinematic perception functions as the subject in its own right, suggesting the return of "New Vision" movement of the 1920s (Moholy-Nagy, Rodchenko, Vertov, and others), which foregrounded the new mobility of the photo and film camera, and made unconventional points of view a key part of its poetics' (Manovich 2001: VIII).

[20] Vertov continually plays with this notion of the dominance of the camera over the man throughout *Man With a Movie Camera*, and toward the conclusion of the film, two strips of film are overlaid to create the singular image of a smaller man standing on top of a gigantic camera and tripod apparatus.

the course of a full day are edited so that the audience can neatly and conveniently consume them over the course of a feature film. Up until this point in the film, the camera has been capturing material, but this scene shifts focus to the representation of spectatorship that becomes united to the images on screen. The film mediates the in-person experience of the movie theater into a filmic event, much like a dashcam or action-cam mediates the physical viewing experience of a driver in a car; that is, we are aware not only of the viewer's vision and line of sight, but we can also see and relate to their physical orientation toward the screen (Images 12 and 13).

Image 12. Watching an audience watch a film in *Man With A Movie Camera*
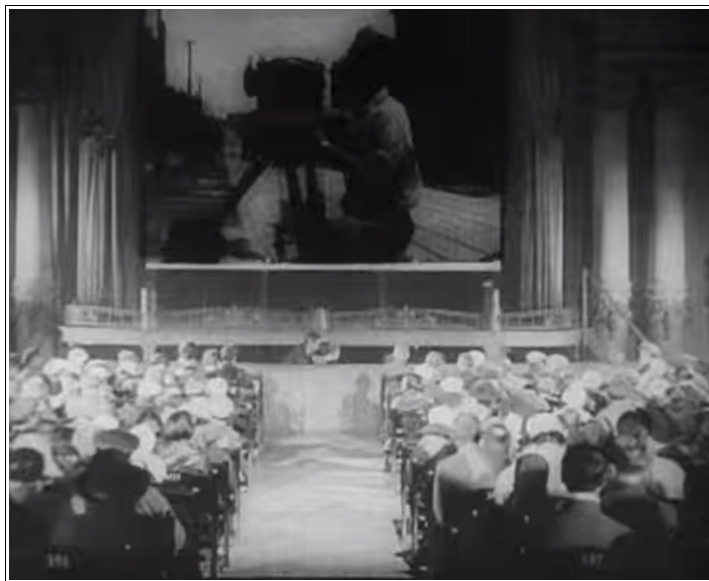
Source: Dziga Vertov's *Man With a Movie Camera* (1929).

Image 13. Passive locomotion: watching a driver view the road

Source: The WinFail Archive (2012).

Vertov fully embraced visual amusement and audience enablement, whereas apparatus theorists came to question these aspects of spectatorship as an illusion posited by the apparatus. They primarily questioned how the spectator formed on screen identifications, compensating for a lack of the viewing subject being in the frame. The spectator passively consumes projected images in a darkened room, yet transcends physical limitations of movement through an illusory visual empowerment. In closing, I would like to re-evaluate this idea in the context of digital media production. I have already mentioned that one of the shortcomings in apparatus theory was that it failed to anticipate a place for the amateur, an everyday man who has access to and knowledge of media production in a democratic age of ubiquitous camera culture. What happens to our notion of viewer identification and alienation when everyone has access to cross over the screen barrier and both shoot and act in their own films? Alienation is removed from the apparatus itself, and placed solely on the action depicted.

In addition to this question, I would like to pose the problematic notion that the bodily controlled camera is in a sense all-powerful in its vision, but controlled by a blind, disconnected user. Because the dashcam driver is removed from his or her control over the camera, and is instead focused on controlling the car, the camera technology of the wide-angle lens seeks to restore the lost hand-eye coordination with the apparatus. The prevalent use of wide-angle mounted cameras is designed to fully capture everything surrounding it, and in vehicle applications, the camera is able to film the whole width of the windshield. Just as the eye was fitted with the lens according to Vertov and other "New Vision" cameramen, the windshield itself almost becomes a part of the camera, an additional piece of glass fitted in front of the other lens elements. The wide-angle lens creates a point of view that extends beyond what the driver sees and of what the driver is aware: it does not necessarily represent the driver's exact point of view, but rather the entire car's, including the peripheral glass of the door windows.[21] In fact, cameras are traditionally not mounted on the driver's side of the car, but are instead placed in the middle of the dashboard, giving the camera a point of view that is not associated with any single driver or passenger. The camera's wide-angle lens must be placed in the center of the car, so as to avoid filming the side A-pillars of the car. This placement also aids the driver, who is not bothered by the camera mounted in his or her direct line of sight.

As the dashcam is driven through space, everything within the frame of the windshield moves, yet the foregrounded area inside the car, remains completely stationary. This is particularly apparent in applications where the camera is mounted behind the driver, the aforementioned image that resembles a sitting theater spectator (Image 13).

This orientation toward representing movement follows David Bordwell's notion of passive locomotion. The camera is fixed in place, while it, and the viewer, are propelled through space. Bordwell mentions that this type of viewing is more dependent on visual cues and more prone to moments of disorientation (21). Bordwell is ultimately describing a subjective viewing experience, in which the subject recognizes movement not through the camera's physical propulsion through space, but through visual cues that must simulate a "perceptual representation of space" (23).[22]

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[21] Similarly, chest and helmet-mounted applications use the wide-angle lens to encompass the whole body of the user, incorporating the body of the filming subject as part of the visual experience.

[22] Viewing dashcam footage not only creates the illusion of reality of driving, but it also reminds us of other virtual representations of navigation found in videogames, simulators, and role-playing games where users guide vehicles or avatars. It should be noted that the virtual movement of the object, either a car or a person, is also an

I bring up these examples of the perception of vision in dashcam media in order to focus on the peripheral objects that are captured by the camera. They are not only the objects that serve as a reference point that signify motion to us, but they are often what become noteworthy: they are the unintended subjects of dashcam media that become important when they enter the frame. We can associate digital photography and digital filmmaking away from acts of viewing and away from operator intention, and instead focus on the happenstance act of capturing. This is actually what would traditionally be thrown away during film production: the outtakes and events that are not filmed according to plan.

I distinguish between the two terms filming and capturing, because capturing envisions the camera akin to a trap; wide-angle lenses, hyper sensitive camera sensors, and constantly running devices are not subject to running out of film stock, but only exhausting reusable memory, allowing for the shooting conditions where the camera records everything, regardless of whether the user actively views or searches for material. This notion coincides with Manovich's observation that 'the new vision' of the film era transforms into the realm of memory within contemporary digital media, which more resembles endless information systems (Manovich 1999a: 11). This idea inverts Vertov's utopian notion that everydayness in its entirety must be captured, reorganized and packaged into film. It presents the problem that the information system is capable of both filming and storing the minutiae of everyday life, but it often is not worth viewing.

Dashcam media over the past few years found a popular home on the internet as a sideshow of Russian eccentricity. Western media outlets continually lampooned the behavior of Russian motorists and pedestrians alike, who were caught unaware front and center on the internet, as they entered the margins of the dashcam frame.[23] While the media hyped this filmic evidence as proof of the national peculiarity of some indefinable 'Russianness', I would propose that it is very much representative of the peculiarity of digital media itself, where the ideology of surveillance, watching and viewing have been reduced and decentered from their place of privilege. Non-eccentric, ordinary footage caught on dashcams is not worth watching, and therefore is deleted. Dashcam media gravitates toward spectacle that always occurs happenstance, 'caught unawares' of the man who drives the movie camera.

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illusion to our eye; games and simulators program a stationary car, just like the camera's fixation on the stationary object, around which a changing programmed landscape simulates motion.

[23] See The Daily Show's piece 'How I Meteored Your Motherland' (2013), for a comedic, but illustrative example of Western media's coverage of Russian dashcam footage. See 'Just ordinary [sic] day of dashcam in Russia', uploaded by *YouTube* user 'Dmitry Pisanko', for an example in Russian language.

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