Experiments in Camera Movement: Venice 1896 to Venice 2003 / Lumière to Sterbak

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The moving camera is almost as old as cinema itself. In the fall of 1896 Alexandre Promio, who was a travelling Lumière cameraman, filmed Venice from a moving gondola. The two films are *Panorama de la place Saint Marc pris d'un bateau* and *Panorama du Grand Canal pris d'un bateau*.[i] In these films, the camera does not tilt or swivel on its tripod in what would today be called a pan movement. Instead, the entire camera/tripod unit moved on its larger support device, the gondola. Other early support systems included trains and at least one elephant.

Now, over 100 years later, Jana Sterbak returns to Venice with an installation centred on moving images. History and geography in art have rarely had such a propitious conjoining. In a multiplicity of ways, Sterbak's work reflects, extends and comments on the stylistic and aesthetic history of the moving image.

Technology

Sterbak's moving images combine primitive means with high technology. The camera movement device is a dog, our domesticated friend for at least the past 15,000 years. The miniature camera was positioned on top of a Jack Russell terrier's head, and an electronics pack was used to facilitate the wireless

transmission of signals. Just as an elephant had been used as a camera platform for a large 35-mm moving image camera early on in film history, a tiny dog named Stanley can now easily carry a video camera system. So far as I know, this is the first use of a canine camera in narrative or experimental film or video.

Why has it taken so long? Part of the answer lies with the technology. Video cameras have been decreasing in size for years, and now they can be truly minuscule. A small film or video camera could have been strapped to a Saint Bernard's head years ago, but the images would likely have been limited to the world viewed by an adult dog attempting to get a big lump off its head. The combination of an almost weightless camera and a young dog, a puppy still forming his knowledge of what normal feels like, resulted in a camera dog. A micro-camera on the head is no stranger than a collar and leash to a domesticated canine, and thus we experience the melding of the technological and the organic with the dog as camera movement apparatus.

The technology is far more complex than just a miniature camera. The genius is in finding a basic set of components, modifying them and making them work together. Denis Labelle is the technical person who has made these images possible. Behind each of the innovations in camera movement is a technical person or team. We know it was Pierre Abbeloos for Michael Snow's movement machine used in *La Région centrale*, and it was Garrett Brown for the Steadicam, both of which will be discussed further on. And now we know it was Denis

Labelle for Jana Sterbak's Venice 2003 installation. The success of this innovative system can be seen in the images.

Control

A second part of the answer to why it is not until after the end of the first century of cinema that we have a canine camera may have to do with the notion of control. Using an inanimate machine or large animal as a camera platform today leaves the image maker in full control, within the physical limits of the machine or the mobility and training of the animal. The image-maker frames the image and moves the camera.

In order to use a canine camera, the artist must decide to relinquish the illusion of having absolute control over the medium, just as Alexandre Promio relinquished control of the known static image, albeit with concerns about sending his gondola film negatives to the laboratory for developing.[ii] A dog will look at what it wants to look at and, if off leash, will move at its own pace. Even a trained "Hollywood actor" dog would have a brief controlled attention span, which, when mediated through final editing, creates the desired illusion. However, a Jack Russell terrier puppy comes close to being independent of external control and training expectations, thus delivering a pure act of automatic movement. Collecting images with a Jack Russell terrier does not have a John Cage level of randomness, but it is somewhat like having a jazz improvisation group. The artist or leader has a general idea of what is likely to happen, but after the event

begins, each moment is determined by the preceding moments and an expectation about the direction of movement.

Obviously, after the images are collected, Jana Sterbak is back in full control. Which of the collected images will be used? Which will be de-saturated of colour? Will there be edits, or will the footage be used as continuous shots? Which images will be shown as progressive scans? What are the temporal relations of images on separate screens? How many screens? Scale? Sound? And what is the concept for the installation? Sterbak is in control of the installation, but Stanley moved the camera.

Subjective Camera

One approach to these moving images could be to consider them as the dog's point of view, analogous to the subjective camera in the history of cinema. Although this may provide a comfortable way of dealing with a unique and unprecedented set of images, I think it would be wrong-headed. Interestingly, the director Tim Burton, early in his career as young animation designer, inserted segments of a dog's subjective point of view in an episode of the animated television series *Amazing Stories* in 1987.[iii]

The subjective camera or subjective point of view has been one of the confused and misdirected paths in cinema. It seemed natural to ask whether a film or video could actually replicate human vision. This is a question that has led many

filmmakers to produce sequences or even entire films intended as positive answers to the question. The “subjective camera shot” is now a well-established descriptive film/video term, but it does not make a lot of sense despite its almost universal acceptance.

The counter-argument to the existence of an accurate subjective camera shot requires only that you take a few minutes and think about your vision and your consciousness of your vision: Your attention can move around in your field of vision; you can daydream and be oblivious to what you are seeing; your eyes blink; you generally change your field of vision every few seconds rather than simply stare; you rarely have any sense of something equivalent to the movement of a frame edge as in a camera shot. This list could go on, but it is easy to see that cameras do not see the way humans do. What “mm” lens is your eye and what is its “f stop”? A further layer is added to this discussion in terms of canine perceptual characteristics. Dogs do not perceive visually as humans do, and they rely on other senses for the full picture. Stanley’s real point of view is therefore not at all identical to the images caught by his camera.

Even though efforts at subjective camera may have been based on limited understanding of the human vision/mind complexity, these attempts have produced fascinating works. Look at the subjective camera shots from Gary Cooper’s point of view as he lies on a moving hospital bed in *A Farewell to Arms* (Frank Borzage, 1932) or Ingrid Bergman’s upside-down subjective point of view

from her bed as she wakes up to see Cary Grant in Alfred Hitchcock's *Notorious* (1946).[iv] These and other examples are interesting, but the real experiment with narrative subjective camera was *Lady in the Lake* (1946). This film, directed by its lead actor Robert Montgomery, was designed as an entirely subjective camera film, after a brief introduction by Montgomery. It is a fascinating mess. Some experiments have been more successful. Stan Brakhage has discussed the concept of closed-eye vision in his films, and his work can seem like experiments in perception.

In a fictional narrative, a voice-over might provide access to the thoughts of the owner of the point of view, and this has reinforced thinking about the possibility of subjective point of view sequences. Even so, the visual differences between camera point of view image and a person's vision remain an insurmountable barrier to the existence of an accurate subjective point of view sequence in a film or video. The existence of a subjective point of view shot in a film or video is a myth.

Even though the images produced by Jana Sterbak's camera dog are not subjective point of view images as they have been discussed in film history, they can be considered a record of Stanley's visual attention. The image precisely follows every movement of the dog's head. We don't know what he is thinking, or even if thinking is the right concept, but we see where he is looking and the speed of his shifts of attention. Complex works are always open to a range of

approaches, and one part of the experience of this work is spending some time thinking about the visual attention of the camera dog. It seems that we have an interest in seeing the world from another vantage point. The camera on top of Stanley's head provides this vantage point fifteen inches above the ground in a direct manner. It does not need to be mediated by a confused theory about film or electronic images and subjective point of view.

The Moving Camera Style

Viewers who become sophisticated about film and video as art forms first begin to think about montage. The literature about editing from technical, theoretical and critical perspectives is extensive. The art world is familiar with Eisenstein and Brakhage, who are known as important representatives of a montage style of filmmaking. Montage is significant, but there is another stylistic thread through film history, which receives little attention: Camera Movement.

In his seminal essay "The Evolution of the Language of Cinema," André Bazin identified Georges Méliès as an early montage filmmaker using trick effects made possible by editing, and the Lumière brothers were discussed as using continuous long takes.[v] The search for camera positions for the Lumière long takes led naturally to the mounting of cameras on moving vehicles, as was indicated in the examples of the two Venice gondola films. The moving camera developed along with montage from the earliest period of cinema.

Sergei Eisenstein is probably the most widely known montage theorist and filmmaker. His first film, *Strike* (1924), and *Battleship Potemkin* (1925) are virtually always discussed as montage films. However *Strike* also includes significantly innovative moving camera shots taken with an overhead industrial system for moving heavy objects in a factory, and *Potemkin*'s classic "Odessa Steps" sequence depends on the moving camera as well as montage. The dominant categorization of Eisenstein as a montage director has led viewers to be oblivious to his camera movements. This Constructivist artist is part of both the camera movement and montage stylistic traditions.

During the same year that Eisenstein made his first film, the Cubist painter Fernand Léger made his first and only film, *Ballet mécanique* (1924). This is a very early example of a visual artist making an experimental moving image work. It is composed of images which fragment the world, as might be expected in a Cubist work. However, this film also exemplifies the appeal of the moving camera to an artist, because one sequence includes images taken by a camera placed on a curving slide in an amusement park. Curiously, this use of an amusement park slide as a means of producing moving camera shots is repeated in the concluding sections of Orson Welles' *The Lady from Shanghai* (1948).[vi]

Another visual artist who made a significant experimental film was Man Ray. Robert Mallet-Stevens was an architect and designer of film sets.[vii] In 1923, while he was creating the remarkable sets for Marcel L'Herbier's *L'Inhumaine*, he was

also designing a house, the Villa de Noailles in Hyères. This modernist house for art patrons Charles and Marie-Laure de Noailles became the location for Man Ray's 1928 film, *Les Mystères du Château du Dé*. The film is unambiguously part of a tradition of works dominated by a moving camera style. Man Ray, known primarily for still photographs, decided that the best way to make a film was to move the camera. An artist who had worked with images of fixed people and objects is given a technology that can gather images while moving through space, and makes a film using the potential of that technology.

The ordinary way of moving a camera is to place it on a dolly, a wheeled platform that can also have a moving boom arm to support the camera. Directors happily use the dolly, but innovative filmmakers have searched for alternatives to the ordinary. In the 1916 film *Intolerance*, D. W. Griffith had a huge wheeled tower built with a descending elevator attachment. A camera descending from the top of the tower filmed a movement towards a Babylonian set. F. W. Murnau was another director known for extravagant camera movements. In his 1924 film *The Last Laugh (Der Letzte Mann)*, one shot shows the interior of an elevator as it moves down to the hotel lobby and, then in a continuous shot, a movement across the lobby. The shot was taken by mounting the camera on a bicycle. In the same film, Karl Freund, who was responsible for the cinematography, strapped a camera to his chest and batteries on his back. Using his own body as the camera movement device, he filmed a sequence to produce images which were understood by the viewers to represent a drunken man's view of the world.

F. W. Murnau moved from Germany to Hollywood, where his first American film was *Sunrise* (1927). The moving camera sequences following a country man as he walks into a swamp to meet a visiting woman from the city ensure that *Sunrise* will be counted as one of the great camera movement films. Again, the camera movement device was not the usual dolly. A system was devised allowing the camera to be suspended from a rail in the upper part of the studio. This allowed the camera to follow the character smoothly as he moved over rough ground and through vegetation into the swamp. A related system of suspending the camera and operator from overhead rails was used during the 1930s for the dance sequences choreographed by Busby Berkeley. Berkeley used large cranes and also found ways of having cameras perform twisting movements between the bodies of dancers and even travel through their outspread legs. But as is the case with other filmmakers working in the moving camera style, he required a custom-made camera movement device in addition to using cranes and dollies. Clearly, he was proud of his overhead rail camera movement system, because he promoted his films by having publicity footage made showing the platform, the operator, the camera and himself. This was an unusual 1930s revelation of technology, which was normally left invisible in Hollywood.

Experimental filmmakers have also used special support systems offering more potential than studio dolly and tracking systems. The handheld camera has been

the most widely used alternative. A filmmaker such as Stan Brakhage, who is associated with a highly edited, quick montage style of experimental filmmaking, regularly uses a handheld camera. A handheld camera can move slowly or quickly, but it is almost always moving. Look at the edges of the frame and notice how they quiver even when the filmmaker is attempting to hold the camera stabile. Every handheld camera film is a moving camera film, but some emphasize the free movement made possible by hand-holding a lightweight camera. Brakhage has often discussed the handheld camera as if he were dancing with the camera. The loosely held camera mirroring the movements of the filmmaker has been part of experimental film for decades. Stan Brakhage did not invent this style alone, but his work is the source of inspiration for large numbers of experimental films utilizing handheld cameras.

To some extent, the expected contemporary look of an experimental film involves quick editing and a handheld camera. Brakhage should be given credit for this; his films have become the model. The blame for the excesses of this style of experimental film does not lie with Brakhage but rather with filmmakers without original ideas. Pop culture areas such as music videos and television dramas have also appropriated this style in the past twenty years.

Michael Snow is an example of an experimental filmmaker who invented a moving camera style contemporaneously with Brakhage, but totally independently. *Wavelength*, from 1967, is usually described as a 45-minute

zoom-in on a loft's wall.[viii] This is a very bad description, since the interest of the film comes from the discontinuous nature of its zoom, which starts and stops, pausing for narrative episodes and colour field displays. *Wavelength* can also be seen as part of a camera movement style, if camera movement is more correctly understood to be frame movement. The appearance of a camera movement on a screen is that of a frame movement. Similarly, a zoom shot produces movement of the edges of the projected frame just as camera movement does, although there are significant differences in the perspective changes created by camera movements and zooms.

Michael Snow is also a filmmaker who has made a "metafilm" about camera movement. His 1980–1981 film *Presents* is in part a comment on camera movement. The camera does move in the film, but the focus of the first part of the film is a self-conscious and very funny analysis of camera movement. In *Presents* the entire set moves in front of a stationary camera, momentarily producing the illusion of camera movement. Later, a moving camera attacks and destroys the set. Is there another experimental filmmaker who has made film theory quite so funny?

These examples position Snow as a filmmaker with work in the camera movement style. He is also a filmmaker who found a new way of moving a camera and used a newly created camera movement machine to make an entire film. *La Région centrale* (1971) used a device commissioned specifically for the

film which allowed the camera to be moved in what seemed to be unlimited ways while twirling around a central point. The film was a three-hour symphony of continuous camera movement filmed in the far north of Québec. Day and night the camera twisted and swung, showing a wild landscape with no human presence. I felt then that it was as fine and important a film as I had ever seen.[ix] It was a pure camera movement film, which now, over thirty years later, still seems radical.

Being aware of machines and devices for moving cameras is a necessary part of understanding a moving camera style. The device dominating the last quarter of the twentieth century was the Steadicam. The Steadicam has become the dominant machine among a series of devices designed to allow a camera to move over rough ground and produce images that appear to be stabile. A trained operator wears a very sophisticated harness which has an arm balancing a camera so precisely that the operator can run or even climb stairs and still capture images with no discernable shaking. It is a wonderful, remarkable device, which has now become ordinary. When the Steadicam was introduced in 1976, there were shots in films such as *Bound for Glory* (Hal Ashby, 1976) which appeared impossible to have been produced. The surprising effects made possible by Steadicam movements continued to be exciting for years. Unfortunately, routine Steadicam shots have now become as dull as a dolly movement on a television situation comedy.

Jana Sterbak's Vision

The Venice 2003 installation is based on a rich complement of elements: a micro-camera, wireless image/sound transmission, a camera dog, direct natural sounds, music, multiple screens, and moving images unlike any which the viewer would have seen. Jana Sterbak's work now becomes part of a stylistic tradition of moving camera film and video. The history of the tradition extends over a hundred years and includes mainstream as well as experimental works. On the leading edge of this style have always been artists like Sterbak who create a new way of moving the camera, a new way of collecting images.

The example of the Steadicam provides an illuminating way of positioning Sterbak's contribution. The proliferation of Steadicam shots has indeed made them pedestrian. Occasionally one will be exciting, but the magic is gone. They are now a routine part of film history. Contrast this with the shots which make up Snow's *La Région centrale*. They remain majestic and uniquely radical. Sterbak's work is far more likely to retain its power, like Snow's, than it is to become commonplace like the Steadicam shot. New visual ideas in camera movement are rare, and Jana Sterbak's work is both new and extremely visually compelling.

Concordia University's first appointment in Fine Arts/Cinema in 1973, John W. Locke has taught seminars on film technology and style, film theory and criticism, and Hitchcock and Welles. Locke was one of the original students in New York University's graduate program in Cinema Studies, turning to film after having done graduate work in analytical philosophy with a concentration in aesthetics and the philosophy of language. His research interests include the concept of style in film and art, the films of 1932 and their cultural contexts, and the contribution of the Academy of Motion Picture Arts and Sciences to the development of early sound technology. Locke has written for film and art magazines in Canada and the United States on experimental film and film criticism, including a seminal two-part article on Michael's Snow's *La Région centrale* for *Art Forum* in the 1970s. His recent work in "how-to" filmmaking books includes topics such as scriptwriting and film technology in the silent era, as well as further work dealing with Jean Dreville's 1928 *Autour de L'argent*, a little-known experimental documentary.

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[i] Michel Agnola, André Gardies and Christian Straboni, "Le voyage en Lumièrie," *Le cinéma des Lumière*. CD-ROM. CAPA, Réunion des Musées Nationaux, 1995.

[ii] Ibid.

[iii] The *Amazing Stories* episode was called "Family Dog" and involved a more than 360-degree animated camera movement around a room representing what the dog saw and the manner in which he saw it. The effect is an obvious anthropomorphizing of the vision of the dog just as in these types of animated films, animals are constantly and historically anthropomorphized.

[iv] In both cases the actors are lying down and the camera is placed where viewers would believe their heads to be, to provide the perspective from which they view the world. Gary Cooper sees the now stereotypic images associated with hospital walls and ceilings moving by as he is being wheeled on a gurney and Ingrid Bergman, lying flat on her back, opens her eyes to "see" Cary Grant upside down from her perspective. She then moves over and her view of Cary Grant rights itself.

[v] André Bazin, *What Is Cinema?* Vol. 1 (Berkeley: University of California Press, 1967), pp. 23–40. This is a translation of sections of: André Bazin, *Qu'est-ce que le cinéma? I-IV Ontologie et Langage* (Paris: Les Éditions du Cerf, 1958–1962).

[vi] Welles' film culminates in a climactic sequence combining the grotesque visual elements of a carnival house with camera techniques that ambivalently repel the audience while propelling the narrative to its end.

[vii] Jean-François Pinchon, ed., *Rob. Mallet-Stevens: Architecture, Furniture, Interior Design*. (Cambridge, Mass.: MIT Press, 1990). pp. 19–35, 104.

[viii] A zoom is a shot made with a special lens which can be adjusted in a continuous way to make objects appear closer or further away. These adjustments of the lens create the effect of camera movement without the camera actually moving. Technically, a zoom lens is a variable focal length lens.

[ix] John W. Locke. "Michael Snow's La Région centrale: How You Should Watch the Best Film I Ever Saw," *Artforum* XII, 3 (November 1973): 66–71. And John W. Locke. "Michael Snow's La Région centrale: How You Should Watch the Best Film I Ever Saw." *Artforum* XII, 4 (December 1973): 66–72.