

The Historical Transition of Handheld Camera

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Abstract

The advent of the handheld camera has dramatically transformed film production and consumption in countless ways. French director and theorist, Alexandre Astruc focuses on the development of 16mm camera and foretell film will be used as a tool to realize the personal vision of the author like other art. As proof of his claim French New Wave and Cinéma vérité create the film with handheld camera on the real location to capture new reality. Their films are distinguished itself from other films made by conventional Hollywood studios. Similarly, John Cassavetes in the United States began to focus on the handheld camera. Since then the handheld camera has become one of the popular shooting methods. Especially, handheld camera are noted for their agile movement and mobility as a way to capture various realities. However, with the advances in technology, lighter cameras and higher resolution have changed in different ways. The technology is neutral, one shooting method does not serve for one philosophy or ism. At one time, handheld shooting is now used as not only a means to capture the real world but also a tool to mimic a realistic feeling.

Keywords

Handheld Camera, Digital Camera, Motion Picture, French New Wave, John Cassavetes, Technology, Aura

1. Introduction

The certain development of technology has created enormous changes in the whole cinematic experience from production to distribution. Since birth, cinema has undergone extreme technological changes like the introduction of sound. The changes also questioned the fundamental identity of cinema. Today, cinema faces a variety of changes brought by digital technology. The situation asks about the theatrical experience (represented by the conflict between Netflix and Cannes International Film Festival), and the ontology of digital cinema (the uncertainty of the indexicality of the digital image). Looking at these questions, some questions are new, but others have partially been experienced. For example, the changes from the spreads of 16mm cameras and TV are similar to the current situation in digital era. This essay, among large discourses, tries to examine the historical transition of handheld camera at this point. This is because handheld camera was invented by the spread of the 16mm camera, and it is settled as a representative shooting technique by using various aspects by each place and period. By observing the transition, the essay tries to catch a glimpse of the future of digital era.

2. The Advent of the Handheld Camera

Handheld camera refers to a shooting method of camera that creates a sense of noticeable absence of a fixed pedestal or mechanical stabilizing device for the camera. The conventional shooting method is to fix the camera to a tripod or other equipment for generating stable images. On the contrary, the handheld shooting is accompanied by free movements

and gives the vividness of being there, which is enabled by attaching the camera to the body of the operator, in most cases to his/her hand or shoulder. This style is not to be found at the beginning of film history. Because of the huge volume and heavy weight of the early cameras, it was impossible for ordinary people to take pictures while carrying them on their bodies. It was essential to mount the cameras on tripods or other devices. As technology developed, the camera became smaller and lighter. In the 1920s, the invention of the 16mm camera made it possible to carry the camera. However, the shaking quality of images was not preferred because it was considered to be amateurish and less recognizable than the stable images. In addition, because the synchronous sound recording was still not perfected, the handheld camera was only preferred in certain areas, such as in the newsreel footage, where fast response is critical. Thanks to the continuous technological innovations, cameras had undergone dramatic changes in the 1950s. Some parts of the 16mm camera no longer required metal, thus replaced to plastic, and the camera's exterior is designed to be shoulder-mounted which dramatically reduced the weight of the camera on the operator. In addition, a sound recorder that is based on magnetic tape was invented, which is relatively light and quiet and uses a portable battery as its power supply. Through these innovations, the handheld camera began to emerge in important ways in documentaries and theatrical films as well as in the more formalistic formats such as conventional newsreels.

3. Handheld Camera in French New Wave

One of the prominent theorists who paid attention to these technological advances was Alexandre Astruc, a French film critic and director. In 「*The*

Birth of a New Avant-Garde: La Camera-Stylo, Astruc argued that the technological advances, such as the development of 16mm cameras and the popularization of television, made it easier for people to access film production, creating the foundation for the birth of new cinema. He criticized that cinema had played a simple role of entertainment or documentation since its birth. Comparing a film director to a writer or artist, and a camera to pen, he foresaw that cinema would be a new language, “a form in which and by which an artist can express his thoughts, however abstract they may be, or translate his obsessions exactly as he does in the contemporary essay or novel”¹ by giving examples of pioneering directors such as Jean Renoir, Robert Bresson, and Orson Welles. Later on, Astruc’s claim has been partially realized by French New Wave and Cinéma vérité.

Although it is difficult to tie French New Wave cinema into a single trend, French New Wave directors share certain stylistic methods such as handheld camera, location shooting, and synchronized sound recording. These methods generated a new norm for giving a sense of reality to the film and sensitively capturing the space and improvisations. Jean-Luc Godard would be one of the most representative film-makers for Astruc’s prophecy because he created a new film language that breaks down the boundaries between fictional film and documentary. He preferred the handheld camera, real location, on-site sound using a portable sound recorder, and high-sensitivity films for utilizing the natural light, just like the method used for newsreels or documentaries. Godard wanted his first feature film, *Breathless*, to be filmed like a documentary, which breaks the genre customs. His purpose was achieved with the help of cinematographer Raoul Coutard, Godard’s longtime partner. Coutard had a career as a photographer in the French Indochina War before he started

¹ Alexandre Astruc, ‘The Birth of a New Avant-Garde: La Camera-Stylo’, 『Film Manifestos and Global Cinema Cultures: A Critical Anthology』(Scott MacKenzie), 2014, pp.604.

to work in film. Godard's experimental vision and ambition could create the images full of quick and free movements with the aid of Coutard's experience.² Also, by capturing the images on location without any other set-up, Godard was able to finish the filming in a short period of time, which was crucial for him to earn more time for the next film's preparation and stay prolific.³

Starting with *⟨Breathless⟩*, Coutard has worked with Godard for a long time, filming most of Godard's representative masterpieces, including *⟨A Woman Is a Woman⟩*, *⟨Contempt⟩*, *⟨Alphaville⟩*, and *⟨Pierrot le Fou⟩*. At the same time, Coutard explored various possibilities of the handheld camera while working on other renowned French New Wave films, such as François Roland Truffaut's *⟨Shoot the Piano Player⟩* and *⟨Jules and Jim⟩*. A scene that represents *⟨Jules and Jim⟩* is one where Catherine, Jules, and Jim are racing each other on a bridge. Coutard's handheld camera, which has stayed stable until the scene, chases Catherine after her sudden start. The camera shows frontal full shot and the profile close-ups of Catherine and the two men following her. These images successfully capture the vibrancy, joy and the speed of their youth while suggesting the working dynamics in their relationship, eventually becoming one of the most memorable scenes.

As seen above, the handheld camera was at its height as one of the most remarkable techniques of the French New Wave film-makers. The camera came down to the real world and began to observe the lives of the people from a close distance, which led the cinema to its new modernity. More interestingly, this technique was a good way to film a documentary. Simultaneous with the change of fictional films, documentary

² Michel Marie, *The French New Wave: An Artistic School*, Richard Neupert, Blackwell, 2003, pp.89.

³ Jean-luc Godard, *Godard on Godard*, Tom Milne, A Da Capo, 1986, p.173.

films began to have cameras that directly participate and engage in life, as opposed to an objective observation-oriented gaze without any intervention of the past. Pioneering work in this style of a documentary commonly referred to as Cinéma vérité is represented by Jean Rouch's *Chronicles of a Summer*, also filmed by Raul Coutard.

Cinéma vérité, a term Jean Rouch and Edgar Morin have coined together, was heavily influenced by the concept of Kino Pravda of Dziga Vertov. In Russian, 'pravda' means truth, as 'vérité' in French. One of Vertov's most representative styles is Kino-eye. Vertov (1971) insisted on constructing a montage of all the improvised images of life while refusing to engage in calculated directing, scripts, professional actors and studios, in an attempt to find out what the camera perceives differently from what our eyes see. Vertov aimed to find answers to life by recording a life without manipulation. In this sense, to Vertov, the camera was a mechanical eye that would reveal the truth without a lie. Vertov wanted to testify revolutionary truths by recording from a distance and creating montages of intact moments of life.

In this respect, Rouch's approach was certainly influenced by Vertov, but his approach differed from Vertov's. Whereas Vertov preferred voyeuristic photography through Kino-eye and observes from the outside, Rouch preferred a shooting style similar to anthropological participant observation or field research. Rouch utilized 'Participatory Camera', which is to eliminate the sense of distance by engaging with people who are filmed and observing events from within for an extended period of time. Rouch said, all the studies of human beings are "distortion of the truth"⁴, and the camera cannot duplicate the experiences and lives of others, but it could show them only through participation in other people's lives and through

⁴ Dan Yakir Jean Rouch, 'Ciné-Transe: The Vision of Jean Rouch: An Interview', *Film Quarterly*, Vol.31 No.3, 1978, pp.7.

ethno-dialogue. In the same vein, the purpose of his films is to create anthropological dialogue among people of different cultures. Therefore, the best work for Rouch is where a film-maker is actively participating in the filming event. In conclusion, for Rouch, the camera was the eye of the film-maker rather than a mechanical eye, and he was not a film director, but a film-maker diver, who dug into the community and jumped into the world. He preferred the camera as a catalyst that triggers cinematic facts, promoting direct encounters between the film-maker and the subject, as well as posing an active intervention, contrary to an objective and observational gaze that just records from a remote place. With this philosophical stance, he found the active and performative nature of the handheld a fitting tool for his cinematic approach.

4. The Spread of Handheld Camera

The same was true for North American film-makers, who were also influenced by technological advances including 16mm cameras. As there was Cinéma vérité and New Wave in France, North America saw the emergence of Direct Cinema and new American independent films. Although these groups did not precisely correspond to its French counterpart or pursue the same purpose, it is not difficult to find similar tendencies, including the 16mm camera's hand-held images.

John Cassavetes' *Shadows* and *Faces* can be viewed to be one of the most representative styles of American independent films. His films feature improvisational acting and loose plots, as well as 16mm handheld shots for almost every scene. Added to these images, improvisational jazz performance creates a unique feeling that cannot be found in the previous generation of films. Especially, Cassavetes' handheld camera is closely

related to close-ups. The handheld camera follows the unstable psychological moments of the nervous breakdown characters, presenting their tiny facial expressions and gestures that fill up the screen. In addition, the combination of the handheld camera and close-up technique limits the field of view, making a small space look like a maze and intensifying the contrast of light and darkness even further. Not only did this style create the trend of American independent cinema at the opposite of the aesthetics of spectacles presented by Hollywood studios, but it also influenced the prominent film-makers around the world, including Wong Kar-Wai and Olivier Assayas. Also, it is not hard to find his influence in the recent film. Barry Jenkins and Safdie Brothers, emerging in recent years, are representative directors who influenced by Cassavetes. Their films, such as Jenkins' *〈If Beale Street Could Talk〉* and *〈Moonlight〉* and Safdie Brothers' *〈Good Time〉*, often use a telephoto lens and a handheld camera, which the dizziness of the captured urban space alongside the facial expressions and gestures of fragile characters in contemporary.

5. The Arrival of Digital Technology

The method of capturing real life using a handheld camera through the development of 16mm cameras and simultaneous recording technology is even further empowered by the advent of digital technology. Even though 16mm cameras have been made smaller and lighter and film production has become more popularized and diversified, film-making was still a highly professional task involving chemically developing and editing films. Also, 16mm camera was still an inconvenient tool for film-makers who work alone. However, since the 1990s through the 2000s, digital camera technology has been continuously developed, making it easier for the

public to approach film-making. The first improvement was also related to the weight and volume of the camera. Thanks to the 6mm Digital Video camera and the Digibeta ENG camera, it is now made truly possible for individuals to go to the scenes and work alone. The 6mm DV cameras, such as Sony's VH2000 and PD150, Panasonic's DVX100 and Canon's XL2, reduced the burden of long handheld shooting and were tape-based, which was considered to be better in terms of weight and cost. These cameras became widely popular and loved by amateur filmmakers, students, VJs, and documentary makers. However, although the tape-based recording is a digitized method, it is the technology of the transition period, because it still requires the tape, the original source material. Above all, the conversion process of capturing the tape-recorded images onto a computer requires the same time as the shooting time, which was still a heavy burden on the general amateur film-maker. In addition, for studio-sponsored film-makers, the digital camera was not a suitable tool because of the low resolution and the limited depth of field due to its small sensors. The transition period, however, eventually was overcome by the development of high-definition digital cameras, resulting in a lot of film-makers moving from film to digital. In the process, the tape was replaced by a memory card or a hard drive, and a truly digital way of transporting the file, not a capture method, was introduced. The camera sensor also became larger and the optional equipments were diversified, which set the new standards of filming. More interestingly, for individual users, the appearance of the handheld device with the attached camera, such as iPhone, and video platforms for sharing moving images like YouTube, started an era of true personal broadcasting. The technological progress is comparable to the situation to which Astruc has paid attention, anticipating the future of cinema from the spread of 16mm camera and television.

It was the Dogma 95 group, formed around Lars von Trier and Thomas

Vinterberg that quickly reacted in the early stages of this digital transition. The group announced 'Vows of Chastity' in 1995 through which they dismissed the traditional film-making, just as the French New Wave did for their earlier generation. The dogma directors strictly limited their methodology of film-making by presenting 10 rules under the vows. The rules includes the use of handheld cameras, which they followed in the makings of Vinterberg's *〈The Celebration〉* and Trier's *〈The Idiots〉*, using digital video cameras. The films countered the conventional studio films by using handheld cameras, location shooting, and simultaneous recordings. In this regard, rather than an innovative movement, Dogma 95 is a declaration of counteraction to the traditional film-making that is becoming more and more commercial. Their rules, such as using handheld cameras, shooting on location only, recording at the same time, not allowing genre movies, are close to the reorganization of French New Wave's or Cassavetes' methods. As a result, the Dogma manifesto succeeded in getting attention early in the digital era and produced many films based on these production techniques, but most films did not strictly follow the rules and the movement did not last long. Although the movement is no longer being observed, however, it is still influencing as a way of standing against the Hollywood studio film-making. Especially the representative film-maker, Lars von Trier, no longer obeys the dogma rules, but still favors handheld camera as his shooting style.

6. The Contemporary Use of Handheld Camera

In sum, the handheld technique, enabled by the lightweight cameras, is settled by the certain films that attempt to capture reality as it is, such as news and documentary, and is used mainly as a tool to grasp the sense

of reality and the improvisational aspects in fiction films. Likewise, it was loved as a tool for realistic effect by films that were against the narrative-centered films based on the Hollywood studio system. This is because the handheld camera has the power to open up the possibility of catching even the smallest of the real world. It is likely that handheld shots are perceived to be realistic because they are often associated with documentaries and news that are based on facts. In fact, the images taken by the handheld method are somewhat different from human perception. The images captured by the handheld camera contain continuous movement and fine tremors, which is not well perceived when a person looks at an object or phenomenon with his/her eyes. Nevertheless, the fact that the handheld camera gives a realistic feeling, through either the point of view shots or the third-objective point of view shots, cannot be overlooked, considering the historical and customary usage of the handheld camera as examined above.

A cinematic style, however, is always used in various directions once it is settled. Even though breaking the fourth wall or the jump cut were used in the beginning to subvert the convention and to generate the alienation effect for the audience, they are now also used for strengthening the identification. The same is true for handheld technique. The sense of realism created by the handheld camera is widely displayed in contemporary films in various ways, to which Hollywood studio films are no exception. Steven Spielberg uses an image shaker to express the chaotic experience of the soldiers in the Omaha beach, in the opening scene of *〈Saving Private Ryan〉*. Whereas the original handheld technique was used as an alternative model enabled by the lightweight camera, the film utilized an added device to make a stronger handheld effect. Using this style, Spielberg successfully recreated the urgent sensation of the 20 minutes of Normandy landing operations by using tremendously shaky images. As

seen in this instance, the handheld camera serves not only as a tool to capture truth in reality but also as a tool to make the projected virtual world looks more real.

One of the examples of landing a new genre through using the handheld style is a mockumentary that makes a fictional situation look like a real event by employing documentary style. Found footage films, such as *〈The Blair Witch Project〉*, *〈Paranormal Activity〉*, and *〈Cloverfield〉* are the most actively exploiting the characteristics of the mockumentary. The films have the cinematographers act as one of the participants in the diegesis. By equating the viewpoint of the camera with the viewpoint of the audience, the fear of the audience is intensified. Even though the audience know that these films are fictive, the audience willingly indulges into the illusion thanks to the identification with camera's point of view. Found footage movies make authenticity out of the incomplete pieces of images. The interesting thing about these cases is that the incomplete perception created by the shaking camera creates the "authenticity, sincerity, and even truth."⁵ Interestingly, *〈Son of Saul〉* was made with a similar technical approach but a different realization. In a similar condition, Georges Didi-Huberman reads "the utmost urgency" in the shaken four photographs taken from Auschwitz.⁶ The handheld camera serves two purposes that seem vastly different: to capture the escaping truth or to project a fiction as an improvised reality.

As a result, shakiness and incomplete perception of handheld camera are combined with various elements into different hybrids, depending on the vision of the film-maker. Above all, the handheld technique is still in

⁵ Francesco Casetti, 「The Lumière galaxy: seven key words for the cinema to come」, 『Columbia University Press』, 2015, p.121.

⁶ Georges Didi-Huberman, 「Images in spite of all: four photographs from Auschwitz」, 『University of Chicago Press, Chicago』, 2008, p.9.

development and experiment. In addition, the future of the handheld camera cannot be predicted easily because the development of digital camera technology is constantly progressing. The evolution of the technology even seems to be transforming the handheld into something that is no longer a handheld. The lightweight camera is now further advanced that action cameras such as Go Pro are beginning to spread. These action cameras are now so small that they do not need to be held in hand, often attached to the helmets, creating images even closer to human perspective. As the name indicates, these cameras are not only durable but also waterproof, suitable for filming various actions from different perspectives. They are already commonly used as sub-camera in television shows and often serve as a main camera when filming a place where the photographer cannot be present. These cameras sometimes express the point of view of animals and easily create a rare perspective shot that we could not get easily before. This diversification of perspectives, combined with different technology, could generate previously unseen aesthetics. Another variation of the handheld technique can be seen in Virtual Reality. VR technology, which acquires and synthesizes the viewpoints of all sides through multiple cameras, can be considered to be the ultimate version in terms of the human desire for the perfect point of view through the use of handheld. It is not difficult to connect this technique to the found footage films. In fact, although for now, the game industry is most actively developing this technology, it could be soon expected to be applied in cinema after this experimental stage.

After more than 100 years of moving images, now the camera is integrated into mobile phones, owned by most people in the time. Now anyone can easily record what they want to record. Simultaneously, it is no longer difficult to own a single-person media through a global platform

like YouTube. Social Network Services are already overflowing with moving images. The concerning voices of worrying that big capitals will ultimately devour the market seem to be only half-right. It is true that large-scale capitalized videos are attracting a lot of viewers, but we also see the content created by a single person or a small number of producers found on numerous popular channels. Still, the shaking images without proper reason is still an inconvenience for the viewers while it becomes easier and easier to obtain stabilized images with the popularized steady-cam technology. On the other hand, operators who are proficient in handheld photography are rather rare. In this light, the handheld camera may be no longer an amateur's technique, becoming more and more professional. Nonetheless, Astruc's prophecy has come true in that the camera has become a tool for everyone to use as a pen and it is anticipated that everyone would be soon able to shoot in a method they want to thanks to the popularized shooting methods. But the important thing is that a great tool does not always guarantee great work. It is also doubtful that the handheld will still carry the amateurism, urgency, and truthfulness as its innate attributes. Eventually, a methodology is not equal to specific meanings; the purpose and the attitude of the film-maker are always factored into images. The handheld camera, in this sense, may have only recently started to evolve.

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요약문

핸드헬드 카메라의 변화에 관한 소고

진 빛 남

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새로운 기술의 발전과 도입은 영화를 만드는 과정에서 소비에 이르기까지 광범위한 영역에 큰 변화를 초래하기도 한다. 프랑스의 영화감독이자 이론가인 아스트뤽은 16mm 카메라의 등장에 주목하며 영화가 다른 예술 장르처럼 작가(감독)의 비전을 실현하는 도구로 활용될 것이라 예견했다. 그의 주장을 증명하듯, 프랑스의 누벨바그와 시네마 베리테의 감독들은 가벼워진 카메라를 손에 들고 거리로 나가 현실의 모습들을 포착하며 기존 할리우드 스튜디오와 차별되는 영화를 만들었다. 핸드헬드 카메라는 감독들에게 민첩한 움직임과 기동성을 제공했고, 이를 바탕으로 영화는 다양한 종류의 현실을 포착할 수 있었다. 미국의 존 카사베츠를 포함한 다른 감독들도 핸드헬드 촬영에 주목했고, 결과적으로 핸드헬드 카메라는 대표적인 촬영방식의 하나로 자리를 잡았다. 하지만 기술은 중립적이고, 하나의 촬영방식이 하나의 미학 혹은 사조를 위해서 봉사하지 않는다. 한 때, 현실을 기록하고 포착하기 위해 봉사하던 핸드헬드 촬영은 이제는 정반대의 목적을 위해서 혹은 그저 가상의 존재에게 현실적인 아우라를 만들어주기 위해서 사용되기도 한다.

주제어

핸드헬드 촬영, 디지털 카메라, 영화, 프랑스 뉴웨이브, 존 카사베츠, 기술, 아우라