



**Media & Cultural Studies
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**The Full Frame DSLR Camera vs The Analogue 35 mm
Rangefinder Camera: investigating professional
photographer's use of and attitudes to these two
cameras**

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I declare that this proposal is my own work and that all the sources I have used to prepare it have been properly acknowledged.

Signed:

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

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Introduction

It is said that a bad workman sometimes blames his tools. Essentially this study aims to reveal how the inbuilt uniqueness of two different camera types can affect their resulting photographs (Editors of Time Life Books, 1976). The two camera types that this study focuses on are the full frame Digital Single Lens Reflex camera or DSLR camera and the analogue 35 mm Rangefinder camera. The key differences of these two cameras lie in their size, operational noise and viewfinder types. While there are these three basic differences, both types of cameras have the same lens for lens aspects.

On size, the DSLR camera is big and heavy, while the Rangefinder camera is small and light to carry around. Regarding operational noise the DSLR camera has a noticeable click when the reflex mirror swings out of the way, and the shutter opens, but the Rangefinder camera is almost silent as there is only the shutter that moves when the photographer's finger pushes on down on the shutter release button. All cameras have a viewfinder that lets the photographer can see what the camera will take a photograph of. The DSLR camera's viewfinder lets the photographer see the subject through the camera's own lens, it blacks out when the camera takes the photograph, while the Rangefinder camera's viewfinder is just to the one side of the lens but there is a slight difference in the view, creating an error of parallax, in what the photographer sees and what the camera takes a photograph of in the end.

This study will deal with the these three technical aspects of the two types of camera in question and theories around representation and medium in photography. You will hear from master photographers on aspects of photography from their own perspective and experiences with cameras and their introduction into a scene to be photographed.

The ethnographic questionnaire then adds to the study the perspectives of eight international profession photographers on their day to day use of the two camera types and how it is to outwork photography with one or the other camera or both if that is the case.

Literature Review

Introduction

To photograph someone is to *draw* the person with *light*, the root of the word *photo* is light and to *graph* is literally to draw or to make a study of something, as in the word geography, graphy is the study of a subject.

The camera is unlike the paintbrush in the artist's hand that makes a painted interpretation on canvas of what is in front of the artist's eyes. The camera produces a photograph which is a representation of what is in front of the camera's lens. A photograph does not first have to be interpreted by the artist's eye and mind, and then by the hand and paintbrush to be painted on the canvas.

The photograph is an aspect of reality (Goldblatt, D. 1996). Photography is considered a three dimensional moment in time that is seen and then is captured and cropped into a two dimensional frame (Sontag, S. 1997).

The act of taking a photograph is as much about what is left out as it is about what is captured within the camera frames. The position of the photographer, and by default the position and introduction of a camera within the scene at the moment of the photograph's birth, or the *moment in time* that a photograph captures, affects the outcome of the image. When the photograph is taken the photographer has left some aspects of the scene out of the photograph entirely, made other things seem small and insignificant in the background and highlighted other aspects of the scene in the foreground giving them prominence. By this process the resulting photographs are the product of an individual's choices and so photographs are as subjective as they are also truth (Price, 1994).

This study therefore looks at photographic interventions, such as the photographer's choice of camera at the time, in the context of social documentary photography.

There are many brands of cameras that have been used by photographers at any one time. Each brand has also many models of camera bodies and lenses to choose from. While this study is only looking at the full frame DSLR camera and the analogue 35 mm

Rangefinder camera, there are many different types of cameras for the photographer to choose from. All of these types of cameras have unique working styles of their own. The researcher has used the arena of social documentary photography because it is an area of photography for which both of the above types of cameras can and are used.

The importance of this study is its effort to add to the understanding of the impact each camera can have on the photograph that it captures, and also of the contextual use of different camera systems within the arenas of photography.

The act of photographing needs the photographer to introduce into the scene a camera body and lens. This act alone lets the subject know that they are now “on camera” as it were and that the photographer is there to record their actions while he or she is there. The effects of the mere introduction of a camera into a situation can cause situational changes once it is out there. Pierre Bourdieu (1990) says in *Photography A Middle Brow Art* that just the introduction of a camera into a subject's setting introduces a reaction of the subject, and people behave in a normative way in front of the camera.

This study is involved with the photographic interventions of the full frame DSLR camera and the analogue 35mm Rangefinder camera in social documentary photography. Both these types of camera have each made a name for themselves in social documentary photography for the unique qualities and advantages that they bring with their use. The study will explore the history of the two types of camera and explain some of the context of the times in which they were developed. It will also unpack the technical differences, development and uniqueness of the two camera systems and how these aspects affect their differing working styles.

Along with these aspects of the two cameras in question, the study will also explore some of the theories around photographic truth and the portrayal of reality, as well as investigate some relevant theories around social documentary photography, visual literacy and representation.

What is a photograph?

Photography is a representational system according to Stuart Hall (1997), it uses images

that communicate meaning about a subject that includes feeling, world views and ideas. Photography works this way; the subject is seen, an idea is thought and the photograph is taken.

A photograph is a moment in time, an aspect of reality, a perception of truth. These three concepts are just some of the ways that a photograph has been described, and what has been said about a photograph and photography in general (Sontag, S. 1997)(Goldblatt, D. 1996)(Price, 1994). Price (1994) and Goldblatt (2005) continue to say that the photograph is also as subjective as it is also truth, and that it is just one aspect of reality. There are decisions that the photographer has made during the *moment in time* it was captured. These photographic decisions, or interventions, can change the construction of elements by placing emphasis on one or another element, either in a position of prominence or lesser prominence within the frame of the resulting photograph. These interventions can also influence the perceptions of the subject of the photograph by the viewers of the resulting photograph in question. The social documentary photographer Dorothea Lange believed that to know ahead of time what you were looking for meant that you were only photographing your preconceptions. Lange says that photographers should rather work by looking at that which they instinctively respond, certain pictures just catch the eye (Dyer, 2005).

There is nothing more mysterious than a well defined fact. The camera like no other tool, can convey one as truthfully as possible. Whether we choose to accept that fact – the photograph – or not is an individual choice. Viewing photographs as they are, without our individual biases, is the most fruitful way of looking at them. Photography should force us to question ourselves and question the spaces in which we live (Moutoussamy-Ashe, J 1986).

Photographic interventions can also take the form of the angle of view that the photographer chooses. The photographer can look down on or up at the subject making the subject seem humble or powerful respectively. The world view of the photographer can also affect the message of the photograph, or the point of view of the photograph. What the photographer places in the foreground and background affects the prominence and importance of those elements within the resulting image too.

Just as points of view affect the resulting images, so too the mere introduction of a camera into a scene can have an influence on the photograph. In the book *Women and War*, (2003) Jenny Matthews talks of a time she photographed survivors of a rebel attack in Mozambique, in the first image that the author took, the woman in the photograph looks the part of a war weary refugee, in the second image the woman noticed the camera and she became the beatific mother, both images happened, both are truth. In the second image it is the presence of the camera itself that changed the resulting photograph.

Backing up the views of Matthews, Harold Evans is quoted by Margaret Waller in her book *A Bigger Picture*, (2000) he is commenting on a photograph. "Her fiancé lies at death's door after being rescued from the sea, she smiles because she saw a press cameraman and knew her picture was going in the papers... Photography changes, as well as reflects, the world we see..." (pp 157)

In both the Matthews and the Evans examples the subjects respectively have become normative in that they have put forward a face that they as the subjects believe is appropriate for a photograph of themselves. In each example the photographer is on the scene to document the drama, feel and reality of being a war refugee or someone whose loved one almost died. When the subject sees the camera, the subject acts out for the camera. What the subjects deem appropriate for a photograph of themselves seems to clash with what the photographer deems appropriate for their social documentary purposes.

Social Documentary Photography

Social Documentary Photography is a genre of photography where the photographer takes photographs that are representative of the social conditions of the photographer's subject matter. A social documentary photograph tries to move beyond the shallow surface expression of the subject and show aspects of the subject's reality that might not be present to the casual onlooker. The social documentary photographer needs the confidence of the subject as the photographer may well need to work in the close proximity of the subject. The social documentary photographer's working style and *visual presence* to the subject can be a problematic issue in the working out of photographic representation of the subject.

Jean Clair quotes Henri Cartier-Bresson *“whether you are passing through or staying put. In order to give expression to a country or a situation, you must have established somewhere close working relations, be supported by a human community; living takes time, roots form slowly”* (pp 5 1998). The act of social documenting, or giving photographic expression to a subject, relies on some sort of relationship and / or knowledge of that subject by the photographer. Social documentary photography needs from the photographer the time and effort to become acquainted with the subject so that the pictures gain depth and become more than shallow surface images. While this effort is needed of the photographer, effort is needed of the viewer too. The viewer has to be visually literate, a photograph can have meaning on many levels (Evans, H. 1978). It is like giving a good book to a semi literate person, if the viewer is not in a place to read all that the picture tells. Victor Burgin (1987) states that “the primary social importance is that a photograph is a place of work, a structured and structuring space. Within which the viewer employs (and is deployed by) what codes they are familiar with, in order to make sense” (pp 177).

Bill Brandt says that the vital elements (of a photograph) are often momentary, chance-sent things like a gleam of light on water, a trail of smoke from a passing train or a cat crossing a threshold, it is usually some incidental detail that heightens the effect of a picture. It is for the photographer to represent the subject in a visually heightened and interesting way, ensuring that the viewer has all the coding to make the fuller sense of the photograph (Waller, 2000). Henri Cartier-Bresson also coined the phrase “the decisive moment” meaning the moment that all the elements, as it where, come together and make the difference between a mediocre image and one that represents the subject with grace and visual wit (La Grange, 1966).

While the above may be the case, photography has also been used in propaganda to inform and misinform the reader (Brothers, C. 1997). While the photographer's photographs represent subjects to their viewers, photographs can be used to expand vastly different philosophies. Susan Sterner and Lori Waselchuk say it follows that as individuals of diverse cultures gain access to cameras, the body of images which comprise our visual history will now include many new perspectives (Waller, M. 2000). The photograph is a series of decisions about what to include and what to exclude from the picture (Berger, J. 1989). He says that these decisions are linked to the culture of the

photographer. Susan Sterner and Lori Waselchuk also say that as a document, it is easily forgotten that a photograph begins with the identity of the photographer. In making an image, photographers respond as individuals, bringing to the moment all that is their background, ethnicity, prejudices and curiosity.”

An introduction to DSLR and Rangefinder cameras

The researcher has limited the study to aspects of only two types of cameras, and also selected the arena of social documentary photography as it is an area of photography where both types of camera have, can and do still service photographers. It should be noted at this point that the field of social documentary photography has space for many different camera formats and different types of cameras beyond the two camera types in this study.

In social documentary photography there is also space for the photographer to take the pictures with a personal touch, and in this way there is the opportunity for the photographer's personal vision to show through. Social documentary photography can give the photographer the freedom to choose which camera format to use on the project at hand.

The DSLR is a large, heavy, full feature, automated digital camera that plugs seamlessly into the digital world that we live in with a menu of additional features like a preview screen on the back plate. The analogue 35 mm Rangefinder camera is a simple, small, discreet and manually operated camera that is pre-digital which means that the images will still need to be scanned, or printed onto photographic paper to be viewed in a meaningful way by others.

While this study is written in an age where all things digital reign supreme, of which photography forms a part, we must not forget or lose sight of how new technology has affected the way we do things, specifically how new technology has affected the essence of what it is that we are producing in the first place.

The reason for this choice of cameras came about for three main reasons. The first fact is that both cameras have the same lens aspects, this means that a

50mm f2 lens for a full frame DSLR camera body has the same angle of view and depth of field qualities as a 50mm f2 lens for a analogue 35mm Rangefinder camera. This means that as far as camera format is concerned, both cameras are on a equal footing. The second fact is that differences in working styles of the two cameras are rooted in the physical differences in the viewfinders of both cameras. The third fact is that the DSLR is a digital camera and the Analogue 35 mm Rangefinder camera uses only film. This means that the DSLR camera can immediately show the photographer a preview of images taken so far in the shoot allowing the photographer to make editorial decisions on the spot, and the analogue 35 mm Rangefinder camera cannot.

By breaking eye contact with the subject at hand the photographer with a DSLR camera can look at the preview screen on the back of the camera seeing what pictures have been taken so far. This gives the photographer the option to decide whether or not the shoot has successful at that point and whether or not the shoot has come to an end.

The photographer with an analogue 35 mm Rangefinder camera cannot break eye contact with the subject to view the pictures already taken, and will have to go on with the shoot until he or she feels that all the necessary images have been taken. This photographer, with the analogue 35 mm Rangefinder camera, will only see what pictures have been taken once the photographic shoot is over, having left the scene behind and all the film is developed.

Cartier-Bresson the French photographer felt that photographs were a way of comprehending the world around us (Dyer, G. 2005). It is also common knowledge among photographers that a body of work gains objectivity from the services of a good photographic editor who can cast a neutral visually literate third party eye over the images before their publishing. It is risky to edit, as it were, the images too soon after taking them and to decide too soon that the moment has been captured to the satisfaction of the desired end. During the shoot or in the heat of the moment, as it were, is not always the best time to take drastic editorial decisions. The photographic moment may still be playing itself out and by taking the decision to stop photographing too soon will, sometimes, as it may be said: to leave the band playing on with no one around to listen.

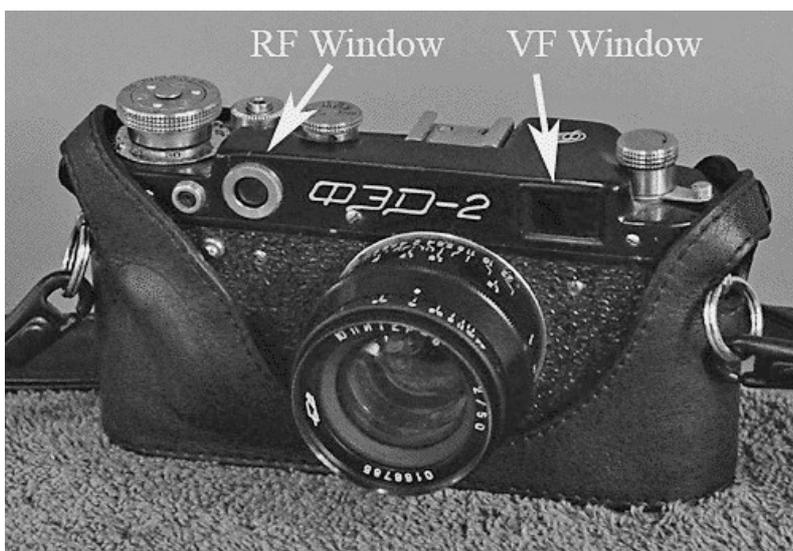
While there are these differences, both cameras are still used by photographic

professionals in the field of social documentary photography. And with the difference in working styles of the two camera types the researcher will be investigating the different photographic interventions inherent in these working styles.

A background to Rangefinder cameras

The rangefinder camera ushered in a new era of compact fast focusing portable camera systems. The Rangefinder camera was also the forerunner of the SLR camera, out of which the full frame DSLR or digital SLR was born many years later(Yue, A. 2011).

Early models of rangefinder cameras were the Leica II and the Contax, they were in production from 1932. The development of the rangefinder camera's focus system using a dual-image range finding device meant that the photographer could now take quick photographs without having to guess with the focusing (Rockwell, K. 2009)(Yue, A. 2011).



A FED 2 rangefinder camera with it's rangefinder window and viewfinder window indicated. Photograph courtesy of Andrew Yue 2011

A Rangefinder camera can be recognised by the presence of the viewfinder window in the camera body top cover and the second smaller rangefinder window off to the one side. The lens-coupled-rangefinding-device is a mechanism that gathers visual focusing information for the photographer through the larger viewfinder window on the camera body:

1. The rangefinder window sits in front of a moveable mirror that reflects a second

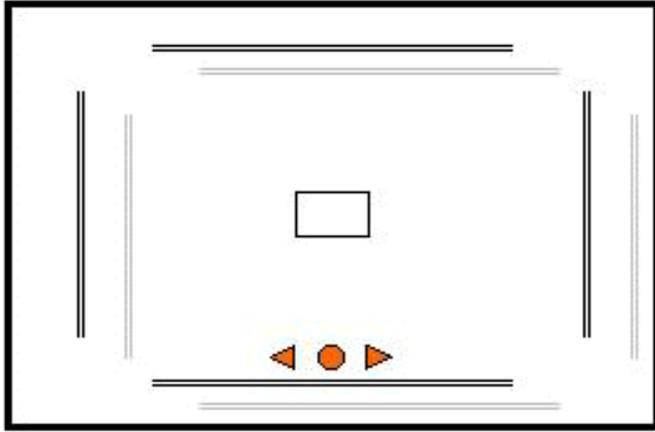
image to the viewfinder.

2. This reflected image moves through the lens-coupled-rangefinding-device towards a small lens before reaching a half-silvered mirror located within the viewfinder.
3. This second image is sometimes referred to as the RF patch and is optically projected into the centre portion of the viewfinder image.
4. These twin images of the intended subject in the viewfinder are what assists in setting of the manual focus ring on the lens.
5. On a rangefinder camera, the lens operates a small sensor arm in the camera body to pivot the moveable mirror as the focus is set.

As the photographer adjusts the focus ring on the lens of a rangefinder camera, a small image projected from the the RF window will appear to shift sideways in relation to the main viewfinder image. When these two images coincide to form a single image, the camera lens is in focus and the camera is ready to take the photograph (Yue, A. 2011). As Cartier-Bresson said in the book *Europeans* (1998) “*you are then ready for the decisive moment*”. Cartier-Bresson was a photographer who used an analogue 35mm rangefinder camera throughout his working life. The rangefinder camera does not have a mirror that has to get out of the way before the camera can take a photograph and so there is no blackout in the viewfinder, and no shutter lag like there is with a DSLR camera.

The placement of the viewfinder window on the small Rangefinder camera means that the photographer can view the subject with both eyes. The Rangefinder camera is discreet when used, and the photographer's face and humanness is also less hidden behind a large camera body from the subject's point of view. Some sort of relating process between subject and photographer can therefore develop. Furthermore because the rangefinder's size and the position of the viewfinder, the photographer is also more aware of all that is around him or her at the time of the photographic shoot. This means that the photographer can incorporate more of this awareness into the resulting images.

The weakness of the rangefinder camera system is it's error of parallax. The rangefinder camera has an error of parallax because the photographer views the subject through a viewfinder adjacent to the lens, and does not view the subject through the lens as one does with a DSLR camera.



Shifting frame lines in a rangefinder camera. Diagram courtesy of www.photozone.de/slr-vs-rangefinder

Thus there is a slight difference between what the photographer sees through the viewfinder and what the camera records through the lens. Modern rangefinder cameras have developed shifting frame lines which correspond to the lens that is attached to the camera body. Most rangefinder cameras have a set of frame lines for a 35mm lens, 50mm lens, 90mm lens and a 135mm lens. These frame lines adjust with the lens and compensate for the difference in what the photographer sees through the viewfinder and what the camera sees through the lens. These shifting frame lines also eliminate the difference between what the photographer sees through the viewfinder and what the camera sees through the adjacent lens.

Though there is the disadvantage of a slight error of parallax in rangefinder cameras there is an advantage of the generally high optical quality of lenses and this results in sharper images in Rangefinder cameras compared to some DSLR camera lenses. An additional advantage of the rangefinder camera is that the photographer's view through the viewfinder is always a bit wider than the lens. The Rangefinder camera's viewfinder allows the photographer to see what is on the outside of the frame lines too and therefore anticipate additional elements as well as possible additional content and / or view a wider context to the photograph.

A background to DSLR cameras

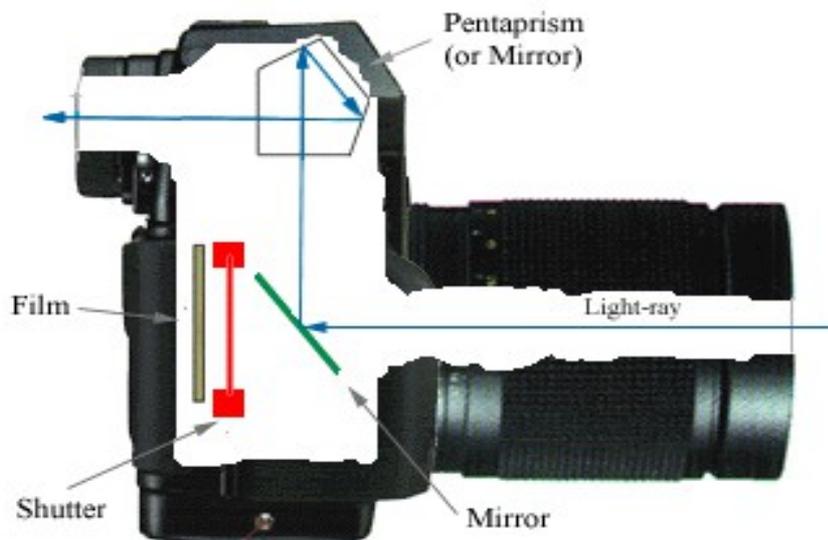
35 mm format cameras have been slowly evolving since the 1930s when the first rangefinder cameras went on the market. The SLR and then the DSLR camera continued with this ability to focus and take fast candid photographs, added the ability to view the scene through the camera lens, eliminating error of parallax that is associated with all Rangefinder cameras. SLR cameras came onto the market in the 1960's, some 30 odd years after the first rangefinder cameras were first available.

The SLR/DSLR camera differs from the Rangefinder camera in that the photographer does not still have to look through a viewfinder that is adjacent to the lens, but now the photographer is looking through the lens itself with the help of a reflex mirror that flips up out of the way when the shutter release button is pressed. This through-the-lens or TTL view of the SLR/DSLR camera ensures that the photographer can now have a precise view of the resulting photographs, as well as *depth of field* controls, that the Rangefinder camera could not ensure with its adjacent viewfinder arrangement. Geoff Dyer quotes Edward Weston in the book *The Ongoing Moment* (2005) that photography was about “the coincidence of the sitter's revealing, the photographer's realisation and the camera's readiness” (pp 63). The full feature design of the DSLR cameras on the market means that unlike the *photographer does everything* style of the Rangefinder camera, the DSLR photographer can concentrate on the moment at hand and let the camera deal with most of the technical aspects of the photograph.

When the shutter release button is pressed by the photographer the SLR/DSLR mirror first swings to its upward position (accompanied by a viewfinder black-out). The lens aperture is now set to the chosen value. Only at this point is the shutter then released and image frame is exposed to the light coming through the lens. The SLR/DSLR system thus has a built in shutter lag which means that there is a slight delay between the pressing of the shutter release button and the taking of the picture (Rockwell, K. 2012).

The SLR/DSLR camera's mirror now swings back down, to its normal viewing position and the lens aperture is reset to its maximum value (e.g. f/2.8 for a 60/2.8 lens) and the film is now advancing to the next frame, either manually or by a motor drive (www.photozone.de/slr-vs-rangefinder).

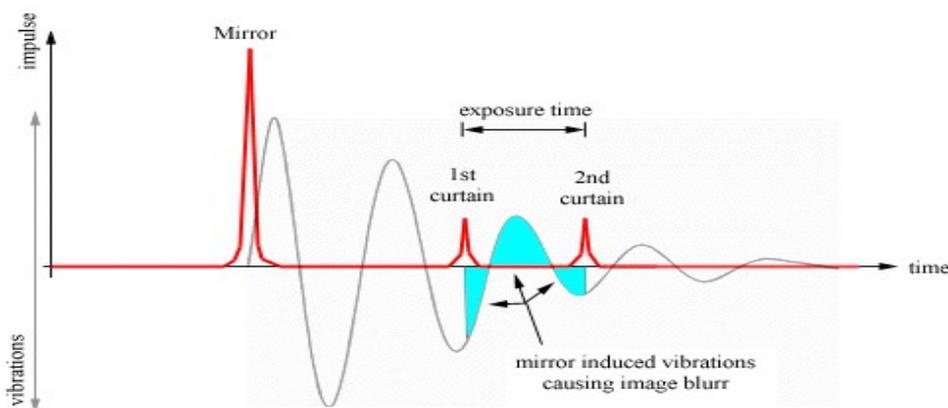
Through-The-Lens (TTL)



The SLR through-the-lens view. diagram courtesy of www.photozone.de/slr-vs-rangefinder

The increase in distance from sensor, or film, to the lens in DSLR camera bodies, due to the fact that space is needed for the mirror box, has its own down sides. The *what-you-see-is-what-you-get* view through the lens that the DSLR camera system has, has come at the price of a negative impact on optical quality on short lenses for DSLR cameras, as well as slight vibrations caused by the impulse of the mirror flipping up, out of the way, prior to exposing of the sensor, or film. These vibrations are wave-shaped, which means nothing else than a periodical up and downward movement of the camera. This movement can cause a blur effect which can result in a deterioration of image quality in the photograph (www.photozone.de/slr-vs-rangefinder).

Camera shake caused by the SLR mirror



Mirror induced vibrations Diagram courtesy of www.photozone.de/slr-vs-rangefinder

The full frame DSLR camera vs the analogue 35 mm Rangefinder camera: with Social Documentary photography in mind

Social Documentary photography encompasses many situations that demand a wide range of technical and situational demands from the photographer and the cameras that they use. Prior to a photographic shoot the photographer has to decide how to conduct themselves and what type of camera will be best for the job, *Life's Little Leitmotifs* by Hazel Friedman (2003).

Social documentary photographers crave invisibility when going about their work. To be *invisible* to their subject means their non presence will lessen the photographer's effect on their subject's world that the photographer is on scene to document. The presence of a photographer and their cameras can cause the subject to behave in normative ways rather than how they could have being were a photographer not there at the time (Matthews, J. 2003).

Social Documentary photography is broadly about the photographing of the human condition. To photographically document the human condition the photographer will often have to interact closely with their subject. The photographer's work style and the impact of the introduction of a type of camera into the scene has an effect on the outworking of the photographic shoot (Waller, M. 2000). Lewis Hine believed that photography should work with the larger project of social reform (Dyer, G. 2005). JC Chamboredon quotes J.P. Sudre "The subject that I photograph is ephemeral... photography alone captures a precise moment... which disappears and which cannot be brought back to life, hence our distress and also the essential originality of our profession. What could be more transient than a facial expression?" (pp 136). With the above five points in mind, the full frame DSLR camera and the 35 mm analogue Rangefinder camera square up technically in the following way.

Photographers have *documented the human condition* with every type of camera that is available to those in the photographic profession. Of all the photographic formats or types of cameras available to those in the photographic profession, the DSLR is the most popular camera on the market today Rockwell, K. (2012). Both the Rangefinder and DSLR cameras are able to allow the photographer to interact closely with their subject. The

Rangefinder camera, due to its size and quiet style of operation seems to come out a bit ahead of the DSLR in the view of having to interact closely with their subject. Concerning the effect of the outworking of photography that the photographer's work style and the impact of introducing a type of camera into the scene, we have the experience of photographer Jenny Matthews in the book *Women and War* (2003) when documenting war refugees in Mozambique. A woman refugee's whole demeanour changed when she noticed the presence of a camera on the scene. The views of J.P. Sudre on the ephemeral qualities of photography can be outworked better with the qualities of no shutter lag, bright viewfinder and ease of focusing in available light of the analogue 35 mm Rangefinder camera.

In Conclusion

Technically the two camera types can complement each other rather than compete with each other. The DSLR camera is good for long lens work and micro photography, in these two areas of work the Rangefinder is at a distinct disadvantage. But the Rangefinder camera is unsurpassed in quality in the normal and wide angle lenses area of work. The DSLR camera is best for fast action work while the Rangefinder camera is best for low light work and in times where the presence of a camera is problematic. Many photographers will have consistent access to both types of cameras for their work.

As far as Social Documentary photography is concerned, in the final count, the choice of camera is a personal one but we have the documented camera choices of the following social documentary photographers to make note of in this study. Sebastiao Salgado the author of many major South American documentary works and the world leading photographer Henri Cartier-Bresson only used rangefinder cameras in their social documentary work. The South African social documentary photographer Jurgen Schadeberg also has used an analogue 35 mm Rangefinder camera for much of his outstanding work too. In the data analysis chapter we will hear from eight professional photographers on their views on the use of these two camera types.

Research Methodology

The questions, the background and methodology of the study

The study took the form of an e-mail qualitative ethnographic questionnaire that sought data from a group of professional photographers in order to contextualise, understand and interpret the impact that these two types of cameras have on the photographs that they take. The e-mail questionnaire attempts to answer the following questions.

1. In what context of social documentary photography would each of the cameras be used?
2. How do the two cameras affect or impact the type of photograph taken by photojournalists working in social documentary photography?
 - a. How do each of the cameras affect the process of picture taking?
 - b. How do the two cameras affect the relationship between the photographer and their subjects?

The researcher posted a document containing the outline of the study, questionnaire, contact details, credentials and an invitation to partake in the study onto www.lightstalkers.org. *Lightstalkers* is an online photographic forum with many members living in news hotspots around the world. *Lightstalkers* also has a section in the site where members can post their personal contact details and published works, which makes it a reputable site with many known photojournalists as members. *Lightstalkers* provides a page (<http://www.lightstalkers.org/john-robinson>) for each member to provide contact details and biographical personal details, these biographical details of the members of *Lightstalkers* helped the researcher in selecting the sample group.

Using online communities as a channel to sample groups

Lightstalkers is an international forum of professional photographers with a general interest in the broader field of social documentary photography. The membership base is made up of professional photographers, academics in the broader field of photography and students of media and photography. At the core of *Lightstalkers* is a dynamic chat room where posts concerning anything photographic are written, read and commented on, on an hourly basis.

The researcher is an active and known member of the forum which worked in his favour as far as posting an e-mail questionnaire and for the accessing of a sample group of photographers. By using an online community like *lightstalkers* he ensured a wider sampling of photographers on the issue than were he only to contact geographically local photographers and do face to face interviews.

An e-mail ethnographic questionnaire aims to find out how people in a specific group but located in many different geographic areas feel about an issue, so for a wide spread ethnographic group of professional photographers an e-mail ethnographic questionnaire was more viable.

Lightstalkers is an 'invite only' (<http://www.lightstalkers.org/invitations>) online social network for photojournalists. By being an invite-only social network, it has managed to limit spam, abusive postings and ghost members (Hudson & Bruckman, 2004).

By the nature of their work many of the members move often and live in different news hot spots around the world for limited time spans. The geographical locations of the members of *lightstalkers* gains the social network a chance of a global view on the topics of discussion in the chatroom. As a member of *Lightstalkers*, the researcher is a part of this network, and so *lightstalkers.org* and the internet provided a mechanism for the researcher to gain contact with and obtain data from a cross section of some of these other professionals in the field.

Since the internet becomes their primary source of communication, using *Lightstalkers* as the channel to invite them to participate in the survey was the best option.

Lightstalkers is known to the invited participant thus the invite came through a trusted source and this may even have increased their willingness to take part in the research. The completed questionnaires were forwarded back by the participating photographers by e-mail.

E-mail questionnaires were chosen specifically for this ethnographic study because Pietermaritzburg is not a large media centre and there are only about two practicing social documentary photographers in the city. It was not therefore viable in this case to do a face to face ethnographic study. By sampling *Lightstalkers* the researcher would not only have had access to South African photographers but also a wider international base of photographers. He also forwarded the questionnaire via email to some South African photographers who are not a part of the *Lightstalkers* community, but whose input was worthwhile. The resulting data was collated on computer and entered into this resulting document.

Advantages of E-mail Questionnaires

There has been a substantial increase over the last two decades in the use of the internet as a source of information and also as a channel of communication between people around the world. Chat rooms, online forums and social networking has provided a mechanism for people in different geographical locations to swap information and communicate in real time (Wright 2006).

The internet can provide researchers with rich pickings through the use of chat rooms and forums as sources of access to people and data that would render face to face interviews unpractical and prohibitively expensive in some cases (Wright 2006).

People around the world discuss many different issues in these virtual communities (Wellman & Haythornwaite, 2002) and online chat rooms and forums have connected many like-minded people from around the world in terms of many different interests and subjects.

Through tapping into these online groups much data can be gained by researchers. An online questionnaire has cost and time saving advantages over a hardcopy questionnaire.

In addition to this the researcher can tap into people, like photojournalists, that may be living in places that are geographically isolated from the researcher (Wellman 1997).

Disadvantages of Online Questionnaires

Disadvantages of online surveys are that relatively little is known of the characteristics of the people in the online communities, aside from some basic demographics. The sample group can be skewed by demographic indices unknown to the researcher at the time (Dillman, 2000). The online questionnaire could be seen as spam and offend some people and as such be blocked by potential participants (Hudson & Bruckman, 2004), and researchers may also open themselves to abusive individuals by having their contact details made public on the internet.

In Conclusion

The researcher feels that without the cooperation of the *lightstalkers* forum to get in contact with this study's sample group, and the use of an e-mail questionnaire to survey the said participants, this study in its present form would not have been possible. By using the *Lightstalker* membership database the researcher avoided some of the anticipated disadvantages of online questionnaires, as stated in the (Dillman) reading. The researcher avoided the potential challenges of the questionnaire been seen as spam, as stated in the (Hudson & Bruckman) reading. by being a known member of the lightstalkers online community when approaching other lightstalkers members as potential participants in this study.

The next chapter consists of an overview of the data collected by the researcher in this study.

Data Analysis

Introduction

The data for this study was collected via e-mailed ethnographic questionnaires from seven international professional photographers sourced from the online forum *Lightstalkers*, as mentioned in the previous methodology chapter. *Lightstalkers* is an established international forum of photojournalists and is therefore a trusted source to connect with participants for such a study. Two of these participants are based in North America, one lives and works in Argentina, another is based in both Europe and North America but working in South West Asia at the time of this study. The fifth lives in East Asia, and two are in South East Europe and Australia respectively. The researcher supplemented this sample group with one South African social documentary photographer, who he knows.

This method of sourcing has ensured a spread of participants from around the world. This makes the context of the resulting data more global in flavour and not regionally biased had there been only Southern African participants in the study.

The demographics of the sample group are also in line with the demographics of the professional photographic forum *www.lightstalkers.org* that finds that the majority of all photojournalists are male and are based in or work out of North America or Europe.

This academic investigation is based on a long standing debate amongst photographers on the merits of the mainly large and noisy Nikon and Canon SLR and DSLR camera systems versus the merits of the smaller and quieter Leica M range of Rangefinder cameras on the photographic representation of the resulting photographs of human subjects. While both types of camera have both analogue and digital models, the investigation was about the digital full frame SLR camera versus the 35 mm analogue or film Rangefinder camera. These two types of camera have the same lens aspects, and by including the analogue rangefinder camera the debate would include the changes that digital photography has also had on analogue based representation and the photographic medium.

The debate is not so much about the photographic basics of photography as all cameras, no matter which brand or type, all work on the same triaxial system of International Standard Organisation rate (film/sensor light sensitivity), shutter speed and aperture size. The debate here is about the representation of the subject and what effect the camera, or medium, plays in the resulting photographs, or message, and how humans react when they are in front of a camera, or when there is just a camera that is known to be present, and how this affects the resulting social documentary photography.

Data Analysis

The researcher starts out on the theme of photographer's experience, by asking about the sample group's experience with different camera formats, both digital and analogue. The participant's experience of different types of camera is crucial, this insight is important because the investigation is about the difference between camera types. This study is about professional photographers' contextual use of two camera types and their opinion of these two types of cameras. Multiple camera format experience is very important to the study.

If a participant said they had only used one camera type in their life, this fact will colour the participant's further answers when comparing one camera with another. If the participant has no personal experience in the use of more than one camera type, the participant would have to rely on third person information in these aspects of the study.

On the subject of popular DSLR camera brands, the researcher's own camera brand preferences are in line with the sample group, they had the following to say...

The Nikon and the Canon brand was generally popular in this group of photographers, the Leica Reflex and Olympus brand were also mentioned, the Canon 5D and the Canon 5D mark II was marked out by three photographers as their preferred full frame DSLR camera. At this point one photographer mentioned the extraordinary image quality that he got from the light weight and compact Olympus OMD-EM5 camera gear that he was now using more and more.

Two photographers mentioned that while they had both used the Canon 5D and 5D mark II

cameras, they had sold both when they switched to the Leica range of digital rangefinder cameras when they had to work silently, attracting minimum attention to themselves. One photographer mentioned that while he was very happy with the Canon DSLR bodies he is using, it is his investment in the Canon lenses over the years that has kept him with the brand.

All participants have experience with at least three types of camera. All participants except for one have used both analogue and digital cameras professionally. The African participant now only uses a 35 mm analogue rangefinder camera professionally and has had never had a full frame DSLR camera. The Australian participant wrote that he had been shooting 35 mm and 120 film since the early 1960s, "I do not shoot digital". He states that he could not think of a context that he would want to use a DSLR camera.

Another of the participants wrote that because his social documentary work demanded that he works up close with his subjects, he had switched over from DSLR cameras to digital rangefinder cameras for all his professional photography.

The researcher concludes from these answers that from the sample group's wide camera format use this sample group is suitable for the study.

On the context of photography the researcher asked about which contexts they think a full frame DSLR camera would work well, and why.

One participant who worked on the streets of big cities could think of no context to shoot digital, saying that DSLR cameras were just too big for his style of work. Three participants in the sample group identified the following contexts: sports, wildlife, reportage and news. The researcher gleans from this sample group that it is the long lenses, the highly automated features of this type of camera and the fast digital workflow that has won wide spread acceptance of the full frame DSLR camera among professional photographers around the world. Another participant noted that the new full frame DSLR cameras also utilised the good prime lenses that the old crop factored DSLR cameras could not take full advantage of and added that he still used DSLR cameras only when he did not feel that the situation in which he was working in was secure enough to use his own rangefinder cameras. The above participant added that the use of the rangefinder camera allows for

an “invisible” approach to social documentary photography. The DSLR camera's autofocus facility was generally popular in the sample group.

The focus of the questionnaire changes towards the context of photography in which an analogue 35 mm Rangefinder camera works well, and why.

One photographer mentioned that as he is a photographer who takes images on city streets, the analogue 35 mm rangefinder camera's small size makes it an unobtrusive tool for him to work with. In contrast to this view another photographer added that as a professional photographer there is no situation where this type of camera would work for him, he added that all analogue cameras were useless for anything but fine art photography.

The African social documentary photographer has only one 35 mm analogue rangefinder camera with a 50 mm lens and he does all of his work with it, he only uses a compact digital camera for some of his personal photographs of family and the like. He adds that he trusts developed photographic film for its long lasting archival qualities, more than he trusts the, as yet untested, digital file for their archival qualities. The researcher notes at this point from empirical evidence that photographic film can last up to 200 years if stored correctly, the digital file is, as yet, untested and we do not know if the file will still be able to be read by computers in 200 years time.

The South American photographer said that the big problem for him with the 35 mm analogue rangefinder camera was that it is analogue. He adds that in Argentina most of the media does not publish black and white photography and prints only colour spot news images. Though the photographer has problems with the analogue rangefinder camera, he uses a digital one in his daily work for the newspaper that he works for. The photographer adds that he likes the viewfinder that his Leica rangefinder camera provides him with.

The genres of street photography and social documentary photography were mentioned as areas where the 35 mm analogue rangefinder camera would work well but one participant added that the camera type was not only limited to these genres. Rangefinder cameras are seen by some of the sample group as photographic jewellery and a small less intrusive type of camera that works well in intimate situations. The camera type is

also seen to have high quality lenses attached to the camera bodies. The group as a whole alluded to a strong connection between the 35 mm analogue rangefinder camera and black and white film photography as a whole.

On the theme of working styles and how camera types used affect, or impact, the images taken with them the following was noted.

Six of the sample group's eight photographers agreed that the photographer's style of work and camera type does affect the images taken. All six individuals are multi camera type users. One photographer disagreed. This photographer sold his DSLR cameras and now only uses analogue and digital rangefinder cameras when possible. He said that the question depends on what the photographer can or cannot see, rather than the camera used, alluding to the fact that he sees his camera type as no hinderance. The African photographer said that he guessed working style and camera types impact the images taken, but was unable to say why. It is interesting to note here that this photographer now only uses an analogue 35 mm rangefinder camera for his work, although he uses a compact digital camera for personal and family images. He has never owned a full frame DSLR camera pertaining to financial reasons.

Two participants describe their photographic style as a candid street photography style. Another photographer said that he was a hunter of images of people. Contrasting with this another member of the sample group said he has never been a fan of just pointing the camera on people as if they were animals rather, he works by blending in or by building a relationship with the people that he was working with.

Two photographers said that their photographic style depended on the assignment and that it could be "run and gun" or slowed down both mentally and physically when doing a portrait. The last photographer to join the sample group describes his style as one of quiet investigation and observation.

The participant who said that he did not shoot digital and could think of no context to use DSLR cameras feels that many photographers use DSLR cameras because of their ubiquity, ease and instantaneous results. The photographer seems to side here with five other participants in the sample group that also mostly use DSLR cameras.

The African photographer only uses a 35 mm analogue rangefinder camera as he cannot afford a full frame DSLR camera. Two of the participants use digital or analogue rangefinder cameras for all of their work.

The reasons that most participants use the DSLR camera over the 35 mm analogue rangefinder camera is that they generate quick, client ready images. A North American participant added that “clients don't suffer the extra expense and inconvenience of having to first develop photographic film”, and they (DSLRs) are the cameras that are often assigned to the photographers by their employers.

On the theme of “chimping” or previewing and editing the images on the back screen of a digital camera during a shoot, the sample group were asked if and why they did this.

One photographer said that he pre-viewed a shot after it has been taken to make sure that it was in focus, properly exposed and the subject did not close the eyes. Other than the above photographer, the other photographers that used a digital cameras chimped to some extent and thought that it was a bad habit during a shoot, as you break contact with the subject and miss potential images.

A north American participant said that the DSLR camera has a “simpler and faster digital workflow” over the 35 mm analogue Rangefinder camera. He added that the DSLR is the “workhorse of modern photography” and “the digital camera can produce very finished images right out of the camera”. The DSLR camera “is much better for long lens work” while the rangefinder camera's wide and normal lenses are “sharper and have less distortion” than the same lens for DSLR cameras said another photographer in the sample group.

The rangefinder camera's viewfinder is separate from the lens, and it has the ability to allow the photographer to see beyond the frame (Rockwell) which allows the photographer to anticipate what is about to come into the frame. While this is the case, a photographer added that because the viewfinder is separate from the lens what is seen is not exactly what is projected onto the film through the camera's lens, so there is the problem of a slight error of parallax with the rangefinder camera. This comment backs up some of the theory found in the study's literature review.

Although the rangefinder camera requires manual focusing of the lens, “if the photographer sets the lens aperture ring at f8 and above, the rangefinder lens provides in focus images at many distances” a participant adds.

One participant finishes off by saying “I prefer DSLRs for my work, because of it's speed in image production but I love the feel and operation of the Leica (rangefinder camera) in use and gain great enjoyment from photographing with it” he adds “I scan the developed film and obtain digital images that clients can use”.

On the theme of advantages and disadvantages of working with the subject using one or the other of the two types of cameras in question, the researcher received the following feed back.

One photographer who only uses a 35 mm analogue rangefinder camera, as a street photographer, said that there were no working advantages between one camera and another. The Africa based photographer, who only uses an analogue rangefinder camera for work, said he just finds that people are perplexed when they can't preview an image just taken of themselves with an analogue camera. All the photographers that use both Rangefinder and DSLR cameras when working in close intimate conditions with their subjects see a distinct advantage in subject relationship when using a rangefinder camera rather than a DSLR camera. The advantages that are seen are that it seems less intrusive. The rangefinder is “more intimate” because rangefinder cameras seem “less intimidating and less aggressive to the subjects” and the “DSLR's shutter is more noisy and can be disruptive”.

Considering the fact that the slower workflow of analogue photography, when compared to the speed of digital photography, being that the photographer needs to wait for the film to develop is seen as a disadvantage of film photography, it is seen here as an advantage too: The South American photographer said that you tend to take more time to take the photos and wait to develop the rolls, these cameras are discrete and light”. The photographer closes with the comment “I prefer frame with the direct (Rangefinder) viewfinder. I only find useful reflex (DSLR) viewfinder in macro and sport photography”.

The researcher notes at this point that like the saying “The fish is going to be the last to

know that it lives in water, because water is all that it knows.”, it might be that photographers that only use small discrete cameras seem to be the last to acknowledge some of the advantages of these cameras over other bigger types of camera.

In Conclusion

The researcher finds from the collected data that the sample group's use and attitudes of the full frame DSLR and the 35 mm analogue Rangefinder cameras are generally in line with the theories sourced in the study's literature review. The two camera systems do not oppose, but rather supplement each other. The DSLR system performs its best with tele and macro lenses, suggesting that it's ideal for sport, action, formal portraits, wild-life and macro photography. Their ability to control depth of field precisely also indicates that the SLR is an excellent choice for portraiture. The rangefinder has a definite edge in street, low-light, people and documentary photography (www.photozone.de/slr-vs-rangefinder).

The sample group's responses to the two types of camera bore the above theory out. It came to light from the data that “while the full frame DSLR is the workhorse of modern photography”, and the DSLR camera works well with sport, wild life, news, action and fast moving subjects. The sample group also backed up the theory that the workflow of digital cameras is faster, convenient and more client friendly than the analogue workflow that the 35 mm analogue rangefinder camera holds to.

It is noted by the researcher that this is a micro study, and the sample group was only made up of eight professional photographers, so the researcher cannot make broad generalisations about professional camera use. Of the eight participants in the sample group 50% still use 35 mm analogue rangefinder cameras on a professional basis alongside their digital cameras which are both rangefinders and SLRs. 25% of the sample group still only used the 35 mm analogue rangefinder camera professionally.

One participant said that while his problem with the analogue camera was that it is not digital, he found that working with an analogue camera was an advantage as it “slowed photography down, This is good to separate the feelings during shooting and to be more cold or objective at the hour of the editing.”

The participant's views are in line with the theory that an objective eye is good when editing photographs while as Lori Waselchuk said "In making an image, photographers respond as individuals, bringing to the moment all that is their background, ethnicity, prejudices and curiosity." The twinning of the slowness of analogue with the individual means that while there is the individual photographer's world view the slowness that analogue photography allows for encourages objectivity and the best image can take the fore.

In conclusion the researcher noted that the 35 mm digital rangefinder camera is now used by some of the participants for workflow reasons, because it is a digital version of the 35 mm analogue rangefinder camera that has served many social documentary photographers since its invention in the 1930s.

Findings and Conclusions

The Research Purpose and Importance of Findings

Prior to the development of the 35 mm analogue Rangefinder camera in the 1930s and the introduction of SLR camera in the 1960s, professional photographers around the world did not have access to cameras that were compact and allowed for photography that was more candid in nature and had a viewfinder that allowed the photographer to focus on their subject with precision (Yue 2011) and not with an element of guesswork as it had been up to this point in the development of photography.

The development of the rangefinder camera system meant that from this point in time photographers could now work with cameras that had a viewfinder which enabled precision focusing and a camera body that was small enough for candid photography. Before the arrival of the rangefinder camera, cameras were bulky and focusing was a matter of guesswork as the rangefinder camera was the first camera with a viewfinder. The rangefinder camera brought with it a new era of candid photography that started the unfettering of the social documentary photographer from bulky cameras that seemed to signify to the subject the photographer's presence (Matthews 2003).

The ephemeral qualities of human expression needs of the photographer and their equipment instantaneous readiness in order to capture the decisive moment (Henri Cartier-Bresson) in a photograph.

J.P. Sudre states in *Photography A middle-brow Art*: "The subject that I photograph is ephemeral... photography alone captures a precise moment... which disappears and which cannot be brought back to life, hence our distress and also the essential originality of our profession. What could be more transient than a facial expression?" (pp 136)

Within these words of Sudre lies the importance of the study of the 35 mm analogue Rangefinder camera and the full frame DSLR camera. Alongside the importance of the ephemeral moments that photography alone can capture, revisiting the technology inherent in the camera systems that we use, as photographers trying to capture these moments, is of great importance too.

While there is a pure academic importance in the unpacking and furthering of knowledge in photographic representation, it is also important to make the unpacking of this issue accessible to the users of these two cameras. The researcher is a social documentary photographer, by profession, and chose this subject because of its prominence in the ongoing debates among social documentary photographers around the world. Thus the findings of this study are of interest to the social documentary photography community as well.

In *Representation: Cultural Representation and Signifying Practices* Stuart Hall states that photography communicates feelings, world views, and ideas. In this book he writes that the photographer sees the subject, an idea is thought and the image is taken. In this regard the fast shutter response of the Rangefinder camera holds the photographer in good stead. In *The Photograph: A Strange Confined Space* Price states that the photograph is both subjective and truth in that the photographer has taken decisions that involve what is left in the picture and that which is left out. Here the ability of the rangefinder camera user to see the camera's view in a wider context again is an advantage over the DSLR camera. Lori Waselchuk and Susan Sterner say we are coming to an age where there will be as many photographic truths as there are world views and cultures as more and more peoples add to the collective photographic archives (Waller 2000). As the South African photographer David Goldblatt continues the conversation by saying that the photograph is just an aspect of our realities. Based on this, could there possibly be room in our collective photographic archives for the resulting truths from both cameras?

The participants in the study rebut these views: There are photographic decisions that the photographer has made when the *moment in time* was captured, including the type of cameras and lenses used as well as how and when editing decisions are taken. Some in the sample group hunted the subject from afar, while others preferred to photograph close up and hated the idea of pointing a camera at people like they were animals. These decisions change the construction of the image. These decisions all influence the perception of the subject by the viewers of the photograph in question.

As Jenny Matthews took two photographs after a rebel attack in Mozambique, in the first image the woman looks the part of a war weary refugee, in the second image the woman

noticed Matthews' camera and she transformed into the beatific mother. It was the presence of the camera that changed the subject, but both photographs are truth.

Dorothea Lange the American social documentary photographer finishes off by saying to photographers: rather work by looking at that what you instinctively respond, certain pictures catch the eye.

Analysis, Options and Conclusion

The researcher in retrospect would back up the e-mail questionnaires with a conversation via skype where the researcher could engage more with each participant on a personal level around each question in ways that are just not possible by e-mail. By delivering a questionnaire by e-mail, a study's sample group is not limited by a geographical area, but then can be limited by a lack of face to face connection between the researcher and the participant where the researcher could seek clarity of the comments made by the participant.

By grouping the participant's answers around themes rather than questions the researcher began to see that individual positions began to emerge in a coherent fashion. This meant that the researcher could take hold of these opinions and easily add the data to the study.

By comparing the sample group's positions with the theories emerging from the literature review, gaps in the theories became evident and areas of future study presented themselves to the researcher.

In general the participant's positions on the two cameras were congruent with theories found in the study's literature review. The researcher wonders why one participant only used a rangefinder and did not use both the rangefinder and DSLR cameras. The participant argued that the rangefinder camera held no advantages for him in his daily work as a street photographer, while the photographers who used both cameras all agree with Andrew Yue, Henri Cartier-Bresson, Sebastiao Salgado and Jurgen Schadeberg. These photographers agree with Yue and the empirical evidence of Cartier-Bresson, Salgado, Schadeberg and others, that the 35 mm analogue/digital rangefinder camera

puts the photographer at an advantage when trying to get candid photographs of subject in close or sensitive situations like in the course of day to day social documentary photography.

The researcher knows that this is only a micro scale study and that the findings of this study are limited as such. However it seems to the researcher at this point that like the above mentioned fish that is not aware of it's reliance on water, there are some photographers who only use small rangefinder cameras for their candid photography who may be personally taking undue credit by not fully acknowledging the advantage of their tool of trade in the output of their work.

Based on this study the researcher is suggesting that a small camera may be less noticeable to the subject. The photographer using it is less likely to cause normative behaviour in the subject. If that camera also has a bright viewfinder, no blackout and shutter lag, the photographer could be in position as Henri Cartier-Bresson would say capture that decisive moment too.

The researcher could investigate furthermore as to whether a small mobile phone fitted with a good camera and lenses could carry on from the 35 mm analogue rangefinder camera as an ideal candid photography tool. However, only when the current shutter lags in mobile phone cameras are shortened in line with the non existent shutter lag of a 1935 era Leica M3 rangefinder camera, which to the present date is still less than the shutter lag on the latest at this present date DSLR camera.

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