

READING THE REBATE:
INFORMATION AT THE EDGES OF 20TH CENTURY PHOTOGRAPHS

By

Locrin Stewart

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Author's declaration

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Abstract

Reading the Rebate: Information at the Edges of 20th Century Photographs

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Locrin Stewart

Film and Photographic Preservation and Collections Management

Ryerson University

Using the photography collection in the Museum of Fine Arts, Houston (MFAH) as a primary source, this thesis explores the use of photographic rebate as found in the work of seven major twentieth century photographic artists working between 1920 and 1980. Investigating the use of rebate as both a manifestation of technology, and as an expressive tool employed by post-war photographers, this paper looks at the physical character of rebate in silver-gelatin prints and its role in augmenting the photographic image. This research elucidates the collection at MFAH, the history of photographic printing in the 20th century and provides a guide to future researchers about how rebate can be used to glean technical data and artistic intent.

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Introduction

The objective of this thesis is to identify and analyse an area of 20th century fine art photographic practice that has received little to no attention in the broad scope of photographic history. The rebate, which can be seen on photographic prints from the initial days of printed photographs though to the present day, has manifested in numerous forms and appeared for varying reasons. By looking at this area of photographic practice, specifically focusing on a time-frame from the 1920s to the 1990s, and assessing critically a selection of artists that have worked with rebate in different ways and to different ends, a dialogue can be initiated, and room for future research addressed. As the 20th century photographic technologies, working methodologies and artistic traditions employed by these artists quickly pass into history, it is important to understand both the practicalities and more elusive artist intent of their work at this juncture in time. Links between material and technological advancement can also be better tracked and mapped in relation to photography used as an art and documentary form.

In order to understand the purpose of this thesis, it is first necessary to establish more precisely what a rebate is. Looking up ‘rebate’ in a dictionary will first lead one to a partial refund to a consumer that has overpaid, then to a variant form of the word ‘rabbet’, a kind of joinery in woodworking. To find rebate in reference to photography, patents and technical data have to be sought out, all of which only use the term in passing, suggesting that it was not intended to act as an element of the printed image. So, to define it in the simplest and most contemporary of terms, a rebate is the edge around a piece of film that is not used to record the image. On 35mm film, for example, the rebate surrounding the frame has the sprockets used to draw the film through the camera, as well as pre-imprinted information by the manufacturer¹, though the rebate does not need to include any such information. The practical use for this extra space around the frame is to carry manufacturer information, provide a support for the image inside the camera during exposure, and carry technical data relevant to the processing of film following

¹ Richard Olliver, Cortland E. Johnson, and David L. Patton, Photographic Film with Latent Image Multi-field Bar Code and Eye-readable Symbols, US Patent US 4965628 A, filed June 28, 1989, and issued October 23, 1990.

exposure. Inclusion of this support and additional information is a decision made by the photographer, whether for practical or aesthetic reasons. Typically, the rebate is not included in final prints. However, it has been used by photographers to different extents. Rebate can also manifest in different ways when physically printed, and can change depending on the kinds of materials used both for capturing the image and for reproducing it. Even though rebate is an intrinsic part of the photographic process, to include it in a picture only began to emerge as a conscious and intentional decision from around the 1930s, eventually dying off again following the advent and proliferation of digital technologies. These changes were in large part due to material and technological changes, but also indicate a level of conscious inclusion for artistic, subjective, or sociological reasons that will be discussed later. Of importance is how the appearance of a rebate can change the reading of a photograph within these contexts, and the implications that come with it.

The rebate is not an aspect of photography that has been written on extensively—in point of fact, there is almost no writing on the subject, save for the occasional mention of it when speaking of artists such as Richard Avedon, whose work frequently and clearly displays the edges of the large and medium format films he employs. Most image analysis and research has, instead, been focused on the images themselves, providing little investigation of the surrounding area. The issue with ignoring the surrounding area is that it leaves out additional levels of analysis, and in the case of researchers, it limits both the information they can gain regarding the working method of the photographer and the insight they can draw from overarching periods of production. The most plausible cause for this gap in photographic study and analysis is because it often does not present the most easily interpreted information, nor does it provide the most captivating subject matter. Similarly, the rebate is often hidden beneath mats by exhibiting institutions, seldom revealed unless specified by the photographer during either the framing process, or over the course of their lifetime, thus setting the standard for display of their work post-mortem. Addressing this area of photographic history is important exactly because it lies at the fringes of study, however it can also reveal valuable information to scholars and historians who know how to access it. As the use and availability of film-based photographic technologies has declined over the last twenty-

five years, so too has the nature of the photographic object created by artists changed in dramatic ways. At the time of writing this paper it appears clear to the author that it will become increasingly difficult for future researchers to access both practical reasons and artistic intent in the work of 20th century photographic artists. By laying groundwork for others to build on and reinterpret, as well as establishing some sources that can be suitable for this kind of analysis, additional kinds of information can be used for historical analysis and be used to build a better picture of photographers and photographic movements alike.

The lack of abundant information has presented problems in researching and investigating this topic, particularly due to a lack of primary and secondary sources. The first section of this thesis, outlining technology contributing to the conscious inclusion of rebate, is drawn primarily from technical publications on equipment and instructional texts on photographic techniques. The second section details a case study using the collection housed at the Museum of Fine Arts, Houston (MFAH), where the research and investigation for this thesis was conducted. The third section digs into the different forms of rebate, and what kind of information can be gained by researchers and historians, as well as the possible reasons for excluding rebate from framed photographs in museums. The fourth, fifth, and sixth sections explore artists actively working with rebate for different reasons and within different contexts. As is the case with a lack of discussion of rebate in the general frame of photography, in most instances the artists' production methods have seldom been discussed at more than just a surface level, with little investigation going on as to why they might include information outside the frame.

As a result of the overall lack of specific information, much of the information has been gained through actively looking at images, analysing trends in the MFAH collection and during different time periods in history, and research into object theory. The goal of this paper is to contribute to the process of creating new resources for understanding 20th century photographic prints, and to investigate what kind of information we can learn about photographers from this often-overlooked area.

Literature Survey & Research

After spending 8 months researching this topic I was unable to find even a mention of rebate in the footnotes of photographic history let alone any significant published sources addressing the subject of photographic rebate. In fact, the only text I could find beyond brief encyclopedia entries was a recent discussion on the Large Format Photographers list serve created by amateur photographers and historians, a questionable source at best. To present a rounded explanation of the historical factors that contributed to its appearance, and to be able to present the argument that it can serve many different purposes, research had to be conducted into varying fields, including technical, historical, and artist-specific factors. This work had to be combined with a critical study of the primary sources available to me in the MFAH photography collections.

Photographic Technologies and Technique

Technical information and manuals pertaining to photographic practice and application are a popular topic for photographers. Sources in these areas have ranged from instructional information on how to make contact prints and work with early enlargers to longer and more thorough explanations of photographic practice. Although early photography was a complicated endeavor involving mixing chemistry and coating photographic plates, the process was becoming more accessible to amateurs by the 1890s. This accessibility blossomed into technical publications for both amateur and professional photographers, both of which have served to broaden an understanding of how photography was written about and used by practitioners. Early methods of printing found in publications such as A. R. Dresser's *Bromide Enlarging and Contact Printing: How To Do It* (1892) and Eastman Kodak's *How to Make Good Pictures: A Guide for the Amateur Photographer* (1922) have sought to distribute information that can be used by the amateur photographer with no background in chemistry, expanding the field in their respective decades.

There are countless books, articles, and sources that have been written to provide technical information for both professionals and amateurs. A selection was made to find a few suitable sources that would provide both an overall historical context, and a technical overview. Berenice Abbott, a significant part of this paper, wrote two instructional publications, *A Guide to Better Photography* (1941) and *New Guide to Better Photography* (1953), which were instrumental in providing historical context to technical advancement of materials and camera systems in the 1930s and 1940s, as was the information in *Manual of Photo-Technique*, 22nd edition by C. I. Jacobson and L. A. Mannehim (1975).

Additional technical information on production and systems has come from photographers such as Ansel Adams in *The Camera* (1980), *The Negative* (1981), and *The Print* (1983), all of which have been repeatedly referenced in later and contemporary technical publications as well as university and college level photography courses; James Alinder's *The Contact Print, 1946-1982* (1982); William Kinnimond's *Practical Guide to Photographic & Photo-mechanical Printing* (1887); and María Fernanda Valverde's *Photographic Negatives: Nature and Evolution of Processes* (2005) in an attempt to build a more rounded understanding of the progression of photographic technologies.

Photographic History

While I concentrated on the history of photography as an art form I still needed to acknowledge the multiple applications of the photographic medium, and how they affect the appearance and reading of the rebate. For example, the history of the picture magazine and photojournalism, the confluence of fashion and photography, and a variety of technical innovations. Each played significant roles in the work of artists who have incorporated photographic rebate into their work. In addition, the development of modernism and its influence on photographic art could not be ignored in this study. Joel Eisinger's *Trace and Transformation: American Criticism of Photography in the Modernist Period* (1999), which thoroughly examines the changing landscape of pictorialist through modernist photography and the primary figures involved. Additional information within the general context of the evolution of photography has come from overarching histories such as Mary Warner Marian's *Photography: A*

Cultural History (2011), and Walter Benjamin's *A Short History of Photography* (1931), both of which, at different times, have sought to illustrate the growth and evolution of the photographic medium.

Related Photographic Theory

Critical theory concerning photography has been necessary to provide a foundation upon which to layer the author's opinions about the role the rebate can occupy and how it intersects with other areas of photographic practice. *Photographs Objects Histories* (2004), edited by Elizabeth Edwards and Janice Hart has been used as a stepping stone to understand the different ways photographs can either be or become objects, and how important it is to consider the photographic object as a whole rather than just the image. Vilém Flusser in *Towards a Philosophy of Photography* (1983) and *Into the Universe of Technical Images* (1985) has discussed at length the nature of photography as a mechanical medium entirely separate from painting and drawing and recognizing photographs as mechanisms for the distribution of information². Both Edwards and Hart, and Flusser in their own ways investigate how photographs are objects that should be read more deeply than just by the image alone. However, none of them investigates the photographic elements that border the image. Photographic theorists that have been consulted include Roland Barthes, *Camera Lucida* (1980), whose work has focused on questioning and investigating the nature of photography but has not reached outside of the borders of the visual image, as well as media critic Vilém Flusser's *Toward a Philosophy of Photography* (1983) and *Into the Universe of Technical Images* (1985). Flusser's writings centre around the nature of images and representation, and how our reading, understanding, and perception have shifted with the advent and dispersion of mechanically reproducible forms. While Flusser likewise does not directly address the rebate of images, his writings address important factors in understanding images visually and philosophically.

² Vilém Flusser, *Towards a Philosophy of Photography* (London: Reaktion Books, 2000), 49.

Artist Specific Research

The appearance of a rebate can change depending on if it was reproduced during the artists' lifetime or post-mortem, as well as how and where it is reproduced, whether for press, publication, or fine art purposes. For this reason, published forms of the works of the artists discussed within this thesis have been sought out. Press periodicals, such as *Life* and *Look* have been used to build a better understanding of mass-distribution mediums as well as books produced and published directly by artists and monographs made later that have provided context around more widely distributed forms of their work. The visual information in these cases helps to show how a rebate has been received by different publication sectors. For each artist profiled, forms of production have been sought out that best represent the published versions of their works. Of special interest has been locating the works used as reference in artist books and monographs. Consulted works have included *Diane Arbus*, the Aperture monograph first published in 1972, *Diane Arbus: Revelations* from 2003, Bill Burke's *Portraits*, 1987, and *Mine Fields*, 1995. Also consulted were Berenice Abbott's *Changing New York* (republished in 1997) and *New York in the Thirties as Photographed by Berenice Abbott* from 2003; *Harry Callahan: Eleanor* from 2008 and *Harry Callahan: Retrospektiv* from 2013; *Portraits* by Richard Avedon and Harold Rosenberg from 1976; and by Danny Lyon, *The Seventh Dog* (2014), and *Deep Sea Diver: An American Photographer's Journey in Shanxi, China* (2011). The reproductions found in these publications and others have helped to further an understanding of how different photographers' works have been reproduced, either with their direct input or in a monograph form, curated and laid out by others without the artist's intervention.

Museum of Fine Arts, Houston Collection

The Museum of Fine Arts, Houston (MFAH), founded in 1900³, possesses a substantial photography collection, numbering over 30,000 objects from the invention of photography through to present day. The bulk of the collection was built by the first curator of photography, Anne Wilkes Tucker. Tucker, hired on in 1976, effectively carved out a place for photography during her tenure, curating shows and writing books and histories to support the photographic medium as well as offering new perspectives on the work and artists that made up the rapidly growing collection. The first step to building the collection was the acquisition in 1976 of the Target Collection of American Photography⁴ which Tucker would continue to expand upon, increasing the breadth and scope of the overall collection, while expanding the MFAH's collecting mandate. The collection continues to grow, now headed by curator Malcolm Daniel, formerly of the Metropolitan Museum of Art in New York.

Of the nearly 70,000 objects the MFAH houses, almost half of them are photographs, demonstrating an institutional commitment to collecting photography as well as an understanding of its roles as both an expressive and documentary medium. In order to further understanding, education, and appreciation of the evolution of photography across time, quarterly curated exhibitions showcasing the history of photography are presented. These quarterly exhibitions rotate out sections of the MFAH photography collection, with an emphasis placed on pieces that have not been previously exhibited. By creating rotating selections of curated works, the museum's intention is to more fully illustrate and display the history of photography and allow for movements to be better visualized over time, as well as provide context within which to better understand early experimentations that later evolved into more widely accepted and familiar forms.

³ "The MFAH: An Architectural History," The Museum of Fine Arts Houston, About the MFAH, accessed May 30, 2017, <https://www.mfah.org/about/mfah-architectural-history/>.

⁴ "Photography: Collecting Areas," The Museum of Fine Arts, Houston, Special Collections, accessed May 15, 2017, <https://www.mfah.org/art/departments/photography>.

Accessing this collection has allowed me to survey a wide variety of subjects and photographic objects, and has provided access to extensive resources that exhibit the use of the rebate at different points of history. The artists chosen as focal points were selected based on the appearance of rebate in their work, the variety of stylistic decisions on inclusion, and their place in the overall photographic canon. Focus is placed on Berenice Abbott and Harry Callahan, both American practitioners who used contact printing extensively in their early work, and serve as two examples of how contact printing incorporated rebate. Henri Cartier-Bresson and Danny Lyon are used to examine the rebate in the context of journalistic and documentary work and to illustrate a sense of independence from publishers and editors. Diane Arbus depicts a changing methodology throughout her years of work, while Richard Avedon typifies the formation of a visual identity through repeated employment of a very specific form of rebate in his work. Bill Burke depicts the recognition and identification of materials through a rebate, and generates discussion on how evidence of these materials serves to inform his work for viewers and researchers alike. The artists focused on in this paper were chosen because of their prominence in the MFAH collection, as well as frequent use of rebate in their work.

In order to build a better understanding of the collection at the MFAH and the prevalence of rebate within the collection, a survey was undertaken in May. Due to both time constraints, as well as the native size of the collection, a smaller survey had to be conducted. I assigned a number to each of the 32,991 individual objects in the collection, then used a random number generator to select 1,230 objects. The choice of the number of objects to survey generates a confidence level of 95%, with an accuracy of $\pm 2.9\%$ ⁵. Information was exported from the cataloguing database used by the MFAH, TMS (The Museum System), then each object was analysed using the picture of the object in TMS, or, in cases where the image was insufficient, investigation of the actual object itself was done. The images were grouped in 10-year date ranges from 1840 through to 2017 because of the substantial number of objects surveyed from differing time periods. While the survey focused on a random sample to provide unbiased data, the artists

⁵ A confidence interval of 95% indicates that were the survey conducted 100 times, it would return the same results in 95 cases.

discussed later in this thesis were specifically chosen to provide a range of different methodologies of rebate inclusion, and to span a time period that was populated with different forms of analog printing.

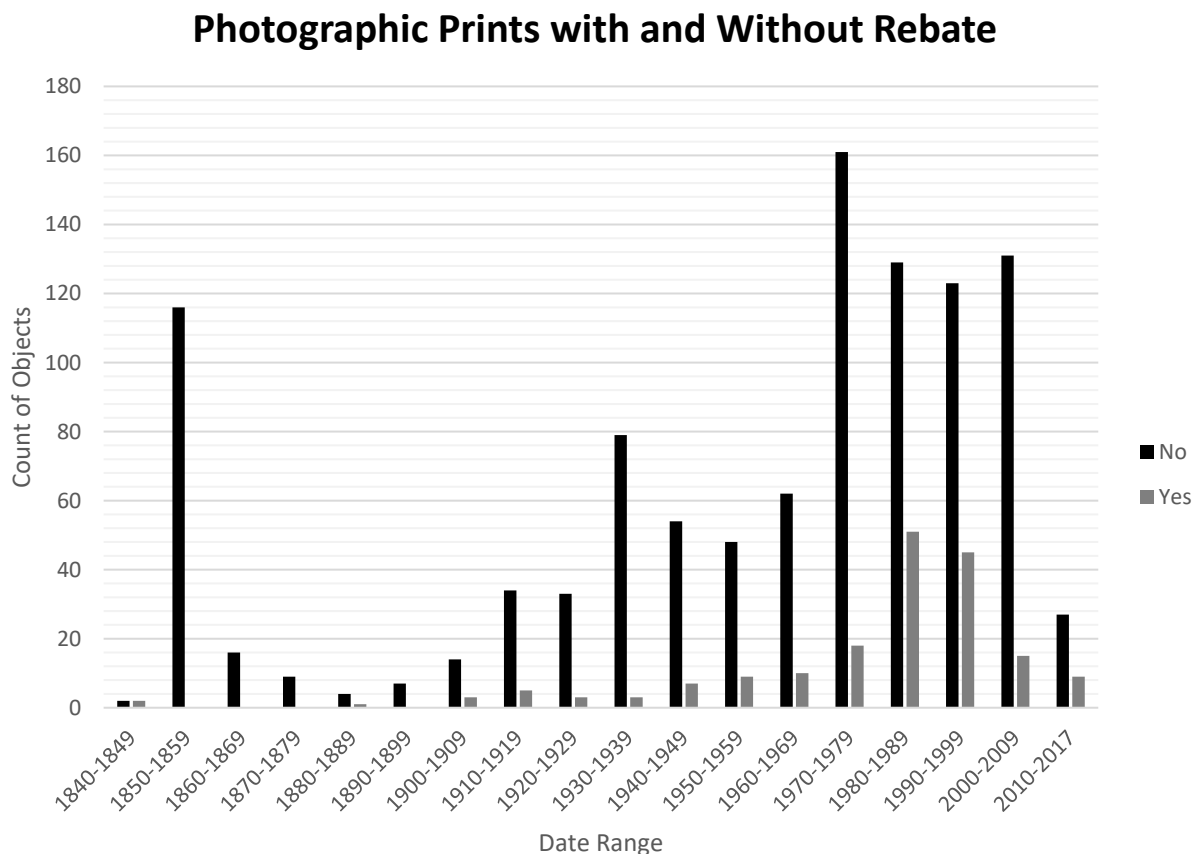


Table 1: Surveyed objects with and without rebate

Of the objects surveyed, $14.5\% \pm 2.9\%$ were found to contain rebate in some form, with the largest groupings showing up between the 1970s through the 1990s with particularly high numbers in the 1980s. The bulk of these later prints are gelatin silver, mostly showing 35mm black border rebate, although there is an almost equal number of similar gelatin silver prints with a large format film border. This corresponds to a large number of artists in these later years working with large format film, however it should also be noted that the MFAH has a large collection of works by Timothy Greenfield-Sanders and a sizable collection of Nicholas Nixon, both highly active during this period and well known for their use of large format film and intentional inclusion of rebate. One of the most interesting areas of the collection in which rebates are hardly present at all is within the early days of photography, between 1840 and 1919.

During this period, contact printing was the primary method of reproduction, and enlarger technology was still being developed and had not yet reached its full potential. The likely reason for a lack of rebate is an abundance of objects such as cartes-de-visite and the prevalence, at the time, for removing the edges of the printed paper to make the print more finished. Especially with hand-coated papers, brush lines from the coating process are visible on uncut prints, but removal of this is very easy overall. In other cases, such as albumen prints coated with the ‘float’ technique, a more even coating to the edges of the paper is much easier to achieve, but the technique almost requires removing the outermost edges due to the necessary act of folding the edges of the paper. In many cases, the edges of coated papers can look messy, and generally detract from the works, so it is no real surprise that there is a definitive lack of rebate in these early photographic paper examples. Early optics also had a tendency to be softer at the edges, a fact that photographers could minimize or remove entirely by cutting off the edges of their negatives, removing the rebate directly and permanently. Early commercialized photographic printing by companies like Kodak in the 1880s also produced clean cropped edges, essentially setting a standard for amateur photographers. Early photographic books featured plates with clean edges, further strengthening the aesthetic.

The rebates that do exist in the collection can be broadly grouped into several categories for ease of identification, the majority of which are either 35mm black borders or large format sheet film examples. Medium format film borders rank third in the surveyed works, followed by Polaroid film borders, ‘soft’ borders (especially prevalent in the some works by Diane Arbus), and finally contact sheets, featuring multiple images with the rebate positioned on a single sheet of paper for artistic effect. While in most cases it is almost impossible to determine whether the inclusion of a rebate is intentional or not, I have made the effort to carefully look at the examples and the context they come from to determine the level of intention in each photograph. This has involved looking at the photographs and assessing what the intended use of the prints was—be it for publication, use in albums, exhibition, or for reference. In addition, by reviewing cataloguing information and institutional history I attempted to determine why the MFAH decided to collect these works. In most cases, the works that feature examples of rebate appear

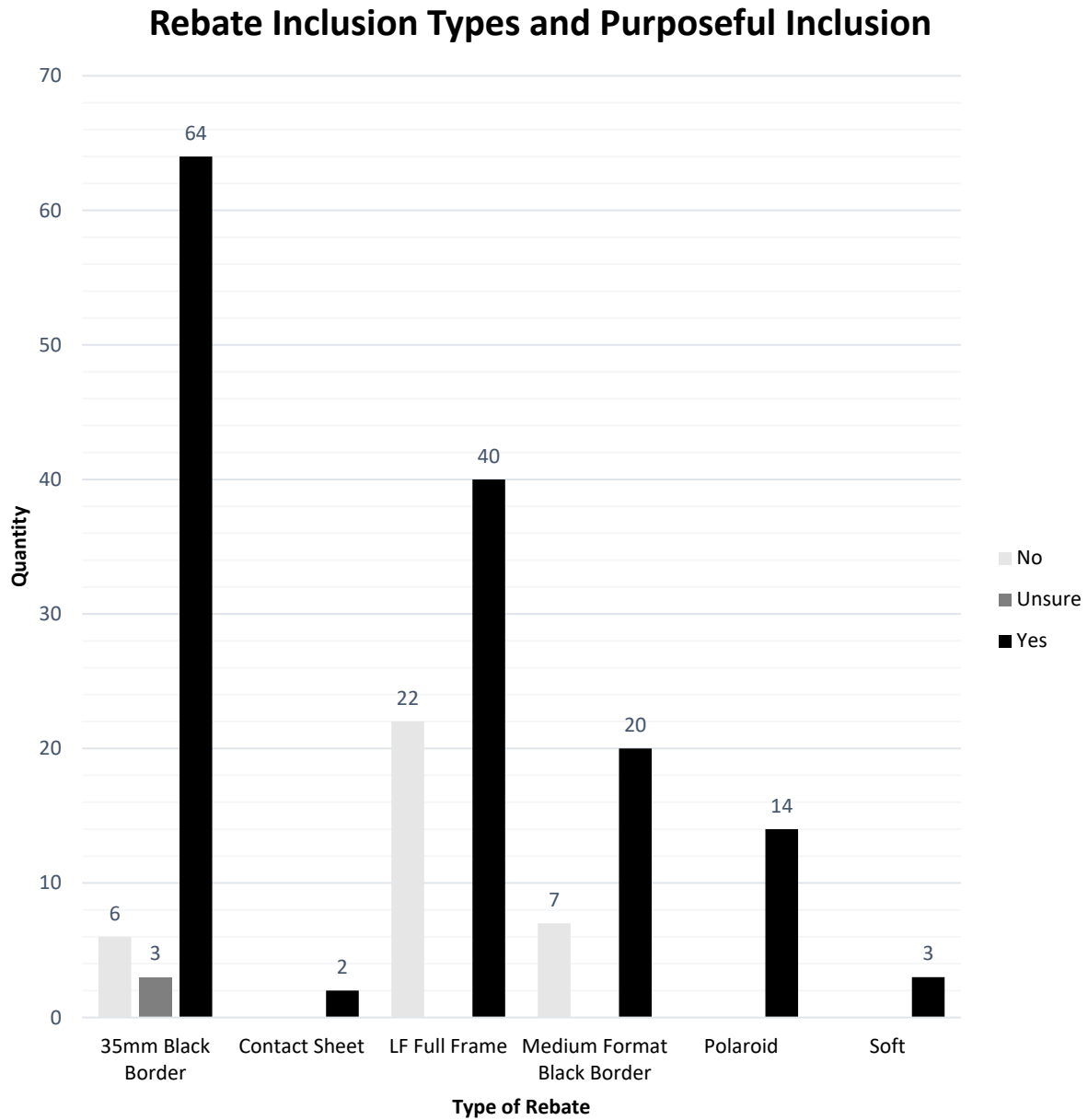


Table 2: Rebate types and purposeful inclusion intention

intentional, whether to build into the overall feeling of materiality, to emphasize the fact that the images are utilizing the full frame, or as part of the artist's own photographic signature of sorts. The works that do not appear to intentionally include rebate are primarily within the realm of material restrictions in the area of large format prints, or in the case of 35mm and medium format prints are due to slight misalignment in places. The examples of Polaroid borders are assumed to be intentional as well as present because of a material restriction. Timothy Greenfield-Sanders' main material of production is using ultra-

large format Polaroid colour film, a choice that directly affects the photographs he produces because it inherently contains elements pointing to its technological production. Greenfield-Sanders, with this choice, demonstrates a conscious decision to use a material that evidences his process, and that provides a visual signature of his works.

History of Printing in the 20th Century

The history of photography has been built on technological and chemical advancements, with improvements occurring over time out of necessity. Three factors have contributed heavily to contemporary materials: photographic film, paper, and enlargers. While they did not necessarily encourage the formation of a rebate, they provided opportunities to use the rebate as an aesthetic choice, and a tool to more readily display the physical and technical aspects of photography.

Film and Camera Technology

Photographic film has moved through various substrates and emulsions, beginning with metal plates and paper negatives, moving through glass, and eventually reaching several types of clear plastic substrates. Early paper negatives, such as albumen, were easy to transport but had low sensitivity to light, resulting in very long exposures. The next form of negatives, wet-plate, which used glass as the substrate, saw an increase in light sensitivity, although is considered very slow by contemporary standards. Another drawback of the wet-plate process is that the photographic plates have to be exposed when still wet, and developed immediately after exposure, making access to a darkroom in the field a necessity. The invention of the dry plate process made transporting and using glass plates far easier, however there was still an issue with the weight of the materials. In order to counteract this, Kodak began research on plastic substrates, eventually formulating nitrate film in 1889⁶. This new film base, called cellulose nitrate or simply nitrate, was the first of its kind, having a higher speed and better detail retention than paper while maintain light weight and flexibility, but also the clarity previously only enjoyed by glass plates. Due to the high flammability of cellulose nitrate, a new kind of substrate was invented in 1908 to minimize safety risk, and cellulose acetate or “safety film” was introduced⁷. The final and most recent innovation in

⁶ Alfonso Del Amo, "A Brief History of Plasticized Cellulose Nitrate or Celluloid," *Journal of Film Preservation* 60, no. 61 (July 2000): 45.

⁷ Megan Lena Harris, "The Demise of Safety Film: A Review of the Cellulose Acetate Based Negatives in the Collection of the Kodak Canada Archive" (Master's thesis, Ryerson University, 2006), Cellulose Acetate Based Films, accessed January 27, 2016, <http://search.proquest.com.ezproxy.lib.ryerson.ca/docview/304912289/fulltextPDF?accountid=13631>.

flexible film is polyester substrates, the first of which was introduced by Kodak in 1980 under the name Estar⁸. Polyester substrates were more durable than cellulose acetate and could be made thinner, and had neither the drawbacks of chemical degradation that cellulose acetate had, nor the flammability of cellulose nitrate.

The mass-manufacture of film provided a gateway to different formats, and as film emulsions improved, it became easier to create smaller formats that maintained a high enough resolution to allow for

enlargement. Cameras shifted from large and cumbersome devices to small, compact means of recording, increasing overall portability, and while significantly reducing the need for contact printing to reproduce final images, generated a need for contact printing as an intermediate step with which to identify viable negatives for reproduction. Some of the formats still available today moved from 4x5" (*figure 1*) and larger sheets to square 2 1/4 wide rolls that could hold up to 15 frames (*figure 2*), to small



*Figure 1: 4x5 sheet film with rebate border, actual size
Courtesy of the author*



*Figure 2: 2 1/4 Square frame, actual size
Courtesy of Rachel Ciolfi*

⁸ "Milestones." Graphics.Kodak.com. Accessed January 26, 2016.

35mm rolls that could hold up to 36 frames (*figure 3*). The practice of cutting images with scissors or a trimmer to cop them changed when enlargement made it possible to perform this task during the printing process, rather than after.



*Figure 3: 35mm film frames, actual size
Courtesy of the author*

Enlargement of smaller formats allowed for only specific areas to be printed while still maintaining a good amount of resolution. In order to identify different sheet films, notches of varying shapes and sizes were cut into one corner of the sheet, indicating the film type and speed. Different manufacturers used distinct kinds of notches including squares, half circles and triangles, thereby allowing them to be differentiated and identified by the notch shapes. Roll film, in place of cut notches, was imprinted with manufacturer and film information. With the development of safety film, a ‘safety’ designation also began to appear on film to identify it as non-flammable, visually distinguishing it from the flammable nitrate film that came before, which was imprinted with the word ‘nitrate’. Over time, other information appeared, eventually replacing the ‘nitrate’ and ‘safety’ designation once all nitrate stock had been phased out, leaving behind elements such as manufacturer and film type and speed information, making future identification easier. Most often, film imprinting aids in identification to make the work of photo finishers easier and faster⁹. Machines, calibrated to multiple film types with ideal settings already inputted, print out initial exposures from the film that allow for minor adjustments to future prints to account for over or under exposure. In the 1980s, DX (Digital indeX) coding began appearing on 135 (35mm) and the short-lived 240 APS (24mm) film canisters. DX coding later moved to being physically printed on 35mm film, below frames and between the full and half frame counter marks (see the bottom edge of *figure 3*). These imprinted DX codes contain information ranging from frame number to film type and exposure latitude, facilitating automated

⁹ Richard Olliver, Cortland E. Johnson, and David L. Patton, Photographic Film with Latent Image Multi-field Bar Code and Eye-readable Symbols, US Patent US 4965628 A, filed June 28, 1989, and issued October 23, 1990.

machines to read the information and create prints that could later be tweaked. This increased the speed of print-processing for consumer applications.

Enlargement and Paper

Enlargers are used to project images onto photographic paper for printing, most often so that an image can be made bigger. However reduction is also possible. Enlargers can be thought of as a sort of modified camera, projecting instead of receiving the image. All enlargers, old and new, have come with a standard set of components that have been refined over time, namely a light source, a negative carrier or holder, a lens, a means of adjusting the lens for focus, a means for adjusting the assembly to control projection size, and a space within which to put a photographic frame¹⁰.

Development appeared in tandem between two main enlarger components, the light source¹¹, and lenses for enlarging. As film became smaller, and enlargers became more important for ensuring that photographs could be seen, lenses had to improve to produce better images. With film size constantly shrinking, better quality optics became necessary and integral to photographic enlargement. In many cases, the negative holders in enlargers would restrict to some extent the ability to print full images because the edges of the carrier would encroach on the edges of the image. Glass negative carriers eliminated this problem, but were expensive and not available for all enlargers¹². Artists that did not have glass carriers with which to print the maximum amount of the frame would physically file out their

¹⁰ C. I. Jacobson and L. A. Mannheim, *Enlarging*, 22nd ed. (London: Focal Press, 1975), 118, accessed April 4, 2017, <https://ia801907.us.archive.org/25/items/aa537-Enlarging/aa537%20-%20enlarging.pdf>.

¹¹ The first enlargers used the sun as their light source, and were called solar enlargers. These devices were built into walls of rooms, often oriented horizontally to project onto a wall. In order to eliminate reliance on the sun for exposure times and to allow for more consistent exposures, alternative light sources were attempted to varying degrees of success. Among the attempted sources is included candles, kerosene lamps, whale oil, coal gas, battery-powered carbon arc lights, and hydrogen-oxygen limelights. Even after electric bulb powered enlargers became the standard, the early days still saw the use of older limelight light sources due to a lack of electrical hookups in homes and businesses (Robert Leggat, "A History of Photography: Enlargers," *A History of Photography*, December 13, 2011, accessed March 01, 2017, <http://www.mpritchard.com/photohistory/history/enlargers.htm>).

¹² Glass negative carriers needed to be made out of a special kind of glass to prevent the formation and appearance of Newton Rings in images.

negative carriers¹³, though at the risk of scratching their film if any barbs were left behind from the filing, leaving behind a black border as evidence of over-filing the edges.

Enlargement would not have been possible without papers formulated for the task, and as enlarger and film technology was improved upon in the areas of optics and light sources, new formulas and mixtures for paper were being experimented with and put in place. While the earliest of photographic papers were hand-coated with very slow emulsions, industrialization of processes allowed for papers to be manufactured commercially. Numerous companies emerged and took up the manufacturing of papers, among them Kodak, Ilford, and Gevaert. The first develop-out papers (DOP) manufactured were made from silver chloride, making them very slow and only truly suitable for contact printing in direct light¹⁴. While faster than the previous generation of hand-made silver iodide-based emulsions, they did not perform well enough to practically allow for enlargement using any mechanism due to a still relatively low speed. To make enlargement more practical, new formulae had to be developed that would produce more sensitive, and therefore faster, emulsions. Silver bromide salts were discovered to be far faster, generating a new range of papers that were differentiated from contact paper by the name of ‘Gaslight Paper’¹⁵. Further refinements in formulary increased paper speed over time, and generated yet another type of paper based on silver bromide emulsions, called printing-out-paper (POP). POP paper differed from DOP paper in that it did not require development in order to form an image, however the image would fade if toning was not undertaken.

The next major step in new paper formulary was a combination of silver chloride and silver bromide emulsions, benefiting from the speed of bromide emulsions and the tonal range of chloride emulsions. Later refinements contributed to faster paper speeds, and most contemporary papers use a

¹³ Diane Arbus, *Diane Arbus: Revelations* (New York: Random House, 2003), 271.

¹⁴ William Kinnimond Burton, "Various Manipulations of Contact Printing," in *Practical Guide to Photographic & Photo-mechanical Printing* (London: Marion and, 1887), 10, accessed March 22, 2017, https://archive.org/details/practicalguideto00burt_0.

¹⁵ *Ibid.*, 9

chloro-bromide emulsion. Silver chloride and bromide developing out papers became the industry standard and make up the majority of 20th century silver-gelatin prints found in collections today.

The combination of these sources of technological advancement all played a part in the formation of a rebate on images. Enlargement made way for an active choice to include or remove a rebate, something to which contact printing was less amenable. In the case of contact printing, an image that does not include rebate would have to be cut down after its creation, rather than initially being produced without a rebate, a practice photographers such as Berenice Abbott undertook, and recommended, if it would improve composition¹⁶. The emergence and widespread use of enlargement or gaslight papers fueled the push for better enlargers and new technology, without which it is unlikely that enlargement would have become commonplace. Developments in smaller and smaller cameras and film similarly forced the accelerated development of enlarger technology. As Abbott notes, “enlargement [was] a practical choice for any films smaller than 5" x 7"”¹⁷. The widespread acceptance of 35mm cameras, beginning in force in the United States during the 1930s¹⁸, gave the public, and professionals, the ability to work with smaller devices, create images with equipment that was less cumbersome and obvious, and work more flexibly than was possible with large format cameras.

¹⁶ Berenice Abbott, *A Guide to Better Photography* (New York: Crown Publishers, 1941), 124.

¹⁷ *Ibid.*, 103

¹⁸ *Ibid.*, 140

Information at the Edges

There are a number of recent published sources that discuss the range of useful information that appears in photographer's contact sheets. Contact sheets most often include all film rebate and contain a wealth of imprinted technical data and sometimes hand written descriptive data added later. This information is one of the earliest forms of what is commonly known today as "metadata". Metadata is, in barest terms, information about information, or data about data. The concept of metadata is not particularly old, and has been a part of photography since its inception, however the digital revolution has contributed to a broader understanding of it. In the context of photography, metadata can be grouped into two categories: descriptive and administrative. Descriptive metadata encapsulates elements within the borders of a photograph, such as location and persons represented. These elements can be compiled and used as finding elements for subjects and allow for a broad-to-specific refinement of imaged aspects. Administrative metadata includes elements such as frame numbers, place of creation, or artist numbering systems. These elements do not reveal what is in the frame, but provide sorting and structuring information, allowing for a different form of organization compared with descriptive metadata.

For most contemporary digital photographers, complex schemas such as the International Press Telecommunications Council (IPTC) Information Interchange Model (IIM) or Extensible Metadata Platform (XMP) append image, audio, film, and text data with additional readable fields to include author, subjects, ages, release and copyright status, duration, format, and other fields useful for categorizing and cataloguing information. With analog photography, this is not possible except through attached hard copy or carefully kept records, or physical inscription on the negative itself. Although the MFAH is not a press archive, it still contains some examples of press photographs with information such as captions taped or written on the verso of the image.

Among the collection, the prints made by Eugene Atget (*figure 4*) contain numbers in the bottom right corner, printed backwards due to his inscription method of scratching them into the emulsion. Another interesting observation from looking at Atget's photographs is the presence of a unique form of

rebate, specific to the kinds of holders he used to mount his glass plates in the camera. Small black lines are found in 4 places, entering into the image, showing parts of the negative that were not exposed because they were obscured by the clips holding the plate in place. This, in conjunction with secondary information sources, allows for a greater understanding of the materials Atget employed.

Numbering plates is not only a practice applied by surveyors¹⁹, however. Fine art photographers likewise numbered their rolls or frames and coupled them with contact sheets for easier search and retrieval of information, and better kept records.

Different images can also subtly encode information along the edges of the frame and into the rebate that would otherwise go unnoticed without careful scrutiny. Hasselblad negatives feature a distinctive double-triangle notch on the left side of the frame, an aspect that is reflected throughout their lineup of analog bodies, making identification of negatives made with these cameras very easy (*figure 5 and 6*). Identification goes beyond something as simple as the Hasselblad negative triangle though; while the standards for building cameras are very high, there is still a small



*Figure 4: Pont Marie
Eugene Atget, 1926
Albumen silver print
Object number 51.52*



*Figure 5: Example of Hasselblad triangles, visible to the left side of the frame
Mauricio - 1994, near Nhamatanda, Mozambique
Bobby Neel Adams, 1994
Chromogenic print
Object number 97.265*

¹⁹ Much of what Atget is known for is his investigative surveys of Paris, France, which would later captivate and inspire Berenice Abbott.

margin of error in their manufacturing. As a result, the film plane will vary slightly from one camera to the next, and cause a unique ‘signature’ on images created with it (*figure 7*). Different lenses will not affect the way the edge of the image forms, however cameras that can employ different backs (Hasselblad systems, for example) can possess unique signatures for each camera back, as is true with large-format film and film holders. Taking these elements of identification a step further, it is possible to gather whether multi-generational photographs are made on the same camera.



*Figure 6: Hasselblad triangles visible in the left side of the frame
Ryan and Caleb
Andrew Savery-Whiteway
July 4, 2014*



*Figure 7: Two images from different rolls of film showing the same rebate edges
Courtesy of the author*

Father Byrd Williams I, son Byrd Williams II, and grandson Byrd Williams III, are a familial photographic legacy native to Texas, who all photographed at times with what appears to be the same camera given the frame borders of their images (see *figure 8–10*). Looking at the top right corner of the frames made from this camera reveals a slight diagonal reaching down the frame. Mapping this against other images made by the three Williams photographers reveals the trend is not relegated to just one generation or set of images, nor is it isolated strictly to contact prints or enlargements, as both printing methods have been employed throughout the family legacy. This information lends itself to further understanding the family itself, and their connection to photography—perhaps most specifically to the continued use of cameras dating back to the turn of the 20th century. Also of note is the continued inclusion of a rebate in the Williams’ photographs within the collection. Where it might be expected that the appearance of a rebate would come and go between generations, the inclusion of a rebate exists within the photographs right up until the present member of the family, great grandson Byrd Williams IV, who still uses film, though his



Figure 8: Johnson Williams and Byrd Williams, Jr. at the University of Texas
Byrd Williams I, n.d.
Gelatin silver print
Object number 2005.1469



Figure 9: Hunters with Kill
Byrd Williams II, 1918
Gelatin silver print
Object number 2005.1472



Figure 10: Untitled
Byrd Williams III, n.d.
Gelatin silver print
Object number 2005.1474

camera choice is no longer the (most likely) 616 format of his predecessors, which was discontinued in the 1980s.

Another way of gathering information from a rebate relates to large-format printing. Enlargers made for mural-sized prints are often equipped with glass negative carriers, oriented horizontally to project across a room to achieve a large print size. As a result, the enlarger light covers the entirety of the frame and rebate, resulting in a projection that includes the full rebate and possibly some negative space around the film. While it is possible to overscan film and print it with rebate information, the printing method and paper can help to identify naturally printed mural-sized works that include a rebate. If an image is printed digitally, it is likely that the inclusion of a rebate is intentional, otherwise the rebate would not be included as it takes up superfluous space.

Modernism and the Frame - Pictorialism Through Modernism

As suggested earlier in the literature survey there are innumerable factors to be considered when attempting to discern why and how photographers decided to include photographic rebate and at what point it became a deliberate decision to make the non-image based content in the film negative a considered part of their final prints. Further, in many instances, it is still difficult to determine whether this decision was tied to technological logistics and conveniences involved in darkroom work as opposed to the inclusion of rebate for reasons related to aesthetic, stylistic and/or expressive concerns. Perhaps these are questions that can never be answered definitively, and for reasons related to time and resources these questions cannot be comprehensively addressed here. However, I believe this general summary on the evolution of photographic practice from pictorialism through to modernism will provide important context for the discussion that addresses the work of specific artists who incorporated rebate into their works.

The most recognizable photographic movement to emerge out of the 19th century was pictorialism. The pictorialist style was characterised by prints with soft focus, painterly techniques, and hand-coated papers. In many ways, pictorialist work was thought of as being closer to painting than photography, and drew further inspiration from the graphic arts, factors that troubled many “straight” photographers who directly followed as well as later modernists. The majority of pictorialist prints were created through contact printing, and were made predominantly with salt paper, albumen, cyanotype, and other slow, handmade processes²⁰. Because enlargement was not possible²¹, contact prints would normally include some form of rebate. Relatively few pictorialist prints at the MFAH displayed any sign of rebate, however, instead being evenly coated from edge-to-edge, indicating that the prints had been trimmed after development.

²⁰ Most of the pictorialist processes reacted to UV light, rather than visible light.

²¹ Enlargers were not capable of emitting levels of UV light high enough to generate exposures.

The first major rebuttal against the pictorialist aesthetic and conceptual framework was the straight photography movement, which would contribute to modernism and the documentary aesthetic of the 1930s. Straight photography struck out and away from the pictorialist aesthetic, and was founded on a scientific purpose built on clarity, objectivity, and autonomy²². Modernist photographer Paul Strand in *Photography* describes objectivity in photography as emphasizing the real aspect of the thing in front of the camera, and being faithful to its representation²³. These ideals stood as opposites to the pictorialist trends; rather than obscuring the world in soft and painterly visions, the world would stand sharply out, freed from the “burdens” of painting and subjective representation. At least part of this separation came from the recognition of the camera as a tool for capturing an allegedly objective reality, and its ability to display the world in crisp, clear detail that was less subject to interpreted as being filtered by the maker. Although this level of objectivity was the primary structure of thought surrounding straight photography, it was not lost on all practitioners that a secondary function of the movement was to promote social change through images, effectively ignoring the objective stance by forcing the image-maker and subsequent publisher to use the image for specific and directed purpose²⁴. Still, the idea of objectivity lent itself well to at least a rudimentary communication of the overarching ideals of the movement.

Straight photography advocated for untouched prints, however what constituted an untouched print was a very loose subject. In the eyes of Beaumont Newhall, straight photography was pin-sharp, high-clarity and with images that were as equally unretouched as their negatives²⁵. Photographer Berenice Abbott thought this was too constricting on the medium, and was too focused on the method rather than the meaning or purpose of the photograph. Essentially, it appears that a more convenient way of thinking about what was permissible is to consider an untouched print as one that has not been manipulated with a

²² Joel Eisinger, *Trace and Transformation: American Criticism of Photography in the Modernist Period* (Albuquerque: University of New Mexico Press, 1999), 52, accessed March 29, 2017, <http://web.b.ebscohost.com.ezproxy.lib.ryerson.ca/ehost/detail/detail?sid=9aa65d41-df4b-49c0-80fa-9255b39f34ac%40sessionmgr102&vid=0&hid=101&bdata=JnNpdGU9ZWWhvc3QtGl2ZQ%3d%3d#AN=22730&db=nlebk>.

²³ *Ibid.*, 56

²⁴ *Ibid.*, 56

²⁵ Berenice Abbott, *A Guide to Better Photography* (New York: Crown Publishers, 1941), 158.

brush for the purpose of altering the image. Dodging and burning, and spotting of prints and negatives was acceptable if it did not alter the integrity of the image, and spotting was sometimes advisable in order to give the most focus to the image²⁶. The driving force behind the desire to make things look more photographic was a need to break away from previous influences on photography, such as the graphic arts²⁷. Abbott's aesthetic principles for a good straight photograph required that it be sharp, exposed and developed correctly, made using low-contrast negatives with fine grain, and printed well²⁸. If any of these material aesthetics were missed or ill-performed, then the image in question would not fully fit into the realm of straight photography, and could be thought of as either a bad image, or one that was at risk of returning to previous and undesirable trends. While straight photography did not specifically advocate for the inclusion of a rebate, works in the style that were contact printed would contain a rebate. Enlarged images, however, could not, and were typically printed with clean borders. In the case of contact prints, the rebate could be cut off, as was done with pictorialist works, but this was not always the case, as in seen in the work of Harry Callahan, which is discussed later. What is important to note, however, is that the appearance of a rebate on some straight photography works emphasizes the fact that the camera is a recording tool, not a subjective device, emphasizing the attempt at unfiltered objectivity.

The documentary movement formed and grew out of the ideals of objectivity possessed by the image, blossoming extensively in the 1930s. Driven by the desire to create social change through imagery²⁹, early documentarians observed the change and knitting-together of the American populous that government-funded bodies were creating, such as the Farm Security Administration (FSA). Organizations like the FSA, founded in 1937³⁰, created images that both appeared and were reputed to be unmanipulated³¹, showing the unfiltered strength and perseverance of the American people. Picture magazines such as *Life* only served to further these kinds of evocative images, and photographic essays

²⁶ Berenice Abbott, *New Guide to Better Photography* (New York: Crown Publishers, 1953), 136.

²⁷ Abbott, *A Guide*, 75.

²⁸ *Ibid.*, 54-55.

²⁹ *Ibid.*, 169.

³⁰ Eisinger, *Trace.*, 87

³¹ *Ibid.*, 94

became commonplace in reportage, shaping the way documentary work was produced³². As cameras and film technology became increasingly more portable and easier to use, more people were able to start accessing new versions of photographic practice. The 35mm camera, although first designed in 1913, began to take off during the 1930s, and was termed the ‘miniature camera’³³. Some bodies did not see press-related journalistic work as servicing the most impactful aspects of the social documentary aesthetic, which is when groups like the *Photo League*, founded in 1936³⁴, came to be. Solidifying even more evidence of the camera into the work they produced, members of the *Photo League*, among them Berenice Abbott, sought to balance a technical document with a work of art³⁵. This, they believed, would firmly solidify photography as independent of other arts.

The documentary field allowed for photographers to disseminate their work quickly and widely, but these benefits were soon outweighed as editors began taking ownership of images that were not their own. Editors exerting increasing levels of control over the work of photographers lent less agency to the photographers themselves. Photographers were being told exactly what to shoot, and were expected to comply, further stripping them of their personal choice in subjects and interests. Photographers were unable to dictate how their images were being used, both in a general sense, but also in the way that they were cropped for publication. Documentary photographers began to resent the magazines, feeling they were being treated as little more than low paid skilled labourers³⁶ and receiving no true credit for their work. One group responded to the situation by forming a co-operative that promoted their photographers as visual storytellers who demanded more creative control over the production and publication of their work. This group was called Magnum and its photographers insisted they be allowed to go where they pleased, shoot what they wanted, and dictate how their images were framed, cropped, and used. Magnum was founded in 1947 by 7 members, among which was Henri Cartier-Bresson³⁷, who had discovered and

³² *Ibid.*, 83

³³ *Ibid.*, 79

³⁴ *Ibid.*, 91

³⁵ *Ibid.*

³⁶ *Ibid.*, 138

³⁷ Pierre Assouline, *Henri Cartier-Bresson, A Biography* (London: Thames & Hudson, 2005), 156.

committed to the 35mm camera nearly 25 years earlier. Magnum challenged what had become the norm for agencies, and helped to bring more power to photographers, allowing them to reclaim some, if not all, ownership of their images³⁸.

By the 1950s, straight photography had become the way that photographs were ‘meant’ to be taken, almost entirely supplanting the pictorialist movement save for a handful of stragglers who were thought to be anything but advanced enough participate in the new modern age. Modernism, which evolved essentially in concurrence with straight photography, was another attempt at separating photography from paintings, however sought its solutions in very different ways from straight photography.

Modernism embraced the camera in ways that were thought to be far too extreme by practitioners of straight photography, experimenting with odd camera angles and pushing the limits of realist imagery to the breaking point. As modernism spread from Europe to American soil, it was met with resistance comparable to early pictorialism, and was often thrown out as gimmicky and extreme. Photographers like Harry Callahan, discussed later, worked in and furthered modernism and the Bauhaus movement in America using intrinsically photographic techniques, including multiple exposures and bird- and worms-eye views. But a fascination and interest in showing the recording device was emerging, and would permeate photography regardless of the mainstream’s initial reactions to it.

Since photography was introduced to the public in the 1840’s, the true definition of the medium has always been questioned. Is it art or science? Truthful record or subjective interpretation? Debate has played a role on all sides, being used as a device of alleged truth or scientific documentation, but also of the inherently photographic by emphasizing the physical character of the image, and being capable of permitting and encouraging subjective readings. Over the course of the twentieth century, the photographic object became layered with additional possibilities for presentation, and could freely include or exclude a debate without the need to separate itself from other industries of production and use. The

³⁸ *Ibid.*

Modernist period caused an explosion of possibilities that emphasized the nature of the photograph specifically as an object that could be molded to suit more than simply the purpose of representation of the world or events. It could be used to stylize or satirize without the need for text, and could become a vehicle for breaking down conventional ways of looking at the world in favour of artistic expression.

Examples of Social Documentary & Contact Printing

Early-mid 20th century photographic printing was still struggling in areas with smaller-format film technology. Emulsions and systems had not yet improved enough to warrant publication-quality prints from smaller negatives, and small format cameras were still challenging to use. Many photographers working with the goal of publication or exhibition were still using large format film and cameras, preferring to contact print their images as this would limit the amount of equipment they would need to rely on in their darkrooms, and would produce sharper images than those made by enlargement. Further, because contact printing paper had already been in use for more than two decades, it was much more technically and chemically advanced than enlargement paper, with a broader range.

The artists discussed in this section, Berenice Abbott and Harry Callahan, both employed contact printing to different ends. Abbott used contact printing to capture and document New York, preferring the larger format of 8x10" to capture as much detail of the city as possible, and because it allowed her additional corrective camera movements necessary in architecture. Callahan employed contact printing with the goal of artistic prints that bordered on documentation of his wife, Eleanor and later his daughter, Barbara. Callahan, unlike Abbott, employed medium format as well as large format cameras (4x5) and films in his contact prints creating smaller, more intimate prints drawing the viewer into his own close relationship with his family.

Berenice Abbott (1898–1991)

Berenice Abbott began the Changing New York project after returning to New York following an eight-year period in Europe. While this project was undoubtedly related to Abbot's experience of a changed city upon her return, it was also clear that the influence of French photographer Eugene Atget (1857–1927) played an important role. Abbott had become acquainted with Atget and his work while living in Paris and had acquired his collection of prints and negatives after his death. She would have likely been familiar with Atget's book mock-ups (never published) about Paris, specifically related to the loss of the old city as urban renewal was executed. Abbott sought to create a similar kind of book about New York concentrating on an important moment in the city's history driven by its exponential growth. Given her inclination to use photography in the purest form possible and to rebel against pictorialist trends, it is possible that Abbott's version of her book could have included information centered around the exposure of her images, or the presence of a rebate in them, thereby grounding the publication and images firmly in the realm of the photographic. The prints Abbott made of New York for this project are predominantly contact prints from 8x10" negatives, wherein a rebate is present, and admittedly almost unavoidable unless cut off after printing (a practice that Abbott was not opposed to³⁹). Regarding the prints in this manner adds an additional visual layer to the work. Much of New York at the time was explicitly angular, with the occasional sweeping curve (*figure 11* and *12*). All these forms can be found mirrored in one way or another in the remaining black border around the contact prints. Angles are repeated and reflected, and give a grounding point to areas outside the image itself, implying a continuation of forms across the entire city, particularly when grouped and viewed together. Abbott's framing is clear and concise, and does not play with or employ unnecessary camera movements, but uses them where appropriate to display a sense of scale and power present in the streets and buildings of New York. Her endeavour is further amplified by the scale of her work. While 8x10" is no longer a large print size, considering the fact that the images are contact printed to begin with is a colossal enterprise.

³⁹ Abbott, *New Guide*, 124.

Carrying a large format camera, positioning and using it effectively is no small challenge, and Abbott's repeated successes at using it well are worth considering in terms of her investment in the project.

Looking at the rebate also uncovers further information indicative of her working method. Each negative is numbered neatly and sequentially, its placement consistently beside the film manufacturer's optically imprinted information and notch code. This speaks to her precise approach to her subject, the city, and her reluctance to deviate from this established working method. While nowhere near the visually applied scientific method of later photographers like Bernd and Hilla Becher, Abbott illustrates a commitment to approach New York consistently with the same intentions for every subject: to treat the structures and locations with the same consistent respect and duty to the cause. Her prints likewise reflect this, each printed to the same high level of quality with regards to highlight and shadow detail. Among Abbott's criteria for an aesthetically good photograph are that the negative be sharp,

possess the correct exposure, be well developed, come from a clean negative with low contrast and fine grain, and that the print is well exposed, developed, washed and fixed⁴⁰. All these elements resonate



*Figure 11: Manhattan Bridge, Looking Up
Berenice Abbott, 1936
Gelatin silver print
Object number 87.353*



*Figure 12: Palisade Avenue, No. 2505, Spuyten Duyvil
Berenice Abbott, 1936
Gelatin silver print
Object number 80.109*

⁴⁰ *Ibid.*, 54-55

across the body of *Changing New York*, however this attention to such intricate detail is lost in publication compared with the original contact prints.

The presence of the rebate in the contact prints for the *Changing New York* photographs contracts the frame inward, making the viewer more conscious of the technology. The rebate showcases the technology, making it a difficult aspect to ignore. The presence of the rebate serves to suggest more beyond the frame. That the city is so much larger than one, two, or three images, and that if you can look just past the small black line, a whole other world is waiting, filled with so many similarities and differences to what is immediately visible. To view the work in print or cropped forms, as in the exhibition prints with square borders and often enlarged, gives a sense of finality to the images, causing them to stand as individual beats of the city rather than in rhythm with previous and future forms. The effect of photography as a divider of time is emphasized when the images have their borders cropped, each photograph standing closer to a brief and fleeting instant. The presence of the rebate promises continuation, as well as adds a consistency to each frame and cohesiveness to the whole. The repeated form of the rebate is an element that can be focused on and looked for across the images, providing a subtle narrative of rigid process to the overarching theme of change in the work.

Comparing these contact prints with the works reproduced in the book, *Changing New York* and its later publication, *New York in the Thirties* reveals a stark difference between the subject matter. The images in the book are presented with clean, squared off borders, leaving negative space around them. The images maintain their 1:1.25 aspect ratio from the original film, including the maximum amount of image area possible while removing the rebate borders, but in doing so change the tone and lend a sense of finality. Because Abbott did not have extensive involvement, short of making the photographs, in the initial printing of *Changing New York*, it is difficult, if not impossible, to say whether she would have included a rebate in her original version of the publication. It is likely, however, that she would have maintained the conventional trend at the time and removed the rebate, keeping the borders sharp and clean.

Harry Callahan (1912–1999)

Heavily influenced by The New Vision movement in photography that grew out of the principles of the Bauhaus in the 1920's, Harry Callahan's work incorporated abstraction and design all while maintaining a strong photographic character. He experimented with multiple exposure, distortion, high-contrast printing to bring out only select forms, and often challenged accepted rules and norms of photographic composition⁴¹. The presence of the rebate in Callahan's work is sometimes immediately apparent, at other times only hinted at, and still others entirely non-existent. When the rebate is present, as in *Eleanor, Detroit*,

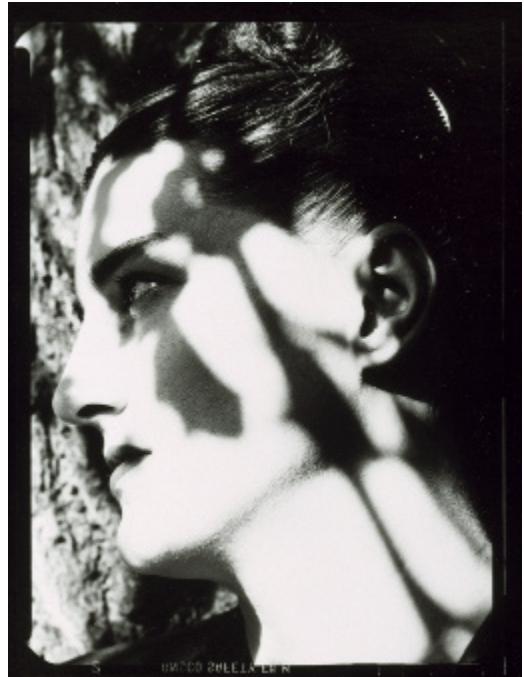


Figure 13: *Eleanor, Detroit*
Harry Callahan, 1941
Gelatin silver print
Object number 91.1297

1941 (figure 13), it is all but impossible to ignore. Eleanor's face, much of which is over exposed and printed with strongly defined contrast, looks out of the frame, the strongest details of her face coming from shadows presumably cast by the leaves of the tree she leans on. Around the edges of the frame, the film's own border is clearly marked, save for the areas of deepest shadow toward the top right corner and along the right edge, where the image bleeds into the rebate. In all other areas, however, evidence of the film itself is present. Corners are strangely shaped, the result of the film carrier that held the film during exposure. Along the bottom edge, printed in reverse, reads 2 ANSCO SAFETY FILM, irrefutable evidence of the materials used to capture the frame. Almost entirely hidden is also a set of square notches at the bottom right of the image, further evidence of filmic materiality. The image is small in size, 11.4 x 8.3 cm, and the printing of it is indicative that it was contact printed, rather

⁴¹ *Eleanor, Chicago*, from 1953, depicts his wife standing in front of a pole, said pole appearing to grow directly out of the top of her head

than enlarged. Looking at the overall sheet, all areas around the frame are entirely black, further emphasizing the use of contact printing for reproduction. An image of the same subject, simply titled

Eleanor from 1947 uses this same method of contact printing. Here, however, the bulk of Eleanor's skin is printed very lightly, though with detail still present. The edges of the frame float and point to the blackness of the background, the full frame clearly visible. The deepest blacks in the image reflect the background on which they sit, both elements mirroring each other.



Figure 14: *Eleanor*
Harry Callahan, 1947
Gelatin silver print
Object number 2002.750

Among perhaps the most obvious forms of rebate to appear in Callahan's work is *Highland Park, Michigan*, 1941-42 (figure 15). Here, three frames float in blackness, stacked vertically. The subject of the photographs is of a group of people ascending a staircase, though the details of these people are impossible to distinguish due to their distance from the camera. It is similarly difficult to determine how far apart in time each frame is; though they first appear to be simply consecutive shots, though closer inspection reveals that the subjects may in fact be entirely different people from one photograph to the next, with changes present in more than just their locations on the staircase. Callahan here has disarmed our ability to judge time within photography, challenging this perception of the medium. The borders of the images show clear evidence of film notches as well as the imprinted manufacturer information—in this case, *ANSCO SAFETY FILM* once more makes an appearance, contributing to a better understanding of the materials Callahan was comfortable using. The hooked edges of these frames and the frame sizes are also reminiscent of both *Eleanor, Detroit* and *Eleanor* mentioned above, indicating that Callahan was using a camera that at least produced similar edge artefacts, if not the same camera system. These images are, again, likely contact printed due to their size (the size of each frame is essentially identical to the images mentioned above),

and the presence of a rebate. The presence of the rebate in these three separate photographs links them by more than just subject matter. The full frame allows the viewer to carefully look at where elements of the photographs fall on the edges of the frames, and indicate that the camera did not move during the sequence. Knowing this, it is possible to extrapolate that the three images were taken on the same day, and grants us the knowledge that Callahan used a tripod to create the sequence.

Callahan's contact printed images contain subtle links between each other when looking at a rebate. While these frames were not intended to serve the purposes of social document ary, as Berenice Abbott's images were meant to do, they do carry an air of documentary related specifically to Callahan. In terms of the subject matter, they illustrate an ability to photograph in multiple styles and employ different printing styles to great effect. The rebates, however, show that Callahan had a strong set of familiar tools that he employed.



*Figure 15: Highland Park: Michigan
Harry Callahan, 1941-42
Gelatin silver print
Object number 2015.520*

Rebate as Fact

Truth in photography has been a long-contested topic, often within the context of journalism, but questions of authenticity have also plagued other areas of photographic recording. Propaganda⁴² and even history⁴³ have fallen victim to questions of authenticity and been revealed to be forgeries of one form or another. The appearance of a rebate on a photograph, however, can speak to a different kind of validation—the absence of cropping. Cropping is typically used by photographers to remove superfluous information or to enhance the formal qualities of the image, acting as a reframing device after the image has been captured. However, cropping has been more commonly employed as a visual editing tool for photographs that appear in print. Magazine and newspaper photo-editors, book designers, and others in the publication industry often crop a photograph to make it fit into a layout, emphasize a particular element (most often a person) and/or eliminate information that is considered extraneous.

A lack of cropping can denote that the intentions of the photographer are not to direct the viewer's attention to a single point in the image, but instead to give them the freedom to explore the entirety of the frame, regardless of where the action or main focal point is. On one level, this places a trust in the viewer to be able to read the image effectively and to understand what the purpose is without direction, while on another it treats the viewer as one who is already capable of doing the aforementioned. For photojournalists, displaying the full frame can serve as a sense of proof not of authenticity of the event but that what is within the frame is a record of everything the photographer saw in that moment. As a result, this validates the photographer's place within the event they are recording, and shows that, while the document is not capable of standing for an entirely assured sense of authenticity, it does give indication of the photographer's place in it as a whole. While printing the rebate is a method that has been adapted by photojournalists to indicate that their photograph is uncropped, to some degree it also serves to

⁴² Stanger, Melissa. "6 People Who Were Literally Erased From History." Business Insider. February 04, 2014. Accessed June 14, 2017. <http://www.businessinsider.com/people-who-were-erased-from-history-2013-12>.

⁴³ Abumrad, Jad, and Erroll Morris. "Truth and Cannonballs." *RadioLab* (audio blog), 2013. Accessed April 24, 2017. <http://www.radiolab.org/story/308563-truth-cannonballs/>.

pronounce the photographer's skill and accuracy with the camera in the moment, suggesting that cropping is rendered entirely unnecessary, and would detract from the image itself.

Henri Cartier-Bresson, who coined the term "the decisive moment", falls into the category of one who does not need to crop his images because of his skill with a camera. Further, Cartier-Bresson was vocal on how the purpose of the snapshot was disrupted by cropping. Danny Lyon uses the borders of the frame to demonstrate that the images he records are exactly as he sees them, placing the viewer, to a degree, in his shoes. His photographic essays, often published and displayed as photo diaries of his experiences, are captured while he is immersed within the lives of his subjects. Most photographic books that feature Callahan's work, in part or as a monograph, do not include the rebate unless it represents an integral part of the image, for example, if 4 images are contact printed on a single sheet for artistic effect, such as *Plate 69* found in *Harry Callahan: Eleanor*. The majority of the published work reflects this, and the images are instead cropped to the actual image borders. In cases where rebate is found in publications, it predominantly follows the path of the aforementioned example, with a succession of images intended to be viewed either in sequence (for linearly-structured sequences) or compared (in the case of images printed in the structure of a contact sheet).

Henri Cartier-Bresson (1908–2004)

The images of Henri Cartier-Bresson evoke a strong sense of place and time as his intention in capturing a specific, and decisive, moment comes across clearly in his images of moving subjects. However, there also exists a strong sense of place and time in his imagery of still subjects. *Seville, Spain* (1933) (figure 16)



Figure 16: *Seville, Spain*
Henri Cartier-Bresson, 1933
Gelatin silver print
Object number 91.477

depicts a scene of children at play, viewed through a hole in a wall. Without knowing the date, it would be easy to assume that the image was taken during the Spanish Civil War, though that would not begin for another 3 years. The resulting image is haunting in the way that it appears to hint at future events, children at play in an area of war-torn destruction. Cartier-Bresson has created a frame within a frame, one purely physical and necessary, the other built on a conceptual framework. Both frames come together to display a kind of proof of being at the event, the frame of the wall echoes a looking glass, and though Cartier-Bresson is undeniably present, he appears invisible to his subjects. The frame created by the rebate not only serves as a formal visual element in the image but also encourages the viewer to be aware of the photographic material and the mechanical device used for capture and reproduction. When hung in a gallery, and displayed with the rebate exposed, we are confronted with yet another frame that surrounds the print itself.

Conversely, looking at an earlier photograph, *Hyères, France* (figure 17) from 1932, Cartier-Bresson uses the rebate as a framing device reminiscent of one image many think of when they consider the overarching concept of the decisive moment. *Hyères, France* depicts this moment almost perfectly, a temporary moment containing both a sense of stillness and that of motion, emphasized by a naturally occurring blur. The motion, reminiscent of early Lartigue images of racing cars with ovaloid wheels,

contains a sense of urgency within the stillness of the streets. Whether this image is a staged version of an event is unimportant. Of course, Cartier-Bresson could have asked the cyclist to pedal by stairs and railings multiple times in order that he achieve the perfect shot, however even if this is the truth behind the image (unknowable without access to contact sheets and film strips), there is still an undeniable element of chance that the ideal frame has been



*Figure 17: Hyères, France
Henri Cartier-Bresson, 1932
Gelatin silver print
Object number 2014.930*

caught. In this case, the rebate stands as a form of proof that Cartier-Bresson has created the internal architecture of the image within the confines of the filmic frame. The sweeping lines of the street are at odds with the harsh angles of the stairs, almost aggressive in their abrupt lines. A dialogue between organic and manufactured forms is present here, the cyclist himself playing into this dialogue further through his own organic lines. A bicycle is not an inherently beautiful object, however looking at the shapes it forms in motion against the cobblestone streets and bricks makes it beautiful, rendering it as completed shapes and forms, the curved edge of the road only hinting at a possibility of a continuation. With an image so filled with organic elements, the iron staircase plays further into the rebate. The rebate is a deep black, the outside composed of hard lines, the inside an imperfect representation of its outside edge. The staircase is another version of this, straight lines on some sides, organic curves on others. *Hyères, France* is not a photograph about truth in an image, nor is it geared toward reportage, an area that many of Cartier-Bresson's photographs can occupy. It is an image what is now widely considered to be street photography, but also of chance, and the rebate is a container around that element of chance. The debate of whether or not the moment of chance in the image is manufactured is another discussion entirely; what is important in this context is that said chance is framed and printed in such a way as to give testament to the skill of the man behind the camera.

The work of Cartier-Bresson can be found in numerous publications before and after the foundation of Magnum in 1947⁴⁴, however it is most often cropped and/or presented without rebate present. In *Life*, for example, his photographs are presented in the conventional format that the magazine was known for—photographs printed with full bleed to the edge of the paper, or arranged with sharp borders and captions below. In one rare occurrence, an issue of *Look*, a competitor of *Life*, from 1967 ran a photographic essay by Cartier-Bresson on Japan. The images included in the essay all included the 35mm rebate border⁴⁵, possibly indicating that Cartier-Bresson was intent on taking full ownership, or that he had stipulated that for his images to be included, that they had to remain full frame.

⁴⁴ Pierre Assouline, *Henri Cartier-Bresson, A Biography* (London: Thames & Hudson, 2005), 156.

⁴⁵ "Henri Cartier Bresson - Japan - Look 1967," Slightly Out of Focus, section goes here, accessed June 13, 2017, http://www.slightly-out-of-focus.com/HCB_Look_Japan.html.

Danny Lyon (1942–)

Looking at Lyon's images, both in published form and as exhibition prints, immediately reveals a rebate. The bulk of his work, particularly early work, is produced on 35mm, and in his contemporary writing he frequently mentions the Leica M4 and M6 he carries and uses⁴⁶. As a result, Lyon places immediate focus on the fact that these images are photographs, and that his aim with them is to show his experience, exactly as he saw it. Built alongside this proof of materials and proof of experience, there is a proof of presence at the event, a proof of occurrence, and a proof of his own personal skill as a photographer working directly in the moment, oftentimes very closely to his subjects. Lyon makes no excuses or attempts at disarming the viewer through clever framing, multiple exposure, or distinctly photographic techniques. With his eye and his reactions, he distills the intentions naturally present within the camera system—that of a recording device—and amplifies them as much as possible.

When Lyon's images of violence, activism and public unrest surface, and especially when they include his captions and thoughts on the events, the viewer is encouraged to participate in Lyon's own experience of witnessing these events. This



Figure 18: Albany, Georgia, 1962, Eddie Brown, Former Gang Leader and Movement Activist, is Arrested

*Danny Lyon, 1962
Gelatin Silver Print
Object number 99.390*



Figure 19: Atlanta, Georgia, Winter 1963-64, High School Student Taylor Washington is Arrested at Lebs Delicatessen. His Eighth Arrest.

*Danny Lyon, 1963
Gelatin silver print
Object number 2001.711*

⁴⁶ Danny Lyon, *Deep Sea Diver: An American Photographer's Journey in Shanxi, China* (London: Phaidon, 2011), 120.

presentation strategy makes it difficult to question the authenticity of Lyon's photographs, firmly grounding them in time and place and though his perspective is a personal one, it maintains an aura of factual truth.

The information encoded by the rebate brings a series of unintentional assumptions to many of Lyon's images. It is apparent that he appreciates fast film, and he is recorded as using Kodak Tri-X in a number of the pieces he has written⁴⁷. His choice of materials allows him to be better prepared to get the shot that he wants in low-light conditions, but still maintain the level of detail imperative for the 11x14



*Figure 20: Crossing the Ohio, Louisville
Danny Lyon, 1979
Gelatin silver print
Object number 84.815.10*

and larger exhibition enlargements he makes. When an image is printed without a black border, there is an automatic assumption that the image is cropped, that the important information does not extend to the edges of the frame and that there is only one point of interest—what we see as viewers. In some of Lyon's images the subject matter is blurred because the events within the frame are unfolding incredibly rapidly. The rebate substantiates that the entire event is contained, unfiltered and within this bounding box; Lyon was in the thick of things in order to capture this specific and fleeting shot. When considered alongside his choice of manual focus rangefinder cameras, an even greater sense of Lyon's skill with the camera surfaces. On the other side, Lyon's images with tack-sharp focus are suddenly revealed to be near-meditative when held against the fast pace of his action shots. Viewed together, the differences mark two methods of shooting that Lyon employs, but treats similarly: that of the responsive photographer, and that of the considerate worker undistracted by anything but what is in his viewfinder. In both cases, the rebate contains these moments, providing evidence of being both present and fast enough to work in situations most would struggle with, but also of demonstrating that he is not limited to this method of

⁴⁷ Danny Lyon and Elisabeth Sussman, *The Seventh Dog* (Berlin: Phaidon, 2014), 12, 118, 189.

photographing. In the former, his reactions are fast and sound enough to absorb and record the action taking place, understanding what is important to make an impact on his audience. In the latter, evidence shows that the entire frame is considered and used to create the final image. A lack of a rebate suggests otherwise—that he needs to crop in to focus the eye of the viewer, that the entirety of his scene is less important than the defined subject.

The Frame as an Expressive Tool

As has been previously discussed, the border of an image can serve many purposes for garnering information and displaying elements of proof, but it can also act as an indicator of a photographer's oeuvre or signatory mark. The final three photographers discussed each bring a recognizable trait in diverse ways: Diane Arbus displays an evolving method of working and printing, changing over time and rooted in three main periods. Richard Avedon displays examples of the cultivation of a visual signature that is still recognized and respected today, becoming a heavyweight in the realm of portraiture and fashion photography over his lifetime. Bill Burke employs a radically different kind of film that comes equipped with its own unique and specific visual signature seldom seen in photography, but capable of shifting and softening the reading of his images.

Active utilization of the frame can generate an instant recognition from audiences, provide waypoints on a map through a photographer's career, or cause a viewer to stop and consider the area outside a frame. Intentional use of rebate to alter or modify the image may be something cultivated over the course of a photographer's career, or it may manifest as a direct result of materials used in a series.

Diane Arbus (1923–1971)

Looking at the early work of Arbus makes it abundantly clear that she was cropping her images heavily. The undated *Untitled* (figure 21), features a cross-dresser in a dressing room, staring vacantly out at something out of frame. The grain is highly pronounced, indicating that Arbus was making use of high-speed, coarse grain film, and that this is a portion of a negative that has been enlarged. The image features hard borders along the edges, part of the subject's elbow is cut off and the legs are cut by the printed border making the image feel directed, though only in the sense that the most important section was selected after capture. There is a physical sense of distance in the image; a photograph of a marginalized member of society taken from far away.

There is no threat in the image, no haunting presence and connection with the subject. They are completely disengaged from both the photographer and the viewer.

By comparison, *Child with a toy hand grenade*, Central Park, N.Y.C., 1962 (figure 22) shows an immediate connection with the subject—the child's strained expression and direct eye contact reaching out to the viewer, his disheveled clothing and physical stress evoking an initial response of affection and the need to comfort him, but as the eye travels across the image, the hand grenade, toy or not, carries with it a direct threat. The image changes with this realization. The child no

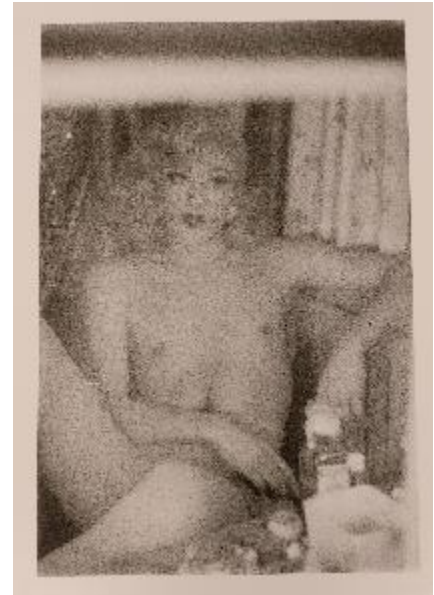


Figure 21: *Untitled*
Diane Arbus, n.d.
Gelatin silver print
Object number 99.604



Figure 22: *Child with a toy hand grenade*, Central Park, N.Y.C.
Diane Arbus, 1962
Gelatin silver print
Object number 2002.573

longer needs safety, he becomes someone to be cautious of, a threat across time, still affecting viewers more than 50 years after the photograph's moment of capture. This image has no borders on it, nothing to contain the stress and anxiety within. The distortion provided by the lens and tension generated by the proximity of the boy's foot to the bottom edge of the frame makes it feel almost as if he can step through the frame, through time, and have the threat become real in front of the viewer. This image carries with it a strong sense of how Arbus' work would evolve, intentionally confronting the viewer, but later with a layer of insulation between the viewer and the image generated by a black or soft border that contains the image. It should be noted that the final print of *Child with a toy hand grenade, Central Park, N.Y.C.* is not the only photograph she made of the boy. The contact sheet for the roll of film, reproduced in *Revelations*, reveals there to be 11 total photographs of the boy, behaving just as a child would—making faces, playing around with Arbus and the camera, and striking generic poses. The playfulness of the boy is sustained until frame eight, wherein Arbus' chosen image reveals itself, then returns to an additional three frames of him playing once more. This may prompt additional readings of the image, readings that could suggest that Arbus was actively searching for a sense of stress and anxiety in people that appeared normal, or that she might have understood that the outward projections of ourselves are not always our truest versions. Whatever the reason, Arbus actively chose frame eight with the knowledge that it would elicit the most emotional reaction from audiences and printed it in a manner that served to emphasize the inherent harshness.

The sharp edges on *Child with a toy hand grenade* were achieved in the darkroom by using an adjustable easel in the darkroom to cut off the outermost borders of the image, leaving only clean lines. This method of printing has long been employed, and is the way in which most images are encountered to this day. This print marks the first step Arbus took to print the entire negative and distance herself from cropping.

The Junior Interstate Ballroom Dance

Champions, Yonkers, N.Y. from 1963 (figure 23)

illustrates the first change, beginning around 1962⁴⁸, in Arbus' printing style following her move to 2 ¼ cameras and film. The image of two children, posed with a trophy at their feet, in a way that echoes the dance they performed to win the championship, look out toward the viewer, their awkwardness mixed with a sort of grace children may gain when performing adult tasks. As with

Child with a toy hand grenade, they are placed in the center of the frame, but afforded more distance from the

viewer, granting the first layer of safety. The title and their pose are indicative of a refined practice, from a different time perhaps. Again, this adds a layer of safety. They pose no direct threat to the viewer or the world around them. It can be thought that they have a life ahead of them filled with high social graces. A higher level of dignity is afforded them than the child in Central Park strictly because they do not directly challenge us. Further, their slightly awkward gaits play into this, embodying their own innocence. A final layer of protection for us is the black border on three sides, the right side lost in a natural fuzz of the edge of the negative carrier, possibly due to an alignment error, but also perhaps to allow a more direct access point into the frame. This print marks a change in Arbus' printing styles to include the edge of the negative frame, the container within which the image is realized. Looking at the edges, there is a sense of containment that comes out. In order for the subjects to fully enter our world, they would first have to cross a physical distance, next lose their childlike innocence, and finally break through a nearly completely solid border. So much protection is afforded the viewer that the image has no option but to sit in an entirely different realm than the previously mentioned images. We can see everything that Arbus



*Figure 23: Junior Interstate Ballroom Dance
Champions, Yonkers, N.Y.
Diane Arbus, 1963
Gelatin silver print
Object number 2002.572*

⁴⁸ Arbus, *Revelations*, 270.

has presented us, and the security of knowing that what is around the children grants us a layer of assurance that there is nothing hiding in the shadows, no lurking threats or hidden anomalies. The borders on *Junior Interstate Ballroom Dance Champions* would have been achieved through filing out the negative carrier so as to expose more of the image area, and, by extension, the surrounding rebate. This practice displays a shift in Arbus' post-production methodology that tends more toward actively showing that the image is uncropped, and that the framing and presentation was considered during both exposure and printing.

Young Girl at a Nudist Camp, PA, (figure 24)

hints at the future method of printing Arbus employed, which began in earnest in around 1969⁴⁹. The borders here have become slightly jagged in places, though soft in others. A black line still remains along some edges, however it is far more irregular than the one found in *Interstate Ballroom Champions*. Though the image is printed in 1965, 6 years before Arbus started actively and consciously printing with overall soft borders, it maintains a sense of that quality. The interaction between hard edges on some sides and soft edges of



Figure 24: *Young Girl at a Nudist Camp, PA*
Diane Arbus, 1965
Gelatin silver print
Object number 2012.503

others create a dialogue between reality and a dream-like version of it. The young girl is proportioned and standing in a similar manner to Botticelli's ca. 1486 *The Birth of Venus*, however here, the girl stands open, her shoulders apart, freely exposed to Arbus and, by extension, the viewer. The only slight hint of tension within the image itself is manifested in the girl's left middle finger, slightly extended and showing the second knuckle. The harder right and bottom borders act as grounding points in the image, creating a feeling of subtle weight to the image as a whole. The soft borders along the top and left contrast this by

⁴⁹ *Ibid.*, 271.

generating an ethereal quality, a sense of freedom and openness mirrored by the girl. While the negative carrier is still clearly filed out, the soft right-hand side of the image is likely a result of the image not being entirely centered in the carrier. The softness on this edge is present because the carrier, with its slightly uneven edge, is diffusing the light and lowering the immediate sharpness. It is possible that printing ‘errors’ such as this were a contributing factor leading to Arbus’ use of soft borders.

The final phase of Arbus’ printing styles is seen in *Albino sword swallower at a carnival, Md.* from 1970 (figure 25) a year after Arbus began printing with soft, irregular borders. In this image, a woman, her head leaned back and arms outstretched, has two swords coming out of her throat; an act as dangerous and old, if not older, than carnivals themselves. Carnivals are the embodiment of a bygone era now, and are thus looked upon with an air of nostalgia. They once offered an opportunity for the public to freely view strange and extreme acts, or so-called freaks with deformities, numerous tattoos, or other non-standard features. The



Figure 25: *Albino sword swallower at a carnival, Md.*
Diane Arbus, 1970
Printed later by Neil Selkirk
Gelatin silver print
Object number 2015.213

rebate here further emphasizes the dreamlike quality of the affair, soft edges bleeding out into the paper like a fading dream. A sense of darkness inherent in the atmosphere of a carnival still remains, however, the sword swallower glowing against the wash of the heavy, dark tent behind her, a slight encroachment of darkness from a vignette at the top corners of the image, bleeding slightly into the frame. These aspects coupled with the soft borders lend a sense of a dream on the verge of turning nightmarish. Many of Arbus’ later works hint at this subtlety and menace, and when the same printing methods are applied to her earlier works by Neil Selkirk, who became her printer in 1971 after her death⁵⁰, a dialogue between

⁵⁰ Arbus, *Revelations*, 269.

dream and darkness is often struck. The soft border effect was achieved, according to Neil Selkirk in *Diane Arbus: Revelations* by using a cardboard mask beneath the lens of the enlarger. This mask, held above the photographic paper, would have caught the edges of the light and diffused it, leading to a softer edge, but still allowing the use of Arbus' previously filed out carriers.

While Arbus' initial prints are similar in technique to her contemporaries and precursors, the clear evolution of her style is what makes her work technically fascinating. Her shifting style, and apparent reluctance to go back on her printing decisions, shows that she was conscious of how others were printing, and illustrates a desire to distance herself from other photographers.

Looking at the variety of printing styles that Arbus has employed provides a strong argument for how the edges of a frame can affect the reading of an image. When this is accompanied by the knowledge that Arbus willingly displayed her images with the edges of the frame visible, it emphasizes her desire to make the viewer realize that though the image was just an image, the entirety of her vision is vital when considering the subject. Contemporary monographs of Arbus' work have respected her printing methods, leaving a visible rebate in the majority of published versions of her works, including the Aperture monograph, first published in 1972, now in its 40th edition.

Richard Avedon (1923–2004)

Richard Avedon's work with a rebate has been a near constant in his practice, spanning the bulk of his artistic career, and at times entering his fashion work as well. Most photographers acquire a visual style throughout their careers, Avedon's manifesting most prominently as stark white backgrounds and heavy black borders around his images. *The Duke and Duchess of Windsor*, 1957, (figure 26) is a small (17.8 x 17.6 cm), square image depicting Prince Edward, who abdicated the English throne to marry Wallis Simpson, an American socialite. A great deal has been written



Figure 26: *The Duke and Duchess of Windsor*
Richard Avedon, 1957
Gelatin silver print
Object number 85.216

about the implications of both the photograph, and about the couple themselves, so, to summarize, the couple, used to having their photograph taken, have been disarmed in this image by Avedon, after he has told them a story about a dog being killed on his way to the photography shoot⁵¹. The image itself is surrounded by a soft and slightly distorted border, most likely from refraction from the negative carrier. The Duke and Duchess' pained expressions look out at the viewer, the strained and imperfect representation of them mirrored in the rebate around the image. This use of an imperfect bounding box effectively extends cracks in their veneer seen in his creased brow and her creased neck, and though the innermost lines are solid and controlled, the outer edges disintegrate and form rough approximations of the full frame.

⁵¹ Anderson, Katja. "Katja Anderson on Richard Avedon's 'Observations'." The Photobook Club. April 28, 2011. Accessed June 13, 2017. <https://photobookclub.org/2011/04/28/katja-anderson-on-richard-avedon-observations/>.

The scale of Avedon's later work, especially prominent in the late 1970s through to the 1990s, is also important to mention, considering especially that his printed fine art images are mammoth in scale, depicting people in a literal larger than life mode. *Francis Bacon*, 1979, is a double portrait of artist Francis Bacon against Avedon's blank white background. The double portrait, taken with large format film and



Figure 27: *Francis Bacon*
Richard Avedon, 1979
Gelatin silver print
Object number 81.114

oriented in a diptych of vertical frames, cuts off part of Bacon's face in the rightmost image. While this division would present a jarring and, generally considered, poor photograph in conventional photographic terms, by pairing it with a second image the composition feels balanced. The total white space on each side approximates the other, and the black and white space between the frames appears to almost blend seamlessly together, creating a single image out of two different ones. The scale of the print is extremely large, measuring 104.8 x 163.2 cm, making Bacon larger than life size, adding a sense of power and a definitive presence to his person. The use of a rebate can be thought of, in this case as well as with many of Avedon's mural photographs such as the *Andy Warhol and Members of the Factory*, 30 October, 1969, as a device for showing that framing of his subjects is entirely intentional and not a mistake, however it goes deeper than this assumption. Throughout his career, Avedon has broken the rules of framing, and has done so by employing a rebate in his work. This continuous motif has encouraged the viewer to be comfortable with breaks in single pieces, and caused the images to be viewed almost as different beats in a continuous narrative about his subjects. Repeated use of a white background provides an anchor that carries through his work, giving us a narrative string that allows for yet another way to instantly recognize an Avedon photograph.

Avedon's *In the American West* series from 1985 demonstrates a full commitment to large scale printing, and can be thought of as a tool for distancing his artistic work from his work in publication. The

printed page and magazine limited the scale of his work, and the gallery wall allowed him to present his works at a scale that was similar to other museum artworks such as large painted canvases. The rebate in these artistic productions is a tool that further compounds the lack of a page, framing the image as a carefully constructed work of art and intention.

Avedon's photographs when originally exhibited were framed in such a way as to directly reveal the rebate. Most often, his work appeared mounted and floating off the wall, with later custom built acrylic boxes to better protect the work, but still reveal the entire sheet of photographic paper. While simultaneously displaying the rebate, this also attests to the skill of his printers, denying any assumptions that the images are printed on multiple sheets and later sandwiched closely together. Printing images at this scale and at such high levels of detail and regard for subtle variations in tone and density is a seriously challenging task. Displaying the results of tens of hours of work on a single image, and understanding the level of dodging and burning required for a photograph of such large dimensions makes it apparent how invested in the work Avedon and his printers were, and how reluctant they were to settle for a print that was sub-par. Avedon's skill and thoughtfulness with the image and the end product becomes apparent when all these elements are considered, and the establishment of a visual signature on his images makes them stand out to audiences across the world.

Early published versions of Avedon's photographs did not include a rebate, leaving a more traditional hard square or rectangle to border the photographs, as is seen in the book *Observations* from 1959. In layouts created by famed designer Alexey Brodovitch the images are presented on the page in full bleed, or arranged in a staggered manner with text. Variations on this approach are used in his next two books but by the time the, "Ricard Avedon: Portraits" book was released in 1972 the photographs all included the rebate which by then became his signature and was not only consistently employed in future books but also began to appear in the editorial magazine work.

Bill Burke (1943–)

Of all the photographers considered in this paper, Bill Burke is likely the least well-known. Burke's work could be considered within the realm of documentary, but only with the acknowledgement that it is as much about the photographer's own life experience as it is about the world he represents. Further, the materials Burke employs are, more often than not, departures from traditional documentary-for-publication tools—although he does use a 35mm camera, he regularly photographs with Polaroid positive/negative film.

Burke's frequent choice of using positive/negative film adds a greater sense of authenticity to much of his work and reveals much about his practice. Positive/negative film produces both a positive print as well as, after proper processing to clear the negative properly in preparation for printing, a usable black and white negative. The most well-known positive/negative film is Type 55, which was only available in 4x5" format, but others in smaller formats such as Type 655⁵² and Type 105⁵³ was also produced. The appearance of both positive/negative film images and 35mm images in many of Burke's published works demonstrates that he brought 2 cameras with him on his trips. The nature of positive/negative film also presents the possibility that he gave, or had the option to give, the positive black and white instant print to the subjects he was photographing, presenting an immediate bartering system that he could use. In some cases, this may have given him a greater chance of allowing him to photograph some individuals as they would see an immediate return.

What makes this type of film immediately recognizable is the rebate, which is entirely unique in the realm of both Polaroid film, and sheet film as a whole. Positive/negative films, after processing, can leave signs of chemical residue



Figure 28: Magnified view of Military Hospital, Phnom Penh showing Type 55 border

⁵² Smile Photo. "Polaroid Film." Advertisement. *Popular Photography*, August 1989.

⁵³ "Option-al Landlist." The Option-al Landlist — Packfilm - 100/660 Series Film. Accessed July 18, 2017. <https://www.instantoptions.com/landlist/films/packfilm/660.php>.

around the edges, sometimes visible as lines of darker development. Because of the chemical packets in positive/negative film, the borders around each print and negative are slightly different. As the film is pulled through the rollers on the Polaroid pack, the chemical packet ruptures, distributing developing agents across the surface of the film. The rupturing and dispersion of the chemistry across the film generates unique patterns on each frame shot.



Figure 29: Military Hospital, Phnom Penh
 Bill Burke, 1995
 Gelatin silver print
 Object number 96.1831

Additionally, there is typically, along one edge, an inconsistent or choppy line of varying shades of black, grey, and white, from the initial break of the integrated chemical pack for developing the film (*figure 28*), or streaking from the initial chemicals. Interestingly, Burke's use of both positive/negative film and continued use of a rebate has been compared with nostalgic memories of 19th century photography and ethnographic studies, particularly in relation to his work in Cambodia⁵⁴.

This form of rebate gives a very different feeling to the images Burke produces. *Military Hospital, Phnom Penh* from 1995 depicts a young man standing beside a staircase, 3 fingers missing from his right hand and his left arm amputated at just below the elbow. At first glance, his now disfigured state is not immediately apparent, and the softened edges around the frame lend an almost dream-like quality to the image. The young man looks unfazed by his injuries, and is presumably well into the healing process. The subject's stoic resolve and self-assurance, at once at odds with his youthful age, are further modified by the gentle chemical patterns surrounding the frame. This leads to a timeless feeling in the image reminiscent of many 19th century photographs and a sense of unreality. Burke captures and displays the

⁵⁴ Andrey Baskakov, *Contemporary Photographers*, ed. Martin Marix. Evans and Amanda Hopkinson, 3rd ed. (New York: St. James Press, 1995), 150.

horrors and results of war in a borderline confrontational 16 x 20" size, but gives an air of hope and assurance that what the viewer sees is of no threat to them, existing far away.

Family at a Spring, (figure 30) in stark contrast with *Military Hospital, Phnom Penh*, depicts two children and their mother in front of a spring and pool of water somewhere in a forest. A heavier border surrounds this image than the previous, but it still comes from the use of positive/negative film. The border indicates that either Burke used an earlier formulation of Type 655 or possibly its predecessor, Type 105, which possessed harder borders. Given the date of the photograph, it may be that Burke was using the older variant of the film, perhaps exhausting older stocks.



Figure 30: Family at a Spring
Bill Burke, 1976
Gelatin silver print
Object number 2002.3261

The people in the photograph all present different looks—the youngest child presents a blank slate, absorbing the world as it comes. The older child, his brow cast in a light frown, stares at Burke, and out of the image, with a critical curiosity, his hands raised in a near shrugging gesture, as though questioning what the purpose of the photograph is. The mother, her hair in curlers, maintains an expression of hesitation, but attempted openness, the possibility of a smile muddled by apprehension. In the context of this image, it is a nice thought that the print could have been given to the family, a small memento from an average day by which to remember a trip. The dreamlike quality does not exist in this print, save for the strong sepia tone it possesses. The borders, hard and undeniably present, box in the subjects as though they already exist within a picture frame, giving the illusion of a glint of light off the outside edges.

These two prints provide sound examples of much of the work found in the books Burke has published. In *Mine Fields*, images of awkward poses and locales in Cambodia are interspersed with

images signifying or the result of conflict. As with Lyon's publications, mentioned earlier, Burke produces logs of his journey, the text at times relating to images, but more often than not existing as a separate dialog, alienated. Nearly every image contains a rebate, further amplifying the diary-esque nature of his project, handwritten captions and page numbers further adding to the aesthetic. The rebate for Burke gives a sense of the presence of himself within the pages and works, and gives space for the subjects in his photographs, supplying a sense of protection from the world. This protection is sometimes used out of respect for his subjects' strife, though elsewhere it manifests as a distancing tool for us as observers, there to help prevent us from becoming overwhelmed at how different and comparatively unfair other places can be.

Conclusion

Part of the goal of this thesis has been to shed light on an area of photographic materiality that has received little previous acknowledgement, often hidden behind mats in galleries and cropped out by photo editors in publications. To think it an unimportant aspect of the photographic object is misinformed because there is a variety of information that can be gained through consideration of the rebate in an artistic and historical context. Whether artists have employed the rebate consciously, due to human error, or as a result of unavoidable technological limitations, the fact that a rebate is visible around the edges of an image is noteworthy.

Rebate can give hard information about photographer's working methods, and about the materials they employ. Being versed in understanding the implications of a photographer's materials allows for a greater understanding of the photographer him- or herself, and provides valuable dating information. This information, used by researchers, historians, and archivists, can aid in gaining further and more exact identification of photographs found in the innumerable collections around the globe. As society becomes increasingly aware of the nuances of materiality in physical photographs, visualization of the full object, can help with their own understanding of photographs and photographic practice. The edge of a photograph that appears unconventional can provide an opportunity for questions and discussion that would not have otherwise been possible had the edges been covered with a matt.

When it comes to the deliberate inclusion of rebate in prints created for exhibition by fine art photographers, the question of whether to show the rebate has often been left up to curators to decide. With regards to some artists, such as Avedon and Arbus, the rebate is almost always shown, the early days of their own photographic careers paving the way for how their work should be exhibited in future. But other photographers are a different matter. Living artists can provide feedback on how they want their work displayed, but displaying the work of deceased artists forces curators to make judgment calls. In this context, it is important to decide whether the rebate adds anything visually to the work, or if it will fit into the entirety of the exhibition. If not, or if it is deemed to be unflattering overall, then it is usually hidden

by a matt, and the only people who get to see this revealing area around the frame are researchers and members of museum staff. Is the rebate important to a viewing audience though? Decisions to include or exclude a rebate in prints have waxed and waned over the years, coming in and out of style. As a result, this means that the rebate gives a different feeling to works in which it is included, forming a better picture of the times in which the image was made. The way audiences look at images also has a part to play in including or hiding the rebate. Giving them this additional piece of information, most often as a third bounding box, surrounded by a matt and a frame, further holds the image with an additional layer of tension. Ultimately, I believe the rebate is important to at least actively consider including, regardless of the period of the print. As well as reinforcing the image as a representation, it also reveals something of what went into its making, and extends the photographer beyond the immediate image area.

The topic of rebate is by no means exhausted, and there are other areas that are connected to it that require further investigation. There are likely links between early examples and forms of rebate existing on 19th century prints that relate to mechanical printing processes such as aquatint and etching. By investigating these areas and how much of a bleed over there is into purely photographic processes, links can be drawn to show how much, if at all, the graphic arts influenced a rebate aesthetic in early and later works. Similarly, digital technologies have allowed, and at times encouraged, the insertion of a rebate in born digital objects, with the example of Instagram immediately coming to mind. The reasons for this likely relates to nostalgia, however a deeper investigation is necessary to identify the intended purpose of the effect, whether for artistic use, aesthetic, or other reasons. In the context of born digital objects, it is also important to identify whether a rebate is appearing in artistic works intended for gallery display, and what goal this is intended to serve. Digital technologies also allow for a rebate to be inserted into an image that has already been cropped, artificially simulating a full frame image. If this practice is in effect, the prevalence of it in the context of art photography should be addressed and identified. Manipulation of this sort may find roots in, again, nostalgia or aesthetic, or possibly even in pure misinformation. Investigating these additional areas of photographic rebate can further contribute to an understanding of this area of photography, and advance the conversation deeper into the 20th century.

The photographic rebate has long been a silent part of photography, and is more prevalent within collections than I initially anticipated. By taking steps to better analyse the information it is capable of supplying, understanding of photography can be further expanded, and another tool can be used in conjunction with those that are already in place to broaden discussions on photographic production and reception.

Appendix A – Photographer Biographies

Berenice Abbott

It is likely to think that when, in 1921, Berenice Abbott ran away from New York to Paris, she never thought of returning⁵⁵. Abbott was certainly not a trained photographer at the time, but the eight years she spent in Europe would turn her into one of the most prolific female photographers of the 20th century, although much of that fame would only truly surface after her death. In Paris, Abbott trained with Man Ray before opening her own portrait studio, where she photographed literary, theatrical, and musical icons, as well as Paris' socialites and creative bohemians. Abbott's time in Paris was spent predominantly on portraits, though she did encounter the photographer Eugene Atget, falling in love with his take on the Parisian streets and architecture. She saw in his work something that spoke to and connected with the city she inhabited. Upon learning of Atget's death, Abbott acquired some 1,500 prints and over 8,000 negatives of his, and made it her purpose to promote the life and work of Atget. Abbott returned to New York in 1929 for a visit, and recognized a distinct change in the city she had abandoned nearly a decade previously. New York was now full of life and constant change, there was a sense of perpetual motion in the city that encouraged her to want to take it on as her new photographic subject. Upon returning to Paris, Abbott sold and traded all her possessions, keeping the barest of materials for her journey—Atget's archive, her photographic equipment, and bare necessities⁵⁶. Abbott's return showed her that the city had undergone more than just visual change. Abbott's reputation was little known compared with the following she had built in Paris, and the American perspective she encountered was like nothing she had experienced in Europe⁵⁷. Further, Abbott struggled to make ends meet, advertising by word of mouth as she had done (successfully) in Paris, and quadrupling her prices, thereby making her one of the most

⁵⁵ Hank O'Neal and Berenice Abbott, *Berenice Abbott: American Photographer* (New York: McGraw-Hill, 1982), 9.

⁵⁶ *Ibid.*, 13.

⁵⁷ *Ibid.*, 14

expensive portraitists in New York⁵⁸. Work was resultantly slow, and she was left with little money to put toward exploring New York and working on her portrait of the city.

Early into her return, Abbott recognized that in order to capture the city in the detail she wished, and presumably in a way to mirror the size and scale the city possessed, she would need to use cameras larger than what she had been using for portraiture, and purchased a Century Universal 8x10 camera⁵⁹. This change in format would later play a part in her insistence that photographers should first learn to use large-format cameras before graduating to medium format and, smaller still, 35mm formats, which she saw as incredibly challenging forms of the medium⁶⁰. To secure funding for the project, Abbott approached a number of sources, including applying for a Guggenheim Fellowship and directly applying to the Metropolitan Museum (both in 1931), and the New-York Historical Society (1932), citing the importance of recording this ever-evolving great American city.⁶¹ All of these applications, as well as approaches directly to benefactors of the Museum of Modern Art and the Museum of the City of New York, were rejected, with reasons ranging from insufficient funds to general disinterest in the project. Abbott finally found successful funding with the Federal Arts Project (FAP) in 1935 after sending an application in February and receiving a reply in September.⁶² With secured funding, Abbott was able to devote herself to the project full-time, and received two researchers and an assistant to expedite different areas of the work. In 1938, the FAP expressed interest in publishing a book of *Changing New York*, however at some expense on Abbott's behalf—she would not receive royalties from the publication, nor would she be involved in the layout and production of the book⁶³. Discouraged but not resigned, Abbott persevered and the book saw publication in 1939 with captions penned by critic and friend Elizabeth McCausland. The 1939 publication effectively ended Abbott's tenure at the FAP, as after completion of *Changing New York* she lost her staff, was demoted twice, and her applications for other projects were

⁵⁸ *Ibid*

⁵⁹ *Ibid.*, 15

⁶⁰ Abbott, *A Guide*, 12.

⁶¹ O'Neal, *Berenice Abbott*, 16

⁶² *Ibid.*, 17-18

⁶³ *Ibid.*, 18

repeatedly declined. Abbott resigned from the FAP in 1939 upset at the way the organisation had changed and seemingly turned against her, though satisfied to leave the *Changing New York* project behind her, completed to an extent⁶⁴. *Changing New York* was republished in 1973 in the same form as the 1939 publication, though under the title *New York in the Thirties*.

Abbott undertook many projects later in her life, including an attempt to document U.S. Route 51 in a road trip with Elizabeth McCausland, and working for the Massachusetts Institute of Technology photographically illustrating scientific concepts for textbooks on a government contract that came as a result of the Russian launch of Sputnik⁶⁵. Abbott died in Maine in 1991 at 93.

Harry Callahan

American photographer Harry Callahan is well known for his early experiments with multiple exposure photography, for his street photography, and for his extensive body of work on his wife, Eleanor, and daughter, Barbara. Callahan, born in 1922, began photographing in 1938⁶⁶. He joined the Photographic Guild of Detroit, and gradually improved his photography. In the 1950s, Callahan taught at Chicago's Institute of Design⁶⁷, and his photographic work continued to both gather attention and receive praise, including a part in the 1955 *Family of Man* exhibition organized by Edward Steichen, a proud supporter of Callahan's work⁶⁸. In 1961, Callahan went on to chair and create the photography department at the Rhode Island School of Art and Design in Providence, establishing first the Bachelors of Fine Arts degree programme and in 1963 the Masters of Fine Arts degree programme⁶⁹. Callahan's early work was made with primarily black and white film, however he later moved on to using colour film as well in his work. Across the many different kinds of work that Callahan has produced, there is a

⁶⁴ *Ibid.*, 19

⁶⁵ Andrey Baskakov, *Contemporary Photographers*, ed. Martin Marix. Evans and Amanda Hopkinson, 3rd ed. (New York: St. James Press, 1995), 5.

⁶⁶ Harry Callahan, Julian Cox, and Emmet Gowin, *Harry Callahan: Eleanor* (Göttingen, Germany: High Museum of Art/Steidl, 2008), 18.

⁶⁷ *Ibid.*, 25.

⁶⁸ *Ibid.*, 30.

⁶⁹ "Harry Callahan." Fondation Henri Cartier-Bresson. Accessed May 17, 2017.

<http://www.henricartierbresson.org/en/expositions/harry-callahan-2/>; "A Department In Motion: A Brief History of Photography at RISD." RISD Photo. Accessed May 17, 2017. <http://www.photo.risd.edu/new-page/>.

sense of connection to his subjects, whether those passing by on streets or in the numerous photographs of his wife and daughter. Callahan's dismissal of many of the rules of photography adds a sense of playfulness to the images he has made over the years, and though it can be argued that some of these dismissals are due to a lack of formal training, there exists a sense of brutal intention to them as well. Callahan's images come coupled with a deep respect for the world around him, as well as his subjects. In the post-war period when Callahan found employment at the AIC, a haven for the Bauhaus movement, his lack of formal training likely aided him in producing works unburdened by the history of photography, giving him latitude to experiment and create more freely. Callahan's contributions in 20th century photography come from the students that followed him, and in his works, ranging from portraiture to nudes to architectural and street photography.

Henri Cartier-Bresson

Henri Cartier-Bresson was born to a wealthy family in Chanteloup, France, on August 22nd, 1908. At 19, he went to Lhote Academy to study painting, a passion that set him apart from his father, who had hoped he would pursue business⁷⁰. Cartier-Bresson found that the academy did not suit his interests after 2 years of study, and left⁷¹, traveling to West Africa to gain worldly experience and attempt a broad range of jobs, eventually settling upon hunting⁷². During his spare time there, he took photographs using a camera with a lens cap as the shutter, however at this point photography was still little more than a hobby to him. Cartier-Bresson returned to France in 1930, and bought his first Leica in 1931, an action that was likely influenced in part by his realization that "photography can fix a moment in eternity"⁷³. Early on, Cartier-Bresson was printing and developing his own work, a practice he did not particularly enjoy, however after meeting Pierre Gassman, he ceased the post-production of his work. Engaging Gassman, who would later go on to direct his own highly successful photo lab, the only

⁷⁰ Pierre Assouline, *Henri Cartier-Bresson, A Biography* (London: Thames & Hudson, 2005), 26.

⁷¹ *Ibid.*, 31.

⁷² *Ibid.*, 45.

⁷³ *Ibid.*, 61.

stipulation he maintained was that the prints were not cropped during enlargement (bar a couple of odd cases), as this would cause the impact of the snapshot to be lost, even if there were defects in the negative as a whole⁷⁴. In 1947, Cartier-Bresson, along with 7 other photographers including Robert Capa, official formed and registered Magnum Photos, a collective that sought to return the powers of ownership to photographers⁷⁵. One of the most important principles of Magnum that was ingrained in every photographer part of the organization was that a photograph had to answer 5 questions—where, when, why, who, and what⁷⁶. Even before officially becoming a part of Magnum, it is clear to see that Cartier-Bresson followed these tenets in his own work, and both his artistic and photojournalistic work throughout the prior and future years abided by these terms. In 1970, Cartier-Bresson abandoned photography to return to his life-long passion, drawing⁷⁷. While it may seem odd that he chose to pursue photography over drawing for so long, looking at his work reveals that he had highly geometric inclinations, and his insisted inclusion of a rebate in his work provided a structuralist frame that echoes drawing in many ways, a series of lines of varying weights that are present in almost all his photographs providing a rigid structure for their inner content.

Danny Lyon

Danny Lyon has repeatedly undertaken projects that have put him at the centre of human rights and segregation issues, or placed him into the world of the outsider—whether that be from a focus on biker gangs of the 1960s⁷⁸ or multiple trips to Shanxi, China, trying to find evidence of a life undisturbed by modern technology. Lyon’s work is as close to experiential documentary as many of us will ever come, his images intertwined with personal descriptive text that is both raw and human, with no attempt made at beautification of his experiences, sometimes written in the first person, other times hidden behind

⁷⁴ *Ibid.*, 76.

⁷⁵ *Ibid.*, 156.

⁷⁶ *Ibid.*, 159.

⁷⁷ *Ibid.*, 221.

⁷⁸ Baskakov, *Contemporary Photographers*, 683.

a pseudonym⁷⁹. This approach builds into Lyon's focus on truth above all else in documentary, that a lived experience is more valuable than facts and figures used to conventionally describe events, reminiscent in many ways of the reporting style of Hunter S. Thompson. In order to further push this sense of immersion of both author and reader, Lyon's images are built in ways to amplify the experience and validate his presence at the events he covers. Although Lyon has a preference for distributing his work in print, he has had numerous shows at institutions including the Art Institute of Chicago, the Philadelphia Museum of Art, and the Art Gallery of Ontario⁸⁰. Lyon has also been involved in films by other artists, including Robert Frank's *Me and My Brother*⁸¹, and his own independent motion-picture works⁸². Lyon is still active today.

Diane Arbus

Diane Arbus, born Nemerov, is one of the most prolific female photographers of the 20th century. Born in 1923, Arbus' photographic career began with her husband, Allan Arbus, working in fashion photography. Arbus' role, initially, was to ensure that the clothing of the models was properly pinned, later disappearing into the background to photograph with a 35mm camera while Allan took the main photographs with an 8x10 view camera⁸³. In 1956, they ended their photographic partnership⁸⁴, and Arbus struck out on a more personal solo career. Arbus' early work was made on 35mm film, and exercised extensive cropping into parts of the image that she found the most interesting⁸⁵. Her film choice was primarily high-speed and coarse grain, emphasizing the filmic quality of her work⁸⁶. Coupled with high levels of cropping, Arbus' early work delved deeply into the uniquely photographic aspects that have separated the medium from other graphic-arts practices, though she avoided more dramatic modernist

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*, 682.

⁸¹ *Ibid.*

⁸² Danny Lyon, "Films," Bleak Beauty Blog, April 23, 2017, section goes here, accessed June 15, 2017, <https://dektol.wordpress.com/films/>.

⁸³ Arthur Lubow, *Diane Arbus: Portrait of a Photographer* (New York, NY: Ecco, an Imprint of HarperCollins Publishers, 2016), 3.

⁸⁴ Arbus, *Revelations*, 139.

⁸⁵ *Ibid.*, 52.

⁸⁶ *Ibid.*, 59.

forms of expression, such as distortion. Arbus started shooting 2¼ film on a Rolleiflex in 1962, later switching to a Mamiyaflex⁸⁷, making the switch completely by 1963 and using exclusively medium format film⁸⁸. Medium format cameras, with waist-level viewfinders, changed the interacting with her subject, and brought her practice farther from Cartier-Bresson's definitive "decisive moment".

Along with a change in formats, Arbus' approach to photography changed. She ceased cropping extensively in order to get closer to her subjects, choosing instead to physically get closer to them when making the pictures. She began using flash in conjunction with natural light, balancing the two so that she could achieve correct exposure of the slow 50 ISO Agfa film that she was using⁸⁹. All of Arbus' technique and technological choices are results of her shifting approach to photography, and to her subjects. Arbus had a propensity for photographing what is considered to be the 'Other', outlying members of society, the disabled, or those who lead double-gender lives. Arbus realized that images and photographs of people within these spheres could easily be fetishized, and so tried to photograph them as people, rather than objects as interest. Although the first photographs that come to mind when considering Arbus are typically ones that do depict outliers, she also photographed those who were not outliers, both children and adults alike. In all her photographs, Arbus aimed to capture what was hidden beneath the surface but realized a photograph natively presents a superficial surface⁹⁰.

Arbus' method of printing, her practice carried on by contemporary printer Neil Selkirk employing the same tools that Arbus herself used, attempted to place as much distance between the image and possible manipulation as possible. According to Selkirk in *Revelations*, Arbus' method of printing involved little to no dodging and burning, with all contrast controls employed by specific developer ratios. By employing control in this manner, rather than dodging and burning, the images appear more truthful in a sense. A lack of either obvious or subtle manipulation subconsciously allows us a higher level of belief as viewers, a stronger acceptance of what we see in the image itself. The intensification of

⁸⁷ *Ibid.*, 59

⁸⁸ *Ibid.*, 270.

⁸⁹ *Ibid.*, 275

⁹⁰ Lublow, *Diane Arbus*, 4.

this sense of truth, however, contradicts much of Arbus' personal thought on what the image should do. In order to counteract this intense sense of truth, a rebate around the image literally and figuratively frames the image. This serves to transform the perception of the image, which in turn causes the viewer to become conscious of the fact that the image is a 2-dimensional representation of a physical 3-dimensional thing, and not a window onto the subject⁹¹. For Arbus, the subject of the image is the most important aspect of the image, more so than the picture itself⁹².

Richard Avedon

Richard Avedon, born in 1923, initially began his photographic career as an ID badge photographer for the Marines. Upon returning home, he began working for *Harper's Bazaar*, then only 21⁹³. Avedon quickly became known for his work, rapidly emerging as a rising star in the world of fashion photography, making images primarily in outdoor environments. Avedon later moved his practice indoors to a plain studio, and began focusing more firmly on portraiture. As his fame and recognition grew, his client base moved to the rich and famous—figures from politics, film and music stars, and others of high social ranking⁹⁴. Avedon cultivated a signature of his own, between the stark white background and frame empty of anything but the subject, and the filmic border included in his art prints which would later begin to encroach on his work for publications⁹⁵. Avedon's status as a highly talented photographer is also supplemented with his drive to break through the shells of those in positions of power and to capture an aspect that makes them human⁹⁶. His most controversial book, *Nothing Personal* from 1974 was comprised of unflattering portraits of famous people, showing his ruthlessness for achieving his goals, regardless of others' opinions. In the 1980s, Avedon produced *In the American West*,

⁹¹ Arbus, *Revelations*, 60.

⁹² *Ibid.*, 50.

⁹³ Andrey Baskakov, *Contemporary Photographers*, ed. Martin Marix. Evans and Amanda Hopkinson, 3rd ed. (New York: St. James Press, 1995), 37.

⁹⁴ *Ibid.*

⁹⁵ "Richard Avedon Biography." Hamiltons. Accessed June 13, 2017.
<http://www.hamiltonsgallery.com/artists/richard-avedon/biography/>.

⁹⁶ Baskakov, *Contemporary Photographers*, 37.

a body of work that firmly established his blank backgrounds, full frame printing, and massive scale. In 1992 Avedon became the first staff photographer for *The New Yorker*. Avedon died in 2004 and his work is now overseen by the Avedon Foundation in New York.

Bill Burke

Bill Burke, born in 1943, has both a BFA and MFA from the Rhode Island School of Art and Design, and attended during Harry Callahan's time there as photography chair⁹⁷. Following graduation, and up to the present day, he has taught at the School of the Museum of Fine Arts in Boston, MA, and spent a large amount of the 1980s photographing and traveling through Indochina, specifically Cambodia⁹⁸. There, Burke created what could be called responsive photographs to the people and places he encountered, and eventually published a book, *Mine Fields* of his trips. *Mine Fields* focuses heavily on the Khmer Rouge, a Communist group best known for orchestrating and carrying out the Cambodian genocide from 1975-79. Within the book, Burke both documents his own life and disintegrating marriage, as well as Cambodia and the Khmer Rouge, creating a patchwork diary of his life in the 1980s at home and abroad. Images that are captioned, often of places or soldiers, are presented in a matter-of-fact manner, emotion removed, while photographs of people who have lost limbs in the genocide are present with no text. Others of Burke's travelogue-style books take on similar structures, composited from scraps and clippings, handwritten captions on some photographs. The storytelling dynamic he employs through this method of presentation lends a sense of authenticity, and where captions are lacking implies a natural loss of words; there are some facets of war that are too challenging to condense into a short description. Burke also employs more conventional methods of production for some of his other books, such as *Portraits*.

⁹⁷ "Bill Burke." International Center of Photography. March 02, 2016. Accessed May 18, 2017. <https://www.icp.org/browse/archive/constituents/bill-burke?all%2Fall%2Fall%2Fall%2F0>.

⁹⁸ *Ibid*.

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