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A Theoretical Construct for Interpreting Photographs Terry Barrett

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A theoretical construct of a category system for interpreting photographs is presented as a means to add specific considerations about the unique medium of photography to existing instructional art criticism formats, and to current research in art criticism questioning strategies. Past categorizations of photographs are critiqued and a new category system is offered which asks viewers to consider photographs as if they were analogous to various types of language statements: descriptive, explanatory, interpretive, ethically evaluative, aesthetically evaluative, and theoretical.

In the 1930's, about 100 years after the birth of the fixed photographic image, general educators, in the spirit of progressive education, began promoting photography in the classroom as a more effective means of teaching art (e.g., Kent, 1935; Lester, 1938). A few years later and in the decades following, art educators also began promoting photography in art education literature but as a new expressive medium, through a variety of "how to do it" articles (e.g., Cooper, 1939; Grubert, 1944; Cowley, 1953). Lowenfeld (1957), in his third edition of *Creative and Mental Growth*, offered an extensive, outlined curriculum for adolescents with several suggestions for examining and making photographs (pp. 303-322). In 1966 a clear and explicit national call was made "for art educators to support the recognition of photography as an art form or 'medium' for artistic expression" (Lanier, 1966, p. 85); and in 1978 Chapman devoted a chapter to Photography, Film, and Television (pp. 264-284) giving it equal status to her chapters on traditional art media.

What are lacking in these policy statements and recommended practices are theoretical constructs for teaching about photography within art education. Photography, a new and unique medium is simply subsumed under practices common to older media. In art criticism formats especially (Chapman, 1978; Feldman, 1981; Johansen, 1982; Mittler, 1982; Broudy, 1983; Lankford, 1984), no particular considerations are given to the unique characteristics of photography requiring special considerations for photographs. Although photographs share pictorial conventions with paintings, prints, and drawings (Goodman, 1976; Gombrich, 1980; Snyder, 1980), photographs are significantly different from other two dimensional pictures (Arnheim, 1974; Barrett, 1980; Barthes, 1981). The medium of photography provides a tremendous diversity of pictures, some of which are made as art and some of which are not. Many of the photographs not made as art are eventually displayed in art museums, art books, and classrooms. If these non art photographs are merely conflated with other aesthetic objects, their contributions to knowledge and values are lost.

What follows, after a critique of old categorizations of photographs, is a new category system which is a theoretical construct designed to engage viewers in interpretive thought and critical argument about photographs without conflating all photographs into art photographs.

This category system adds specificity to common art criticism formats (Chapman, 1978; Feldman, 1981; Broudy, 1983) by raising issues appropriate to photographs in the realm of aesthetic discourse and appreciation. As a heuristic matrix of questions, the new category system adds specific photographic content for questioning strategies in art criticism (Taunton, 1983; Hamblen, 1984). The categories are applicable to all photographs, from

naive family snapshots to sophisticated art, scientific evidence, and photographic propaganda. The new category system reinforces that photographs, despite their aura of objective, mechanical, neutral authority, are expressions made by individuals which ought to be interpreted and evaluated before they are accepted.

Old Categories

At the birth of the fixed photographic image, Arago (1839) proclaimed that the invention would further both science and art, and today this implicit categorization of photographs as artistic or scientific remains. Another time honored and explicit by-partite distinction further divided art photographs into "Purist" and "Pictorialist" groups (Ward, 1970). Photographers guided by Pictorialist criteria saw photography as a means to making art, holding that any means to this end were legitimate, and that finished photographs ought be judged by the same criteria as other pictorial art. These criteria allowed photographs to be hand touched, brushed, multiply exposed, and pastiched. Purist criteria disallowed such handwork, stressing fidelity to a claimed uniqueness and intrinsic character of the medium of photography which would result in "pure photographs rather than "pseudo-paintings." The labels of "Purist" and "Pictorialist" have evolved into "straight" and "manipulated," respectively, when used to refer to recent photographs. The major problem with such a division is that these labels tend to reinforce the notion that a photograph can be "unmanipulated." Although some photographs may not rely on brushwork or montage techniques, all photographs are highly selected images which radically transform the reality from which they emerge. All photographs manipulate, some overtly, others subtly. Not to be cognizant of this when looking at photographs is to misunderstand photography and aspects of the world which are photographed.

In the 1950's Minor White, the prominent photographer and influential teacher of photography, and some others, developed an approach to photography criticism they called "Reading" (Barrett, 1975). Part of Reading was placing photographs into one of four categories: documentary, pictorial, informational, and equivalent. "Documentary" photographs were described as those which attempted pure recording, placed content above all, and took the viewer to some place or time. The "pictorial" photograph was identified as one through which the photographer stressed his or her way of seeing, rather than giving stress to the subject of the picture. The "informational" photograph was said to explain, report, and instruct the mind and was the result of applied or scientific photography. Examples included aerial photographs, photomicrographs, and architectural photographs. White took the term "equivalent" from the photographer Alfred Steiglitz, but gave it a capital E and used the term honorifically across the other categories: "Any photograph is an Equivalent, regardless of whether a pictorialist, scientist or reporter made it, that somehow transcends its original purposes" (White Chappell, 1957, p. 164).

Beaumont Newhall, in his 1964 edition of *The history of photography*, (pp. 196-197) identified four stylistic trends, similar to White's four categories, which Newhall claims have dominated European and American photography since 1910: straight photography, the formalistic, documentary, and the equivalent. Newhall typified the "formalistic" style as a means of isolating and organizing form for its own sake by the action of light and chemicals, but without the use of cameras. Such pictures are usually called "photograms," are without concern for subject, and are highly influenced by abstract

painting. Subject is paramount in "documentary," which is "essentially a desire to communicate, . . . to record without intrusion, to inform honestly, accurately, and above all, convincingly" (p. 197). "Equivalent" photographs use identifiable subject matter, but only as a starting point for metaphorical images which are charged with emotional significance and personal meaning.

Newhall's four stylistic trends are superior to White's four groups which collapse into two, namely the traditional groups of scientific and artistic. White's "informational" and "documentary" are too similar to mark distinguishing characteristics and collapse into a scientific category. "Pictorial" remains as a category for art photographs, but the distinguishing characteristic of "pictorial" photographs, according to White, is their stress on the photographer's way of seeing as opposed to "documentary" photographs' "pure recording." This distinction is misleading to interpretation efforts because it reinforces the naive view of objective photography, or photographs free from the world view of the photographer who made them. Newhall's use of "equivalent" to identify metaphorical photographs is more descriptive than White's use of "Equivalent" which is totally subjective, arbitrary, and honorific. It is difficult to identify the differences between Newhall's "equivalents" and his "formalistic" photographs. Further, it would be conceptually more accurate to see all photographs as more or less metaphorical in that a photograph always shows us x as y, and attempts to have us see x as y. In a strong sense of metaphor, most photographs show us the subject as something; they show us a man as a laborer, a bureaucrat, or as a father, and attempt to persuade us to see him as such (Goodman, 1976). All photographs at least show us the subject, usually at an instant of time in a parcel of space from a specific point of view. Finally, all photographs are not so much "straight" as they are "manipulated," sometimes greatly and overtly, and sometimes less noticeably, but always importantly.

A popular way to divide photographs is by subject matter. The Time-Life (1970) comprehensive series of books on photography includes a volume on *The Great Themes*, for example, and presents photographs in categories of "the human condition," "still life," "portraits," "the nude," "nature," and "war." Division by subject matters such as "landscape" or "portrait" might be useful to a slide librarian, but it is a division by the obvious and offers little challenge to the viewer to consider aspects of meaning regarding a photograph. Rather, it gives the viewer a false sense of security through naming, and minimizes the important differences between the cutting commentaries of portraits by Diane Arbus and Richard Avedon and the flattering, conventionally glamorized portraits made by commercial studio photographers.

John Szarkowski (1981), the curator of photography at the Museum of Modern Art, recently established a new bi-partite division of photographs that is meant to improve the older "straight" and "manipulated" division. His division is by "mirrors" and "windows." In the late seventies he mounted a major traveling exhibition, "Mirrors and Windows," with an accompanying explanatory catalogue (1981). His metaphor of mirrors and windows is the basis of a model which utilizes a continuum with two poles. He would have us ask of any photograph: "is it a mirror, reflecting a portrait of the artist who made it, or a window, through which one might better know the world?" (p. 25). In a shift which is strange in light of the history of aesthetic theory, he aligns mirrors with the romantic tradition, and windows with the realist tradition. Mirrors are associated with self-expression, and windows are associated with exploration of the physical world.

Windows imply an acceptance of fact, objective structure, and the logic of process, and present the photographer as a disinterested chance witness. Mirrors imply autoanalysis or autobiographic content and suggest that the photographer is the photograph's ultimate subject. Mirrors are romantically self-expressive photographs which exhibit concern for formal coherence more than a desire for description, are generally made from a close vantage point for abstract simplicity and to reduce information, with favored subject matter of virgin landscapes, pure geometry, unidentifiable nudes, and social abstractions such as the young. Windows are realistic explorations which are more concerned with description than suggestion, which attempt to explain more and dramatize less, and which usually deal with subject matter that is specific to a particular time and space, and can usually be dated by internal, iconic evidence (1981, pp. 18-19).

Despite his claim that his distinction is based on a continuum rather than a dichotomy, Szarkowski uses the continuum as a hard bi-partite division. It can be seen as having the weakness which he claims the straight-manipulated division has, namely, that it "is based on a principle of mutual exclusivity only dividing the whole of photography into two parts and thus exhausting itself" (p. 22).

A New Category System

The new category system which follows is based on an analogy of visual images and verbal statements. It is posited that it is interpretively beneficial to see photographs as if they were analogous to descriptive, interpretive, explanatory, ethically evaluative, aesthetically evaluative, and theoretical statements in language. These six categories are logically discreet and conceptually distinct, but photographs will often overlap them. Every photograph, for example, is descriptive, but many photographs are descriptive and evaluative. Similarly, evaluative photographs usually contain explanatory information, and many are aesthetically pleasing. To reasonably place a photograph in one or more of the categories, one has to think interpretively about the photograph, how it is being used, and offer reasons in support of category placements. This overlapping category system presupposes that photographs are more than mere things, natural or man made, in the world: a photograph of a table is more than a table, it is a photograph of a table and, in some sense to be discovered, about a table (Danto, 1981). The categories challenge the viewer to seek what the photograph is about and how it is about what it is about. The category system assumes that photographs are mental as well as physical and that photographs without interpretations are null, moot, or void. The six proposed categories are explained below.

Descriptions. All photographs may be said to describe the surface of objects in greater or lesser detail and clarity, within the constraints of various cameras, lenses, films, and other technical variables, and within the constraints chosen by the photographer. Some photographs, however, are not meant to be more than descriptions. Paradigm cases of descriptive photographs are identification photographs, medical x-rays, photomicrographs, NASA space exploration photographs, and photographic reproductions of artworks. These photographs are analogous to statements of fact in verbal language, are visual recordings of empirical qualities and quantities, and are meant to be interpretively and evaluatively neutral. Their makers attempt no more than accurate recordings of objects and events onto photographic surfaces.

Whether descriptions can be interpretively and evaluatively neutral is an important question. The dicta that facts are theory bound, and that there are no facts without theory, are well taken, and viewers ought to consider how theoretical assumptions impinge on descriptive photographs. The point is that

never the less, some photographs are meant to be descriptive only.

Explanations. Although many descriptive photographs are made to be used as the basis of future explanations, some photographs are expressly made to explain, or are made to function as visual explanations. Often they are descriptive answers to questions which seek explanations.

Edweard Muybridge's Animal Locomotion (1887) photographs are paradigm examples of photographic explanations. Less well known are the photographs of Etienne Jules Marey, a French physiologist also specializing in the study of locomotion. In 1883 he invented a camera which took on one plate a series of pictures of men in various activities. His resulting pictures were linear graphs of the motion of arms and legs, trajectory paths, and oscillation patterns of movements. Marey's (1895) intent was clearly to explain: "With the assistance of the graphic method, we determined to introduce accuracy into these studies, but it was chiefly by means of chronophotography that we arrived at a scientific interpretation of the various bodily movements" (p. 127). His and Muybridge's studies led to more sophisticated time-motion studies in relation to efficient human industrial labor. Marey's photographs and diagrams are also claimed to be the visual springboard for Duchamp's celebrated paintings of a Nude Descending A Staircase (1911-12) and other art of the Italian Futurists at the turn of the century (Scharf, 1974).

Contemporarily, physicist Harold Edgerton has photographically examined the characteristics of bullets in flight and other fast moving objects with his invented stroboscopic equipment and techniques. Social scientists who are engaged in what they are now calling "visual anthropology" and "visual sociology" are also increasingly using photography as a research tool in investigating society photographically (Becker, 1981). Such investigations include Margaret Mead and Gregory Bateson's monumental study, *Balinese Character* (1942) for which they made over 25,000 photographs as well as movies, and more recent work by others of Arkansas prison life, the travels of migrant fruit pickers, a comparison of a family-run restaurant with a McDonald's, and the urban assimilation of American Indians (Becker, 1981). Most press photographs would also fall into this category, as would the work of some photographer artists who do "street work" and "documentary" photographs.

Individuals making photographic explanations attempt objectivity in explaining how things are. To use Szarkowski's observation, many of these photographs deal with subject matter that is specific to a particular time and place, and can usually be dated by internal, iconic evidence (1981, p. 23). The photographs are falsifiable in that potentially they could be empirically demonstrated to be true or false, accurate or inaccurate. These photographs are like empirical claims in language which seek to explain: all of them can be, or at least potentially could be, further verified or refuted through more testing procedures. In this respect, they are unlike another type of explanatory photographs, "interpretive photographs."

Interpretations. Interpretive photographs are nonfalsifiable explanations which are analogous to metaphysical claims in language in that their makers use them to make assertions about the world independently of empirically verifiable evidence. A clear example is Duane Michals's "The Spirit Leaving the Body" (1968), an eight image sequence made with double exposures which shows a semi-transparent man appearing and arising from out of a man lying on a bed and then disappearing, leaving the man on the bed as he was. Most of the pieces of Jerry Uelsmann (1973) also serve as clear examples. His complex images are composites of several negatives. An untitled pair of images show a young, semi-transparent, nude girl with angel like wings, alternately emerging

from a rock and then from a body of water and receding into blackness with her hands covering her eyes. Arthur Tress's book, *Theatre of the Mind* (1976), is full of images of this type. His are single pictures made of single exposures.

Interpretive photographs depict an intentionally subjective understanding of phenomena and generally point up the world-views of the photographers who made them. Most of the images in this category are in the larger generic category of art photography, and most are historically grounded in the tradition of Pictorialism. They are generally fictitious even though they often look realistic, and routinely rely on visual metaphors. They are nonfalsifiable since in cases of dispute they cannot be confirmed or denied empirically. If, for example, Duane Michals asserts an afterlife in some of his sequences, the claim would be difficult to prove or disprove by appeal to empirical evidence.

Ethical Evaluations. Photographs which function as ethical evaluations always describe, often attempt to explain, but also and most importantly imply moral judgments, generally depicting how things ought or ought not to be. Most photographic advertisements, for example, present us with aspects of the advertiser's conceptions of "the good life" or assert what products, life-styles, and attitudes ought to be desired.

The relatively recent and last book of the late W. Eugene Smith, Minamata (1975), is a paradigm example of work in this category. The book, coproduced with his wife, Aileen, prominently bears on its dustcover the inscription "The Story of the Poisoning of a City, and of the People who Chose to Carry the Burden of Courage." The first line of the prologue states: "This is not an objective book," and later it is added: "This is a passionate book" (p. 7). The Smiths spent three years in the early 1970's in Minamata, Japan, a fishing and farming village on the island of Kyushu which had been plagued by a 'strange disease' since the early 1960's. The strange disease was eventually recognized as methyl mercury poisoning from the industrial waste of the Chisso Corporation's chemical factory. The Smiths lived and worked with the villagers, photographing their infirmities and their political struggle, actively involving themselves in a crusade to force the industry and government to take responsibility for the one hundred and three deaths and several hundred people who have been permanently disabled as a result of the willful pollution.

Other prominent examples of ethically evaluative photographic projects in the early history of photography are the social criticism of Jacob Riis including How the Other Half Lives (1890), and Lewis Hine's, the overly propagandistic photographs of the Nazi regime, and the anti-Nazi photomontages by John Heartfield in the 1930's. Contemporarily, Hans Haack, who is better known as a conceptual artist than as a photographer, has been producing photographic work which is critical of a large range of social issues, particularly corporate policy in the arts.

Aesthetic Evaluations. All photographs can be apprehended aesthetically, and many photographs which are made to be condemnatory or explanatory are also aesthetically pleasing. But some photographs are made primarily for aesthetic appreciation. These photographs function as visual notifications that the photographer deems certain people, places, objects, or events intrinsically worthy of aesthetic apprehension; or they function as notifications that the photographic presentation of people, places, objects, or events is worthy of aesthetic apprehension. In the case of Playboy or Penthouse photographs, for example, it is primarily the body, rather than the photographic presentation, which is foregrounded as aesthetically meritorious. In Bill Brandt's photographs of nudes, however, we are aware of a woman's body but the particularity of the body is displaced in favor of its extreme distortion by

Brandt's choice of lens, light, and angle of view. But in Edward Weston's photographs of nudes, the particular body and the photographic arrangement are equally attended to and are equally brought to our aesthetic attention. Usually it is a combination of both the object and the object as photographed which are presented for our aesthetic sensibilities. In some of these photographs, however, the original subject matter is so radically displaced in favor of the way it is photographically presented that our attention is directed only to the harmonious relationship of the photograph's elements. We see large numbers of "aesthetically evaluative" photographs: pristine landscapes, solitary cityscapes, nameless nudes, and details of the world transformed into visually stimulating graphic images.

The pictures by some "street photographers" such as Gary Winnogrand and Henri Cartier-Bresson show identifiable people in recognizable spaces, quickly composed in the viewfinder and frozen in aesthetically charged relationships. Because of the stylistic realism of camera images and the actuality of the subjects, we are likely to see through the photographs to the subjects and overlook the artistry employed. But both the artistry and choice of subject make these aesthetically interesting and pleasing, which is primarily what they are about.

Theoretical Photographs. Finally some photographs are not about people, places, objects, or events in the world but are about art or photography. They function similarly to meta-language in verbal language or metacriticism in art discourse. They generally are made to address issues about photography, or issues about photographs, functioning as visual commentary or as visual art criticism. More simply, they are art about art or photographs about photography.

Les Krim's book, Making Chicken Soup, (1972) is a paradigm example. The book is composed of a sequence of Krims' mother, dressed only in panty girdle, making chicken soup, step by step, from raw ingredients to the finished dish, in frontal shots similar to stills from a Julia Child's television program. Included in the book are two recipes, one for kreplach and one of matzo balls, a handwritten letter from "mom," and a dedication. The dedication reads: "Making Chicken Soup is dedicated to my mother, and also to all concerned photographers — both make chicken soup." "Concerned" is the key term in the phrase "to all concerned photographers," and conventionally is used to refer to those concerned with social issues. Krims is engaged in elaborate sarcasm pointed at any photographers who would attempt to solve social problems with photographs, which are as useless an effort as making chicken soup to cure infirmities: both photographs and chicken soup, in Krims' view, are placebos (Barrett, 1982).

Currently, several photographers are making "theoretical photographs" as a reaction to, and gesture against Modernism, appropriating the images of others to call into question such tenets of Modernist thought as originality, genius, and artistic autonomy. Sherrie Levine has copied and exhibited as her own work photographs made by Walker Evans and the paintings of Mondrian. Vikky Alexander incorporates others' photographs into her own pastiches to make political and feminist statements about the negative influences of male dominated mass media communication. Richard Prince has been rephotographing and exhibiting others' previously published fashion photographs. Some work which would be placed in this category has been labeled "conceptual."

Uses of the Categories

This overlapping category system ought not be used to end thought and discussion of photographs through pigeon-holing; on the contrary, it is to be

used to open discourse about photographic meaning in order to increase understanding and appreciation of photographs and of the variety of statements photography carries and delivers. The system has been successfully used as a curricular model for teaching photography as a studio activity (Barrett & Desmond, 1983; Barrett, 1985); and as part of experimental studies in determining how cognitive processes function in understanding art (Desmond & Koroscik, 1984). Its primary purpose, however, is as a heuristic framework of questions with which viewers can interpretively approach any photograph or group of photographs and seek to answer, for example, whether a journalistic photographic essay is descriptively accurate and if it presents objective explanatory data, or whether it is subtly imbued with negative value judgments. Placing any photograph in a category or combination of categories, even those paradigm examples cited here, requires decisions which need to be backed with evidence drawn from the picture or from external contextual information (Barrett, 1985). Any photograph can profitably be seen as if it belonged in each of the six categories, but a "right" category placement is where the photograph makes most sense, fits best, does its best job, or where it is seen to its best advantage (Walton, 1978). A placement is always open to dispute, calls for argument, and is open to counter-argument.

Placement of any photograph into one or more of the categories requires attention to detail and nuance of aesthetic form and content. In considering a photograph for placement, it is necessary to sort out its content and expression, its denotations and connotations, its rhetoric about its subject. Although intentionally and knowledgeably misplacing photographs from one category to another can afford fresh perspectives and enjoyable experiences, an unwitting misplacement yields misunderstanding. Were one to see Sherrie Levine's copies of Walker Evan's photographs, and if on the basis of how they looked, one considered them to be traditional documentary photographs, or in the confines of this system as "explanatory photographs" rather than the "theoretical photographs" they are, one would misunderstand them. Were one to see a fictional, "interpretive photograph" of Michals' and see it as a true "explanatory photograph" one would garner some bizarre notions about empirical existence. Serious problems may also arise when advertising photographs are presented as descriptive or explanatory. They are descriptive, but they are also highly value-laden.

To engage in thought and discourse of this nature about photographs through the use of these categories is deemed more worthwhile than comfortably labeling a photograph "documentary," a "portrait" or "art."

References

Arago, D.F. (1839). Report. In Trachtenberg, A., (ed.), Classic essays on photography, New Haven: Leete's Island Books, 1980.

Arnheim, R. (1974). On the nature of photography. Critical Inquiry. 1 pp. 149-161.

Barrett, T. (1980). A structure for appreciating photographs. Exposure: The Journal of the Society for Photographic Education. 18, pp. 50-55.

Barrett, T. (1982). The offset works of Les Krims: an interpretive critique. Camera-Lucida: The Journal of Photographic Criticism. 5. pp. 49-57.

Barrett, T. (1985). Photographs and contexts. *The Journal of Aesthetic Education*, 19, 3, pp. 51-64. Barrett, T. (1985). Photographic diversity. In *Cameras in the Curriculum*, Rochester, N.Y.: National Education Association & Kodak, p. 17.

Barrett, T., & Desmond, K. (1983). Teaching about photography. Paper presented at the National Art Education Association National Convention, Detroit.

Barthes, R. (1981). Camera-Lucida: Reflections on photography. New York: Hill & Wang.

Bateson, G. & Mead, M. (1942). Balinese character: a photographic analysis. the New York Academy of Sciences.

Becker, H.S. (1981). Exploring society photographically. Evanston, Ill.: Northwestern University. Broudy, H. (1983). A common curriculum in aesthetics and fine arts. In Eighty-second yearbook of the national society for the study of education, Part I. Chicago, NSSE.

Chapman, L. (1978). Approaches to art in education. N.Y.: Harcourt, Brace.

Cooper, L.P. (1939). Photography as a school art. School Arts. 39. pp. 46-47.

Cowley, E. (1953). Design slides. School Arts. 52. p. 358.

Danto, A. (1981). The transfiguration of the commonplace: A philosophy of art. Cambridge: Harvard.

Desmond, K. & Koroscik, J. (1984). Contextual information effects on the categorization of differences among photographs. Arts & Learning SIG Proceedings: American Educational Research Association, 2, pp. 97-105.

Feldman, E. (1981). Varieties of visual experience (2nd ed.). Englewood Cliffs, N.J.: Prentice-Hall. Gombrich, E. (1980). Standards of truth: The arrested image and the moving eye. In Mitchell, W.J.T., (ed.) The language of images. Chicago: University of Chicago.

Goodman, N. (1976). Languages of art: An approach to a theory of symbols. Cambridge: Hackett, 1976.

Grubert, L.M. (1944). Photography and art education. School Arts. 44. pp. 79-82.

Hamblen, K.A. (1984). An art criticism questioning strategy within the framework of Bloom's taxonomy. *Studies in Art Education*, 26 (1), pp. 41-50.

Johansen, P. (1982). Teaching aesthetic discerning through dialog. Studies in Art Education, 23 (2), pp. 6-13.

Krims, L. (1972). Making chicken soup. Buffalo, N.Y.: Humpy Press.

Kent, J. (1935). Photography in the art class. Progressive Education, 12 pp. 230-231.

Lanier, V. (1966). The uses of newer media in art education. Washington D.C.: Department of Health, Education, and Welfare.

Lankford, L. (1984). A phenomenological method for art criticism. Studies. 25 (3), pp. 151-158.

Lester, R.M. (1928). Visual aids in the teaching of art. Journal of Adult Education. 10, pp. 170-172.

Lowenfeld, V. (1957). Creative and mental growth, 3rd ed. N.Y.: MacMillan.

Marey, E.J. (1895). Movement. Appleton, New York.

Michals, D. (1968). The spirit leaving the body in Bailey, R.H., (1975), The photographic illusion: Duane Michals. Los Angeles: Alskog.

Mittler, G. (1982). Teaching art appreciation in the high school. School Arts, 82 (3), pp. 36-41.

Muybridge, E. (1887). Animal locomotion. 11 vols., Philadelphia.

Newhall, B. (1964). The history of photography: From 1839 to the present day (4th ed.). N.Y.: The Museum of Modern Art.

Riis, J. (1890). How the other half lives. New York.

Scharf, A. (1974). Art and photography. N.Y.: Pellican.

Smith, W.E. & Smith, A. (1975). Minamata. N.Y.: Alskog.

Snyder, J. (1980). Picturing vision. In Mitchell, W.J.T., (ed), *The Language of images*. Chicago: University of Chicago Press.

Szarkowski, J. (1978). Mirrors and windows: American photography since 1960. N.Y.: The Museum of Modern Art.

Taunton, M. (1983). Questioning strategies to encourage young children to talk about art. Art Education, 36 (4), pp. 40-43.

Time-Life Books (1970). The great themes. N.Y.: Time-Life.

Tress, A. (1975). Theatre of the mind. Dobbs Ferry. N.Y.: Morgan & Morgan.

Walton, K. (1978). Categories of art. In Margolis, J., (ed.), *Philosophy looks at the arts*. Philadelphia: Temple University Press, 1978.

Ward, J.L. (1970). The criticism of photography as art: the photographs of Jerry Uelsmann. Gainsville: University of Florida Press.

White, M., & Chappell, W. (1957). Some methods of experiencing photographs. *Aperture*, 5 (4), pp. 160-171.