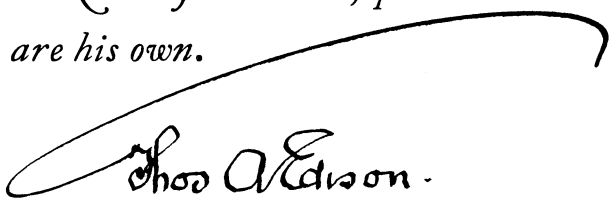
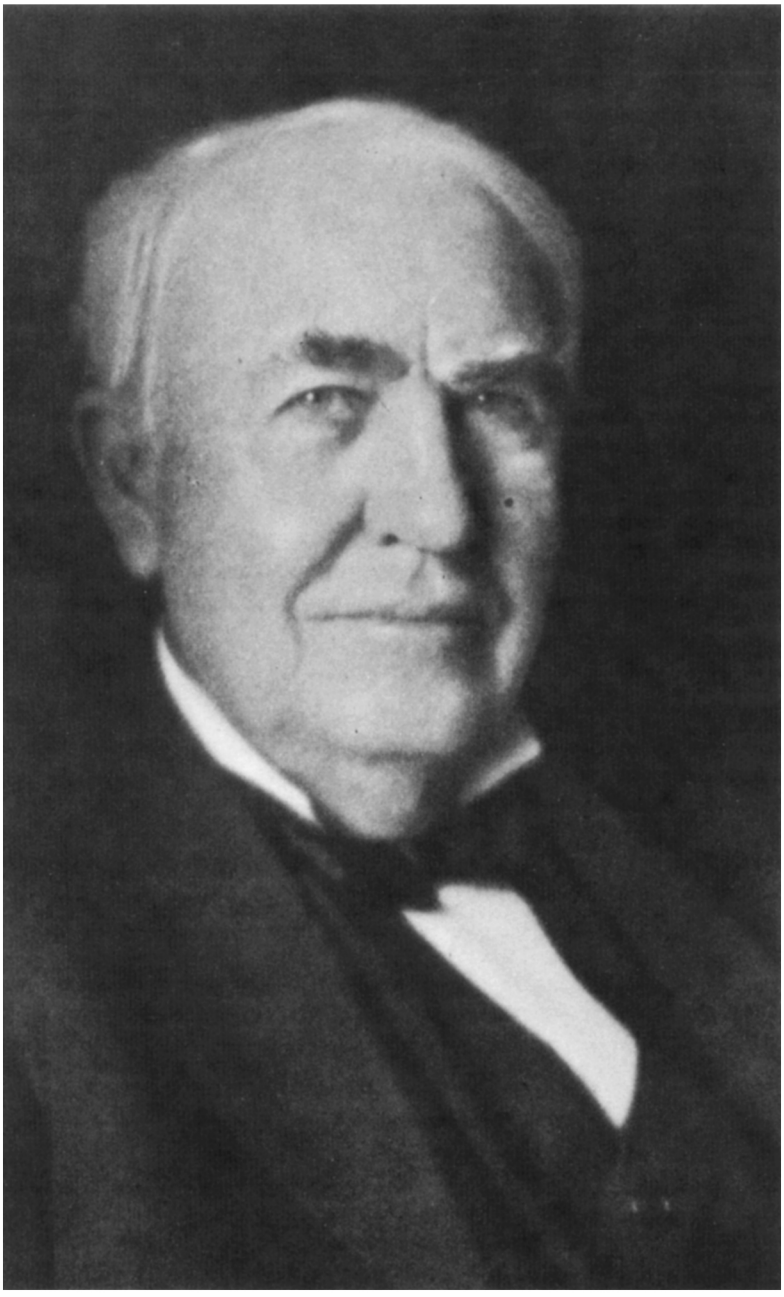
A Million and One Nights

A History of the Motion Picture

Terry Ramsaye

This is, I believe, the first endeavor to set down the whole and true story of the motion picture. I have been in contact with the author's researches through his years of preparation and I am aware of an unrelenting effort at exact fact. A high degree of detailed accuracy has been attained. Ramsaye's theories, opinions and deductions are his own.



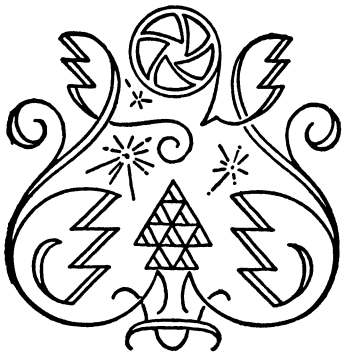


THOMAS A. EDISON, inventor of the motion picture film, the camera and the Kinetoscope — the technological foundation of the art of the motion picture.

A MILLION AND ONE NIGHTS

A HISTORY OF THE MOTION PICTURE

TERRY RAMSAYE



FRANK CASS & CO. LTD.

LONDON

Published by Frank Cass & Co. Ltd.
2 Park Square, Milton Park,
Abingdon, Oxon, OX14 4RN

Transferred to Digital Printing 2006

ISBN 0 7146 1588 9

Publisher's Note
The publisher has gone to great lengths to ensure the quality of this reprint
but points out that some imperfections in the original may be apparent

A NOTE ON THE NEW EDITION

When A Million and One Nights *was first published in 1926, it was hailed as "the first complete source book on the motion picture" and its author, Terry Ramsaye, as "the first authentic film historian." The intervening years have established* A Million and One Nights *as a classic, standard work on the history of the motion picture from the beginning through 1925. The contents of this edition are identical with those of the original two-volume edition.*

—THE PUBLISHERS

PREFACE

This history is a tale for its own sake. Many, and perhaps most, of the facts presented in these pages will be found to be new or at variance with the generally accepted traditions and writings of the motion picture.

The recorded annals and expressions pertaining to the screen broadly considered fall, often precipitately, into two classifications; those written to serve special interests within the industry or other partisan purposes and the observations of writers remotely external to the world of the motion picture.

Late in 1920 James R. Quirk, the editor-publisher of *Photoplay Magazine*, recognizing the lack of any coherent and authenticated record of the rise of the motion picture commissioned me to undertake the preparation of a series of twelve articles covering the subject. The preliminary survey of the field indicated so much material that the series was extended to thirty-six installments running for three years in the magazine. However, even this extraordinary editorial endurance did not permit a complete presentation of the ever unfolding story with its tempting new vistas beckoning for exploration. Now two years more have been devoted to completing some of the more important researches and a recasting of the entire mass of material in the light of the progressive developments.

The enthusiastic approval of the endeavor by Mr. Quirk and access to the extensive records and files of *Photoplay* have been important to the continuance of the researches subsequent to the completion of the magazine serial version.

Because of the strong coloration of individual and special

interest in much of the writing concerning the screen, it is necessary to state that there is nothing in this narrative especially in behalf of any person or concern in anywise related to the art or industry.

My contact with the motion picture began in 1913 when I was a member of the staff of *The Chicago Tribune*, functioning between the editorial and circulation departments. This led to connections, in sequence, with a number of motion picture corporations and ramifications of their sometimes peculiar enterprises. In 1920, upon undertaking the labors of this history, I abandoned all corporation connections and started afield with a free hand. In this five-year period my occasional services to the motion picture have been as a free-lance consultant on specific business problems or editorial aspects of individual productions for various and competing concerns. Within the domain of the motion picture I have neither friendships nor enmities of sufficient weight to influence the telling of this story.

The material for this history has been gleaned practically in its entirety from original sources, first through my personal contacts within the industry and secondly by research in previously unpenetrated strata of record. It early became apparent that nothing offered, either by prior publication or from the contemporary personal recollections of persons involved, could be finally accepted or interpreted without painstaking checks and verifications. With but an inconsiderable number of exceptions, every living person among those mentioned in this history has been interviewed, some of them many times, while the correspondence, accounts and archives in general of others have been examined in detail. The records of the several hundred litigations of the thirty years of patent and commercial wars have yielded much of the material strangely ignored by prior writers. Also for reasons, which become

apparent in the body of the story, an extensive fabric of erroneous tradition, with some strands of deliberate distortion of the record, has had to be unravelled. The work has been complicated and prolonged by the continuous provocation of the existing possibility of uncovering every exact moment and affair of bearing on the subject—an enslaving condition which condemns me to an eternal sense of dissatisfaction and incompleteness.

The situation which finds a majority of the leading figures in the history of the screen yet alive, and frequently active, has presented me with both opportunities and problems not common to historians comfortably insulated by the centuries, with their subjects safely reduced to graveyard mould.

This endeavor has been aimed at determining with some accuracy the place of the motion picture in the contemporary world and tracing the steps by which it has arrived at this place.

The literature of the motion picture is mostly yet to be written. Many aspects of the art appear to call for intensive examination and record. It has been possible, in the compression of this memorandum of quarter of a million words, no more than slightly to indicate the high lights of the evolution of narrative styles and technique by the picture makers and the parallel education of the screen audience in the hieroglyphs and vernacular of screen narration.

The innumerable and complex racial, political, and geographical relations and reactions in which the screen has been importantly involved are yet to be explored. Largely the psychology of the motion picture is still awaiting an investigator. Not even a small part of the important technological developments within the film and the camera have been adequately recorded for the public.

A slight, tentative beginning of screen discussion and ap-

praisal was made by Vachel Lindsay in his "Art of the Moving Picture" published about 1916. It was largely a rhapsody from the viewpoint of a poet sitting in a Springfield, Illinois, theatre, capable for its day and pleasant, but neither professing nor possessing penetration. A step significant and indicative of the analytical screen literature to come has been accomplished in "Pictorial Beauty on the Screen" by Victor Oscar Freeburg, Ph. D. It is the most effective discussion of dramatic film technique yet brought forth.

In the field of periodical publication some pregnant discussions of the motion picture have come from Julian Johnson and Ralph Block, both picture production executives, and from Gilbert Seldes, John Farrar, Burton Roscoe, Robert Sherwood and others among the professional critics, in the main as incidental side glances from their concerns with other arts and literature. A school of motion picture criticism is evolving with a deliberation which seems tedious beside the racing progress of the pictures. This probably results from the fact that nearly all those who know anything about the motion picture, as well as some who do not, are busy making them.

This history has necessarily concerned itself exclusively with the motion picture of the theatre screen, which, while the obviously dominant florescence of the art, represents only one of its functions.

It has seemed advisable, even in its incompleteness, to get this record into the safekeeping of the printed word now, in view of the imminent passing of the pioneers and the ephemeral character of much of the important source material. Conditions revealed by these researches indicate a large opportunity of service for a motion picture museum.

For an adequate listing of the persons to whom I am indebted for coöperation and access to important records the reader might well be referred to the entire array of names in

the index, but because of their generosity of attention I wish to especially acknowledge the courtesies of Thomas A. Edison, the late Norman Charles Raff, Thomas Armat, William Kennedy Laurie Dickson, C. Francis Jenkins, Jeremiah J. Kennedy, Robert W. Paul, Cecil Hepworth, Charles Urban, Louis and Auguste Lumière, Henry Norton Marvin, George Kleine, Frank L. Dyer, Jacques A. Berst, Robert Cochrane, John R. Freuler, Edwin S. Porter, Fred Hawley, J. Stuart Blackton, W. W. Hodkinson, Lewis J. Selznick and Adolph Zukor. Acknowledgement is also due to the assistance of Betty Shannon Ramsaye, who has been associated with my labors of inquiry, and to Walter B. Pitkin of Columbia University, through whom the fruits of related but yet unpublished researches in some other fields have been made available.

Twenty-one years ago Charles I. Blood, city editor of *The Kansas City Times,* called me, a timid novitiate, to the desk for my first assignment.

"There has been a shooting in the West Bottoms," he said. "Go find out who did it, when he did it, why he did it and who he did it to—and that will be a story."

That is what I have endeavored to do for the motion picture.

T. R.

New York, May 1, 1926.

FOREWORD

THE ART AND ITS AUDIENCE

Here is a news story. It endeavors to cover the birth of a new art—the motion picture.

For the first time in the history of the world, so far as the author has been able to discover, an art has sprouted, grown up and blossomed in so brief a time that one person might stand by and see it happen.

The motion picture has occurred, or perhaps has been committed, in the presence of a reporter, who has been busy the while, taking notes and interviewing the possibly innocent bystanders.

The motion picture is a genuine art. It is genuine in that it is strictly popular, appealing to and serving the multitudes.

This art has grown out of simple, elemental wishes. The forms which it has taken are the products of now well recognized human traits. Like all the great arts its appeal is based on a few primitive, and therefore universal, instincts and mechanisms in man. Sex and combat are the chief instincts. The eye is the principal mechanism.

The motion picture is the great common denominator of the arts.

Like all great arts, the motion picture has grown up by appeal to the interests of childhood and youth.

The average life of the savage who began the arts of the dance, the song and the picture was not more than fifteen years. Men were old at twenty. Women were withering hags at eighteen. A person of fifty was a Methusaleh.

The intelligence tester tells us that the effective age of the

average American mind today is about fourteen. That is old enough for all practical purposes, the most important of which is reproduction. Nature is not wasteful, so why make us older? More elaborated older minds are, measured by the commonalty, accidental freaks like paper-shell pecans and navel oranges.

The insurance tables indicate that we die at age 58 now, on the average, anyway. Even this longevity has been attained for so tiny a period in history that it is of no moment. The human race has always been young. It is a world of distinctly young ideas.

The song, the dance and the picture have sprung from minds essentially juvenile and adolescent. Our arts are the product of the slow, inevitable process of trial and error in serving mass tastes down the ages. Art has been distilled and filtered through the likes and dislikes, the acceptances and the rejections, of the billions of our ancestors. The experiences, sex life and outlook of those billions have been those characteristic of the eighteen-year-old boy and girl. The world and all its arts are the property of the adolescents.

Classic art, which means popularly accepted art, is adolescent to the core.

Classic art is a flowing tapestry, woven in the same unvarying patterns by the same young weavers from the beginning to today. The colors are softened, blended and perfected by glamor as the fabric stretches back in the perspective of time into history, tradition and mythology. Where the weaving is fresh in the Loom of Now we see the same colors, fresh, raw and garish in today's headlines and tonight's movies.

But the figures of this tapestry's pageant are all one merry company, members of the immortal race of Personified Desires: Diana, Aphrodite, Sappho, Dido, Helen of Troy, Hercules, Jason, Ulysses, Solomon, Salome, Cyrus, Alexander,

Cleopatra, Cæsar, Richard Cœur d'Lion, Robin Hood, Nell Gwyn, Elizabeth, Marie Antoinette, Romeo and Juliet, Paul and Virginia, Dick and Ben Turpin, Joan of Arc, Ivan-the-Terrible, Lief-the-Lucky, Columbus, Pocahontas, Priscilla, George Washington, Napoleon, Daniel Boone, Kit Carson, Coal Oil Johnny, Buffalo Bill, Jesse James, Lydia Pinkham, John L. Sullivan, Eugene Sandow, Bushman and Bayne, Pickford, Theda Bara, Fairbanks, Gloria Swanson, Tom Mix, Sarah Bernhardt, Gyp-the-Blood, Cecil Rhodes, Edison, Roosevelt, Harry Houdini, Morgan-the-elder, Beatrice Fairfax, Thomas Meighan, Jack Dempsey and Rudolph Valentino.

The motion picture reveals all of the art processes of all the ages. In the swift history of the films we see the entire evolution of art, compressed and oversped on the screen of Time. The motion picture is itself a tabloid picture of the evolving eternity behind us.

An art is born before our eyes, just as these very movies have shown us in stop-motion pictures the butterfly emerging from the cocoon. We see it struggle limply forth, dry its glamorous wings, and fly—with all its gay, gaudy spirit of youth, strong as youth is strong, weak as youth is weak.

And—butterfly like, the service of this gossamer winged art of flitting shadows is mostly in pollenizing the blossoms of the Wish, be they ragweeds of commonalty or roses of culture. Ragweeds are more abundant than roses.

The scholars, the historians, the cloistered critics of the colleges, all seeing the older arts down the cooler vistas of the ages, see them detached from their origins. Inevitably they see them all wrong. You can not know the nut unless you know the tree. You can not know the tree unless you know the soil. The motion picture is close to the soil.

A silly sanctity surrounds the standard, accepted, classic and traditional views of art. Each of the arts is surrounded by

its priests and temple dancers. They chant mummeries which pass for lore and scream for the blood of heretics.

All of the arts and all the industries are products of the same forces. In the adventure of these pages we shall identify these forces, for the motion picture, in sex, fight, ambition and fear, in the plots and hopes of promoters, actors, publishers and politicians, and in the yearning, wishing millions who pay the box office tolls where they see the sign hanging out: "Dreams for Sale."

Our bold inquiry will take us into unfrequented byways of personality. Because they have been so fortunate, or so daring, as to involve themselves in the loving, hating, plotting, rioting flamboyances of the motion picture's growth, some hidden phases and motives in the lives of the people of the screen must be winnowed and measured here. It is a characteristic incident of the racing development of the art which brings the writing of this history while a majority of the makers of screen history are yet alive.

Most history is autopsy. This one is vivisection.

If this is to be history it must pursue its investigations with the same impartial, critical interest as if the demi-gods, the idols and the kings and queens of the screen empire were at one with the dust of ancient Egypt, instead of dusting up and down Fifth avenue and Sunset boulevard. We must be free to be as frank about Mary Queen of Hollywood as about Mary Queen of Scots. We must be open in treatment no matter which Charles-the-Great comes into our story. Adam, Aristotle and Adolph must be on a parity here. There is only a little matter of dates between them anyway.

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

ILLUSTRATIONS

ILLUSTRATIONS

ILLUSTRATIONS

THE PREHISTORY OF THE SCREEN

IN the public mind and in the consciousness of many of its students the motion picture seems a magic thing, born yesterday and of full growth this morning. But magic and miracles always fade in the light of information. It is the vastness of what we do not know which creates the great astonishments.

To the investigator who will pursue the facts through a maze of obscurities, one of the most interesting aspects of the screen is its belated arrival. The motion picture was a great deal overdue many, many centuries ago.

It is the very fact of the tardiness of the arrival of the screen which has resulted in this apparently miraculous growth and flowering into the magnitude which enables it to claim position among the leading industries of the world: This development has thus far occupied slightly more than three decades. To many the time seems even shorter, since there is a natural but erroneous tendency to think of the motion picture as having begun its career at the moment of the individual discovery.

If from the dark depths of the forest you transplant a stunted, struggling little tree, dwarfed and light-starved, out into a favorable soil and a place in the sun, its pent energies and deep primeval powers will shoot it into an amazingly rapid growth, a fevered redemption of the lost years. It is so with the motion picture.

He who will have the patience to follow this growth of the motion picture will find it too, like the tree, clearly an organism, following organic law in its development. The living picture will be found following that law with the unrelenting persis-

tence that marks the growth of all living things, from yeast mold to races.

It is only by this recognition of the organic character of the motion picture and its consequent interrelation to all of the organism of mankind and society that it can be truly understood. Critics and forecasters, academic, professional and commercial, are continually committing themselves to error, and to the swift exposures of those errors, because of their failure to see the screen as one of the strands of the yarn of life, with an infinity behind and ahead.

The motion picture is as irresistible as the life stream behind it. It persists as a fundamental expression of that stream. Men and their movements which appear to control it are merely riding on its surface for their hour, and their operations are little more than evidences of the currents below. They who think they are the creators and masters of the motion picture are its servants.

The motion picture may be called the last-born offspring of the parent impulse of all the arts of expression, which are seeking to transmit to and infect others and ourselves with an impression of things and emotions.

The motion picture is the realization of the age-old Wish of the world.

This is not said in glorification of the picture, but is offered as fact based on all of the significance of Wishing.

Wishing has made the race, and with it the growing thing that has flowered on the screen. Nothing but desire has ever forced expression, and all of the expressions of art, recognized and unrecognized, are efforts, partially successful, to attain the objects of the Wish.

There is ample scientific authority for the assertion that in the beginnings of the human race wishes preceded communication and language—probably by some millions of years.

THE PREHISTORY OF THE SCREEN

Man is the most wishful thing on the face of the earth. Simpler organisms await pure propinquity, chance, and the casual opportunities of natural supply to gratify their Wishes. As we ascend the biologic scale of intelligence we see increasing provision for the gratification of the Wish: from plants dependent on the happenings of a single spot and oysters feeding on what the tides may bring, to roaming beasts of prey and on to bees in the hive, a community gone insane with communism and the business of foresight and provision. Up at the top of the scale is man, the supreme go-getter of them all.

Out of the power and experience of the Wish man early found that some things were highly pleasurable. They delivered satisfaction to his assorted senses. Of those things and events he wanted more and ever more. He observed, presumably, that every time these things occurred he got the same pleasant sensations, the same emotional or sensory kick. Then, impatient of waiting for these pleasant things to happen of their own accord, came the impulse to push ahead and make them happen.

Man sought to repeat the pleasant event. That impulse to seek started it all. This probably began long before he became anything that we would call Man. But that was the desperate beginning of everything. That was the coming of the serpent into the garden, call it sin or intelligence as you will.

It took memory to know that the repetition of the event would bring a repetition of the pleasure. Memory thus came to seek the repetition of the pleasure by the re-creation of the event.

That dawning ability to re-enjoy by re-creation of the event of pleasurable memory was the beginning of knowledge. Perhaps it is a tribute to the antiquity of the strongest Wish of all that the Biblical phrase "to have knowledge of" is impregnated with the same duality of meaning that has come into the word "kiss" in some of the pungent fiction of the current period.

It is a rather fair presumption that it relates at least to that of which the race had its first knowledge. The serpent, you know, is quite as authentically an emblem of Wisdom as of the Devil.

Out of the Wish, his blazing and gnawing desires, man evolved expression, communication, and all of his arts. Research has traced the steps of that evolution; it shows that the ego of man makes him want to know himself.

That ego is the very soul of both the arts and the sciences. Man in his own profession and his own recreation. The chief of his desires, the keenest of his Wishes, the greatest of his re-creations is the business of re-creating himself biologically and his emotional adventures in memory and its art forms.

This explains delightfully the inexorable persistence and dominance of the love story in the fiction of stage and screen and printed word. It is the one idea which dominates everywhere all the time, in ink, in celluloid, in paint and bronze and marble. It is what the saxophone says. Beauty and art, for the majority, are inseparable from sex.

The crab-apple of Eden and the orange of Hollywood are undoubtedly fruit of the same tree.

The evidences gathered by the students of language among the surviving and extinct primitives indicate that expression begins with signs of pantomime; that is, it begins with drama in its simplest form. When man set out to re-create events and to communicate, his own body was the first medium to fall under his control. His hands and arms were his first instruments. By gesture he could contrive to make another recognize something of the character of the idea impelling the imitative or suggesting postures and movements. A Chippewa Indian boy at play can thus make you see a bear, or a moose, very clearly. The simulative "chicken dance" of the Blackfeet, a pantomimic representation of the courtship of the prairie chicken per-

formed by the braves before the admiring squaws, is an elaboration of the same idea passed into ritual.

This is the simplest form of telling. It is, in so far as possible, a very literal and actual re-creation of the event. The simple idea is "I will be as nearly a bear as I can, and then he will see the bear as I saw it." It is, note this, an effort to make a living picture, a motion picture, the medium of making the appearance of the event occur again.

But signs and pantomime have limitations of both scope and time. Despite an amazing ingenuity of pantomimic expression there are many things so remote from the possible action of the pantomimist that he cannot conveniently say them with his gestures and grimaces. Duration also is an element. The thing said in pantomine is said and gone. It does not continue to be said. The pantomimic picture fades as fast as it is created.

To escape these limitations man sought a more convenient and capable method of expression, a more enduring re-creation of the event for his own memory and for the benefit of others. It was thus that graphic art, the business of making pictures, was born into the service of the Wish.

Prehistoric troves have left to us some of those remotely early expressions, messages in image. The cave man seems to have wanted to say "bear" and "woman" rather often. They must have been ideas much on his mind—the thing that wished him and the thing that he wished, both delicious dangers. He began to sculpture his ideas of "bear" and "woman" in plastic mud, and presently to scratch representations of them on stone, on slabs of bone and ivory. It was, presumably, quite a step from sculpture which definitely sought to re-create the object in all of its external aspects in three dimensions to the relative abstraction of drawing which endeavors a three dimensional message in a single plane.

A vast new liberty came with this new method of telling, this new method of re-creation of the object or event by sculpture and drawing. It was no longer necessary to stay on the spot and pantomine the message. More could be said, and it would stay said for quite a while.

But this son of Pithecantropus discovered that art is long and time is fleeting. We can fancy him dropping his flint stylus in weariness and sighing that "the pictures are only in their infancy."

Communication grew impatient of the pace of the cave artists. It doubtless developed that there were many bears and many women to be discussed, and many things to be said of them. Continuing consideration of Things and Places and a developing recognition of Time and Space brought a complexity of emotions and ideas. Mud images and wall pictures could not keep up with the flow of thought and things to be said. The primitive man became a better thinker and more ardent expresser than an artist. In time he got to the point he could no longer say it all with pictures on a rock.

Man has been forced ever and ever to seek a greater facility for his re-creations.

The re-creation of the event is but a service of man's memory, an aid to summoning up at will and living again emotions enjoyed. By art man lives in the Past, the Present, and the Future all at once. His anticipations are but projections of memories, tinted by heart's desire. It is the peculiar, and perhaps only, especial beneficence of creation that man forgets the unpleasant. The pleasant he tries to re-create that he may re-live it, and that is art.

Efforts at re-creation for this service of the emotional desire began in ancient ritual in the simple form of complete re-enactment. To achieve the desired same result the whole thing was done over, be it the hunt, the battle, or the harvest. But art

evolved a trifle, and a process of abridgment evolved into re-creation by symbolic acts, briefer cues to memory. Memory and imagination were growing. This method of re-creation by symbolic acts is in common survival today: witness the rites of the Eucharist, the pantomimic dances, and pageantry.

The progression from re-creation of the event by the complete act to re-creation by symbolic act is illustrated by a significant reversion. In Mexico a zealous sect, the Flagellantes, has been given to a complete re-enactment of the Christ legend, so literal as to include the actual crucifixion of the honored actor. The Passion Play of Oberammergau is itself only a somewhat less sanguinary re-creation by the complete act. The practise of the church, we see, has evolved from the literal ancient ritual to the symbolic drama of the altar of to-day.

When the re-creation of the event has a distinct purpose of utility, as for instance in the rain dance of the Hopi tribe, or in the cannibalistic hope involved in the doctrine of transubstantiation, we call it ritual. When the re-creation becomes more remotely symbolical, and at the same time loses its direct purpose of readily recognizable utility, we call it art.

The Dionysia of the ancient Greeks began as a sort of corn dance in furtherance of the crops. They evolved into a whole set of Athenian theatrical rituals. Then they became the Roman Bacchanalia, and to-day survive as the cute little May Pole dance, merely something pretty for the ornamentation of the Sunday school picnic. Also the juice of the corn is still a considerable factor in modern dancing. A great deal of the motion and emotion come out of the same bottle for the irrigation of the Wish. We still serve the old god Dionysius with fidelity. His name is with us yet, administered as "Denis" at the christening font. The roots of art are in ritual and the roots of ritual are in the tall grass. The cornfield waves forever. "All flesh is grass" quoth Isaiah. When the eccentric

Nebuchadnezzar betook himself to the pasture on all fours—after vitamin B, no doubt—he was, perhaps, not so crazy as Daniel presumed.

These rituals and their evolutions are, however, but by-pass channels of expression in re-creative effort, and are significant to us here only because of their very definite pictorial character.

Returning to our primitive picture-making man, we find him ever reaching for more facile media for his swelling flood of ideas, his picture-crowded mind.

For ages he struggled on with his picture making, his pantomime and ritual, and an evolving vocal language, growing words while sound and the action marched side by side. This was expression but not record. The service of memory requires record.

Out of this grew the profession of remembering, the function of the bards and minstrels. Here were born the sagas and the songs of Homer. Sound had been infected of meaning by association with events and their pictorial re-creations by pantomime and ritual. Now the event was being photographed on the memories of the professional rememberers, by translation into sound. The mnemonic need brought cadence and meter and rhythm to aid. Rhymes for remembering began. We use the same devices to-day: "Thirty days hath September, April, June, and November. . . ." There is something in the motion of the meter wave that keeps the memory on the path, just as the bicyclist keeps his equilibrium by moving forward. So poetry and music came to join in the function of remembering and telling; always the re-creating, the picturing of the event. They contributed motion and emotion.

All of these professional rememberings seem to depend for their very survival upon falling into the metrical wave motion of song and chant. The great epic of ancient India, the Mahabharata, is believed to have begun as prose, a tale of the affairs

of the brothers Pandu and Dhritarashtra and their many sons. The family boast grew into an encyclopedia of India after it became metrical. It reached at last total of 100,000 distichs or couplets, being eight times as big as the Iliad and the Odyssey put together. The jingle kept it going. The prose writer sometimes comes to a stop, but the poet's metrical momentum overcomes all frictions. A prose novelist can be terminated by shooting, while a poet's refrain is picked up and carried on by his successors and assigns forever.

We must recognize a significant identity in the rhythmic quality of the dance as evolved ritual and the rhythm element of song, chant and verse serving the same Wishes. Poetry is made of dancing words, in measures that may be tripped by either foot or tongue. The beating syllabic feet of verse are indeed just sound-pictures of the motion, pointing again most precisely at the intrinsically pictorial character of language. The rhythmic movement of dance and song are identical for the identical purposes of memory, and apparently the memory is one and the same function whether it is to govern the feet or the tongue. Memory rhythm controls both ends in behalf of the middle. And memory lives in motion.

A sharply defined illustration of the motion control of memory is afforded in a parlor memory trick in vogue some years past. The memory performer essayed to repeat rapidly in succession the names of anywhere from twenty-five to fifty articles in the precise order in which they were stated to him. This was readily accomplished by the expedient of mentally building a pictorial action sequence, no matter how absurd, involving the articles as they were named to him. Thus if the series began "shingle, stove, chair," the memory scenario might run "shingle jumps into stove, stove sits in chair, etc., etc." When called upon to repeat the list the performer merely retraced the action of his motion scenario and picked up the articles in sequence.

Thus it appears that memory lives in mental motion pictures.

This motion pictorial element is even more astonishingly revealed in the memory feats which are incidental to the work of Gay MacLaren, dramatic recital artist. Her unique performances consist in giving entire plays, in the voices and actions of all of the members of the casts, attaining a high degree of stage illusion. Her repertoire includes some eighteen plays, and she sometimes adds two a season. The process of acquisition requires merely that she see five performances of the play as a member of the audience. No conscious memory effort enters into the process. The essence of the feat appears to be a recording of the stage picture, a function of what is termed her "camera mind." With only a setting of a table and two or three chairs, she reproduces that entire stage picture down to the most inconsiderable detail of action, by the sheer perfection of pantomimic reproduction of that action.

Any of these eighteen plays, many of them full three hours in length and including perhaps fifteen or twenty characters, is available in Miss MacLaren's memory at an instant's notice. The entire play with its infinity of pantomimic details and rapid fire of spoken parts, so essential to the multiple character delineations, flows on through a single personality with all the ribbon like continuity of a film. Her memory is a motion picture.

This element of motion is eternally of the vastest importance. It is the life. Only the motion, the actitation, persists. Trees die, the forest lives forever. Men and nations perish, but the race itself goes on. It is only the on-and-on movement that makes language an instrument of living man. All living and all that purports to reflect living must partake of and participate in this motion. There are a myriad evidences, some interesting because of their remoteness.

It is deeply significant that practically all modern psychologists agree that man cannot even think without some muscular

motion. They agree that motion is an integral part of thinking, and not a mere aid to it. Some creative workers are notorious for the motion by-play which attends their efforts. They stalk and storm and gesticulate.

You cannot think without movement, be it ever so tiny, of some muscle somewhere in your throat, eye, ear, neck or arm. It must not be taken from this that ear-flapping is an index of intelligence. The moves tend, in some way, to realize the thing you have in mind. When you think "julep" your mouth waters and you swallow. Walter B. Pitkin of Columbia University in a lecture before a group of writers remarked that if it were given to us to be able to see interpretively every motion that a man made we should be able to tell what he was thinking about. The poker face is a defensive recognition of this principle. Four of a kind tends to generate telltale motions, and the royal flush often spreads to the face.

This motion quality of language re-creation of events is exemplified in the evolution of headline English in the daily newspapers. When the dynamic journalism commonly attributed to Hearst came into being it evolved a principle of head-writing which is briefly: "Do not write labels; put it in the active voice, present or future tense if possible. Get a verb in the head. Make it slam. Always get the today angle."

The event which occurred in the vicinity of midnight and which has been covered by the morning papers is mentioned in the hectic afternoon edition rewrites as "early to-day." The event may have occurred yesterday or a week ago, but the headline of its first presentation is active, present progressive; "Famous Beauty Shoots Near Husband," or "Airship Rams Submarine." The effort is continually to picture the event as going on at the instant before the reader's eyes.

This kinetic, motion-pictorial journalism consists outstandingly of the endeavor always to say a thing the most effective

and immediate way. Its only use for yesterday is to give today a sharper taste and to-morrow a keener anticipation. It is the writing of the people, by the people, and for the people. Circulations are the indicators. Its essence is this same principle: a picture of movement, always on and on.

The hunger for movement is the root of all manner of aspects of our civilization, many more tangible than the recognized arts of expression—the one-step and fox trot, the merry-go-round, the swing, the rocking chair, shoot-the-chutes, all the park rides, the motor car. Let a man invent a new movement, and the world will reward him as it has Ford, Wrigley, Rockefeller and Eastman. A good movement is priceless.

This motion accompaniment of thought enters conspicuously into the chewing gum habit, which succeeds so well in filling what would be otherwise total vacua. The jaw motion of chewing gum is close kin to the little movements which seek to realize the wish-laden thought. Being such a close associate of thought it can by easy transfer be made to take its place. It can be observed at its best in an East Side dance hall where jaw and foot operate in utter synchronism with the orgiastic pulsations of the music. Chewing gum at a penny a stick got aboard the great human principle of motional emotion and won millions for its purveyors. The Liggett & Myers Tobacco Company tried to ride the same principle with its attempt of some years past to popularize edible tobacco with the slogan evolved by the late Richard A. Foley, reading: "The Men who Chew are the Men who Do." It failed because tobacco contains too little chew movement and too much marksmanship for urban populations.

We are going and going, where or nowhere makes no matter if we but *go*.

All this movement may seem no more than the dance of the midges where the sunbeam shafts through the birches over the trout pool, but it seems that much—life.

THE PREHISTORY OF THE SCREEN

The static philosopher under the Bo tree seeks the perfect peace of All-Knowledge and finds it Oblivion. There are only the Quick and then the Dead. That is arrival. Motion is the be all and end all. The going is the life.

It was, and yet is, the business of the sagas to preserve the continuity of the race, reminding it that it *came* and that it is *going*—on and on and on.

Down in the Society Islands the profession of remembering survives with tribal reverence and honors for the old woman entrusted with the chanted annals of their people. Investigators have related instances in which these librarians of the race have recited lines of royal genealogy purporting to trace a thousand generations. For the identical purpose similar functionaries, usually old squaws, exist in most of the North American Indian tribes and among the Esquimaux.

So sound, by virtue of its pictorial meaning in words, became the memory cue, the light for the screen of recollection. More and more the burden of the re-creation of the event was shifted from the clumsy process of re-enactment to swift processes of visual imagination. The artist became author and sidestepped through language, making the listener mentally draw his own picture.

Sound by words became the medium of picture transmission in this wise, by translation first of the act into the significant sounds or words, and then again by translation back into the act in the mind of the listener. The process suggests the analogy of the translation of voice into the electrical wave and back to the voice again, as in the telephone and radio. Both are conversions of basically pictorial conceptions into transmissible media.

Sound and word made the brain, in an indirect sense, photosensitive.

This business of expression was and is tremendously difficult and complex. Picture making went on and grew in association

with sound, just as pantomime did. Ideas in word-sounds had companions in idea-pictures. By a gradual, tedious metamorphosis, by generalization, degeneration and formalization the pictures became symbols for the associated sounds. When the pictures were divorced from their pure pictorial meaning and wedded to the sound they, by that step, became an alphabet.

The alphabet gave a tremendous impetus to the business of communication. It vastly shortened the process of re-creation of events, but added complication to complication by putting yet another pair of transformers in the circuit. The process was now from act to sound to alphabet, and then back down the line again through eye and mind from alphabetical word to the re-creation of the act on the screen of the mind.

But the artist communicator, as a writer of words, had no longer to trouble about accurate representations of his bear or woman. He could indicate everything swiftly with a few formal strokes, signs for the sounds which were signs for the pictures.

This pictorial ancestry of the alphabet is most readily established by examination into the writings of the ancients. And in fact, nearly the whole history of the human arts of expression is preserved for our examination in the archaic human islands that remain here and there in the sea of modern civilization. Among the living remnants of the ages in remote tribes and unevolved peoples we can study the trend of the arts of expression with just as much assurance as we may study the ice age where it lingers still in the islands of prehistoric time frozen on the mountain glaciers.

In some of the simpler forms of the sign language of the American Indian we can see how intensely pictorial were the beginnings. Two fingers straddling the edge of the other hand signifies a man on a horse. To hammer on an open hand with the clenched fist means stone. The right arm bent and slightly

raised forward with the hand closed and knuckles upward signifies old man. The derivation of the sign becomes apparent the moment that the hand clutches a supporting staff and completes the picture.

It is, of course, the most common knowledge that the written language of the Chinese to-day remains not at all an alphabet but a system of just such signs, pictures, simplified and formalized on paper with a brush. The Chinese ideographs are the persistence of a pictorial language in a state of arrested development.

In the most ancient of Chinese inscriptions the strictly pictorial origins of their written language is evidenced. By comparison with modern forms of the same characters we can observe the trends of formalizations in behalf of speed and the limitations of the writers' tools, brush, ink and paper. The first writings were with a firm stylus, more readily controlled in detail than the brush.

	Ancient	Modern
Sun		日
Moon		月
Mountains		山
Child		子

Horse 

Fish 

The next tiny step, showing the origin of derived compounds and the beginning of the sort of elaboration which has carried the language of the scholars of all races so far from the primitive concrete images, is indicated in such characters as theses:

	Ancient	Modern
Bright (sun and moon)		明
Forest (a group of trees)		林
Obstruction (A tree or bit of wood in doorway)		閑
East (Sun seen through a tree)		東

The Chinaman has stuck to the pictorial side of the ideograph to the bitter end, an interesting fact in view of the more recent anthropological notion that he is perhaps the purest and simplest survival of original man.

Out of the dusty yellow lore of ancient China comes a significant proverb: "One hundred tellings are not so good as one seeing." It is the axiomatic statement of the purpose of telling, to enable—by re-creation of the event—the seeing.

"One hundred tellings are not so good as one seeing." It is the lament of an eye-minded world.

Again in the ancient Persian, the tongue of the Rubaiyat of Omar's pleasant despair, we find the same famed proverb: "When will hearing be like seeing?"

We have it in the English, "Seeing is believing," and in the Americanese of "I'm from Missouri, show me."

The next step in the continuity of development is to be found in the transition of the Egyptian hieroglyphics or picture writings into the arbitrary forms of alphabet as we know alphabets in our common use of to-day. A most effective example of how pictures came to be letters in written words is afforded in the hieroglyphic representation of the name of Cleopatra. This comes to us from a period when the hieroglyphic language had reached its highest development, with some four thousand years of recorded Egyptian culture behind it.

Here is the name of Cleopatra, as it appeared within the cartouche or circumscribing line which denoted the royal Shield. The characters read from right to left.

Now analyzing the name we discover the conversion of pictographs into phono-graphs or sound symbols.

An angle or knee		In Egyptian, or Coptic, *Kne* supplies the sound of **K**
A lion		..... *Labo* gives the sound of **L**
A reed		..... *Aak* supplies the sound of **A** or **E**
A noose		..... Of unknown name, supplies the sound of **O**
A mat		..... *Pu* supplies the sound of **P**
An eagle		..... *Ahom* supplies the sound of **A** (broad)
A hand		..... *Tot* supplies the sound of **T**
A mouth		..... *Rho* gives the sound of **R**
An eagle		..... *Ahom* supplies the sound of final broad **A**

Again, as we examine the Hebrew alphabet, one of the several successors to the hieroglyphic, we discover the continuing processes of evolution. In the Egyptian the picture became a sound, and in the Hebrew the picture signs for the sound are simplified into nearly arbitrary forms, still with a tinge of the picture in them. The first letter of the Hebrew alphabet, in its older forms, is plainly the head of the ox, a conventionalization from the same source as the great sculptures of the

winged bulls on the palaces of Babylon. The animal concerned, zoölogical history now asserts, was really identical with the Wisent, lingering yet in parts of Germany and Russian, and a close relative of the American Bison. This wild ox was abundant in western Asia in Sumerian days and appears on many cylinder seals and Summerian inscriptions. The later Babylonians and Assyrians adopted the figure although the animal likely had disappeared from the region. The Assyrian character for "bull" was the triangle representing the broad face of the wild ox, with a pair of horns projecting. It was almost exactly our own letter "A" drawn upside down. The early Hebrew term for bull was *alphu*, expressed by the Assyrian sign. In turn evolved the Hebrew-Phœnician *aleph*, denoted by the same character inverted, then came the Greek *alpha* and now the Roman "A".

If you chance ever to have seen a big bison bull leading his herd and heading into a storm on the Alberta prairie, or thundering on the charge at a foe, it is easy to understand how he got himself up at the front of all the alphabets, no matter how much it may offend to admit that our language begins with simple, pure bull. The wild bull was the first fact alike in the lives of the Sumerian hunters and the American Indian.

So it comes that in the Hebrew the alphabet begins with the picture of *Aleph*, the ox, the initial sound of which it conveys; while the second letter represents a house or tent, *Beth*, and gives its initial sound "B" to the letter. And so onward, *Ghimel*, represented by the neck of the camel and carrying the sound of its initial to the character, and *Daleth*, representing a door and sounding like "D."

The Hebrew alphabet, starting *Aleph, Beth, Ghimel, Daleth*, or A, B, C, D, is really a succession of pictures, Ox, Tent, Camel, Door. Our very word Alphabet, combined of the first two let-

ters of the Greeks, *Alpha* and *Beta,* is an abridgment or partial pictorial re-creation of the alphabet, which points the way of the process of pictorial re-creation. When folk of the commonalty speak of the "A-B-C's" they are falling back on a more strictly literal re-creation in preference to the use of the slightly abstracted name-symbol of the adopted word "Alphabet." Alphabet is too far from the picture of the letters for some minds.

The process of alphabet derivation from pictures is strikingly shown in reverse in the pictorial nursery alphabet books and their jingles:

> "A is for Apple so big and so round,
> B is for Bunny . . ."

To aid the infantile mind over the bump of abstraction in the conception of symbols the sub primer of the nursery backs down the road to get a running start from the plane of simple familiar pictures.

So we see that written language and alphabets have come out of what really has been a striving for living pictures, reduced to shorthand by practical necessity of expediency.

So much has the word come into the go-getting service of the Wish that Alfred Binet, pioneer intelligence tester, chose power over words as his yardstick twenty or more years ago.

It is to be anticipated that biologists may raise the fact that the sense of hearing is older than sight—which presumably is a consequence of the origin of life in the waters of the ancient murky seas, where the vibrations received as sounds were more available than light, the medium of sight impression. Perhaps eye-mindedness, which paved the way for the motion picture, began as the silts settled out of the ancient seas and the clouds of the primordial sky cleared. The Fundamentalists may find in Genesis: ". . . and darkness was on the face of the deep. And God said, Let there be light, and there was light."

When and where light became available evolution seems to have hastened to make it serve. Hearing must necessarily be as slow as the sound wave. Sound travels at about 1100 feet a second in the air at the surface of earth. Light under the same condition travels about 186,000 miles a second. Light is nearly 900,000, or close to a million, times as fast as sound. The organism, seeking to be informed about who was coming to eat him up, turned toward the faster line of communication. Seeing had an advantage over hearing about as great as getting the ringside news hot off the radio as against reading about it in a weekly newspaper.

The language of sounds acquired the pictorial value of gesture and pantomime and further pictorial concepts beyond the power of mere pantomime. So our words are picture laden vehicles. With eye-mindedness came the language as we know it now. This frozen gesture-picture language, precious gift of the ages of experience, became venerated and sacred, a subject of worship like the Classical Chinese. Nothing less than the zeal of religion can explain the purists' ardent defense of their ancient orthodoxies of honored usage.

Progress and elaborations of civilization are driving even the educated Chinese to the use of Pidgin English to express concepts beyond their old ideographs. A related evolution, not so acutely marked, is indicated when Marguerite E. DeWitt, Authors' League of America, writes in *American Speech:* "We speak twentieth century English and approximately write that of Chaucer's day."

If hearing had embodied the refinement of definition and the capacity for swift, precise information of the external world the human race might have evolved as strictly ear-minded rather than eye-minded. But hearing lacks just that quality of nicety and scope. The sight component was necessary to make the language talk.

But in this long-ago quest the development of communication by a falling back on hearing was an alternative of expediency. It would have been hardly more complex, but much less convenient, to have chosen to address the sense of touch as the alternative avenue. In the blind who read Braille we see the thing done.

In Braille reading the mind, through the tactile nerves, receives pictorial impressions just as truly as the normal person receives them from the abstractions of the printed word for the eye and of the spoken word for the ear.

Thus we find languages clearly elaborated for three of the senses, sight, hearing, and touch. Only a lack of refinement and range, and perhaps a lack of the necessity, prevents a similar elaboration of language or picture symbols for the smell-taste sensory combination. And no one of experience will deny that, by association, aromas have their power to awaken pictorial images, from the stockyards of Chicago to the fields of new mown hay.

The facility of the translations involved becomes so great that it is a common place instead of a wonder. We have piled translation upon translation without end in this transmission of pictures. The reporter observes the event, be it the ball game, prize fight, fire, or flood and converts it into words, either written or dictated straight to the telegraph operator, who receives them by eye or ear and translates them into dots and dashes, a mere wave rhythm in the electric pulse on the wire. And in the craft of the telegrapher a whole new system of abstractions appear in the coding abbreviations. The reporter may write or dictate "shot and instantly killed," but the operator sends "s-a-i-k."

The telegraph sounder converts the pulse of the sending current back into the sounds of the dots and dashes and another operator receiving writes them into letters and words. The words may then be printed, as they come, or again translated

into Braille in a newspaper for the seeing fingers of the blind. In any event the process is one of communicating a picture from one mind's eye to another through the complications of media which strive to overcome both distance and time.

The process is even more strikingly exemplified in some of the so called "sensational" newspapers when a staff artist in the publication office, perhaps hundreds of miles from the event, takes the words from the wire as the basis for a strip of progressive pictures and diagrams to show how it happened. This is really just pictorial pre-digestion of the words, ready made translation, prepared for consumers believed by the editor to require this assistance in, or substitute for, the process we call "reading." It should be called simple rather than sensational journalism. It is sensational only in that it offers a short-cut to the ultimate sensation in the receiving mind. He who calls it "yellow journalism" confesses the snobbery of his impatience at what is to him an annoying proclamation of the obvious. The fundamental effort is at understanding, differing in no basic quality, moral, ethical or mental, from the drawings which accompany a patent application on a new washing machine.

Radio transmission of photographs now attained, and the efforts at similar transmission of motion pictures now in progress, are but a part of the same process, a striving to transfer the labors of translation from mind to the genii of electricity and machines.

Trying to communicate with words we are ever in a struggle with the faults of their translation into mental pictures. "Don't you *see* what I mean?" we implore as the words begin to limp. By illustration, simile, metaphor and parable we try to fortify the picture message of the words.

Just as the complexities of society and thought outgrew the pictures on the cave walls, the processes of algebra and calculus

outgrew the capacities and facilities of simple arithmetical numbers. Then symbols, partial re-creations, or essences, came to take their place. Mere convenience led the mathematicians to the adoption of the ready-made symbols from the Roman and Greek alphabets. A B C and X Y Z became handy intruments for the demonstration of pure abstract principle shorn of confusing, hampering and concrete finite quantities and relations. The step from numbers, say 4, 5, 7, to A B C in algebra is after all just such a step as the child makes in arithmetic when he can add bare, bald numbers instead of the familiar problems of "How many red apples will John have?" in the primary textbooks.

The progression from the concrete picture to the abstract thought is nearly identical in every form of expression. This places the motion picture in a most significant light.

In the evolution of the alphabet from the original impulse to picture, to re-create the event, to make a living and therefore moving picture of it, we see the liberation of thought, communication and expression from the tediousness of graphic art. And with this liberation it is obvious that there was a progression from the concrete to the abstract and from Things to Ideas. Here at once in this consideration of affairs archaic we discover the fundamental character and limitation of the art of the motion picture. And it may be to the point to remark that with this thought in mind the student of the motion picture will perhaps be able more clearly to evaluate some of the curious internal struggles of the art of the motion picture on the screen of to-day.

The strivings of the abstract against the walls of the concrete are often in evidence on the screen. These strivings have resulted in such significant and curious experiments as D. W. Griffith's *Intolerance*. *Intolerance* was a box office failure because of the discomfort which it caused in the minds

of its patrons. The picture did not please a sufficient number of persons in relation to its cost.

Intolerance registered in the mass mind only as a stupendous miscellany of something, now Babylon, now medieval France, now barbaric modern America, the whole considerably shot up with excitement. The concrete happenings were not generalized into illustrations of the abstract principle of intolerance. Tillie-the-Toiler in the orchestra seat with her boy-friend did not see the individual gripped by fetish, ritual and intolerance. She saw the King of Babylon having a swell time interrupted by the hardboiled guy Cyrus. She saw that there was a rough night in Paris on the eve of St. Bartholomew. She saw that Mae Marsh in the young mother role was having a hellofa tough time while John Law was framing to hang Bobby Harron. And that is all that Tillie saw. She was peevish because Mr. Griffith kept mixing these stories up. For Tillie, these stories had nothing to do with each other.

Allusion, simile, and metaphor can succeed in the printed and spoken word as an aid to the dim pictorial quality of the word expression. The motion picture has no use for them, because it itself is the event. It is too specific and final to accept such aids. The only place that these verbal devices have on the screen is in support of the sub-title or legends, which need support indeed in their contrasted weakness of words beside the pictures. *Intolerance* was a giant metaphor. The public saw it just as it sees the Pyramids of Egypt, without an interest in history, or the Grand Canyon of the Colorado, without an interest in geology.

This incapacity of the eye-minded public for attention to even the tiniest abstraction or breaking away from simple pictorial movement is a trait as old as the world. The art of letters has become accepted only as the result of the most tremendous effort and necessity.

Most of mankind is still illiterate. The art of reading and writing is remote centuries ahead in the development of the millions of the majority. In these proud United States with their high degree of literacy the publishers estimate that there are only about six million potential buyers and readers of any reasonably intelligent book or of magazines of such a moderate intellectual standard as that of *The Saturday Evening Post.*

The race of man was so loath to engage in the mental labor of learning letters, so wedded to the easy re-creation of events by the ritual and picture, that for very long periods the business of reading and writing was delegated to priests and slaves. Learning of abstract letters was in the nature of dirty work, too hard and tedious to torture the hours of the wealthy. The idea is embodied in the modern by-word, "Brains are cheap."

The evolution of the alphabet and a facile written language produced an increasingly wide and deep channel for the processes of thought and communication. It was the liberation of thought from the literal thralldom of the picture which gave the written word its higher intellectual power. But it was only the vaster greater convenience of word writing as against laborious picture making which made the written word the main channel of recorded expression.

When word-writing liberated expression from the picture, writing became the main stream. Graphic art, the business of pictures, was robbed of its major importance. It has since remained an incidental, meandering system of trickles, brooks, and rivulets sometimes paralleling the big river of expression in written words.

Every now and then one of these little creeks of graphic art is swelled into a pool by the wallowings and splashings of some sufferer trying to convey abstract ideas with pictures. A fuss of no importance always results from trying to blow a twenty horsepower whistle with a five horsepower boiler.

A vast deal of most profound foolishness about painting and sculpture has grown out of just such efforts and splashings. Every now and then we get all wet from the spray of such things as Cubism, Vorticism, and Futurism. The result is always muddy water.

It is apparent that, when the alphabet evolved from pictures to open the way for abstract communication, thought began to escape from just Things and the simple emotions concerned only with Things. But the whole population did not follow in that escape. The majority did not jump off the concrete bank of pictures into the abstract river of words. They did not want to swim. They stayed on the assured soil of just Things. They are still sitting by the river, making small use of the alphabet and looking at pictures of Things, mostly bears and women.

Beside our metaphorical river of expression, at a spot somewhere in the vicinity of the place where the abstract alphabet broke out at the side of the concrete dam of pictures, we can pick up that particular line of trickles in the old main channel which will lead us down to the motion picture of to-day.

Let us consider written language as the off-shoot which became the greater stream for the current of ideas, leaving the now less important and obscured course of graphic art and picture making to go on its way with a diminished freight of thought. Drawing, painting, and sculpture survived and continued down the centuries, developing at times and borrowing back on occasion some refinement of ideas from the rushing new current of the written word and its abstract powers.

Every one used words and language, while a relatively few atavistic artists maintained and built upon the tradition of the picture-writer of the old home cave. They are still doing it. Doubtless it is this atavistic character of graphic art which accounts for certain matters of long hair, smocks, and Illustrators'

Balls—a subject slightly outside of our chosen segment of the universe.

Meanwhile the picture still retained its power, and words, for the masses, had only the power of the pictures in them. The picture was yet to have its day—and that is our screen history.

The process by which the cave picture became the written language tended to carry the business of expression off into heights of abstraction a good way beyond the original intent. The language, in fact, has gone so far that it is largely out of reach of the infantile public, as we have noted concerning the book market. For the masses the word is but a make-shift of unpleasant tediouness still. Therein is the secret of the golden kingdom of the screen.

Now what Mr. Og was trying to do for Mr. Ug back there in the cave was to give him, by drawing on the wall, a complete re-creation of the event; in other words, a life size, natural color, stereoscopic, talking motion picture. He was seeking to project into Mr. Ug's osseous consciousness the image which he had enjoyed, and he was trying to do it with a picture on the wall. It is a choice idea to dally with:

Adam Og presents
EVA EGG
in
THE FIG TREE
A mastodonic drama

Adam Og sought re-creation of effect by a representation of the complete act. He wanted to give Mr. Ug an identical thrill. He still does.

Drifting down the by-waters of graphic art, we can pick up significant examples of the effort all the way tending and striving toward this same life size, natural color, stereoscopic, talking motion picture—the compete re-creation. And incidentally,

in technical terms, we have potentially arrived at just that. Motion pictures variously containing each of those qualities have been made for some years. No important scientific problem prevents them from being combined. But many artistic and commercial problems stand in the way.

The records of the past are rich with the rudimentary efforts at the motion picture idea. For so many centuries that even the Chinese have lost count, elaborate shadow plays have been a part of the art lore of various of the old Asiatic peoples, and they survive yet in Siam. Little silhouettes mounted on sticks for manipulation before a lamp or candle are used to enact a shadow marionette show upon the wall. These silhouettes are often exquisitely executed bits of craftsmanship in elaborate sets which include both the characters and the scenery for rather complicated shadow drama.

In Java a considerable folk art of shadow play survives and flourishes. A large cloth screen is erected between the audience and the sun. Back of this screen the manipulators of the drama move silhouettes of half life size which cast their shadows through the cloth. The "cast" of one of these long shadow plays is often a huge pile of hundreds of silhouette figures, depicting pantomimic phases of action and related to each other just as the succeeding steps of a strip comic cartoon in our daily press. This shadow drama of Java has its formalized rubber stamp types of villains, hero, heroines, mothers-in-law and the like, evolved precisely as we have them in the melodrama of the stage and more conspicuously on our screen.

Shadow plays of silhouettes variously created can be found in the tradition of every civilized people. No doubt they have the common ancestor of the shadow mimicry of nursery walls, whereby ages of mothers have entranced and quieted bawling young Adams with fascinating silhouettes cast by deft hands in suggestion of the braying donkey, the champing wolf, and

the barking doggie—motion pictures in their simplest form.

Countless other pictorial efforts from progressive frieze reliefs on temples, depicting the triumphal return of the king from the war and hunt, down to the painted cycloramas of the Battle of Gettysburg are expressions of the same idea, the effort to re-create the event to be pleasurably remembered.

All art is pervaded by this single purpose, a living motion story of thrill and glory and pleasure. Consider narrative sculpture from the mud images of the prehistoric troglodytes to now; miles upon miles of life size history in stone left by the Cambodian kings, the countless classic arches from Trajan's biographical and Dacian boasts at Benevento to Napoleon's Arc du Carrousel proclaiming the triumphs of 1805, and the Robert E. Lee-Old South saga Borglumed into the face of Stone Mountain in Georgia, U. S. A. 1925. We still say it with rocks.

Chisel and brush have continued paddling down the river of expression, but failing ever behind the written word. Two factors put the plastic and graphic arts behind: first; mere mechanical facility, and second, also most importantly, their weakness as compared with the power of the word to convey motion. The word is pictorially weak, but it moves. The active verb is the soul of the language. It is the vitalizing current that sweeps the word onward. The infinitive is our tie to the infinite. The statue and the painting can only say *was*. The word can say *is*, and luring us on it can promise *to be*. The race wants to *is* and *is* onward, continually being *to be*.

The graphic art, the original simple picture making process of event re-creation, light starved and thwarted in its growth, waited down the ages, and after the ages through the measured centuries, for this catalytic essence of life—the vital gift of motion.

When motion came to vivify the picture it was armed for the conquest of the world of concrete expression, already vacated

by the advancing fore-fringe of the abstract words. Words were born as pictures, but among the erudite minorities they had gone on to another plane of concept.

Motion made the picture a language instead of a sign: made it the fundamental language it set out to be in the beginning. Motion made the picture move from *was* to *is* and to *to be*. The tedious translations were swept away. No longer in concrete communication was it necessary for the communicator to struggle to convert his pictorial concepts into symbols of sounds or symbols of alphabet form to endow them with motion and give them transmission. No longer was it necessary for the listener to receive with the ear that jumble of rapid sounds and translate it in terms of pictures and motion for the mind's eye.

Motion in the picture cut out the transformers in the language expression circuit. The mind could now get its emotion juice from the re-created event direct. The transformer losses were eliminated. The juice was stronger, purer. The line noises, the static and squeals and howls of word perversion and attenuation, were gone. Automatic, photographic record supplied in full authenticity what before the individual had to conjure up for himself out of bits of memory and by really stupendous feats of intellectualization.

In this the motion picture is not a thing apart, but only functioning with the whole effort of the evolving thing we call life. In the re-creation of events for the re-enjoyment of emotions the film brings just such a short cut directness as the whole of scientific industry is seeking in every phase of human concern. Science has remade the world by bringing about the marvel of work done without human labor. It has eliminated the complications of costly muscle power and has substituted a similar but cheaper organic re-action in the coal-steam-electricity institution. Now again science seeks another set of eliminations, another series of direct lines, in super-power, solar power and

radio power transmission, and again in fixation of atmospheric nitrogen and synthetic foods. Art and industry are laboring alike, and by very like steps, for one and the same service—the pleasant titillation of the five senses of the human animal and that sixth product of those five factors which is euphemistically called the soul.

To pursue the parallel to its last extreme step, one may say that just as electricity may be called the one fundamental energy so we may call the motion picture the one fundamental art. Of course the exponents of the status quo with investments, emotional and intrinsic, in the attenuated, specialized and derived arts may be expected to scorn such a view of the screen. It is always so of authority which bases itself on tradition. The authority of painting, sculpture, literature and music have a great deal in common with the divine right of kings and similar conventions.

Probably the most remarkable property of the motion picture as an art medium has been neglected or undiscovered by the scholars and critics. This is its unparalleled ability to superimpose emotional stimuli. In this the screen is alone and supreme. With the incredible swiftness of light it can throw its dramatic "kicks" one after another into the eye consciousness attaining a cumulative effect which is tremendous as measured against any one of its components. In all of the other media, as in painting, sculpture and the stage drama, only one punch can be delivered at a time. Sheer mechanics make this inescapable. But optical mechanics permit the motion picture to build the spectator to a pitch of dramatic feeling and then shower blow upon blow and climax upon climax upon him before the effect of the first has subsided. Reaching for this facility the stage has at times resorted to complications of machinery with but the most casual success. But the motion picture dramatist attains the result with absurd ease by the

trifling expedient of splicing block and film cement. Only music can approximate the flow of the film, but music is a conveyor of mood, not a narrator. The film is specific, primitive, actual, faster than life and twice as natural.

It is this rapid fire capacity to superimpose dramatic tensions to a new depth of intensity which tends to compel attention to any motion picture no matter how trivial. It may all be of no importance whatever, but we are held because while something is continually happening something else also is always in the process of being about to happen. We may scoff and scorn the meager, trite content of the picture, but someway we sit and see it through, riding its monotony rocking-chair fashion, while if the same tawdry art were presented to us on the stage we would walk out, and if in a book we would throw it under the radiator. The film has the spell of continuity and speed.

A pleasant coincidence of opinion is discovered in Barbara Low's article on the limitation of the cinema's value in education, in the *Contemporary Review* (London), November, 1925, in which, after citing Ferenczi's statement of the "period of unconditional omnipotence" and the "belief in magic gesture" of child development, she observes:

> It is surely clear that the cinema entertainment must gratify this "magic omnipotence wish" more than any fairy tale, any novel, picture or drama can possibly do—and does so independently, to a large extent, of the theme of the film. It is the *method* which brings about so vividly the sense of wish fulfillment. It is the cinema's business to show all problems solved, all doors opened, all questions answered: it must simplify and arbitrarily select, which is one way of making the spectator feel his wishes are fulfilled, since real life is complex, unselective, often baffling our curiosity, and rarely offering solutions to our problems.

The sages and the Homeridæ come in the film can, bottled right at the spring.

A MILLION AND ONE NIGHTS

The film is the primordial art, freed and empowered. For eons the picture on the wall could only say "bear" and "woman." Now endowed with motion it can say "There goes the bear," and more joyously still "Here comes the woman."

The yearnings of Adam Og and his friend Ug can now be satisfied, and Eva Egg may have her career.

The ancient cosmic itch is being scratched at last.

The motion picture appeals to the savage in us all. Yes, even to the Great Ape within us, crouching back, wondering and fearing, in the shadows cast by the fires of daring thought.

The motion picture does what man tried to do when he invented language. It fulfills the strivings of a million million years!

In the twilighted theatre, lulled with music's emotional and motional rhythms, we see our day-dream wishes ethereally materialized before us at the screen's window, which opens on the land of heart's desire. Without painstaking thought or effort it comes and rolls on and on and on.

The motion picture is the Prayer Wheel of the Wish.

CHAPTER ONE

FROM ARISTOTLE TO PHILADELPHIA, PA.

Now begins the world's most human story—the history of the motion picture. It is a tale as old as creation, and as new as tomorrow morning's paper.

For the first time in the history of civilization we can see the complete flowering of an art form in a single generation. Within thirty years, the motion picture has progressed from the sleeping germ of the age-old wish to the effulgent blossoming of the universal screen of today. Never before in all the ages has this happened. The beginnings of the stage are lost in obscure antiquity. The art of the printed book is half a millennium. Painting and music have come to us out of the remote unknown. All these are the fruit of patient endless time. But many, perhaps a majority of the readers of this page can remember when there were no motion picture films.

The men who saw the birth of sculpture, painting, and drama were mouldering in the sleep of the ages when the Redwoods came to clothe the Sierras, when Cheops planned his Pyramid. But the first men to see a motion picture on a film are yet alive, and with a hearty prospect of seeing many another. There is no parallel in all human experience.

But the motion picture is young only as the bud upon the tree is young. Under them both are roots deep in endless time. The motion picture is a bud that has flowered. To see and know rightly this flowering of the films we shall start our inquiry back down this branch of the tree of expression.

Here Romance and Science come blithely down the centuries

bringing us the art of the screen and pictures that live. Among their retainers we shall find philosophers, savants and priests, gamblers, adventurers and cut-throats, noblemen, gentlemen and commoners, wise men and fools—all of the motley of life. This is the chapter of the savants.

The coming of the motion picture was inevitable. For ages it existed only in man's desire. It has been attained because of that age old wish for the re-creation of events attended by emotions of pleasure.

When in that dim long ago, the leaders of thought laid down their fears of the whimsy of Gods and took up a hope in law and a reasonable universe, progress began toward the myriad attainments of the modern era. Among these we may importantly number the motion picture.

So long ago and so obscurely were the first discoveries on the path to the screen made that it would be futile to search for them. Aristotle in ancient Greece it was who first wrote down the observation that even a square hole in a shutter illumined by the sun cast a circular spot of light against the wall of a darkened room. He was only mildly curious about it. Natural science in his day consisted of noting oddities. Others of equal antiquity observed that the stone twirled by the slinger and the glowing light of a rapidly whirled firebrand both presented apparently continuous circles to the eye.

In those two primitive phenomena were hidden all of the secrets of the motion picture. That hole in the wall of a chamber in Hellas was the pinhole aperture which cast a true image of the sun, and that darkened room was in truth a camera. . The circles described by the whirling stone of the Balearic slinger and the firebrand were demonstrations of the principle of the persistence of vision.

Doubtless many a curious scholar in the succeeding centuries saw various puzzling phenomena of light and images, but not

until we arrive at so recent a milestone as the Italian Renaissance do we find recorded glimmerings of the beginning of the service of optics to art.

Somewhat hazy tradition credits the invention of a device known as the *camera lucida* to Leone Battista Alberti, a roistering, rejoicing artist of Florence.

Alberti may of course have been only among the first to use the apparatus. It was a prismatic arrangement by which a reduced virtual image of an object could be apparently cast on a drawing board, making it convenient for tracing outlines. Alberti was so versatile and so infinitely busy with the prodigious activities of the period that he probably welcomed such a labor-saving device. It is related of him that he astonished all Florence with his feats of strength and skill. He could, so history solemnly states in dignified Latin, make a standing jump over any man's head. Also he could stand in an aisle of the Cathedral of Florence and toss a coin so high in the air that it could be heard to tinkle against the vaulted roof above. He was the Fairbanks of Florence.

The unborn motion picture's destiny hovered through the fifteenth century about Florence. It was the remote, heroic year of 1452 when gay Ser Pero, the notary, having indulged in amorous dalliance with a comely peasant girl Catarina, found himself the father of a most vociferous and promising son, duly christened Leonardo.

Now this Leonardo da Vinci became all kinds of a man, artist, architect, decorator, engineer, scientist, and author.

One of Leonardo's concerns was expressed in a pursuit of the most realistic results possible on the canvas of painting. He wanted to make the picture absolutely re-create the event, to make it happen again before the eyes of the spectator. His literal aims are reflected in a passage of his *Trattato Della Pittura,* where he writes:

> I have seen a portrait so like that the favorite dog of the original took it for his master and displayed every sign of delight; I have also seen dogs bark at painted dogs and try to bite them; and a monkey make all sorts of faces at portraits of his own kind; I have seen swallows on the wing attempt to settle on iron bars painted across painted windows of painted houses.

In all of which Leonardo was doubtless nature-faking, but he was definitely stating the desire for a living picture.

This quest of reality made Leonardo pursue the secrets of life endlessly. He stood by execution yards to observe and sketch the expressions and gestures of poor creatures on their way to their doom. He littered his studio with gruesome bodies for dissection that he might learn the mysteries of muscle-controlled expression. He took life apart in search of secrets that should make his canvases live.

This search after the means of re-creating the event sent Leonardo, some centuries early, very directly in pursuit of the camera of to-day. Among Leonardo's experiments was an investigation of the laws of perspective by placing a glass plate between the eye and the object, and noting thereon where the lines of sight cut the plane of the glass.

Then, too, Leonardo observed that if he cut a small circular hole in a shutter of a darkened room there would be an image on the wall opposite, showing in detail the building or landscape outside in the full light of the sun. This room was in reality the *camera obscura,* used by artists for centuries after, and it was indeed too the camera of to-day, lacking yet only the sensitized film or plate. If Leonardo had had the chemical means of coating the glass plate of his experiments in perspective and catching thereon the image he found on the wall of his room, he would have had photography, which in a nameless unconscious way he was seeking.

It had not apparently come to Leonardo that there was a

possibility of pictures in motion. But he was after a strict recording of nature in the picture, up to the fact of motion. He hoped to suggest life by a frozen moment of it, a still photography in which the skill of hand and eye performed functions of photo-chemistry yet undiscovered.

Leonardo's search after reality in art, his hunger for convincing pictures, made him seek every emotional aid. Vasari wrote of Leonardo that he employed musicians to play for Mona Lisa while she sat as his model. Doubtless there was a laughing up the sleeve among Leonardo's contemporaries at such a fanciful extravagance. Stepping lightly over time and space to the Biograph studio in Los Angeles in 1913–4, four centuries after Leonardo, we find D. W. Griffith employing an orchestra to make Blanche Sweet emotional before the camera recording *Judith of Bethulia.* Griffith's contemporaries laughed and scorned.

In Leonardo we have seen the artist beginning to use science consciously as an aid to capturing a moment of the event, a picture. The urge of art was strong indeed in his day. Art was the particular subsidized servant of authority and the Church. It was the great medium of propaganda, the medium of re-creating emotions by re-creating events. Painting marched side by side with pageantry and ritual. It was about the year 1500, only half a century after Gutenburg and Fust began printing from type. Dramatic ritual and the graphic arts were much more important then, before the printing craft loosed the modern flood of words upon the world. What was to be said to the masses had to be said in pictures. That is still largely true, but not for lack of words.

For a full two centuries after the coming of printing from type and the rising tide of books the pictorial art remained unchanged, losing ground in the unequal race with words. The picture was fast and firmly immobile, as immobile as

the wood or canvas upon which it was painted. Before the art of the picture could hope for a share in the living fluidity of the word's ability to state motion it had to be freed, loosened from the wall.

Just about two hundred years from the invention of the printing press and a century and a half after Leonardo's prime, the picture began reaching for this new freedom which lay still centuries ahead. One evening in 1640 Athanasius Kircher invited nobles and wealthy citizens of Rome to a remarkable first night showing at the Jesuit College. Kircher desired to present for the consideration of the rich and the mighty the first model of his *Magia Catoptrica,* or magic lantern. Nowadays the same thing is done with similar pomp and to the same purpose by motion picture producers presenting their wares at private previews in the Ritz-Carlton.

Kircher's show consisted of a few crudely painted slides depicting devils, demons and skeletons. Death, Evil, and the Devil were important factors in the life of that day, when the principal emotion useful for the control of the multitudes was fear. Kircher chose the Devil for his star quite as naturally as the motion picture maker of to-day reaches for Cinderella in some guise, purveying the positive appeals of hope and sex instead of the negative emotion fear.

The slide shadows on the wall filled the audience of ignorant nobles and the wealthy climbers of Rome with amazement and delight. There were plaudits for Kircher. This inventor of the magic lantern was a German from the ancient community of Geiss, known to a more modern day as Hesse Cassel, the territory which later contributed the Hessians to the war of the American Revolution.

Kircher the Jesuit has told at length in his book, published in 1646 under the title of *Ars Magna Lucis et Umbræ* (The

Great Art of Light and Shade), about this magic lantern. This ancient volume has been brought to light by Will Day of London, an able authority and collector of motion picture archives. Kircher's lantern had a lamp, reflector, and a lens, just as the magic lantern of to-day has.

Kircher also illustrated in this volume a method of changing from picture to picture by the use of a revolving drum. His drum shows pictures of the radiant sun, the head of a lion, and the head of an ass. He was really getting dangerously near the motion picture idea. His pictures were painted on glass.

Kircher's magic lantern progressed from that day as fast as illuminants improved and lens makers evolved their craft. This was not really so long ago, when one reflects that the Pilgrims had become well established in Massachusetts by that date and that Southampton, Long Island, was thriving in Indian trade and the pursuit of "whayles and other greate fish."

Through Kircher we see the pictures become liberated from the immobility of paint and canvas. The ingenuous Jesuit began with his *Magia Catoptrica* to make pictures of light and shade. They were not yet, in his crude hand-drawn slides, truly mobile in a pictorial sense but they contained that inherent possibility. His pictures in light and shadow were a step back toward the fluidity of motion in nature's pictures presented direct to the eye from the object, also seen only in terms of light and shade.

Picture making on the wall was ready and waiting now to receive motion.

The striving after literal motion recreations of events continued with every conceivable sort of presentation. One of the most ingeniously elaborate of them is set forth in a playbill of 1811 recently found in London. It reads:

Sanger's Mechanical Collection of Alabaster Figures and Moving Wax Work, now exhibiting in this town for — days only. The proprietor, in offering this truly moral, elegant and truly scientific exhibition to the notice of a discerning public, states, without fear of contradiction, that this expensive production of years of hard study and perseverance has been ultimately crowned with success. He thus fearlessly invites the patronage of all good members of society, as the aim, object and end of his endeavors have been to please the old and instruct the young; teaching them to look from nature to nature's cause. The first enclosure contains a splendid lifelike representation of Moses striking the rock, or the Children of Israel in the Wilderness. Moses is seen at the head of the Israelites standing on a rock near Mount Horeb. The just proportion and mechanical movement of this figure surpasses everything of the kind that has hitherto been attempted. Moses is seen to raise his arm and strike the rock, from whence water appears to flow. The speculation of the eye and movement of the mouth, as if inviting the people to drink from the waters that are gushing from the rock. To the left is Aaron, with an intelligent smile upon his countenance, as he gazes on the stream which slakes the thirst of the great multitude. The whole of these beautiful figures will be set in motion by the aid of mechanical ingenuity. The movement of the limbs, the rolling of the eyes, and heaving of the chests of men, women, and children, taken altogether give it a life-like representation of what has in reality taken place, as we are bound to believe, according to the records of sacred history.

One is particularly delighted to note that these living wax works so handsomely registered the heaving of the chest. Chest heaving has become a prime essential of modern screen drama.

Not until nearly two hundred years after Athanasius Kircher and his lantern show, did scientific investigation begin determined pursuit of the mysterious principles of the appearances of motion, leading toward the motion picture. These scientific beginnings held no relation to showmanship, then apparent.

FROM ARISTOTLE TO PHILADELPHIA, PA.

It was at the end of the first quarter of the last century when one Peter Mark Rôget of London began to make certain observations filled with motion picture portent. This Rôget is scientifically most important and historically little known. His name, shorn of every vestige of personality, survives among the tools of the writer's craft in the title of Rôget's Thesaurus, the word book.

As one might suspect from the doubly impressed Christianity of his christening in honor of two apostles, Rôget was a minister's son. His father was John Rôget, formerly of Geneva, pastor of the French Protestant church in Threadneedle street, London. His mother was a sister of Sir Samuel Romilly, and to her gallant British biographers have credited Peter Mark's heritage of mind. Their authority for this does not appear. The precocious youth was graduated from the medical school of the University of Edinburgh at the age of 19.

Rôget became a physician. It was doubtless a choice of mere practicality. The practice of medicine was, bear in mind, well near the only earning career open to a scientifically minded man of that day.

Rôget was interested in everything within the scope of science. He became an expert on water supply. He rioted in mathematics. He invented a logarithmic slide rule for rapid calculating and as a result was elected a fellow of the Royal Society of Great Britain, becoming its secretary. He lectured on "The Laws of Sense and Perception" before the Royal College of Physicians and spent three earnest years on the study of the "external senses." He was eagerly interested in the problem of the manner in which the human mind becomes conscious of the outside world.

It was therefore inevitable that Rôget should have engaged in researches bearing on the principles of vision, and that his findings should now be seen as uncovering various laws under-

lying the yet undreamed motion picture. Further it is intensely significant, bearing immediately on the principle of event re-creation and the identity of picture and language that Rôget was so aggressively interested in mere words that he made the compilation of his classic Thesaurus the valedictory labor of his declining years. Clearly the word and the picture, the impression of the "external sense" of sight were intimately related in his mind.

The star of motion picture destiny, always traveling westward in the course of the race, reached England with Rôget. One day while he was engaged in his inquiry into the affairs of the external senses he chanced to glance from his study window to note the approach of a vehicle. It was only a baker's cart and Rôget hurriedly turned back to his papers. But, as he turned away, the line of his vision swept past the interferences of the slats of a Venetian blind. Through the slitted apertures the scientist caught the impression that the cart was proceeding by jerks. He saw it, despite its rapid motion, momentarily at rest in each slit, and, through each successive opening, he saw it in a different phase of motion.

Rôget had previously placed a great deal of confidence in his eyes. This was something to be investigated at once. In 1824, a century ago, Rôget appeared before the Royal Society to read a paper entitled "Persistence of Vision with Regard to Moving Objects."

This matter of seeing and its new problems might well have been expected to intrigue the interest of Sir John Herschel, who had seen so much. In Charles Babbage's "Passages from the Life of a Philosopher" we can find the story of how a thought from Herschel contributed to the progress of the motion picture idea. Sir John sat toying with a shilling. He ventured that it was "possible to see both sides of the coin at once," and proceeded to demonstrate by spinning the coin on the table.

blending the image of the face of the shilling with that of the obverse.

Babbage mentioned the incident to his friend Dr. William Henry Fitton, a geologist, chemist, and physician. The next day Dr. Fitton had evolved a demonstrating device. It was a little disc of cardboard with strings attached to twirl it. On one side was a drawing of a bird, on the other a cage. When the disc was revolved between the strings, the bird appeared in the cage.

Then it appears that another doctor came confusingly into the course of history. John Ayrton Paris, M.D., with Cambridge and Edinburgh behind him and all manner of scientific interests in "natural philosophy" and materia medica, began in some way the commercial manufacture of the little device, and it acquired the altogether alarming name of the Thaumatrope. Dr. Paris rather takes the credit of the thing in his work entitled "Philosophy in Sport made Science in Earnest." If there was such conflict of testimony about the parentage of this trivial ancestor of the motion picture in 1826, what may we expect of today?

Meanwhile the initial studies of Dr. Rôget, embodied in his paper before the Royal Society, set other minds at work.

The great Michael Faraday made an inquiry based on the curious appearances of the wheels of the baker's cart seen through a Venetian blind. Faraday constructed machines which revolved various arrangements of cogs and spokes, revolving at different speeds. He found, as he set forth in the Journal of the Royal Institute of Great Britain, that the impression of rest could come from combinations of motions, that rapid movement could be made to appear from slow moving and that an impression of backward movement might result from actual forward motion. Every spectator of the motion picture of today has seen some of these same manifestations

in the eccentricities of wagon wheels which turn backwards on the screen, while the vehicle goes forward. Faraday studied movements on a system of wheels.

Over on the Continent Dr. Joseph Antoine Ferdinand Plateau, then a youth of thirty among grey-bearded scientists, began work on this notion of "the persistence of vision" at the University of Ghent in Belgium. Almost simultaneously, Dr. Simon Ritter von Stampfer at Vienna in Austria engaged in similar investigations.

It was the next year after the publication of Faraday's observations that Plateau and Stampfer almost at the same time, but independently of each other, arrived at the first devices in the world for seeing pictures in simulated motion. By coincidence their devices were identical in all respects. Both placed pictures of phases of motion, handmade drawings of course, on the rim of a disc and viewed them through slits in another disc, blackened on the viewing side, and revolving on the same axis with the picture disc. If the eye were placed in proper position and the pair of discs were twirled, the successive pictures appeared before the eye as of a continuous series. The smaller the slits the sharper the pictures appeared; the blurring motion was also lessened. This was the world's first motion picture machine, devised in the year 1832, in Ghent and Vienna.

Up to this time and point, the study of motion had not been aimed directly at the making of living pictures. Herschel, Rôget, and Faraday worked only on the bare bones of abstract principle. Plateau and Stampfer with little dancing figures on their discs began to give humanity to the principle.

The motion picture had been born, but it was yet dependent for the making on the handwork of an artist. The images for the little disc machines had to be made in the only way that

pictures could be made, through the fallible eye and limited hands of the artist.

Stampfer gave his picture machine the horrendous name of the Stroboscopic Disc, while Plateau called his the Phenakistoscope.

Over many years and in the face of tragedy Plateau carried on his experiments and researches in seeing. Through the very weeks in which he evolved the device which blazed the way to motion picture seeing for the world's millions the light of his eyes was fading into the dark of utter blindness. He who would see so much paid the price of his sight.

In 1829 Plateau went out of his laboratory and gazed at the midday sun for twenty unblinking seconds. He wanted to see more of the great lamp of the universe, source of all seeing, than any one had seen before. When he turned to go back to his desk and note what he had seen the black of night was about him. In a few days he recovered his sight. But for fourteen years it waned, and in 1843 flickered out forever. Through the twilight and on into the dark Plateau, seeing through the eyes of others and their words, carried on and gave to the world works on vision that are landmarks of scientific history.

After a time Plateau changed the name of his Phenakistoscope to the Fantoscope. A coloration of life was coming to the motion picture. It had been as abstract as X Y Z of algebra, but now it was called "phantom-seeing," related as closely to life as ghosts and phantoms.

Plateau in the concoction of what we may call cast and scenario for his Fantoscope chose the same star as did Athanasius Kircher, the Jesuit inventor of the magic lantern two hundred years before—namely, the Devil. How the Devil does persist in motion pictures! Plateau's Fantoscope showed

"Le Diable Soufflant"—The Devil Blowing up Fire. Kircher's painted lantern slides could only show a portrait of the Devil, but Plateau's Devil was in action. Even Hell is improved by science.

Science was to remain yet another half a century the sole custodian and agency of motion picture destiny. In Vienna, the city of Stampfer, Lieutenant Baron Franz von Uchatius, of the Second Regiment of Artillery in the Austrian Army, became interested in the science of implements of war, especially ballistics and metallurgy. He, like the rest, wanted to see more accurately.

In 1853 he wedded the magic lantern inherited from Kircher and the Stroboscopic Discs of Stampfer, thereby projecting the pictures on the wall. Only one eye at a time could see the pictures of the Stroboscope and the Fantoscope, but many eyes could simultaneously see the Uchatian pictures on the wall.

Now projection and the fluid freedom of light-painting had come to the motion picture. It still awaited the chemical genii of photography to make the pictures.

William George Horner of Bristol, England, son of a minister, a school master and mathematician, gave the little dancing pictures of the Fantoscope a more popular application by mounting them on the inside of a slitted cyclinder, which revolved on a stand. It was an adaptation of mere convenience as a parlor novelty. This Horner described in the *Philosophical Magazine* under another irritating name, the Dædaleum. In 1860 one Desvignes, a Frenchman, patented an evolution of this device, and it received the name of the Zoetrope, or Wheel of Life. The favorite subject consisted of drawings of a galloping horse. The Zoetrope can still be found in European toy shops of to-day. It took the embryonic motion picture out of the laboratory to an eye hungry world.

Now for a while the progress of the motion picture stood still,

waiting for a better and more facile recording of motion than could be had through the eye and the hand of the artists.

Even before 1800 there had been beginnings in photo-chemistry. Observers were noting that substances faded or darkened in the light. With opaque stencils they began to make patterns on surfaces coated with fading substances. These, of course, were mere shadows, and could not be called pictures any more than Kircher's magic lantern shadows cast by devils painted on glass. The image-forming lens, the artificial eye, did not enter into the process. Neither were the sun painted patterns permanent. It was found in time that one of the best substances for this light stenciling was a solution of certain salts of silver. In 1819 Sir John Herschel, the same who twirled the shilling and gave us the Thaumatrope, found that sodium thiosulphate would dissolve silver chloride. That was, in popular terms, the discovery of what we buy at the druggist's kodak counter as "hypo," the same being hypo-sulphite of sodium. This hypo takes the unaffected silver salts out of our negatives and makes them permanent; therefrom the amateur photographer's term of "fixing."

The history of photography is a long long trail down which we may not detour for very many steps. But it is most interestingly important to take note as we go of Daguerre, notable in our day because his name has been given to those treasured old pictures of our great-grandfathers and mothers, prim in their stocks and laces, known as Daguerreotypes. He was quite a person, this M. Louis Jacques Mandé Daguerre, painter, manager of the Diorama, and member of the Legion of Honor.

M. Daguerre was artistically, and perchance in other more human ways, very much like Leonardo. As a painter he wanted not what we have come to call interpretive art, but literal re-creations of the event. He was after the fundamental picture telling of the caveman, the one art form that has al-

ways been popular and always will be popular. Daguerre tried to paint the place so that you thought you were there. One of his feats was the painting of a background setting for an altar which seemed to make the church open on a vast fairy-land garden. Daguerre was a super-scene painter, with a brush dipped in saccharine. The Diorama was Daguerre's commercial pictorial show, just such an affair as the Cyclorama of the Battle of Gettysburg.

Daguerre wanted a camera just as earnestly and for the same reasons as Leonardo did. He wanted to re-create the event better than the frailties of memory, eye and hand would permit. But the camera was closer now. Chemistry was about to give memory a silver-salted record to take down the pictorial message of Leonardo's *camera obscura.*

On December 14, 1829, Daguerre, the artist, and M. Joseph Nicephore Niépce, "landowner of Chalons-sur-Mere," entered into a contract aimed at evolution of the photographic art.

Photography did evolve, and Daguerre attained the ability to make light record its images through a lens on a treated metal plate. He required exposures of long duration, respectable fractions of an hour.

Through the efforts of many men photographic processes and materials improved. Operations were simplified, and the exposures shortened until only a matter of a few seconds were required to impress the image on the photographic emulsion coating of the plate.

The year 1860 had come, and with it the wet plate process of photography, still used by engravers. The destiny of the motion picture was now moving westward in its following of the course of empire. In Philadelphia in that year Coleman Sellers, the head of a mechanical engineering business and withal an inventor of the successful sort, put himself at the problem of making pictures live and move.

Sellers posed his small sons. Coleman, Jr., pounded away at some amateur carpentry while Horace rocked in a little chair beside him. Sellers had a difficult time keeping his wet plates wet while he changed from pose to pose of the successive steps of the action, and invented a glycerine bath to keep the plates alive. He did not photograph motion, because he had no device fast enough, physically or chemically, but he built up, step by step, a synthetic cycle of movement by poses considered representative instants of the motion. This was doing photographically just what the artists had done when they drew the pictures for the Wheel of Life.

Sellers made his pictures stereoscopic, with an ordinary twin-lensed camera. He mounted the successive prints on a sort of paddle-wheel device in which they could be viewed by looking down on them through a stereoscope, while the paddle-wheel was turned by hand. At the proper rate of speed an impression of motion resulted.

Sellers named his machine the Kinematoscope and patented it February 5, 1861. It is interesting to note that he recognized that a period of rest in the presentation of each picture, to permit it to register in the eye, was necessary. He did not embody a stop device for that purpose, but achieved the result in a degree because on his paddle-wheel machine the picture moved away from the spectator in the direction of the line of sight and remained in view practically until the next took its place.

When he named his machine the Kinematoscope, Sellers launched a word that was far to overshadow his own slight fame and long outlive his invention. This was the first appearance of Kinema, which spread the world and in every language means motion picture. We shall encounter kinema and its derivatives often.

With the Sellers machine the motion picture had caught up

with the progress of photography and stood waiting for it to make way.

The principles of the motion picture that was to be were rather well recognized now. Within three years of the patenting of the Sellers device in the United States a somewhat visionary experimenter in France, Louis Arthur Ducos du Hauron, obtained a patent there, in the application for which he wrote:

> My invention consists in substituting rapidly and without confusion to the eye, not only of an individual but when so desired a whole assemblage, the enlarged images of a great number of pictures when taken instantaneously and successively at very short intervals. . . . The observer will believe that he sees only one image, which changes gradually by reason of the successive changes of form and position of the objects which occur from one picture to the other. Even supposing that there be a slight interval of time during which the same object was not shown, the persistence of the luminous impression upon the eye will fill this gap. There will be as it were a living representation of nature and the same scene will be reproduced upon the screen with the same degree of animation. . . . By means of my apparatus I am enabled especially to reproduce the passing of a procession, a review of military manœuvers, the movements of a battle, a public fête, a theatrical scene, the evolution or the dances of one or of several persons, the changing expression of countenance, or, if one desires, the grimaces of a human face; a marine view, the motion of waves, the passage of clouds in a stormy sky, particularly in a mountainous country, the eruption of a volcano. . . .

This stated in anticipation the motion picture. M. Ducos never got beyond the idea on paper, filed April 25, 1864.

After Sellers the development of the picture lingered yet a while in Philadelphia. Henry Renno Heyl of Columbus, Ohio, a designer and inventor of machinery, removed to Philadelphia in 1863, destined to have a share in the evolution of the motion picture. Heyl was highly skillful in mechanical principles.

He devised special machinery for the working of paper and wire stitching of books and pamphlets. He became the original patentee of the now commonly used wire-stitched paper box, used by the haberdashers, florists, and department stores.

The program announcement of the "Ninth Entertainment of the Young Men's Society of St. Mark's Evangelical Lutheran Church, Philadelphia, to be given at the Academy of Music by O. H. Willard, Esq., on Saturday evening February 5, 1870, in aid of the library fund," contains the following paragraph concerning the first exhibition of a picture device invented by Heyl:

THE PHASMATROPE

> This is a recent invention, designed to give various objects and figures upon the screen the most graceful and lifelike movements. The effects are similar to those produced in the familiar toy called the Zoetrope, where men are seen walking, running, and performing various feats in most perfect imitation of real life. This instrument is destined to become a most valuable auxiliary to the appliances for illustration, and we have the pleasure of having the first opportunity of presenting its merits to an audience.

The Heyl machine carried thin glass positive pictures, mounted radially on a wheel, which carried and exposed them intermittently to the light ray of the magic lantern. This machine had a shutter and a ratchet and pawl intermittent mechanism which produced all of the mechanical effects necessary to the proper projection of pictures, even by today's standards. The making of the pictures was by just such a process of successive poses as Sellers had used. Heyl and a dancing partner were photographed in six positions of the waltz at O. H. Willard's studio at 1206 Chestnut street, Philadelphia.

The six pictures were made on negatives *carte de visite* size, and were reduced in printing to positives on glass a little larger

than a postage stamp, and rather close to the size of the image on the modern film. Each of the pictures was printed three times, to supply eighteen images to fill the wheel. Hence each revolution of the Phasmatrope gave three turns of the waltz. The operator synchronized the picture to the orchestral music at the entertainment and gave the audience of 1,600 persons a profound sensation. The entertainment included also a wheel picture of an acrobatic performance. The receipts for the show were $850.

Just what direct personal contact there may have been between the Sellers effort and the work of Heyl is not certain. Charles C. Heyl of Germantown, son of the inventor and heir to the Phasmatrope, recalls that his father became a member of the Franklin Institute and was for thirty years a member of its board of directors. There the elder Heyl and Sellers became intimate friends.

Through the Heyl device the problem of showing motion pictures had now come nearer to a satisfactory solution than the making of them. The screen was waiting for the laggard camera to catch step by attaining the ability to photograph objects in motion, not mere timed poses.

Heyl was apparently the first to project photographic pictures. But because of the limitations of photography his motion was entirely synthetic. The Sellers device was an evolution of the Zoetrope, which in turn had developed from the Plateau-Stampfer Stoboscopic Disc machine. And farther back Lt. von Uchatius had projected the Stroboscopic pictures on a screen, very much as Heyl projected photographs later.

The next step was to come from a far place and unexpected sources.

CHAPTER TWO

MUYBRIDGE IN MYTH AND MURDER

AGAIN the star of the motion picture's destiny moves westward, now to California. It is still four decades before the first camera clicked in Hollywood.

We have come to Muybridge and his tradition. We shall examine into the tale of a tale which by constant repetition has become the supreme classic reference of all motion picture history. It is the screen's accepted first chapter of Genesis, growing in authority and weight down the years.

For at least twenty years every writer and every speaker on the annals of the motion picture has repeated with increasing assurance the time-worn story of the race horse pictures with which the late Eadweard Muybridge has been so orthodoxly credited with fathering the motion picture. Thereby the story has taken to itself the greatness of great names and the backing of high authority.

But the supreme classic is supremely wrong. Muybridge, in a word, had nothing to do with the motion picture at all; and, in truth, but a very small part, if any, in the creative work of the hallowed race horse incident.

The principal necessity for discussing the Muybridge story here is not his part in the background of the motion picture itself, but the overwhelmingly distorted shadow of his fame.

The reader familiar with the long told story of common acceptance will find now and again glints of the stuff from which the Muybridge myth has been constructed, along with here and there evidences of how it came to grow into the fabric of tradition.

Our California of the Seventies was a newly preëmpted Promised Land with a rising culture of the logical sort to follow the hurly-burly of the actively romantic days of the gold rush of '49. The land was in the hands of a coterie of industrial pioneers of the type always designated by friendly biographers as "empire builders." California was the distinctly empirical property of a group typified and headed by Collis P. Huntington, Charles Crocker, Governor Leland Stanford and James R. Keene, names written conspicuously across Pacific Coast history. They were the Rockefellers, Morgans and Goulds of their domain, the United States from the Sierras to the sea. The Southern Pacific railway, and its components and subsidiaries, were at once the symbol and instrument of their dominion.

From the dimmest dawn of history down to the gasoline age, from Attila to Henry the Ubiquitous, the conquerors have come a-horseback. The fast horse was through the ages the best servant of man's fight against time and distance. In this day, when the horse is hardly more than a living fossil, racing survives by the force of fetich, still glamored with the title of "the sport of kings."

Horseflesh was, therefore, still a utility as well as a diversion in the seventies. The horse was a considerable and imposing fact in the lives and interests of those ducal builders of empire in the great open spaces of the West.

Governor Leland Stanford owned an imposing racing stable and was a breeder of fast horses. He had a deal of knowledge and definite opinions concerning the horse. It was his solemn and somewhat lone assertion that at various gaits a horse at full speed took all of his four feet off the ground at once. The horse was as provocative of conversation and argument then as the motor car is now.

James R. Keene and Frederick MacCrellish were among those who differed with Stanford's notion most vigorously.

There is no knowing how long they may have argued about it, but eventually in '72 the day came when the last word was "I'll bet you."

It was a right princely bet, too, being in the sum of $25,000, good California gold. The traditional story always refers to it as a wager, gaining thereby some flavor of antiquity and a savor of extra gentility.

More recently, since the name of Stanford has become immortalized by a university and laureled by time, one or two distinguished chroniclers writing for local consumption have sought to cast over the race horse matter a Puritan aura by firmly asserting in limpid accents that Governor Stanford never at any time or place indulged in betting. Let us observe that the worthy governor owned many race horses with great pride in their speed and that this was the California of 1872, when and where men were men, etc. The circumstantial evidence is as definite as that surrounding a darky in a melon patch.

The wager may have closed the argument, but it did not settle the issue. Somebody had to prove something. Governor Stanford started out to do it. He wanted to be able to show conclusively what the feet of the race horse did in action. It was necessary to have ocular proof in hand—in other words, a picture. Up to that moment pictorial art had been purely a servant of communication and evolved esthetics. Now it was called upon to take a brass tacks, scientific assignment. Artists and sculptors through the centuries had accepted the pictorial tradition so typically expressed in the antique *Balbi* in the Neopolitan museum. Stanford did not agree with the artists. He had to find picture making that was untrammeled of opinion, able to record rather than to fancy. This inevitably meant resort to photography.

Stanford cast about and presently employed this Eadweard Muybridge, a San Francisco photographer. Muybridge was

locally known for his work in making various photographs for the U. S. Coast Survey. He had been sent to Alaska to make photographs by way of supplying official answer to the cry of "Seward's Folly" raised at the purchase of the territory for seven millions from Russia in 1867. It is probable in the light of both the political and industrial interests of Stanford that this was the source of his acquaintance with the photographer.

Muybridge worked with the wet plate process, which was then still the best available method of recording the image cast by a lens. Stanford sent him to Sacramento in '72 to try for pictures which would show the gait of the horse. This was an attempt at making snapshots, a daring conception in that day. Muybridge worked with the ordinary stand camera of the period. It was loaded with a plate freshly sensitized in a black tent darkroom on the spot. Then this plate was exposed as a horse was driven past the camera.

Photographic manuals indicate that the briefest practical exposure was then about one-twelfth of a second. That was about one half as rapid as the action of the common Brownie camera used by children and novices today. Such a long exposure could not record rapid motion close to the camera. A trotting horse registered in a blur on the plate.

Muybridge inevitably failed and was about ready to give up.

Stanford was disappointed but still eager for the pictorial proof which he was sure would confirm his opinion in the matter of the motion of the horse. Perhaps Keene was chaffing him a bit, too.

A sudden, and previously unexplained interruption now appears in all of the scientific and popular accounts of Muybridge's work. The solemn records of the journals and the archives of libraries and universities leave some five years of Muybridge's life accounted for by saying "when he returned

to San Francisco five years later . . ." You may search the libraries of San Francisco, Philadelphia, New York, Paris and London in vain. There is an ample and abundantly erroneous literature of his labors in two or three languages. But there is no recorded word there of the lost years, and those years hold the secret chapters of the highest drama in the life of the man whom a careless world calls "the grandfather of the motion picture."

Stowed deep in the dust of the records of an obscure country court house is a file of tape bound papers which supplies the key. The file jacket reads:

THE PEOPLE OF THE STATE OF CALIFORNIA
vs.
EADWEARD MUYBRIDGE

Those old papers in their faded legal blue jackets take us back to the black day of October 17, 1874, when the lost years began. Muybridge was at work over his plates in the dark-room of the photographic establishment of Bradley & Rulofson in San Francisco. The status of his connection with that concern is not clear. He may have been, and likely was, an employe on a piece work basis. A lawyer called on Muybridge who was a defendant in a suit for $100, the bill of one Mrs. Susan Smith, midwife. She had attended Mrs. Muybridge at the birth of a child a short time before. The child was born while Muybridge was at Sacramento, and now Mrs. Muybridge was away on a visit to the Dalles in Oregon. It was typical of Muybridge's carelessness with his financial affairs that the bill should have been unpaid. There must however have been some other factor. Muybridge was resisting payment.

A hint came from the lawyer that Mrs. Smith knew something about Mrs. Muybridge. If she were not paid there was to be

vengeance. Muybridge, aflame, went to Mrs. Smith, who told a tale of domestic perfidy.

One Major Harry Larkyn, the midwife said, had brought Mrs. Muybridge to her house for confinement, and there had been love scenes with the new born babe between them.

Mrs. Smith elaborated with stories of visits by Mrs. Muybridge to Larkyn's quarters, with a touch about a veil and shawl left behind. Muybridge refused to believe. Mrs. Smith countered by giving her lawyer letters from Mrs. Muybridge in Oregon, discussing Larkyn in tender terms and enclosing a picture of the baby with the name "Harry" written on the back. It would appear, too, that Mrs. Muybridge was hiding from Larkyn, for there were advertisements in the personal columns of the San Francisco and Portland papers through which he had tried to communicate with her.

This Major Larkyn was an Irishman of English culture and an adventurer. He had in a year served on several San Francisco newspapers and was now with the *San Francisco Stock Report.* He was of the dashing sort, handsome with the glamor of a whisper of noble lineage. He was a familiar of the merry life of San Francisco, hail fellow and often met.

Mrs. Flora Muybridge was, the records tell us, twenty-three and a rare beauty, petite, plump and blue-eyed.

Muybridge was forty-seven, given to moods of gloom and eccentricity.

Also it was California, golden and provocative.

Now this seventeenth of October the lawyer came with the papers, the letter, Judas-sweet, and the picture of the child. The name "Harry" was scribbled on the back of the photograph.

Muybridge, emerging from the darkroom, squinted against the glare of outer light and regarded these documents of his despair.

From among his effects in the workshop he snatched a revol-

ver and dashed into the hall. He had been marked as curious at the Bradley & Rulofson establishment because of some phobia which would not let him use the elevator. This day he dashed into the car and descended. In the hall below William Rulofson encountered Muybridge and sought to calm him. Muybridge poured out his trouble and declared he was going to see Larkyn, whom he knew to be at Calistoga. Rulofson parleyed, hoping to delay Muybridge until the last boat had gone. The dock was twelve squares away from the Rulofson galleries in Montgomery street. Four minutes to the sailing hour Muybridge broke away, running. He made it.

When the boat docked that evening Muybridge walked ashore and presently went about the streets of Calistoga on his quest. Calistoga was a way station on romance road. There where the warm sulphur waters bubbled up at the foot of Mount St. Helena, Sam Brannan, locally known as "the great and only," had come from New York and built a resort, named in token of his native Saratoga. Up these same streets one Robert Louis Stevenson came one day, not long after the time of this chapter, and went up the mountain with his bride to write "The Silverado Squatters."

Major Larkyn and his light o' love had been there, too.

Now vengeance entered, in sequel, with the outraged personality of Eadweard J. Muybridge. Larkyn was, he learned, at the Yellow Jacket mine, seven miles distant.

It was eleven that night when a liveryman deposited Muybridge at the house where Larkyn was stopping.

Muybridge shouted a call for Larkyn.

Larkyn came to the door and peered out into the dark.

"I can't see you," he answered.

"My name is Muybridge—here is a message from my wife."

The message was a shot from Muybridge's revolver.

Larkyn clapped his hands to his heart and turned back into

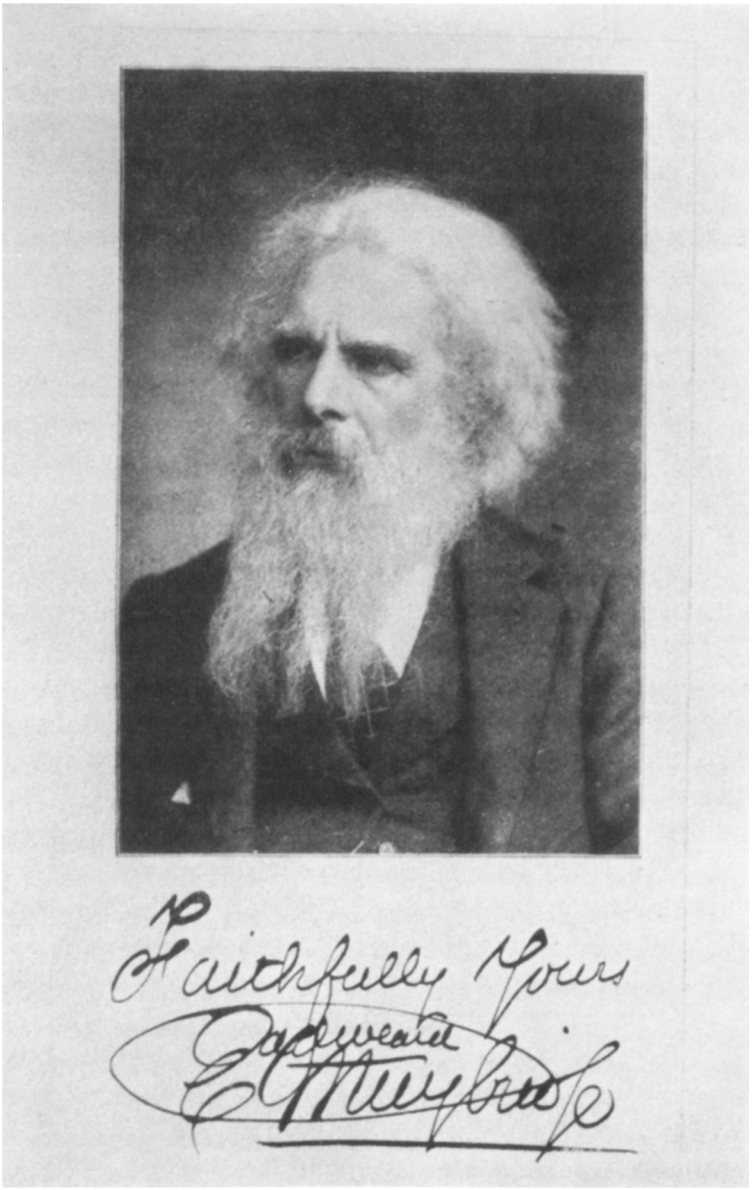
the house. In half a minute he was dead. Muybridge, following Larkyn in, was disarmed and sent away that night to the jail at Napa City, the county seat.

The affair was the sensation of the year in Napa county. Shootings were common enough, but not affairs so dramatically involving beauty, love and high pitched romance.

Sam P. Davis, a reporter for the *San Francisco Chronicle* and a friend of Larkyn, came to minister last attentions, and write the story. Davis was a brother of Robert H. Davis, now one of the famous among New York's magazine editors, whose recollections furnished the first clue to this chapter of our history.

Four months later, February 3, 1875, Muybridge was called to trial in the Napa City courthouse. The hearing occupied two days. The defense relied on asylum officials to support a temporary insanity plea. That was before the alienist had been invented. The evidence revealed that Muybridge had been injured in a stage coach runaway accident in July 1860, while crossing the continent on his way to England. He had lain long ill with injuries to his head, at Fort Smith, Arkansas, and months after was treated in England by the famous Sir William Gull. Doubtless Muybridge's injuries were genuine enough, since it appears the Southern Overland Stage Company settled with him for $2,500 when he returned to California. Many reputable citizens testified to the change that the accident had wrought in Muybridge's mental character and conduct.

The streets about the little brick courthouse in Brown street were crowded with wagons and ponies and the courtroom overflowed through the open doors into the halls that afternoon when Wort W. Pendegast of counsel for the defense made his plea to the jury of hard faced pioneers. Pendegast had come into the Napa Valley from Kentucky, bringing with him the ability for courtroom oratory which was the special gift of the land of



EADWEARD MUYBRIDGE as he appeared in the years of his fame at the University of Pennsylvania.

The Napa Daily Register.
PUBLISHED EVERY AFTERNOON.
SATURDAY, FEB. 6, 1875.

"NOT GUILTY."

End of the Muybridge Trial.

BRILLIANT SPEECH OF SENATOR PENDEGAST.

The Prisoner Overpowered with Emotion.

FRIDAY, Feb. 5, 1875.

AFTERNOON SESSION.

Court convened at 1 P. M. Jury called and found all present.

The Court began by announcing that it had concluded to admit evidence of prisoner's condition of mind subsequent to the killing, with privilege to defense to rebut. Defense recalled J. M. McArthur. Was in Muybridge's company most of the time after the killing, till he took him to Calistoga: noticed his deportment.

[Pendegast interrupted by a request to exclude witnesses.]

Appearance and deportment was exceedingly cool and deliberate; observed nothing unusual; neither after arrival at Calistoga was appearance unusual: was cool and collected. As as instance of coolness, said Muybridge poured out a drink very steadily when they all drank together on their arrival at Calistoga: when I took his pistol from him he was steady, nerved and cool. Cross-examination—He was unusually cool. Conduct that of any man under ordinary circumstances; conduct was unusual under the circumstances. Don't think I told him "keep cool" or testified to that statement.

and Muybridge was brought in to receive it. It was "We the jury, find the defendant not guilty."

OVERPOWERED WITH JOY.

On hearing his acquittal, Mr. Muybridge was so overcome with his emotions as to fall into a paroxysm similar to that which had seized him on the memorable 17th of October, when he heard of his wife's infidelity. He fell upon Mr. Pendegast and wept, and went into convulsions. He was removed to the offices of his counsel, and Dr. Boynton sent for. By the time of that gentleman's arrival, however, he had so far recovered as to be out of the need of medical aid, and rapidly regained his wonted composure.

He is now a free man and has received the congatulations of a multitude of friends. He leaves tonight for San Francisco, where, so confident was he of acquittal that he had an engagement to dine with a friend tomorrow.

SPEECH OF HON. W. W. PENDEGAST.

Rejoiced that there were some points in the case that were not controverted and upon which all agreed. I agree with Judge Stoney that the prisoner at the bar is guilty of murder in the first degree, or he is guilty of nothing. Either send him from the Court-room a free man, or send him to the scaffold. He deserves absolute freedom, or he deserves death. Between the two ye are the judges. No controversy as to the killing or its attendant circumstances. Admit that Muybridge took the life of Harry Larkyns, and that he took it in no self-defense. Do not wish to bring Larkyns from his bloody grave; am willing that he should sleep there till the resurrection morn.

How *The Napa Daily Register*, of Napa City, California, reported the acquittal of Muybridge — the day that his five mysterious years began.

bourbon and blue grass. He was tall and lank and solemn. His voice poured out with the emotion of a great organ.

Pendegast laid the statutes aside and invoked the "unwritten law." His address to the jury is a tradition of the Napa County bar. Pendegast's oratory was interrupted by rounds of applause. He pulled out the tremolo, the vox humana and all the rest of the stops on the organ. After thundering a philippic of vengeance and justice "above the law," Pendegast dropped to a softened plea carefully pitched to hush the courtroom into churchly silence.

"I can not ask you," he said, "to send this man forth to family and home—he has none. Across the arch of his fireplace where once were written the words Home—Wife—Child—Content and Peace, there now appears as a substitute for all, in black letters, placed there by the destroyer, the single awful word "Desolation." But I do ask you to send him forth free—let him take up the thread of his broken life and resume that profession on which his genius has shed so much lustre, the profession which is now his only love. Let him go forth into the green fields, by the bright waters, through the beautiful valleys and up and down the swelling coast, and in the active work of securing shadows of their beauty by the magic of his art, he may gain surcease of sorrow, and pass on to his end in comparative composure."

The jury was charged and retired for deliberation in late afternoon. Hours passed and the disappointed crowd went away for supper, as the jurors had theirs sent in. Meanwhile argument and balloting continued.

Ballot after ballot was taken. Always the vote was "Not guilty—11, guilty—1."

Old Sam Newcomer was foreman of the jury. He was one of the oldest settlers of the valley. He had come for gold and he stayed to be a rancher. He was tall and gaunt and spare.

He wore a white moustache and a goatee, grandee fashion. He was a type of the covered wagon era.

Newcomer and ten fellow jurymen raged and cursed at W. T. Commary, the twelfth man, voting "Guilty."

Commary was a hardy determined person, too. He was a carpenter. Strangely enough, in the light of his decision, he had a young and beautiful wife, quite as fair as she who had cost Larkyn his life. They lived in Napa City near the courthouse.

Argument and oaths were unavailing with Commary.

"He's as guilty as hell and you know it," he insisted. "The law is the law. Every man here knows he's guilty."

Midnight came. Twelve cots were moved into the jury room.

As the twelve good men and true sat pulling off their boots, Newcomer called for another ballot. "Not guilty—11, guilty —1."

They blew out the oil lamps and went to bed, cursing.

Newcomer lay still, staring up at the dark ceiling. On the cot next to him was Commary.

Soon the heavy breathing and snoring of ten tired men filled the room. Two men tense beyond sleep lay still in the dark.

It must have been near two o'clock in the morning when Newcomer sat up on the edge of his cot facing Commary. Commary sullenly grunted. Newcomer spoke low, but clearly.

"Listen to me Commary. You've knowed me for a long time."

Newcomer waited. Commary was looking hard at him.

"I reckon I have, Sam Newcomer."

"Well Bill, you've never seen me pray. It's a long time since I ever said a prayer, Bill. But I'm going to say one now."

Newcomer stopped to let Commary think. Then he went on.

"And Bill, I'm a-going to pray to God that while you're locked up here in this jury room some —— gets your wife!"