

The Language of Photography

(Chapter 2– Time)

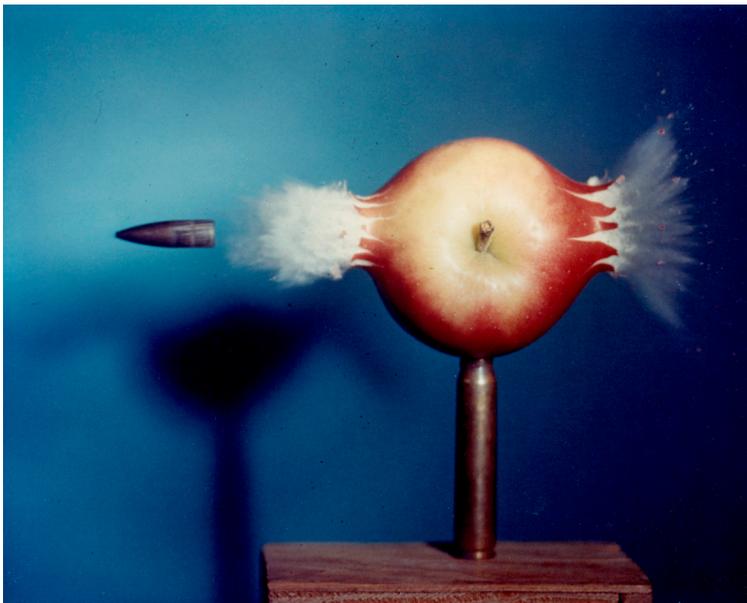
by
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Chapter Two: Time

Each photograph is a record of light at a moment in time. The “moment” that a photograph is made may appear instantaneous, but the image can also tell a story that has a beginning, a middle and an end.

Each photograph is a record of light at a moment in time. It is made in the instant when the shutter opens and closes allowing light to pass through the lens and strike the film. As we have seen in the previous chapter, the patterns this creates can evoke in a viewer aspects of our shared experiences of the world. Because most images are made in a fraction of a second, the resulting photographs seem to capture a moment frozen in time, holding light and



Harold Edgerton, Bullet Through Apple, 1964

even reality itself in a kind of suspended animation. In some cases where that moment is microscopically brief, it can reveal an invisible world of cause and effect, like an ancient insect frozen in amber.

Once the lens has created these patterns they are fixed and unchanging. But this sense of timelessness, of time suspended, is not technically accurate. In actuality, the world these patterns represent is in a constant state of change

and flux. There's an old saying, “You can't step into the same river twice.” More accurately, you can't even step into the same river once, because it changes even during the time it takes to get from the toe to the heel immersed. In the same way, from the moment the lens opens and light begins to etch the film, to

the time it closes, the world that is reflecting the light into the camera changes. Not only can't you take the same picture twice, but very like the ever-changing river, you can't take the same picture once! For the most part, this change is usually imperceptible in the final image, but when exaggerated through the right use of the shutter speed or camera movement, it can be significant, and offer great creative possibilities to a photographer.

In the language of photography, this change is recorded as a specific type of distortion of the "normal" patterning, and is referred to as "blur". If the change is large, it can dramatically alter the nature of the patterns that are recorded on the film. These changes can be considered, from a scientific point of view, to undermine the accuracy and reliability of the information they contain—an out-of-focus image contains fewer points of useful information, and a photograph that is blurred by the motion of the subject or the camera throws into question the precise location of the points used as reference. The greater the doubt about a point's actual location the less useful it is for scientific calculations.

A long exposure during which the subject, or the camera, or both move, creates a blur. However, from a creative point of view, this blur is a particular kind of pattern that we have come to interpret as sourced in motion. How fast the actual object was moving when photographed cannot be determined. The blur creates only the suggestion of motion, not real motion. If a long-enough exposure is used, a turtle can create a blur. If a short-enough shutter speed is used, a galloping horse, even a bullet shot from a gun, can be frozen like a statue. Ironically, of those two scenarios (and all else being equal), the image of the blurred turtle will communicate a sense of motion more effectively than the one of the bullet or horse.

But if you step out of the scientific paradigm, the patterns that are created from these technical "errors" can be used to wonderful effect to communicate symbolically or expressively a vast range of temporal experience—of time, of movement, of change and transformation. In fact, this language for expressing movement, motion and change have been appropriated into a range of other graphic art applications. Keep in mind that this is a particularly valuable expressive tool because, until the advent of motion picture photography, and like all two-dimensional imagery from cave paintings to the Sistine Ceiling, photographs are inherently static.

Early practitioners of photography noted that with the long exposures required by early emulsions, images would often blur as a result of the subject's movement. This blur quickly became recognized as offering a possibility for creative expression, and photographers would produce them on purpose to try and communicate the animated nature of their subjects.

Early experimenters saw the blur as a means of communicating the dynamism of life. Anton Giulio Bragaglia, with his younger brother Arturo, both amateur photographers, created what Anton referred to as photodynamism. This term was used to define the photographs of movement he made from 1911. The aim of these pioneering works was to render a sense of the natural continuity of motion. They attempted to achieve this by recording, in a single image, the patterns of motion, of moving people, and objects created by long exposure times.



Eadweard Muybridge, Yosemite Upper Fall, Yosemite Valley, c. 1886



Bob Rogers, Canadian Waters, 2008



Anton Bragaglia, Change of Position, 1911

Three Kinds of Blurs

Not all blurs are the same, or created by the same technique. As a result, not all blurs communicate the same sense of motion or movement. The different denotations of motion depend on the source of the movement and the camera technique used to record the pattern the motion creates.

Some patterns of movement are created by objects moving in front of a static lens. This kind of blur suggests that the movement is passing by the observer as if one were at a racetrack and the action traverses the field where one is standing. Another way of creating blur is by moving the camera itself. The camera's motion coupled with a slow exposure makes everything in the photograph blur along the arc of the camera's movement. This is called "panning," a term borrowed from the motion picture industry where a camera mounted onto a tripod swivels on its axis to follow the action on the set. This is slightly different from dollying where the camera travels alongside a moving object, holding the central subject steady in the frame while the background blurs as, for example, in a picture taken out of the window of a moving car or train. In the first technique the camera is stationary, but swivels in an arc. The results in these two techniques are very similar, but there can be subtle differences. In both cases, all the patterns created



Bob Rogers, The Funnel of Sex, 2012

by the objects in the picture will be stretched along the apparent lines of camera travel. This technique is used to great effect when the camera travels at the same speed and in the same direction as a moving subject. If the timing is



Unknown Photographer, Buffalo Bill Cody Riding His Horse, c. 1900

correct, the moving subject will actually be photographed without a blur, but the background, foreground, and all stationary objects within the frame will be blurred.

The effect of this is to create for the viewer a sense of identification with the subject, of being in motion along with the subject, and experiencing the

otherwise stationary environment surrounding the subject as flying by. This can occur in a situation when, for example, the photographer is in a moving car,

photographing another moving car traveling alongside at the same speed. This is the idea behind the “dolly shot” in motion pictures, where the camera is in synchronized movement with the subject. However, when this is not possible, panning with the motion of the subject can create very much the same effect in the still photograph.

There are three basic ways to incorporate blurring into an image:

- *The object moves during exposure while the camera remains stationary*
- *The camera moves during exposure tracking the speed and direction of the subject's motion (panning) but can also be random or erratic for a more chaotic effect*
- *Both the camera and the object move (this can create a variety of effects depending on the relative motion of the camera and the objects, their direction speed, etc. In relation to each other and the other moving object within the frame.)*

It is also possible to combine several layers of blurs into a single image to create a sense of differing planes of movement. Objects traveling within the frame can create differing degrees of blurs as a result of their different

speeds and directions. In addition, panning in the direction of the motion can add another layer of apparent movement to create an even more dramatic sense of dynamic energy. It is also possible to move the camera in other than a straight, linear fashion to create a sense of action and movement that is more random and chaotic.



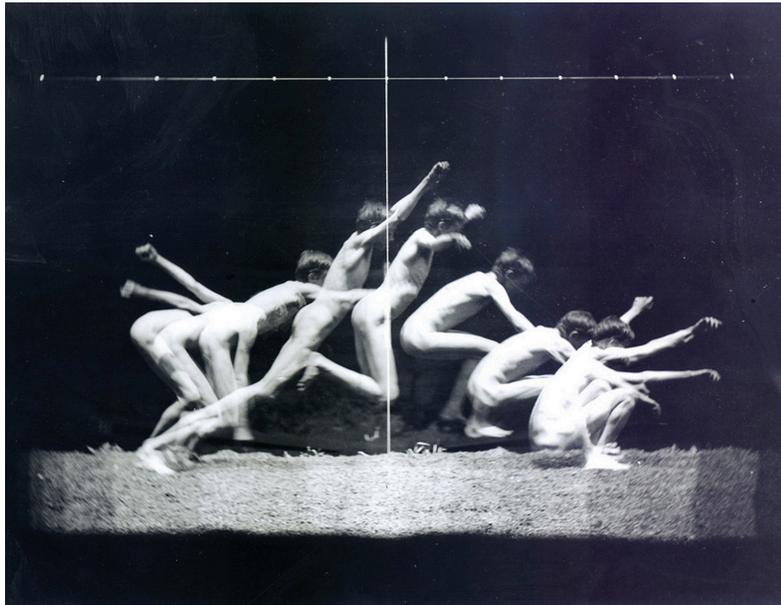
Chris Hamilton, Kobe Bryant, 2008

Using flash and blur

A more complex technique is to utilize a combination of flash photography and long exposure, to create a hybrid of “decisive moment” and blur in the same image. Depending on the motion of the camera and the moment at which the flash goes off, you can create a variety of wonderful effects.

Other kinds of patterns

The “blur” is not the only kind of pattern that the camera and lens can create that has come to be recognized in our visual language as signifying motion. In the 1880s, Etienne Marey and others used a spinning disc in front of the lens to create a kind of stroboscopic effect, freezing multiple images of moving objects

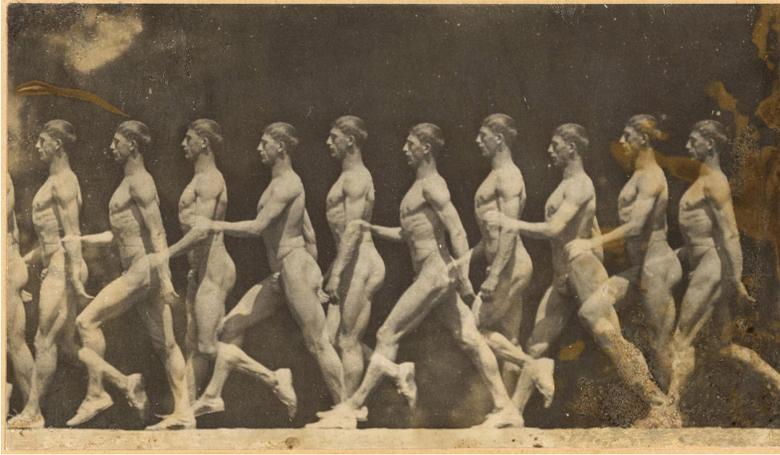


Thomas Eakins, *History of a Jump*, 1885

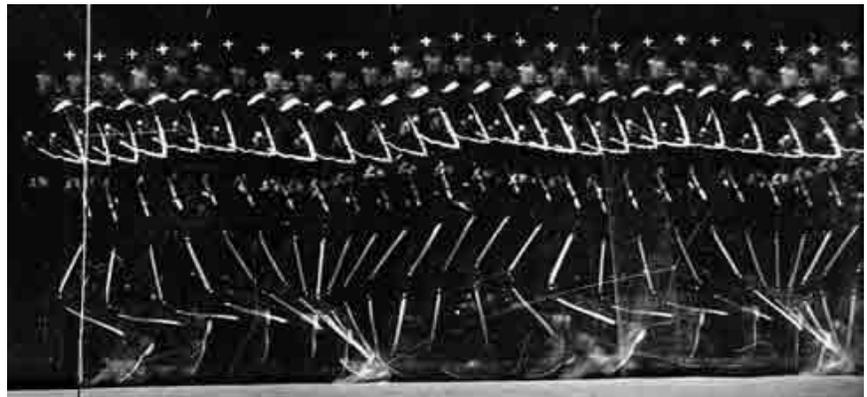
that traced motion in a clear, systematic fashion. His motivation was for scientific purposes, to reveal the underlying physics of motion photographically. But the value of these images as tools for visual expression was immediately recognized as well, and Marey's stroboscopic studies soon became an inspiration for a generation of artists seeking a means of evoking a sense of motion in their otherwise

static images. Other distortions created by the camera have found their way into the popular vocabulary of graphic design as well. In 1912, a young Henri Lartigue used his camera to explore aspects of middle-class life in France. His camera utilized a newly designed focal-plane shutter.

Shutter mechanisms are the means by which the passage of light through the lens is controlled. The simple, iris leaf shutter, which opens and closes like the pupil of the eye has advantages and disadvantages. The nature of its design means that there is a period of time that it opens, a period that it stays open and then a period of time when it closes again. This cycle creates opportunity for blurring a moving image, which although desirable for some can be seen as a liability for those attempting to freeze action. Even at higher shutter speeds the lens has to open completely, however briefly, and then close again. Early, slow emulsions necessitated relatively long exposures, so a shutter design that did not remain open as long and could provide the same level of light transmission was sought.



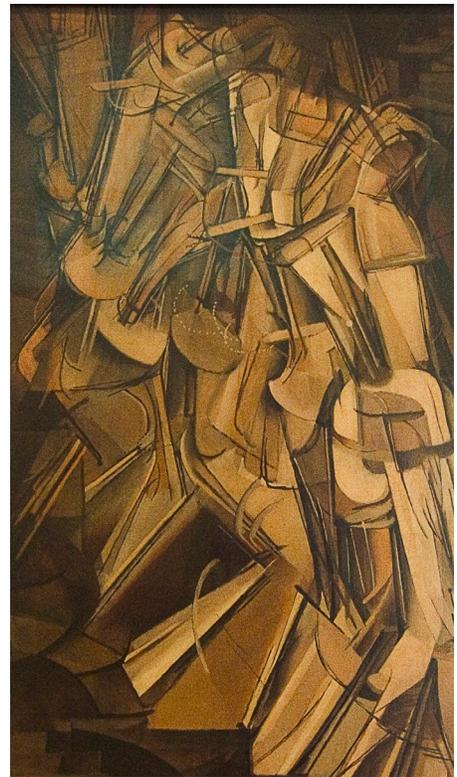
*Etienne-Jules Marey,
Man Walking, 1890*



*Etienne-Jules Marey,
Man Running with
White Stripe, 1884*

Motion studies by photographers such as Etienne-Jules Marey and Edward Muybridge expanded the vocabulary of implied motion to include multiple exposures as well as the blur. Eventually this technical signature of objects in motion caught the eye of painters such as Marcel Duchamp who incorporated the technique into non-photographic works and today this representation of motion is commonplace in the visual arts from billboards to cartoons.

*Marcel Duchamp- Nude Descending
the Staircase #2, 1912*



The focal plane shutter is comprised of two moving screens that pass in front of the film plane. One screen opens and then the other closes behind it making the exposure. At faster exposures the second screen starts to travel before the first screen completes its journey across the face of the film, effectively creating



Henri Lartigue, Race Car, 1912

a moving slit. This slit exposes a section of the negative, and then moves on to the next area until the entire film surface has been exposed to light. The overall exposure is the same as a leaf shutter, but as the film is exposed one section at a time, the possibility of a blur in any given area is significantly reduced. However, there is another visual

consequence. If the object being photographed is moving fast enough during the exposure, different parts of the object will be in different places on the film



Road Runner (Warner Bros.)

when it comes to be their turn to be exposed. The result is that different parts of the final image do not line up and the moving objects are either compressed or stretched out depending on the relative motion of the shutter screens.

This distortion, as well as the multiple exposure, has become part of the visual vocabulary of artists and part of the popular, collective imagining of motion.

The “Decisive Moment”

At the other extreme, when the amount of change between the beginning and the end of the exposure is minimal, or effectively non-existent, the resulting image will appear to “freeze” a moment in time. Capturing this instant—what Cartier-Bresson calls “the decisive moment” —is the essence of photographic story telling in general, and photojournalism in particular.

Understanding this technique is best illustrated by a curiosity in physics. When a ball is tossed in the air, it is in motion, traveling at an ever-decreasing rate of speed as the pull of gravity slows it down. It then reverses direction, and falls back to earth at an ever-increasing velocity. However, there is a moment, as conceptual as it is actual, when it stands completely still. In absolute terms, that moment may be, in



Sam Sheere, Explosion of the Hindenburg, 1937



Henri Cartier-Bresson, Gare St. Lazare, Paris, 1932

Finding just the right moment takes luck and a quick eye. In 1937, Sam Sheere captured the explosion of the Hindenburg. A moment earlier and it would have been an ordinary landing. A moment later, and the wreckage would have been lying in embers on the ground. This is the moment that tells the whole story. But the moment doesn't have to be world-shaking to make a powerful image. The photograph by Henri Cartier-Bresson of a man jumping over a puddle captures a charming moment of drama as well.



W. Eugene Smith, Burial at Sea, 1944

There is a moment in narrative photography when past, present and future are all held suspended in a moment of time. In Smith's image of a burial at sea, that moment is embodied in the shroud-wrapped sailer, suspended in air, between the worlds of life and death. Note that the falling corpse is slightly blurred, underscoring, in visual terms, the passage between these worlds.

The story in photojournalism often focuses on the great or important events of the day, here told in seamen at attention for the funeral of a fallen comrade. But the story telling ability of photography can be much more intimate and personal, and yet still be imbued with meaning and significance as in the image of sailors on leave, at ease, waiting for a phone to call families and loved ones.



Bob Rogers, Sailors, 1983

*To see a World in a Grain of Sand
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand
And Eternity in an hour.
A Robin Redbreast in a Cage
Puts all Heaven in a Rage.
A dove house fill'd with doves and pigeons
Shudders Hell thro' all its regions.
A Dog starv'd at his Master's Gate
Predicts the ruin of the State.
A Horse misus'd upon the Road
Calls to Heaven for Human blood.
Each outcry of the hunted Hare
A fiber from the Brain does tear.*

— William Blake
(from *Auguries of Innocence*)

fact, unmeasurable with any certainty, although it must logically exist. In the instant before it reverses, in the instant it stops ascending, in the instant before it starts to fall, it is completely motionless. In this instant, past, present and future are all contained within that suspended movement, as implicit history and inevitable future. A photograph that tells a story must, like the ball, have within the image past, present and future. That is the moment in photography that Cartier-Bresson refers to as the “decisive moment.”

The story need not be dramatic, not necessarily life and death; it can just be a story of a small drama of everyday life, a delicate moment, one that might have passed unnoticed were it not for the keen and prescient observer. However, within that small tale, can lie all the tension, tragedy, comedy, and humanity of grand, world-changing events, what William Blake referred to as “a World in a Grain of Sand.”

One of the reasons why photojournalists have often preferred range-finder cameras, is that with SLRs, the exposure of the film necessitates that at the moment that the “ball stands still,” the mirror must be out of the way of the film; the photographer cannot witness the very moment they wish to



Esther Bubley, Greyhound Terminal, New York, 1947



William Klein, Gun 1, New York, 1954

record. The view through a range-finder, separate as it is from the machinery of exposure, is uninterrupted, allowing the photographer not only to anticipate, but to witness the decisive moment they seek.

When searching for such images, it is important to remember to snap the shutter at the point of the action that tells the whole story—the moment that suggests what came before and what will come afterward. The moment may last only a millisecond and requires the ability to anticipate events so that a photographer can start the process of taking the picture before the peak of the action occurs to allow time for the finger to respond and the shutter mechanism to engage. It's not easy—one needs

to train one's eye to sense action, and where it is going. Like catching a bottle falling from a medicine cabinet, one needs to send one's hand to the place where it will be when it is caught, not the place where it is when one starts to see it fall.

Blurs can also be incorporated into "decisive moments", such as in this picture by Robert Capa of a soldier scrambling to make the beachhead during the D-Day invasion of Normandy.



Robert Capa, D-day: Normandy, 1944

Significantly, according to the story, the blur in this image is not the result of the actual circumstances of combat, but a mistake in the handling of the original film. After shooting three rolls of film, exposing 106 frames, Capa evacuated the beach and returned to England. He rushed to London where the photo lab technicians were told to hasten the processing, as the entire world was awaiting these images. In his haste, one of the technicians supposedly used an electric heater to speed the drying of the film. However, he put it too close to the film, with the result that the heater melted the emulsion on all but ten of the frames. Those ten that remained were only slightly distorted, “blurred” by the shifted emulsion, but which, as much for as despite their technical flaws, powerfully conveyed the chaos and confusion of the day, because the patterns they created were identical with those that could have been caused by movement in the scene, or of the camera,

This raises an interesting question: Does it matter what the source of blurring is? Do the images feel less “authentic” once one knows that the blurring was created by a technical mistake? Would it feel the same way if, let’s say, it was a product of a later double exposure in the darkroom? What if Capa had decided years later to “improve” his original images by manipulating them? What about a contemporary photo editor with Photoshop? Does it make a difference that the melting process was part of the war-time experience? How much do we “trust” the film and the camera? How important is it that the images be “unmanipulated”? Even in the creation of a distortion such as a blur? Are there “acceptable” manipulations and “unacceptable” manipulations?

Time plays a significant role in the creation of any image. The precise moment may be critical, as in a photojournalistic image that communicates a sense of immediate action, or it can suggest an unchanging timelessness, an “eternal moment”, as if the photograph could have been made at anytime. But in either case the task of the photographer is to find a lighting situation at a particular moment that when photographed will communicate the very qualities of experience that were the reason for wanting to make the photograph in the first place.