

# Shutter Speed and Motion Photography

# Shutter Speed

- Why do higher numbered shutter speeds represent faster shutter speeds?
- What is the slowest shutter speed at which one could freeze many forms of motion?
- What is the optimal shutter speed to create pan or blur motion (when the camera is hand-held as opposed to on a tripod)?

Each full shutter speed stop either doubles or halves the amount of light entering the camera

# Doubling Comparison for Shutter Speeds

- Doubling Sequence

- 1
- 2
- 4
- 8
- 16
- 32
- 64
- 128
- 256
- 512
- 1024

- Camera Shutter Speeds

- 1
- 2
- 4
- 8
- 15
- 30
- 60
- 125
- 250
- 500
- 1000

Why do higher numbered shutter speeds represent faster shutter speeds?

# Higher numbers mean faster shutter speeds?

- Shutter speed numbers represent fractions as well
- The shutter speed number on your camera is the denominator
- For example, 125 =  $1/125$  of a second, 1000 =  $1/1000$  of a second

# Shutter Speed and Motion



# Fast Shutter Speed



Freeze Motion

# Slow Shutter Speed

Blur Motion



Pan Motion

# Motion

It's about SPACE and how you use it

The most important compositional  
element when shooting motion?



Consider your background and  
your use of  
**SPACE**

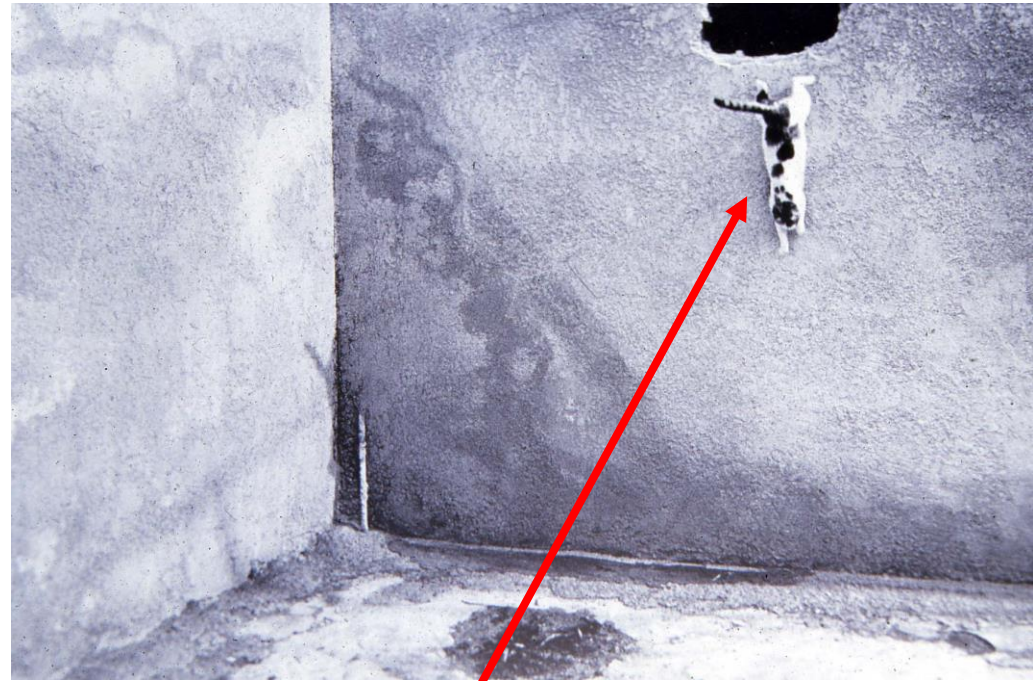


Photo on left is a great subject, but has major  
merger issues

Photo above is composed with much better use  
of **space**

Pay close attention to background and your use  
of **POSITIVE SPACE** and **NEGATIVE SPACE**

Motion

Freeze

What is the slowest shutter speed at which one could freeze many forms of motion?

1/250

However, faster shutter speeds are recommended if the light source is bright enough











# How to shoot Freeze Motion

- Shutter Speed at 1/500 or faster
- Set f-stop based on light meter or BDE
- Hold camera steady when shooting
- Vertical motion is easiest to capture
- No cars for freeze motion

What is the optimal shutter speed to create pan or blur motion (when the camera is hand-held as opposed to on a tripod)?

$$1/60$$

Motion

Blur





Fran Gonzalez









# Composition - Blur

- Hold camera steady
- Subject moves across or down your field of view
- Pay attention to the **negative space** – avoid mergers



# Composition - Pan

- Follow the subject with your camera
- After you shoot the exposure, continue to follow the subject to avoid blurring the subject – exaggerate the motion



# For Blur and Pan

Be fairly close to your subject – if you are too far away, blur may not occur or subject may not show up in pan shot