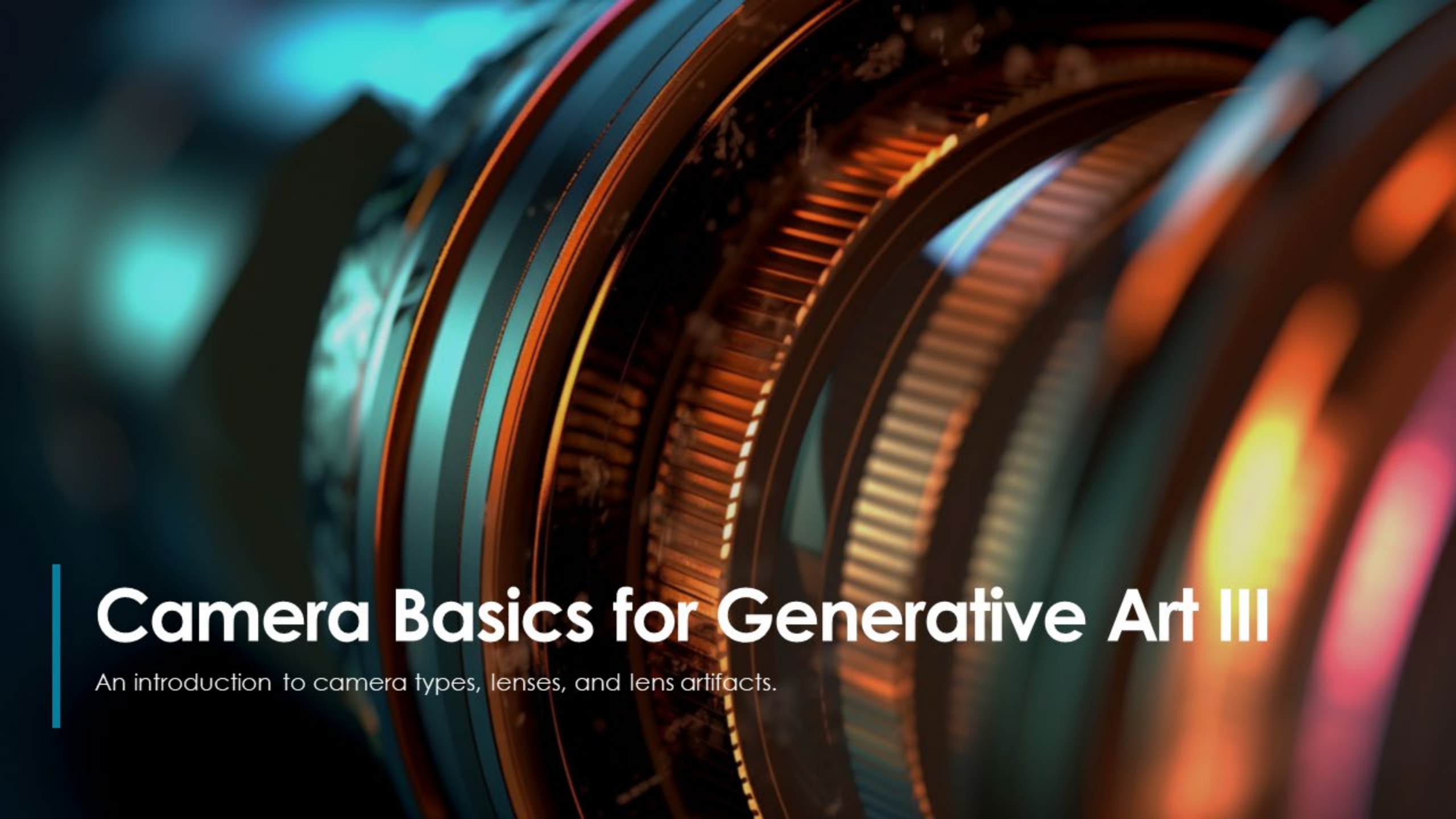


Camera Basics for Generative Art III

An introduction to camera types, lenses, and lens artifacts.

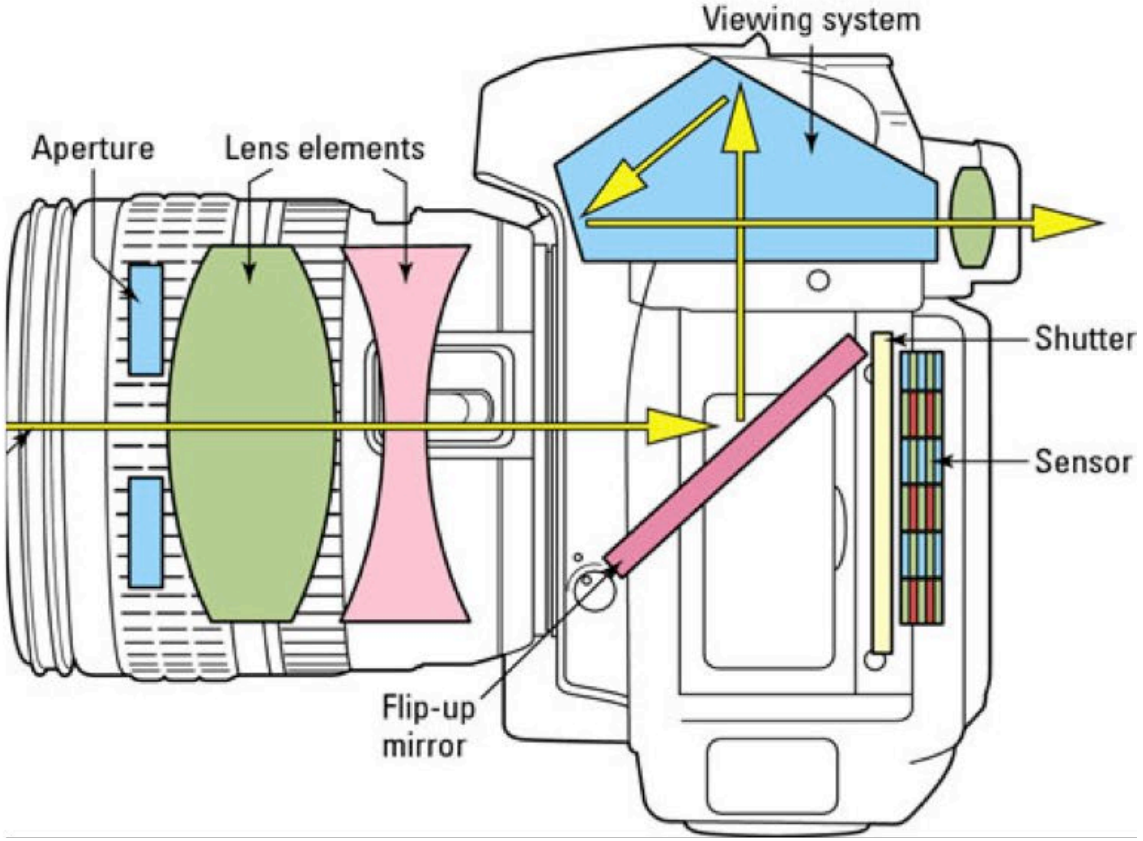
CAMERAS

Different cameras in your prompts will give you different results. Some match the expected look of a given camera, while others may be too subtle to register.

How does a camera work?

http://howthingswork.org/electronics-how-digital-camera-works/

The way a digital single-lens reflex camera (DSLR) work (same as a film camera) is schematically shown below. Light coming from the object goes through the lens forming the image. An adjustable opening (called an aperture) in the lens is used to control the total amount of light that passes through. Before you press the button to take the photo, a mirror directed the light to the viewing system.



Can you imitate the look of physical cameras through AI-generated imagery? **Yes and no.** A number of more specialized cameras with specific looks do translate in AI programs, such as Holga, Polaroid, pinhole & box cameras, satellite cameras, microscope cameras, etc. But there are also many that do not register recognizably, particularly notable big name brands like Canon, Pentax, Hasselblad, Sony, and Leica.

The testing I have done for this module is substantial, but not exhaustive. It represents my own experimentation, which I encourage others to do as well.

COMMON CAMERAS ARE NOT ALWAYS RECOGNIZED BY AI:

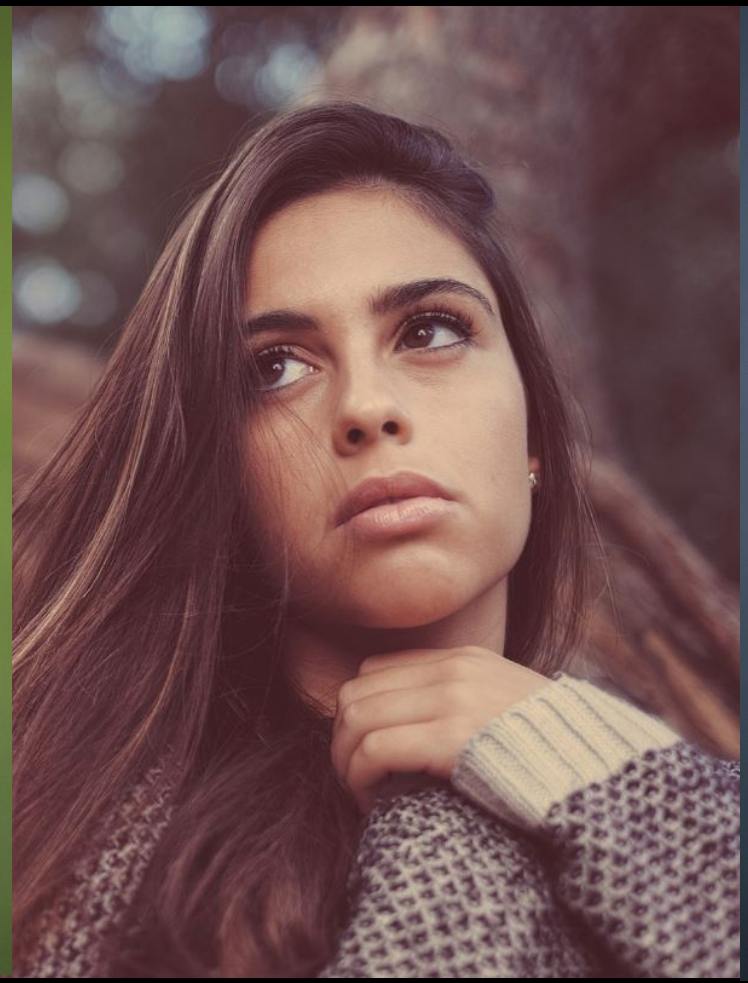
EVEN SEASONED PROFESSIONALS STRUGGLE TO IDENTIFY THE OUTPUT OF A COMMON PROSUMER OR PROFESSIONAL CAMERA. ADDITIONALLY, THESE LOOKS ARE ALSO GENERATED IN CONCERT WITH SPECIAL LENSES, WHICH ARE VARIABLE WITH A GIVEN CAMERA. **THE NUANCES ARE TOO DEPENDENT ON OTHER FACTORS TO EXPECT AI TO PRODUCE THE EXACT LOOK OF PHOTOGRAPHS PRODUCED BY NON-SPECIALIZED CAMERAS.**

All images from respective manufacturer web sites

LEICA, PENTAX, HASSELBLAD: CAN YOU TELL THE DIFFERENCE?

MEDIUM FORMAT CAMERAS ARE KNOWN FOR DETAIL, BUT THERE ARE NO PROMPTS THAT WILL GIVE GENERATIVE ART MORE DETAIL, WHETHER LISTING CAMERA TYPES, RESOLUTIONS (UHD, 32K, 8K, ETC.), OR EVEN DESCRIPTORS SUCH AS 'EXTREME DETAIL'. MIDJOURNEY DEFAULTS TO 1024×1024. THESE CAMERAS ARE ALL FAMOUS FOR CERTAIN LOOKS, SUCH AS THE 'GLOW' & POPPING COLORS OF THE LEICA, OR THE DEEP SHADOWS AND BRIGHT HIGHLIGHTS OF A HASSELBLAD. **MANY PROFESSIONALS WOULD NOT BE ABLE TO MATCH EACH PHOTO BELOW WITH ITS RESPECTIVE CAMERA, AND THEREFORE IT IS NOT SURPRISING THAT AI PROGRAMS ARE UNABLE TO ACCURATELY EMULATE THEM.**

https://www.richardhadley.net/x-training-mk-ii/



https://www.reddotforum.com/content/2015/03/exposing-the-soul-portraiture-with-the-leica-m240/ *https://www.hasselblad.com/inspiration/stories/douglas-kirkland-marilyn-monroe-hasselblad/*

LEICA, PENTAX, HASSELBLAD: CAN YOU TELL THE DIFFERENCE?

IN THE IMAGES BELOW, I HAVE INCLUDED LEICA, PENTAX, AND HASSELBLAD IN THE PROMPTS (ONE FOR EACH IMAGE IN RESPECTIVE ORDER). BUT THERE ARE MANY OTHER DESCRIPTORS THAT GIVE EACH IMAGE VISUAL INTEREST, INCLUDING **SUBSURFACE SCATTERING, REFLECTIVITY, GOLDEN HOUR, RAY TRACING, BOUNCED LIGHT, THREE-POINT LIGHTING, SPECULARITY**, AND SO FORTH. **REGARDLESS, THERE IS NO EVIDENCE THAT INCLUDING THE CAMERA IN THE PROMPT MADE A DIFFERENCE IN REGARDS TO EITHER THE 'SIGNATURE' LOOK OF THE CAMERA OR THE FIDELITY OF THE IMAGE.** ANY SIMILARITIES TO THE IMAGES AND THE CAMERAS ATTACHED TO CREATING THEM ARE EITHER KISMET OR THE PLACEBO EFFECT. **I WELCOME OTHER GENERATIVE ARTISTS AND RESEARCHERS TO TEST THESE CAMERAS AS WELL IN THEIR PROMPTS.**

All images by Jazno Francoeur

CANON, NIKON, SONY: CAN YOU TELL THE DIFFERENCE?

CANONS TAKE IMAGES WITH A HIGH DYNAMIC RANGE, GOOD COLOR ACCURACY, AND LITTLE LOSS OF DETAIL EVEN AT HIGH ISO LEVELS. IMAGES FROM THE LATEST NIKON CAMERAS TEND TO HAVE LITTLE NOISE, SHARP SUBJECTS, AND SOLID COLOR (EVEN SO, SOME SAY NIKON COLORS HAVE A BIT TOO MUCH GREEN AND YELLOW). SONY CAMERAS GENERALLY TAKE SHARP IMAGES, HAVE A WIDE DYNAMIC RANGE, AND PERFORM WELL IN LOW LIGHT. HOWEVER, THE DIFFERENCES ARE TOO SUBTLE TO IDENTIFY IN A BLIND TEST. **MANY PROFESSIONALS WOULD NOT BE ABLE TO MATCH EACH PHOTO BELOW WITH ITS RESPECTIVE CAMERA, AND THEREFORE IT IS NOT SURPRISING THAT AI PROGRAMS ARE UNABLE TO ACCURATELY EMULATE THEM.**

All images by Jazno Francoeur

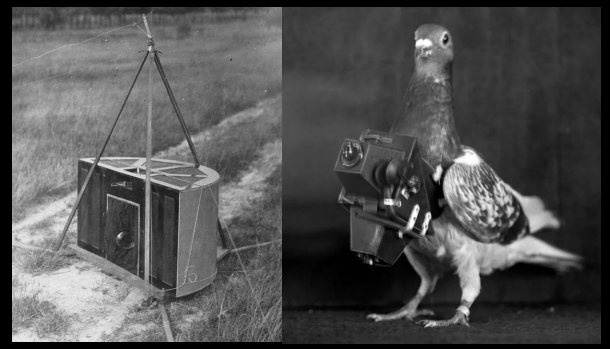
CANON, NIKON, SONY: CAN YOU TELL THE DIFFERENCE?

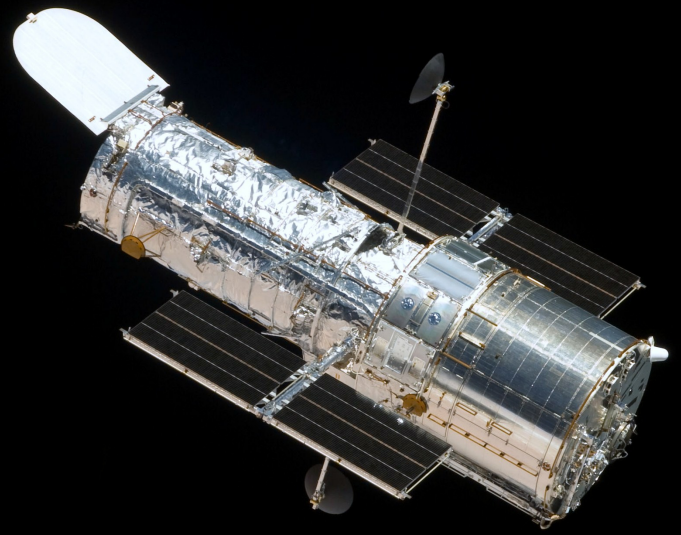
IN THE IMAGES BELOW, I HAVE INCLUDED CANON, NIKON, AND SONY IN THE PROMPTS (ONE FOR EACH IMAGE IN RESPECTIVE ORDER). BUT THERE ARE MANY OTHER DESCRIPTORS THAT ACTUALLY GIVE EACH IMAGE VISUAL INTEREST, INCLUDING **DRAMATIC LIGHTING, BLUE FILL LIGHT, WARM KEY LIGHT, PROFESSIONAL LIGHTING, LENSCULTURE PHOTO AWARDS,** AND SO FORTH. **REGARDLESS, THERE IS NO EVIDENCE THAT INCLUDING THE CAMERA IN THE PROMPT MADE A DIFFERENCE IN REGARDS TO EITHER THE 'SIGNATURE' LOOK OF THE CAMERA OR THE FIDELITY OF THE IMAGE.** ANY SIMILARITIES TO THE IMAGES AND THE CAMERAS ATTACHED TO CREATING THEM ARE EITHER KISMET OR THE PLACEBO EFFECT. **I WELCOME OTHER GENERATIVE ARTISTS AND RESEARCHERS TO TEST THESE CAMERAS AS WELL IN THEIR PROMPTS.**

All images by Jazno Francoeur

SPECIALIZED CAMERAS ARE OFTEN RECOGNIZED BY AI:

FROM MICROCOSM TO MACROCOSM, BOUTIQUE CAMERAS WITH NOTICEABLE LOOKS ARE OFTEN EASIER TO EMULATE WITH GENERATIVE ART PROGRAMS. WHETHER EXPERIMENTING WITH NOVELTY TOY CAMERAS OR THOSE WHICH ARE DESIGNED FOR SCIENTIFIC EXPLORATION, **THE IMAGES GENERATED BY SPECIALIZED CAMERAS ARE PARTICULAR IN NATURE AND EASY TO IDENTIFY.**





All images from Wikipedia and respective manufacturer web sites

PINHOLE CAMERA:

BLACK AND WHITE EXTREME CLOSE-UP **PINHOLE CAMERA,** PROFILE PORTRAIT OF A VAUDEVILLIAN, ONE MINUTE EXPOSURE, **PALIMPSEST OF GHOST-LIKE LAYERS, MULTIPLE EXPOSURE, OUT OF FOCUS, CONTRE-JOUR, TIME LAPSE,** MONOCHROMATIC, ANTIQUE, DRAMATIC LIGHTING, SHALLOW DOF -- AR 2:1 --V 5.2 **[MIDJOURNEY 5.1]**

PINHOLE CAMERA TEST:

PINHOLE CAMERA PORTRAIT OF A VAUDEVILLIAN, **GHOST-LIKE MULTIPLE EXPOSURES, OUT OF FOCUS, TIME LAPSE, MONOCHROMATIC, ANTIQUE,** DRAMATIC LIGHTING --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

PINHOLE CAMERA PHOTOGRAPHER, ALYSON BELCHER

"FOR THE PAST 10 YEARS I HAVE BEEN MAKING SELF-PORTRAITS THAT COMBINE PINHOLE PHOTOGRAPHY AND IMPROVISATIONAL PERFORMANCE. WHEN I BEGAN THIS SERIES, I WAS LOOKING FOR A WAY TO PHOTOGRAPH THE HUMAN BODY THAT WENT BEYOND AN OBJECTIVE RENDERING OF THE EXTERNAL FORM. THE BODY IS A VESSEL THAT CONTAINS AND CHANNELS ALL OF OUR EXPERIENCES, THOUGHTS AND FEELINGS. MY PHOTOGRAPHIC PROCESS (THE USE OF MOVEMENT AND LONG EXPOSURE TIMES) HAS ALLOWED ME TO ACCESS AND GIVE VISUAL FORM TO WHAT LIES BENEATH THE SURFACE OF THE SKIN." ***YOU CAN VIEW HER WORK AT HTTP://WWW.ALYSONBELCHER.COM/***

BOX CAMERA:

BATMAN IN A **DAGUERREOTYPE PRINT**, **BOX CAMERA,** MONOCHROMATIC, ANTIQUE, DRAMATIC LIGHTING --AR 2:1 --V 5.1
[MIDJOURNEY 5.1]

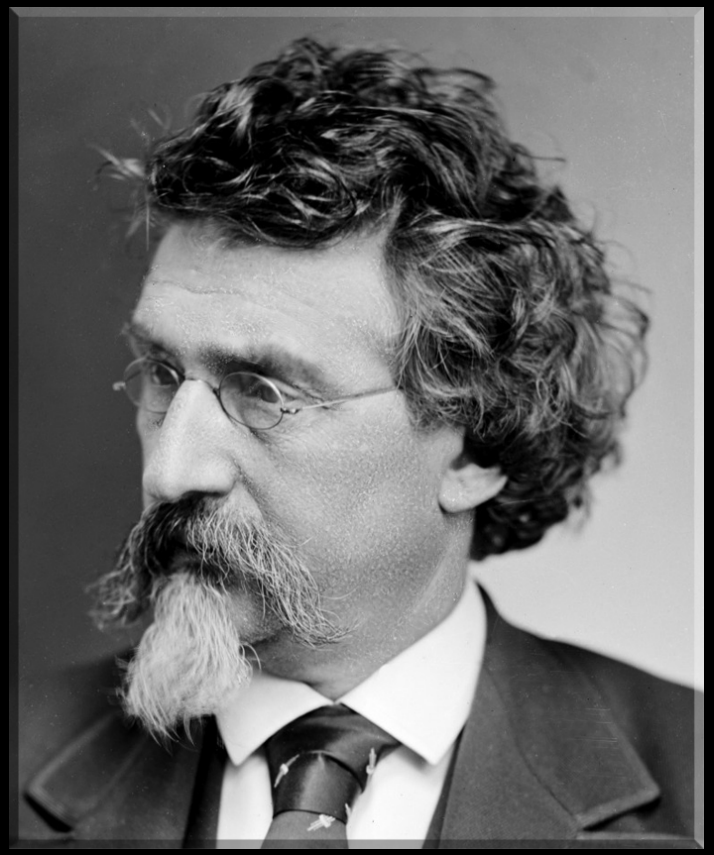
BOX CAMERA TEST (USING SEED + BLEND MODE):

HTTPS://S.MJ.RUN/VLGFYTCSGPS HTTPS://S.MJ.RUN/O1S_2AN5R-I HTTPS://S.MJ.RUN/N-MCPSAA64S THE JOKER HOLDING A JOKER CARD, LAUGHING, SIDE VIEW, DUTCH ANGLE, **MARK- FILLED DAGUERREOTYPE PRINT, SCRATCHES ON PLATE, LAYERS OF SCRATCHES AND RANDOM MARKS, PATINA OF AGE, ANTIQUE, PALIMPSEST OF TEXTURES, MONOCHROMATIC, ANTIQUE, DRAMATIC LIGHTING** --AR 2:1 **--SEED 1523262570** --V 5.2 **[MIDJOURNEY 5.2]**

BOX CAMERA PHOTOGRAPHER, MATTHEW BRADY

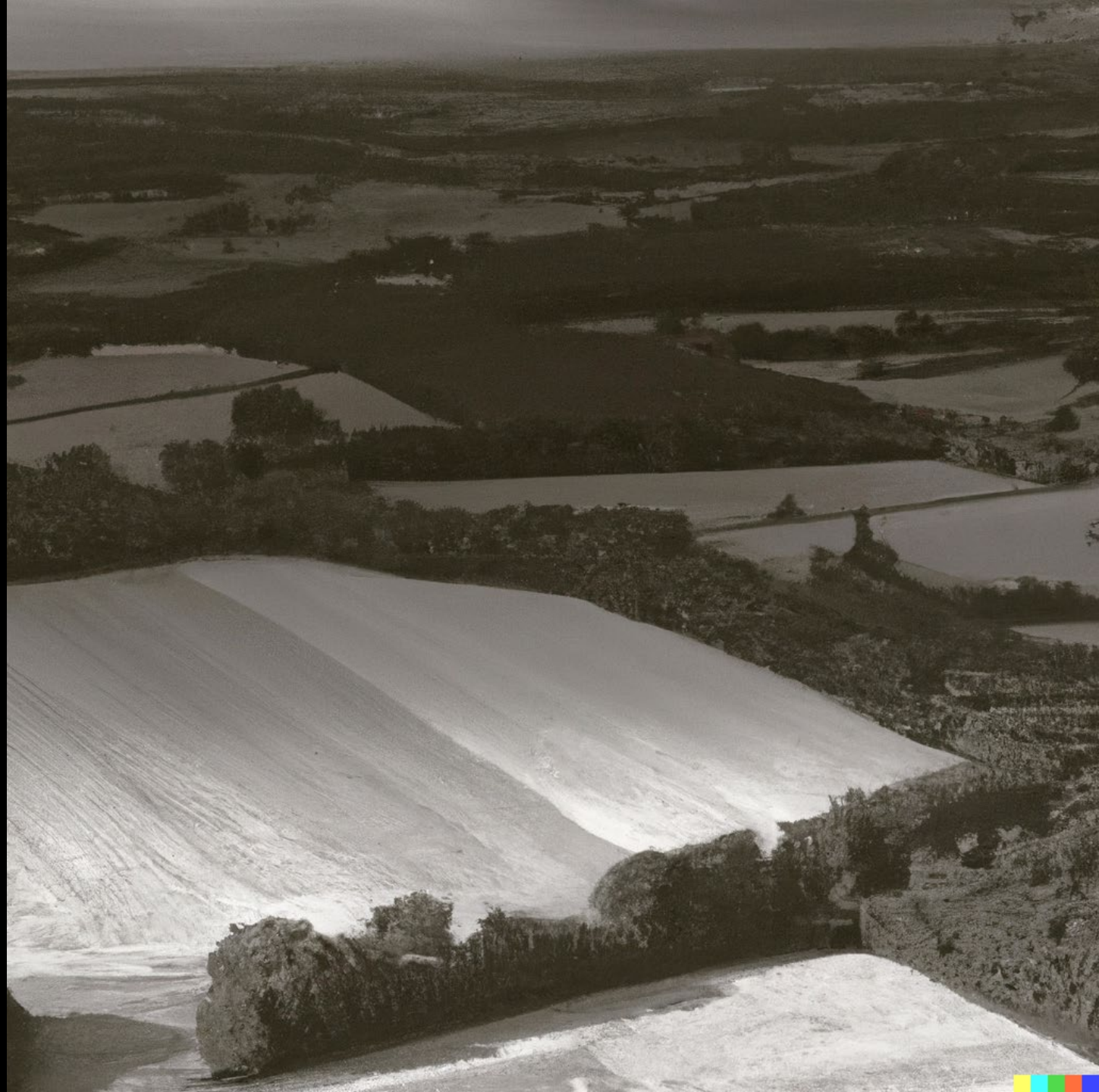
MATHEW B. BRADY (C. 1822–1824 – JANUARY 15, 1896) WAS ONE OF THE EARLIEST AND MOST FAMOUS PHOTOGRAPHERS IN AMERICAN HISTORY. BEST KNOWN FOR HIS SCENES OF THE CIVIL WAR, HE STUDIED UNDER INVENTOR SAMUEL MORSE, WHO PIONEERED THE DAGUERREOTYPE TECHNIQUE IN AMERICA. BRADY OPENED HIS OWN STUDIO IN NEW YORK CITY IN 1844, AND PHOTOGRAPHED JOHN QUINCY ADAMS AND ABRAHAM LINCOLN, AMONG OTHER PUBLIC FIGURES. ***HTTPS://EN.WIKIPEDIA.ORG/WIKI/MATHEW_BRADY***

https://www.theatlantic.com/photo/2015/08/the-gift-of-the-daguerreotype/401816/



KITE CAMERA:

BATUT STYLE KITE PHOTOGRAPH OF FRENCH LANDSCAPE, MONOCHROMATIC, ANTIQUE, DRAMATIC LIGHTING **[DALL-E 2]**



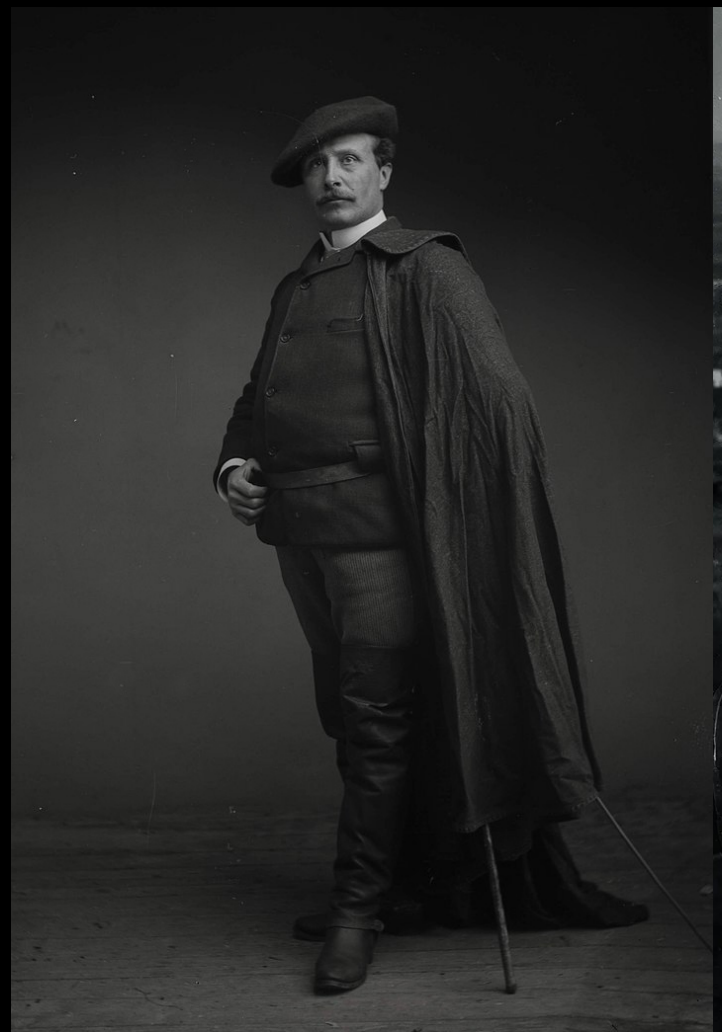
KITE CAMERA TEST:

BATUT STYLE KITE PHOTOGRAPH OF FRENCH LANDSCAPE, MONOCHROMATIC, ANTIQUE, DRAMATIC LIGHTING, **BLACK AND WHITE, AERIAL VIEW** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

KITE CAMERA PHOTOGRAPHER, ARTHUR BATUT:

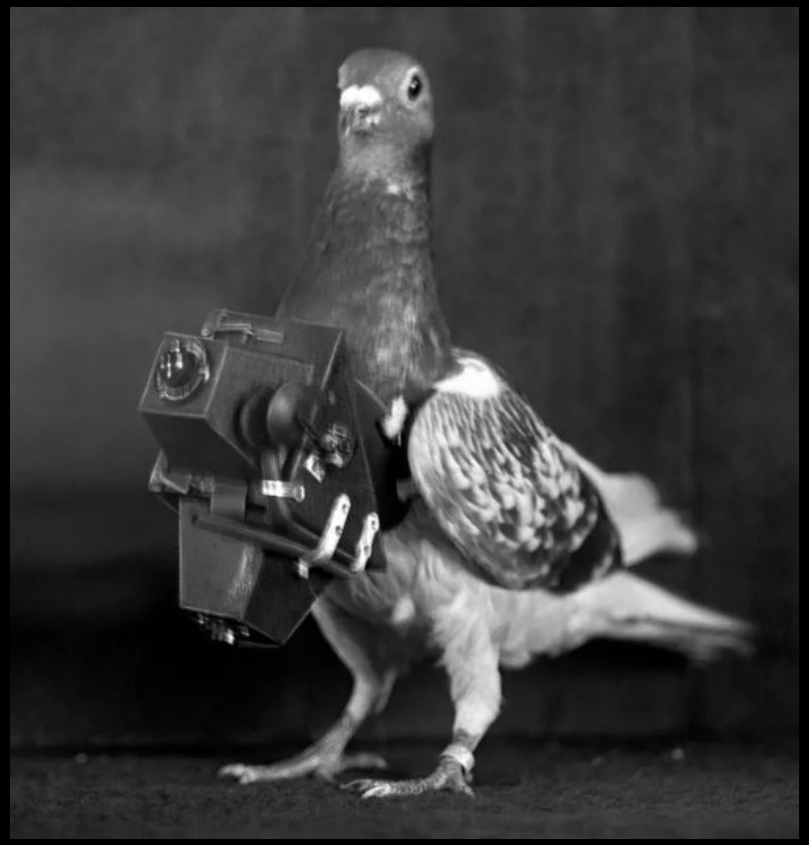
BATUT WAS BORN IN 1846 IN CASTRES, AND DEVELOPED INTEREST IN HISTORY, ARCHEOLOGY AND PHOTOGRAPHY. HIS BOOK ON KITE AERIAL PHOTOGRAPHY APPEARED IN 1890 AND CONTAINED AN AERIAL PHOTOGRAPH TAKEN IN 1889 FROM A KITE OVER LABRUGUIÈRE, WHERE HE SPENT MOST HIS LIFE UNTIL HE DIED THERE IN 1918. IT IS BELIEVED THAT IN 1887 OR 1888 HE WAS THE FIRST TO USE THIS METHOD SUCCESSFULLY. AT THE TIME, KITE AERIAL PHOTOGRAPHY HAD POTENTIAL APPLICATIONS FOR AERIAL RECONNAISSANCE, BUT ALSO FOR AGRICULTURE AND ARCHEOLOGY.

HTTPS://EN.WIKIPEDIA.ORG/WIKI/ARTHUR_BATUT



PIGEON CAMERA:

STYLE OF JULIUS NEUBRONNER, BLACK AND WHITE, PIGEON PHOTOGRAPHY, EXTREME REALISM, **AERIAL VIEW OF PARIS CITYSCAPE** 1920, --AR 3:2 **[MIDJOURNEY 5.1]**



PIGEON CAMERA TEST:

STYLE OF JULIUS NEUBRONNER, PIGEON PHOTOGRAPHY, EXTREME REALISM, **AERIAL VIEW OF PARIS STREET INTERSECTION, 1920 SEPIA, GRAINY PHOTO, POV OF PIGEON, FISHEYE LENS** --AR 3:2 --V 5.2 **[MIDJOURNEY 5]**

PIGEON CAMERA PHOTOGRAPHER, JULIUS NEUBRONNER:

JULIUS GUSTAV NEUBRONNER (1852–1932) WAS A GERMAN APOTHECARY, INVENTOR, COMPANY FOUNDER, AND A PIONEER OF AMATEUR PHOTOGRAPHY AND FILM. IN 1907, NEUBRONNER SUBMITTED A PATENT FOR HIS INVENTION OF AERIAL PHOTOGRAPHY BY MEANS OF A PIGEON PHOTOGRAPHER; HE WAS GRANTED THE PATENT IN 1908. THE INVENTION BROUGHT HIM INTERNATIONAL NOTABILITY AFTER HE PRESENTED IT TO AN INTERESTED AUDIENCE AT INTERNATIONAL EXPOSITIONS IN DRESDEN, FRANKFURT AND PARIS IN 1909–1911. SPECTATORS IN DRESDEN COULD WATCH THE ARRIVAL OF THE CAMERA-EQUIPPED CARRIER PIGEONS, AND THE PHOTOS WERE IMMEDIATELY DEVELOPED AND TURNED INTO POSTCARDS WHICH COULD BE PURCHASED. AT THE 1910 AND 1911 PARIS AIR SHOWS HE RECEIVED TWO GOLD MEDALS, FOR THE METHOD AND FOR THE PHOTOGRAPHS.

HTTPS://EN.WIKIPEDIA.ORG/WIKI/JULIUS_NEUBRONNER

https://commons.wikimedia.org/wiki/File:Photograph_from_Neubronner%E2%80%99s_pigeon_camera_1.jpg

KEYSTONE F8 CAMERA:

FAIRCHILD AERIAL KEYSTONE F8 CAMERA
PHOTOGRAPH OF WWII, FORCED PERSPECTIVE, DRAMATIC LIGHTING --V 4
[MIDJOURNEY 4]

KEYSTONE F8 CAMERA TEST:

AERIAL VIEW, KEYSTONE F8 CAMERA PHOTOGRAPH OF WWII, DOCUMENTARY FOOTAGE, 1950'S COMMERCIAL JET FLYING OVER NEW YORK, DRAMATIC LIGHTING, **STYLE OF MARGARET BOURKE-WHITE, BLACK AND WHITE** --AR 3:1 --V 5.2 **[MIDJOURNEY 5.2]**

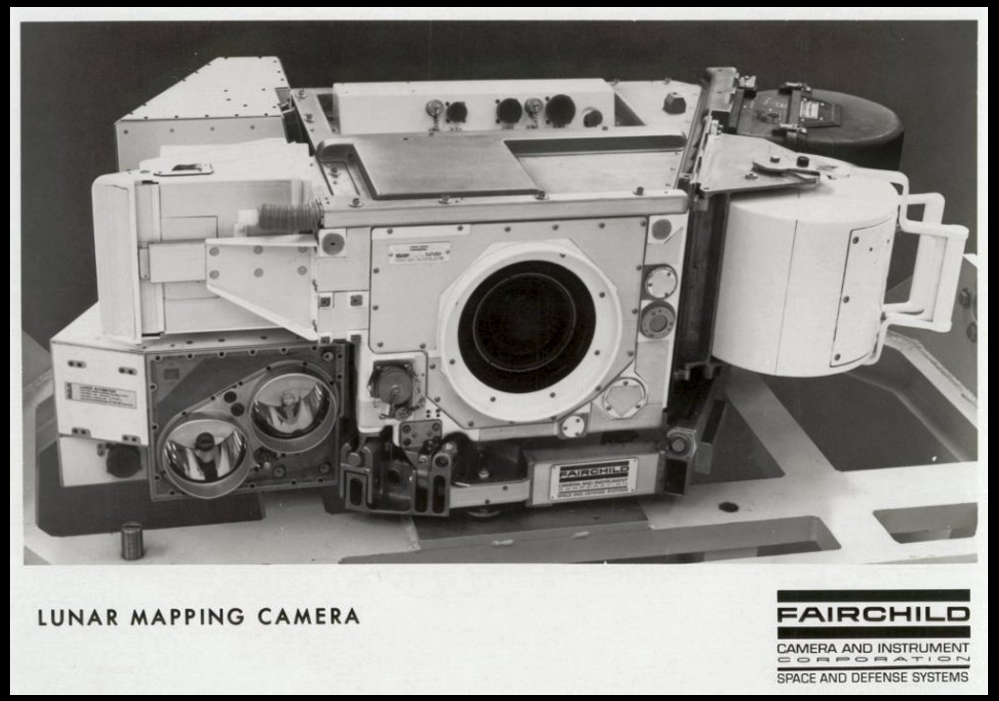
KEYSTONE F8 PHOTOGRAPHER, MARGARET BOURKE-WHITE:

MARGARET BOURKE-WHITE (1904–1971) WAS AN AMERICAN PHOTOGRAPHER AND DOCUMENTARY PHOTOGRAPHER. SHE WAS BEST KNOWN AS THE FIRST FOREIGN PHOTOGRAPHER PERMITTED TO TAKE PICTURES OF SOVIET INDUSTRY UNDER THE SOVIETS' FIRST FIVE-YEAR PLAN, AS THE FIRST AMERICAN FEMALE WAR PHOTOJOURNALIST, AND FOR TAKING THE PHOTOGRAPH (OF THE CONSTRUCTION OF FORT PECK DAM) THAT BECAME THE COVER OF THE FIRST ISSUE OF LIFE MAGAZINE. ***HTTPS://EN.WIKIPEDIA.ORG/WIKI/MARGARET_BOURKE-WHITE***

https://blog.emania.com.br/mulheres-na-fotografia-margaret-bourke-white/
https://www.holdenluntz.com/magazine/photo-spotlight/margaret-bourke-white-dc-4-flying-over-manhattan/

LUNAR MAPPING CAMERA:

FAIRCHILD LUNAR CAMERA,
PHOTOGRAPH OF THE MOON, --V 4
[MIDJOURNEY 4]



LUNAR MAPPING CAMERA TEST:

PHOTOGRAPH OF THE MOON TAKEN WITH FAIRCHILD LUNAR CAMERA, BLACK AND WHITE, EXTREME DETAILS AND REALISM, DRAMATIC VIEW --AR 3:2 --V 5.2
[MIDJOURNEY 5.2]

LUNAR MAPPING CAMERA OPERATOR, APOLLO 15, 16, 17:

THE LUNAR MAPPING CAMERA WAS A MULTIPLE CAMERA SYSTEM, WHICH CONSISTED OF A TERRAIN (OR METRIC) CAMERA, A STELLAR CAMERA AND A LASER ALTIMETER, ALL INTEGRATED INTO ONE UNIT. USING THE IMAGERY FROM THE STELLAR CAMERA, IT WAS POSSIBLE TO ASCERTAIN TO A GREAT DEGREE OF PRECISION THE ORIENTATION OF THE TERRAIN CAMERA. ***HTTPS://HISTORY.NASA.GOV/AFJ/SIMBAYCAM/FAIRCHILD-LUNAR-MAPPING-CAMERA.HT***

LANDSAT SATELLITES

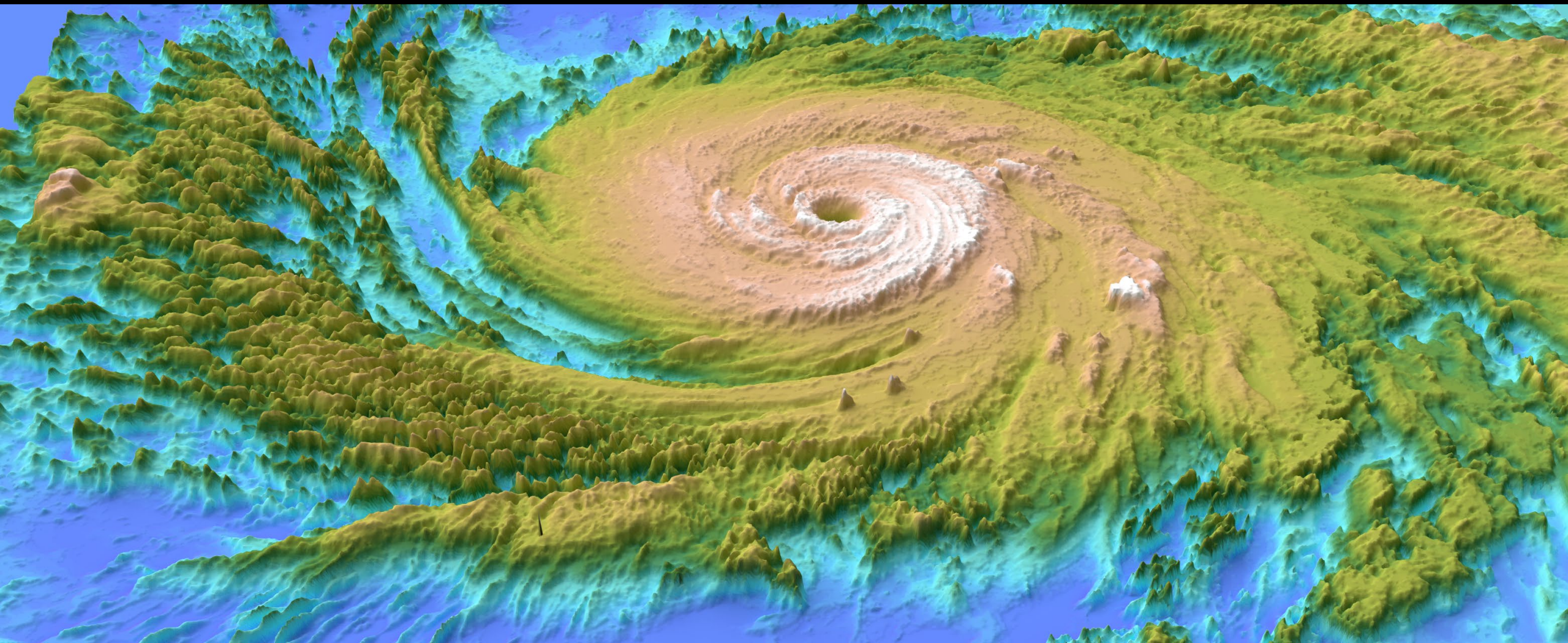
2013 + 2021- Atlas V- Landsat 8 and 9 Launches

LANDSAT TEST:

AN ENORMOUS HURRICANE OVER FLORIDA, **STYLE OF LANDSAT 9, STYLE OF MRI PHOTOGRAPHY, FALSE COLOR**, STYLE OF HOKUSAI AND KEIICHI TANAAMI AND YOKO D'HOLBACHIE AND TAKASHI MURAKAMI, GRAPHICAL WOODBLOCK PRINTS, 3/4 VIEW, FORCED PERSPECTIVE, INTERPOLATING GREEN TO BLUE --AR 32:9 **[MIDJOURNEY 4]**

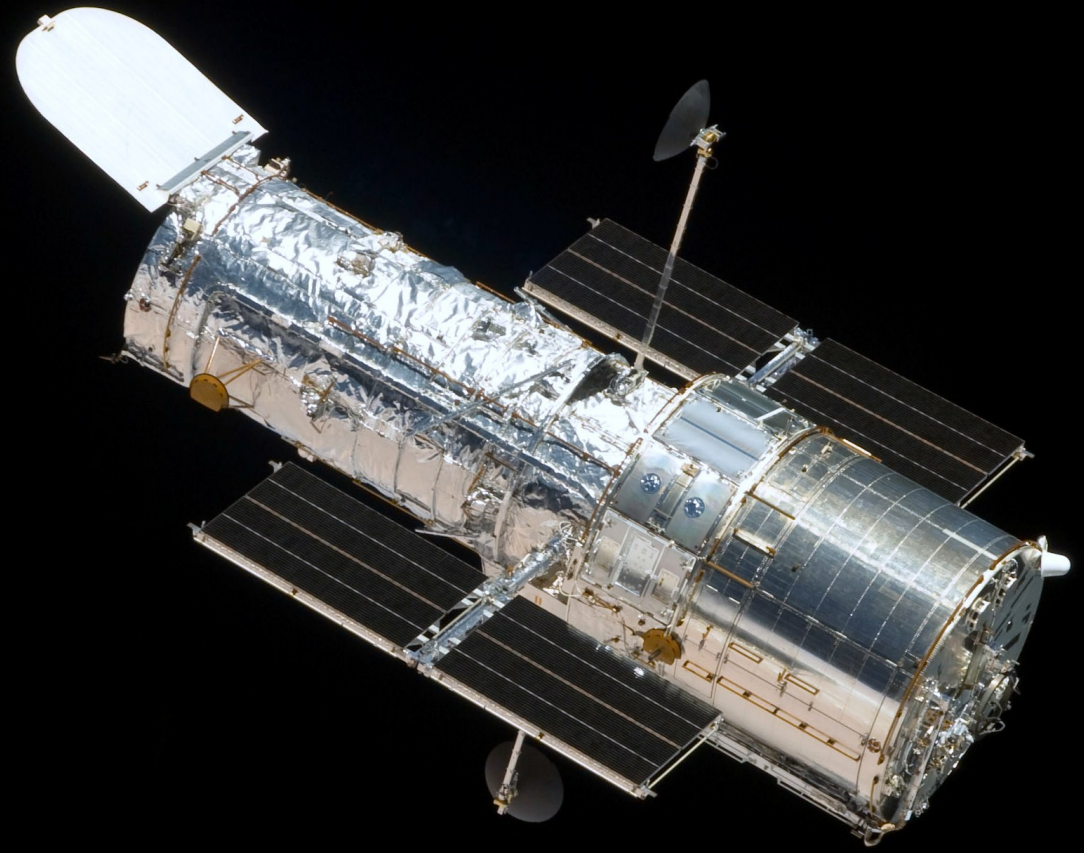
LANDSAT PHOTOGRAPHY:

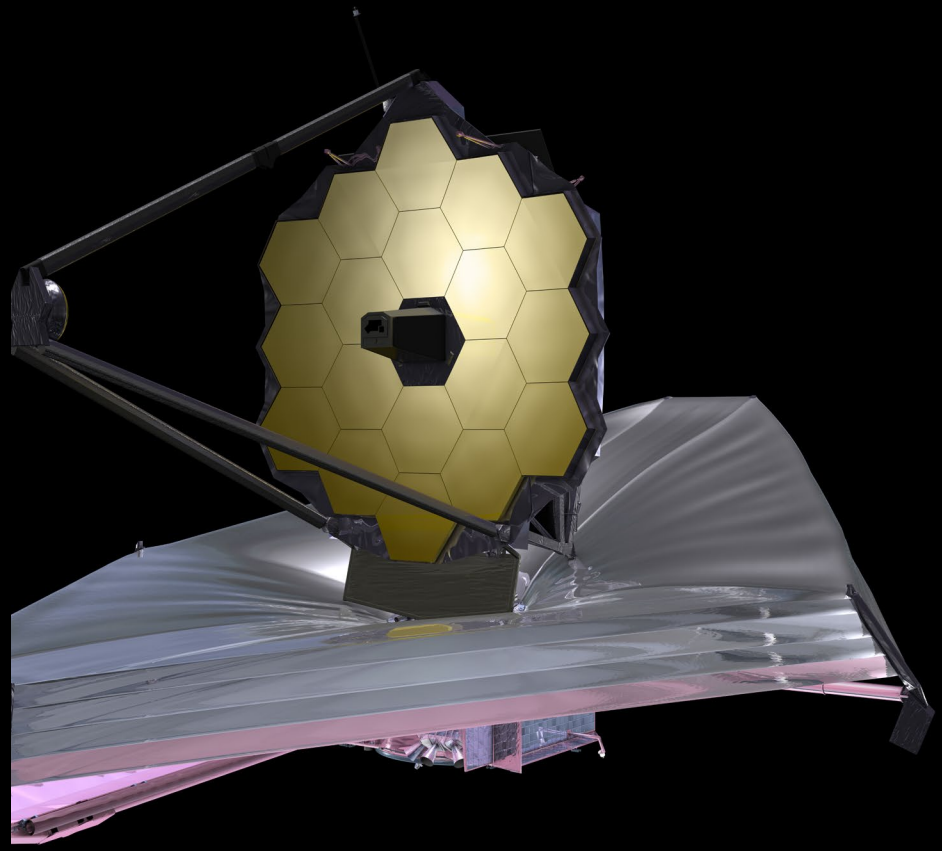
THE LANDSAT PROGRAM IS THE LONGEST-RUNNING ENTERPRISE FOR ACQUISITION OF SATELLITE IMAGERY OF EARTH. IT IS A JOINT NASA / USGS PROGRAM. ON 23 JULY 1972, THE EARTH RESOURCES TECHNOLOGY SATELLITE WAS LAUNCHED. THIS WAS EVENTUALLY RENAMED TO LANDSAT 1 IN 1975. THE MOST RECENT, LANDSAT 9, WAS LAUNCHED ON 27 SEPTEMBER 2021. ***HTTPS://EN.WIKIPEDIA.ORG/WIKI/LANDSAT_PROGRAM***



HUBBLE SPACE TELESCOPE + JAMES WEBB TELESCOPE

https://en.wikipedia.org/wiki/Hubble_Space_Telescope
https://en.wikipedia.org/wiki/James_Webb_Space_Telescope





HUBBLE VS. WEBB TESTS:

HUBBLE SPACE TELESCOPE, CAT'S EYE NEBULA, DRAMATIC COLORS, EXTREME DETAIL --V 4 **[MIDJOURNEY 4]**
JAMES WEBB TELESCOPE, CAT'S EYE NEBULA, DRAMATIC COLORS, EXTREME DETAIL --V 5 **[MIDJOURNEY 5]**

HUBBLE VS. WEBB PHOTOGRAPHY:

"WEBB OFTEN GETS CALLED THE REPLACEMENT FOR HUBBLE, BUT WE PREFER TO CALL IT A SUCCESSOR. AFTER ALL, WEBB IS THE SCIENTIFIC SUCCESSOR TO HUBBLE; ITS SCIENCE GOALS WERE MOTIVATED BY RESULTS FROM HUBBLE." ***HTTPS://WEBB.NASA.GOV/***

https://science.nasa.gov/center-cats-eye-nebula

https://www.jameswebbdiscovery.com/

SCANNING ELECTRON MICROSCOPE:

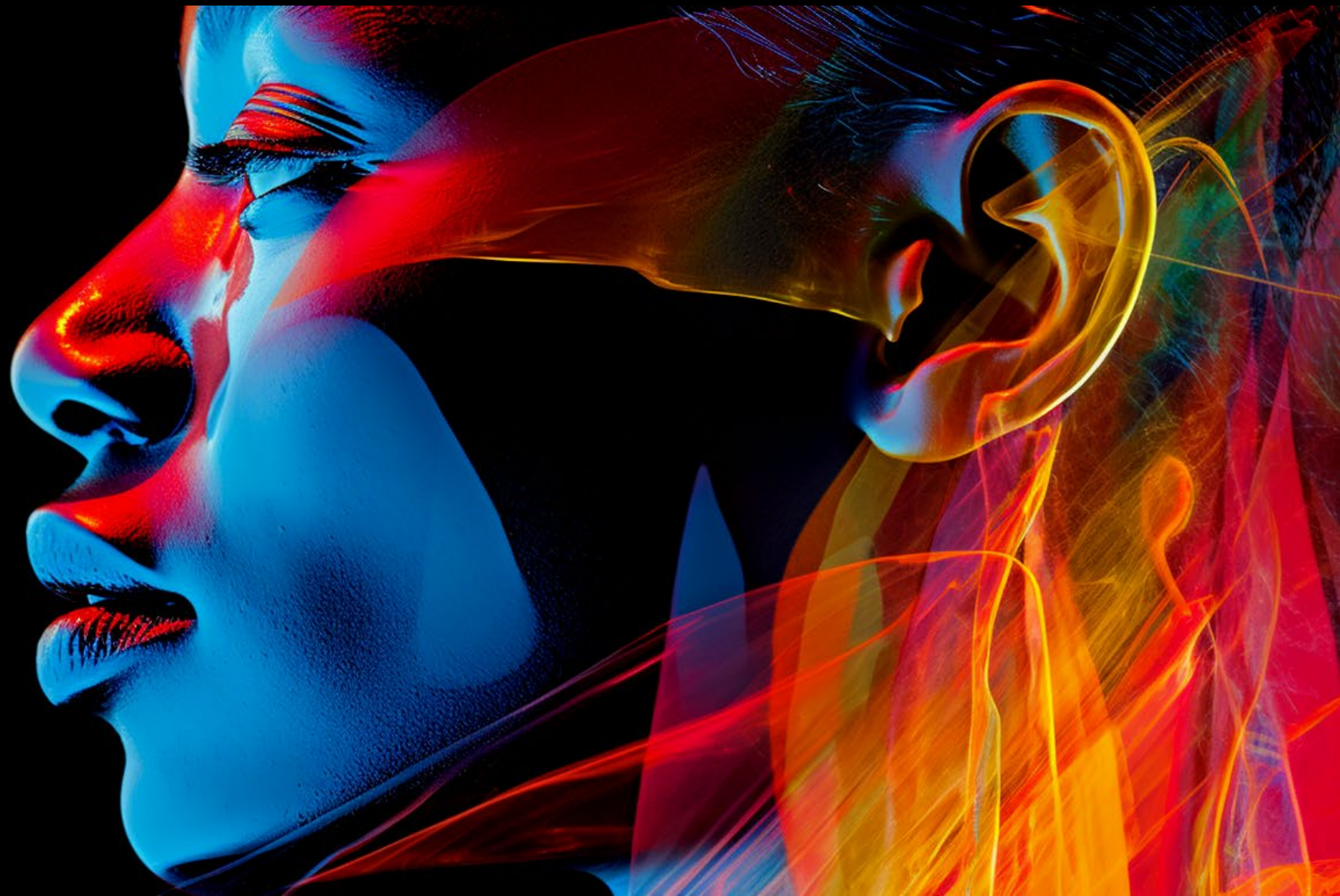
DETAILED SURFACE OF A BUTTERFLY WING, SUBSURFACE SCATTERING, **SUPER RESOLUTION MICROSCOPY** --AR 2:1 **[MIDJOURNEY 5.2]**

SCANNING ELECTRON MICROSCOPE TEST:

DETAILED SURFACE OF A BUTTERFLY WING, SUBSURFACE SCATTERING, **SUPER RESOLUTION MICROSCOPY, CONFOCAL LASER SCANNING MICROSCOPE** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

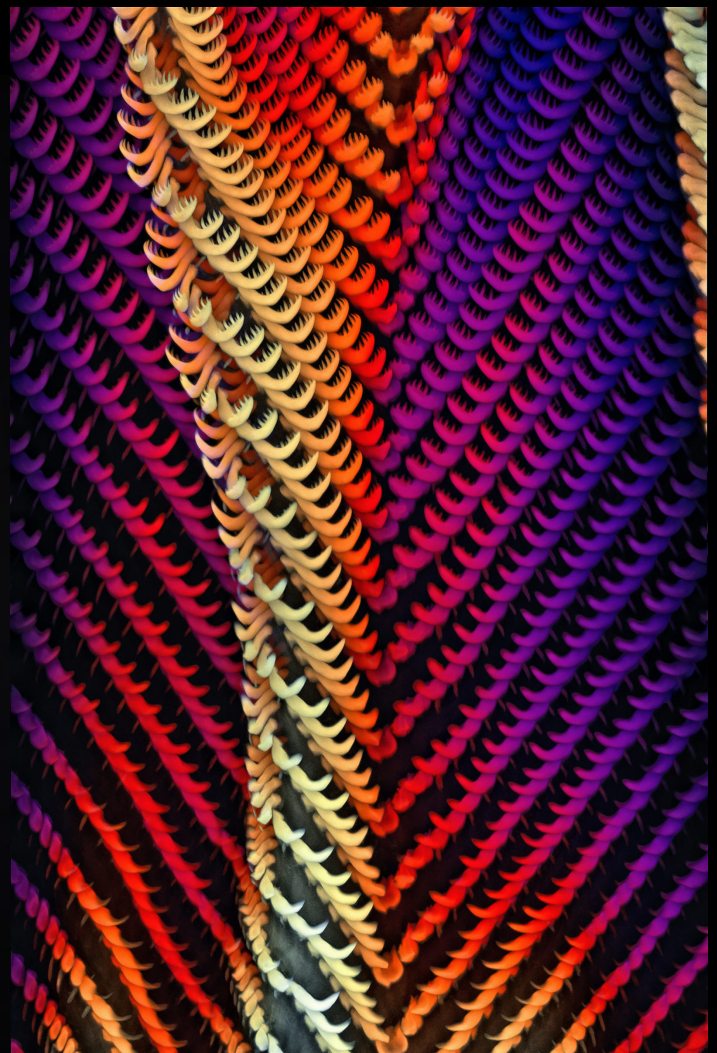
CONFOCAL LASER SCANNING MICROSCOPE TEST:

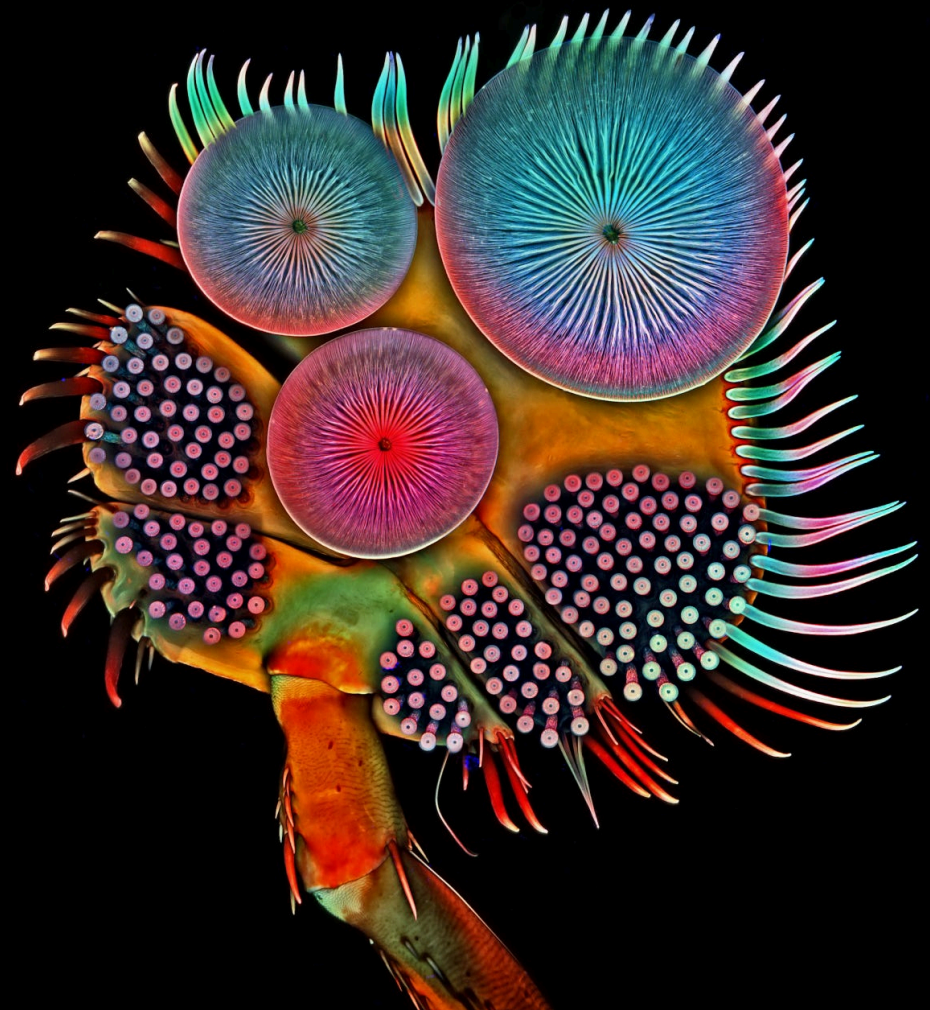
STYLE OF **CONFOCAL LASER SCANNING MICROSCOPE**, WHITE PAPER TORN IN RUSSIAN CONSTRUCTIVIST SHAPES REVEALING TORMENTED WOMAN CONTAINED IN KARA WALKER SILHOUETTES, EXTREME CLOSE-UP, **SUPER RESOLUTION MICROSCOPY**, ELECTROLUMINESCENCE, RAINBOW REFRACTION, FRANZ KLINE, DIEBENKORN --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**



MICROSCOPE PHOTOGRAPHER, DR. IGOR SIWANOWICZ:

DR. IGOR SIWANOWICZ IS AN ACCOMPLISHED BIOCHEMIST AND NEUROBIOLOGIST WHO HAS PLACED IN NIKON'S SMALL WORLD COMPETITION 18 TIMES. CURRENTLY, SIWANOWICZ'S WORK IS FOCUSED ON DRAGONFLIES AND ANATOMY OF DRAGONFLIES. SPECIFICALLY, SIWANOWICZ IS STUDYING THE NEURO-CIRCUITRY THAT IS RESPONSIBLE FOR PREY TRACKING AND PREY CAPTURE – A PERFECT BLEND OF HIS INTERESTS IN PHOTOGRAPHING INVERTEBRATES AND THEIR NEUROBIOLOGY. ***HTTPS://WWW.NIKONSMALLWORLD.COM/MASTERS-OF-MICROSCOPY/IGOR-SIWANOWICZ-ON-CAPTURING-MICROSCOPIC-ANIMAL-ANATOMY***





POLAROID CAMERA:

BATMAN FROM THE 60'S PARTYING WITH SUPERMAN, **POLAROID PICTURE,** DRAMATIC LIGHTING, FORCED PERSPECTIVE **[MIDJOURNEY 4]**

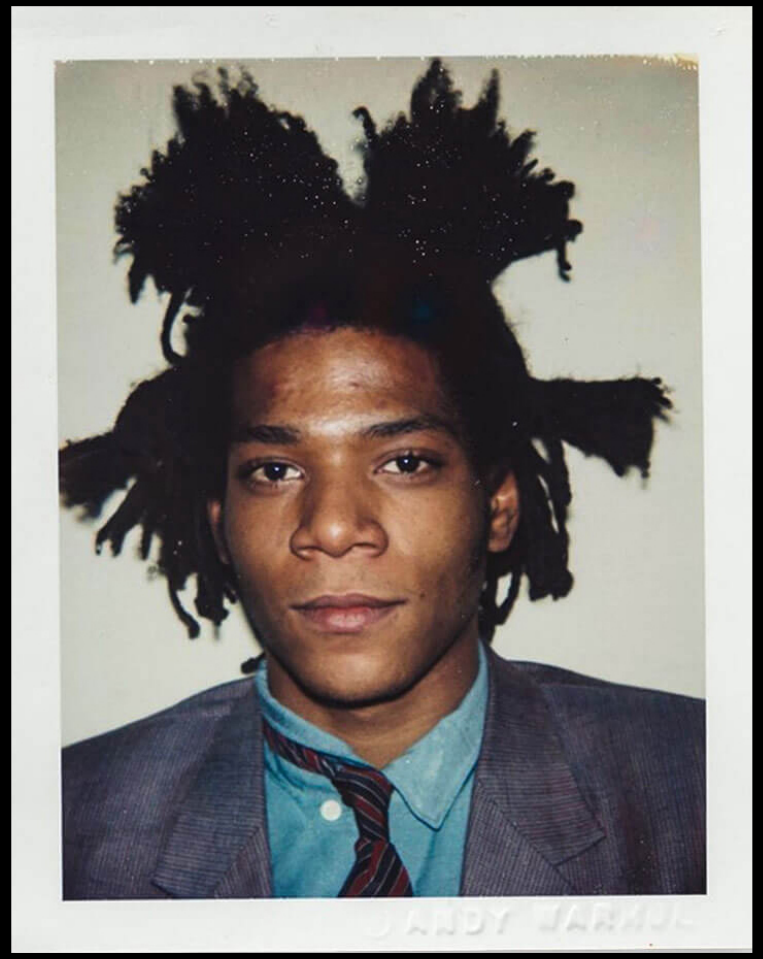
POLAROID CAMERA TESTS:

BATMAN FROM THE 60'S PARTYING WITH SUPERMAN, **POLAROID PICTURE**, DRAMATIC LIGHTING, FORCED PERSPECTIVE, **WASHED OUT COLORS, VINTAGE 80'S**, REALISM, VERITE, VOYEURISTIC, TETRADIC COLOR SCHEME --V 4 **[MIDJOURNEY 4]**

POLAROID OF BATMAN FROM THE 60'S HOUSE PARTY WITH SUPERMAN, VOGUE MAGAZINE, **WASHED OUT COLORS, VINTAGE 80'S,** REALISM, VERITE, VOYEURISTIC, TETRADIC COLOR SCHEME --V 5.2 **[MIDJOURNEY 5]**

POLAROID CAMERA PHOTOGRAPHER, ANDY WARHOL:

THE PRINCE OF POP ART. ANDY WARHOL WAS A RELENTLESS CHRONICLER OF LIFE AND ITS ENCOUNTERS. CARRYING A POLAROID CAMERA FROM THE LATE 1950S UNTIL HIS DEATH IN 1987, HE AMASSED A HUGE COLLECTION OF INSTANT PICTURES OF FRIENDS, LOVERS, PATRONS, THE FAMOUS, THE OBSCURE, THE SCENIC, THE FASHIONABLE, AND HIMSELF. ***HTTPS://THEWHISPERGALLERY.COM/WARHOLS-LENS-THE-PRINCE-OF-POP-ART/***



HOLGA CAMERA:

GODZILLA ATTACKING TOKYO, **HOLGA CAMERA**, TIN TOYS, DRAMATIC PERSPECTIVE, WORM'S EYE VIEW, DRAMATIC LIGHTING **[DALL-E 2]**

HOLGA CAMERA TESTS:

EXTREME CLOSE-UP, WORM'S EYE VIEW, GODZILLA, **HOLGA CAMERA,** DUTCH ANGLE, **TILT SHIFT,** TIN TOYS, DRAMATIC PERSPECTIVE, WORM'S EYE VIEW, DRAMATIC LIGHTING, CINEMATIC COLOR --V 5.2 **[MIDJOURNEY 5.2]**

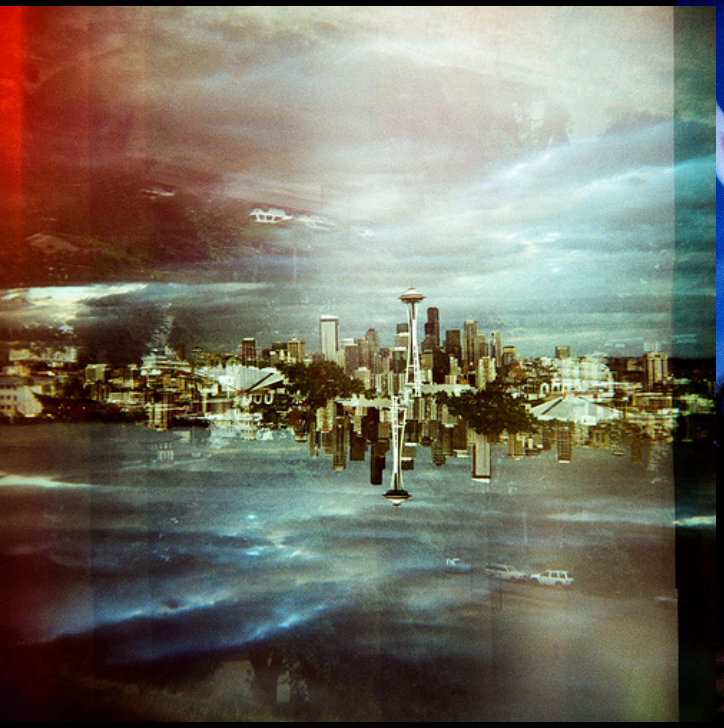
HOLGA CAMERA TESTS:

EXTREME CLOSE-UP, WORM'S EYE VIEW, GODZILLA, **HOLGA CAMERA,** DUTCH ANGLE, **TILT SHIFT,** TIN TOYS, DRAMATIC PERSPECTIVE, WORM'S EYE VIEW, DRAMATIC LIGHTING, CINEMATIC COLOR --V 5.2 **[MIDJOURNEY 5.2]**

GODZILLA AND KING KONG ATTACKING SEATTLE'S SPACE NEEDLE**, HOLGA TOY CAMERA, VIGNETTE,** DUTCH ANGLE**, TILT SHIFT, LIGHT LEAKS ON PRINT, FAINT MULTIPLE EXPSOURES, SATURATED TETRADIC COLOR** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

HOLGA CAMERA PHOTOGRAPHERS, VARIOUS:

THE HOLGA IS A CAMERA, FIRST MANUFACTURED IN CHINA IN 1981, MADE ALMOST ENTIRELY OF PLASTIC, SOME EVEN HAVE PLASTIC LENSES. IT WAS AN INVENTION INTENDED FOR THE CHINESE CONSUMER AS A LOW-BUDGET, EVERYDAY KIND OF CAMERA FOR CAPTURING FAMILY PHOTOS AND PORTRAITS, BUT HAS SINCE GATHERED A CULT FOLLOWING. THE EARLIEST MODELS OF THE HOLGA CAMERA USED A 120 MEDIUM FORMAT FILM (A POPULAR FILM FORMAT BACK THEN). IT SHOT IN 6X4.5 CM OR 6X6 CM ASPECT RATIOS. THEY COME WITH A DIFFERENT MASKS TO SHOOT THE DIFFERENT FORMATS.
HTTPS://PHOTOGRAPHY.TUTSPLUS.COM/ARTICLES/AN-INTRODUCTION-TO-HOLGA-PHOTOGRAPHY--PHOTO-9697



Multiple Exposure
[Katherine Lynn]

Vignetting & Saturated Color
[Wuxiong]

Light leaks
[Bastet in the Sky with Diamonds]

CONCLUSIONS FOR CAMERA TYPES:

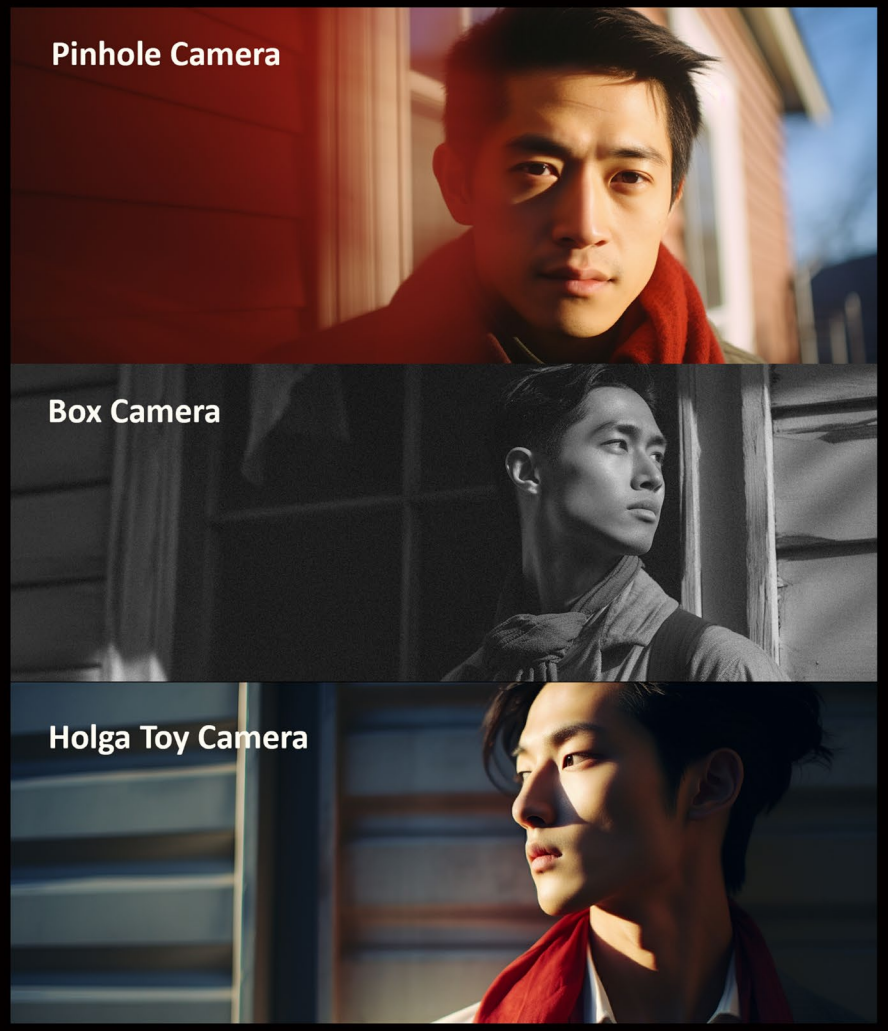
WHILE IT IS POSSIBLE EACH OF THE IMAGES TO THE LEFT HINT AT THE SIGNATURE LOOKS OF THEIR RESPECTIVE CAMERAS, AND THAT THERE ARE VARIANCES IN OUTPUT, **OVERALL THE DIFFERENCES ARE NOT DRAMATIC**. HOWEVER, THE IMAGES TO THE RIGHT MAKE IT CLEAR THAT **SPECIALTY CAMERAS NOT ONLY CARRY A MORE DISTINCTIVE LOOK, THEY OFTEN BRING WITH THEM MORE ARTFUL RESULTS.**

INCONCLUSIVE RESULTS

No Camera | Leica M11 | Sony A7R V

Pentax K-1 Mark II | Canon EOS R5 | Hasselblad X2D 100C

VISIBLE DIFFERENCES



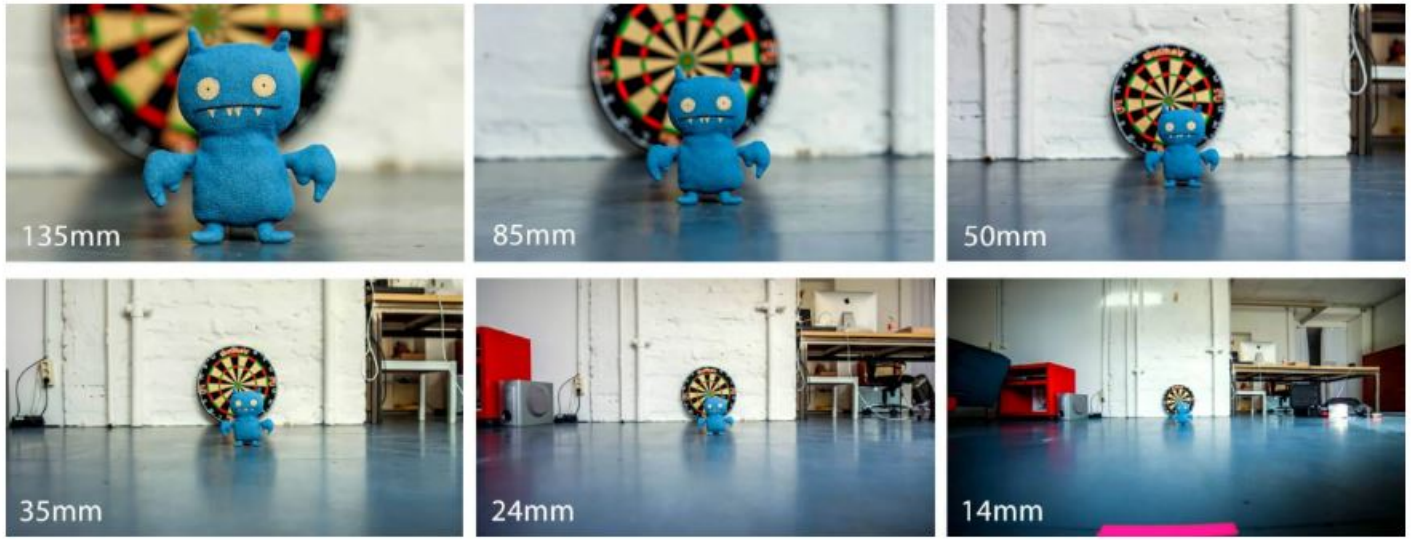
LENSES

Focal length is critical for defining your narrative, and for giving your imagery a cinematic look.

What is focal length?

Focal length is the distance between the optical center of the lens, and the camera sensor or film plane when focused at infinity. The optical center is where light rays converge inside the body of your lens. The focal length defines the magnification and field of view for a given lens. This value is most commonly measured in millimeters. Prime lenses have set focal lengths whereas zoom lenses have variable focal lengths, and any change alters the visual properties of your footage.

https://www.studiobinder.com/blog/focal-length-camera-lenses-explained/



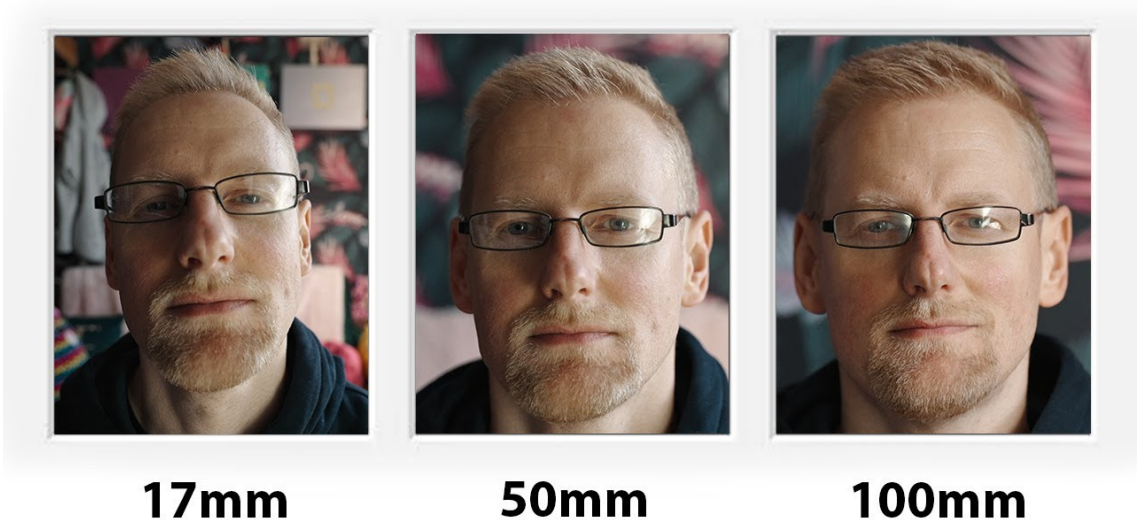
Same distance, different effects

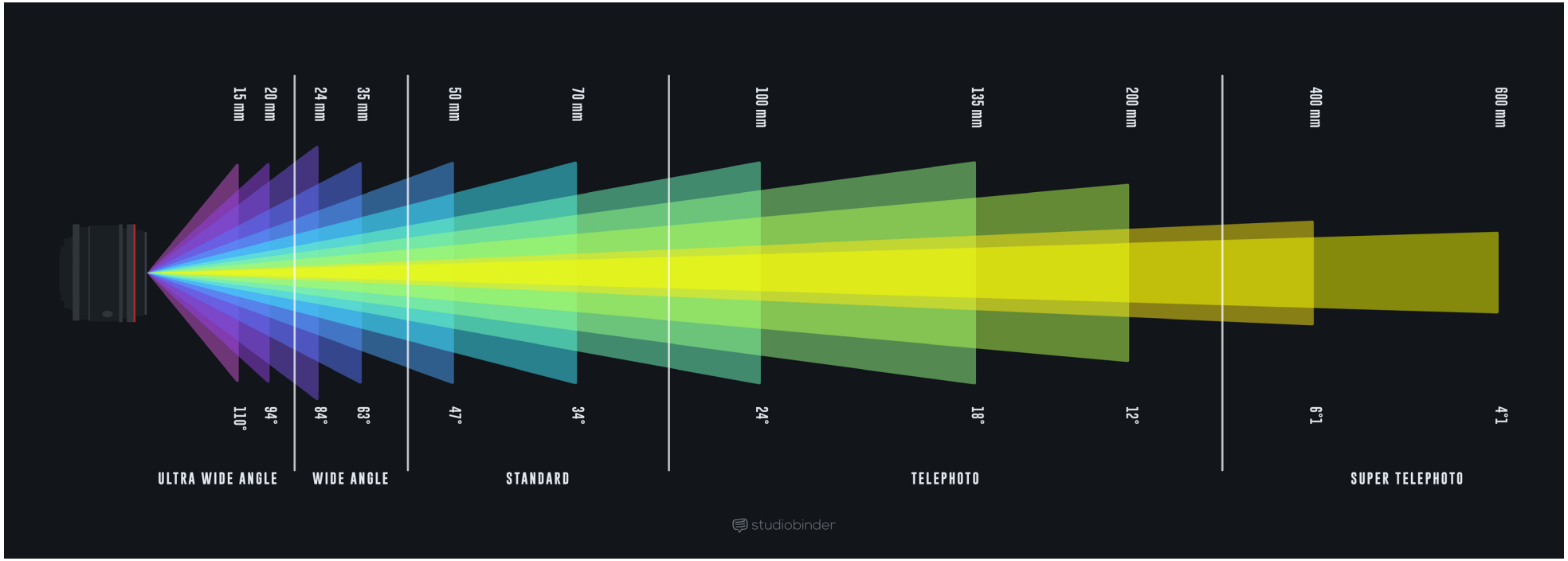
Different distance, different effects

Why is focal length so important?

- Dictates your field of view (what is in frame)
- Generates visual context for your shots (how we feel)
- Alters the visual properties of your shots (how it looks)

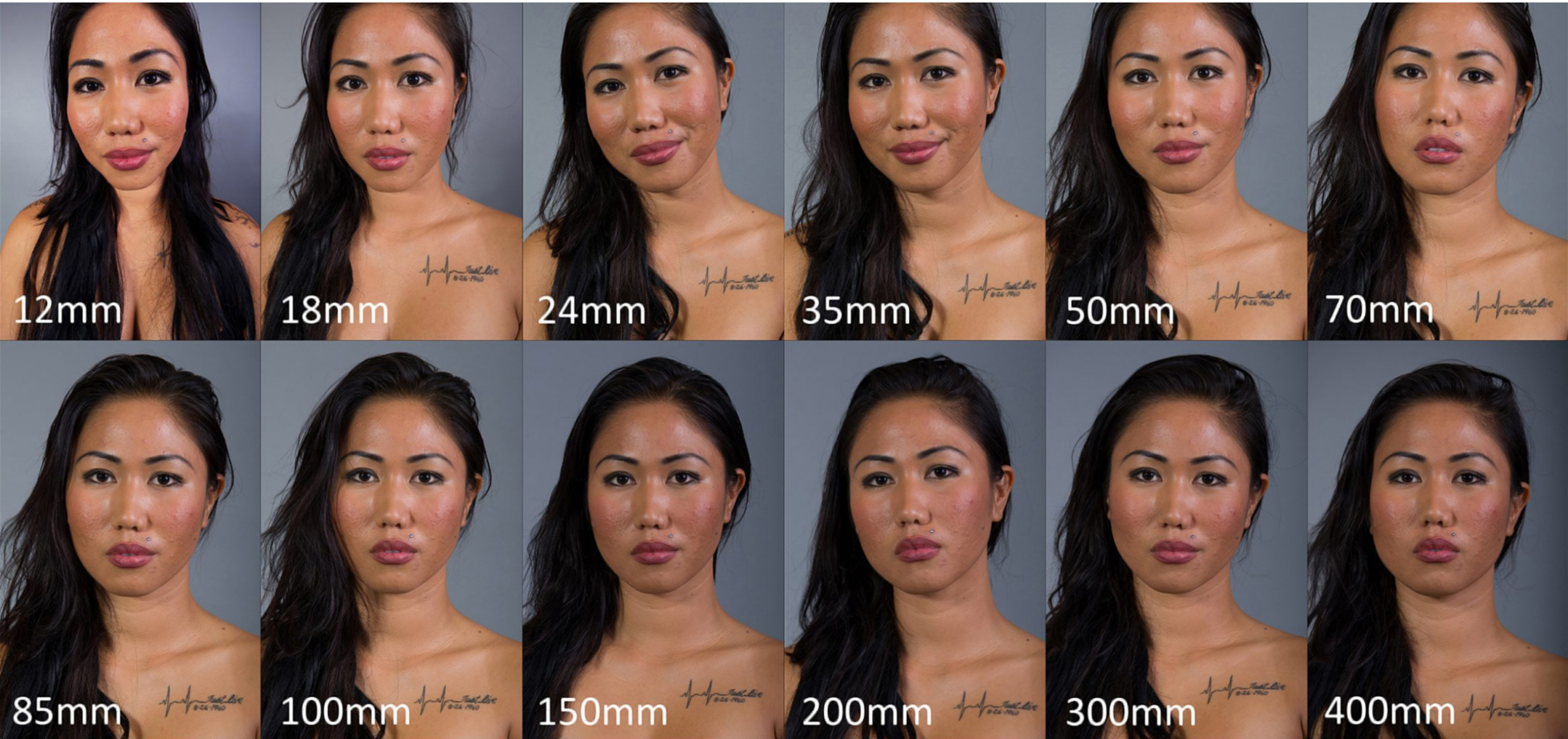
https://www.youtube.com/watch?v=6H4YJ6Ys2A0





Wide angle lenses create the most focal distortion.

https://www.dpreview.com/forums/thread/4164807



The basics of lens focal length

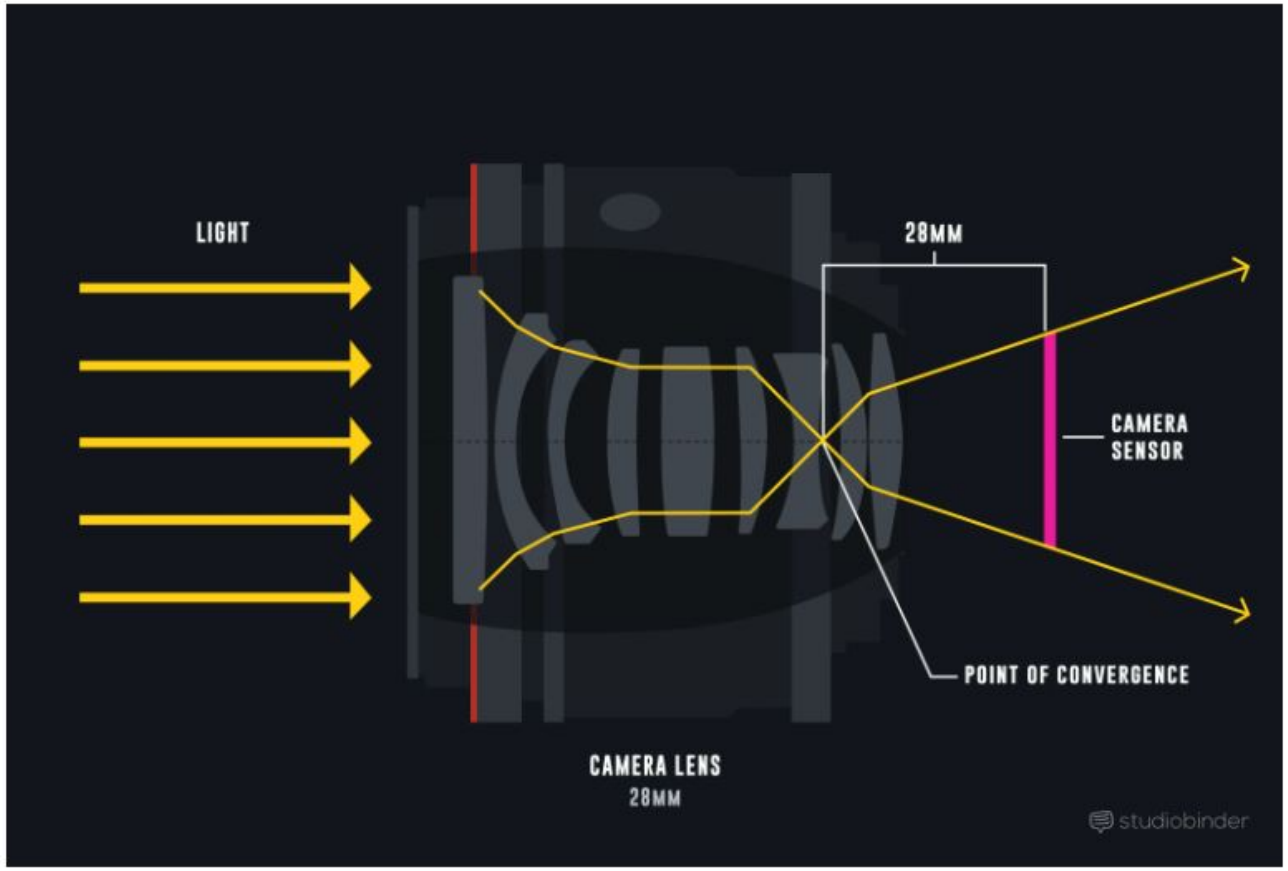
Your camera and lens are the audience. Your audience sees no more and no less than what you show them. It is crucial that when telling your story, you consider all the aspects of visual storytelling for your film.

All the small creative storytelling choices that you make for each image of your film are important. These small choices coalesce into the powerful effects your audience will feel as your story unfolds before them.

Focal length affects how "zoomed in" an image appears. The higher the millimeter (mm) number, the more "zoomed in" the image appears.

Focal length is measured as the distance from the focal point where light rays converge in the lens to the sensor or film in the camera, as illustrated in the diagram to the right.

https://www.studiobinder.com/blog/focal-length-camera-lenses-explained/



The measurement from the focal point, or point of convergence, to the sensor or film

FOCAL LENGTHS, BLADE RUNNER 2049

Shot 1

Shallow Focus/Single · 35mm

Deckard Hears Something

Shot 2

Single · 35mm

'K' Gets Ready

Shot 3

3-Shot · 28mm

3 Shot | Window View

Shot 4

POV · 85mm

POV | Binoculars

Shot 5

Single · 28mm

Deckard Runs for the Car

Shot 6

2-Shot · 28mm

Car Explosion

https://www.studiobinder.com/blog/focal-length-camera-lenses-explained/

What is a prime lens?

A **prime lens** is a fixed focal length lens that doesn't let you zoom in or out. This focal length is the distance between the point of convergence in the lens to the sensor in your camera. Prime lenses have very wide or large *apertures*. Apertures measure the size of hole when the lens opens inside a camera. Prime lenses have maximum apertures typically ranging from f/2.8 to f/1.2. There are few moving parts in a prime lens, making it difficult for major problems to arise.

Zoom lenses are lenses in which the focal length can vary, and while convenient, they have a much more complex system that can potentially cause more issues. Prime lenses are often smaller than their zoom lens counterpart, and have a variety of other benefits comparatively.

https://www.studiobinder.com/blog/what-is-a-prime-lens-definition/

Hasselblad Prime Lenses

Prime Lens vs. Zoom Lens

- Prime lenses are more compact with less involved
- Camera prime lenses are sharper than zoom lenses
- Wider aperture allows for bokeh and other techniques
- Better image quality
- Often better value

4 Prime Lenses Everyone Should Own

https://www.photographytalk.com/beginner-photography-tips/8437-4-prime-lenses-you-should-own

24mm- Wide angle

If you shoot a lot of landscapes, a 24mm prime lens is an excellent choice. Not only do these lenses give you a wide-angle view of the landscape, thus allowing you to capture more of the scene in your shot, but they have top-notch optics, too. **24mm has a short focal length.**

35mm- Wide angle

A 35mm helps you be much more creative. They are incredibly versatile and allow you to photograph virtually any subject. A 35mm lens lets you cut loose and try all manner and type of photography. A 35mm lens also has the advantage of being familiar. **35mm is the focal length that most closely resembles how we see the world with our own eyes.**

50mm- Normal Focal Length

50mm prime lenses (or the 'nifty fifty') have excellent sharpness and low-light performance. On top of that, they are small and compact, making them an ideal everyday lens that's easy to use and easy to carry around. Fifty millimeter lenses are also one of the most versatile lenses you can buy. **On a full frame camera, a 50mm focal length is ideal for everything from architecture to portraiture to landscapes.**

85mm- Short Telephoto Lens

if you take portraits, it's hard to find anything better. The **85mm** focal length is ideal for portraits for a variety of reasons. First, this focal length allows you to fill the frame with your subject without being right up in their face. Often, that means that the subject will be more relaxed, which means a better-quality portrait. **85mm is basically a short telephoto lens, so focal length is not particularly long or short.**

4 Specialty Lenses Everyone Should Own

https://www.studiobinder.com/blog/different-types-camera-lenses-explained/

Micro vs. Macro Lens

A macro lens is a lens that reproduces an image on the sensor plane or film plane that is of similar size to that of the actual physical subject. Macro lenses are most often used to capture a very small subject, like an insect or a coin, in very fine detail. **Micro photography refers to anything with a magnification ratio of 20:1 or greater.** That's right – it looks at least twenty times bigger on your camera's sensor than it does in real life. This isn't a type of photography that most people are ever going to use in their daily lives.

Macro and micro lenses are actually different names for the same thing and they both refer to lenses that you'd use to shoot macro photography. Canon calls their macro photography lenses "macro lenses" and Nikon calls them "micro lenses." Go figure.

Zoom Lens

A zoom lens is a type of lens that can vary its focal length by physically moving various optical mechanisms in the lens. Zoom lenses differ from prime lenses which have a fixed focal length. Cinematographers and photographers use these lenses to zoom in or out from a subject giving the appearance of moving closer or further from the subject without physically moving the camera. These lenses are also used to achieve a dolly zoom shot.

Fisheye Lens

A fisheye lens is a camera component used for shooting extremely wide angles, typically 180 degrees. Also referred to as a "super wide" or "ultra-wide" lens, it produces an image that appears distorted, giving it a more abstract yet dynamic aesthetic.

Good for shooting extreme sports, giving the impression of looking through a peephole. scenes of a person waking up or struggling with unconsciousness, or for simulating security footage


ladybug on a leaf, dappled light, golden hour, subsurface scattering,
zoom lens, shallow DOF --ar 2:1 --q 2 --v 5.1
ZOOM LENS
(CLOSEUP
PHOTOGRAPHY)


ladybug on a leaf, dappled light, golden hour, subsurface scattering
macro lens, shallow DOF --ar 2:1 --q 2 --v 5.1
MICRO / MACRO LENS


ladybug microscopic detail, dappled light, golden hour, subsurface scattering,
micro lens, style of Igor Siwanowicz, shallow DOF --ar 2:1 --q 2 --v 5.1
MICRO / MACRO LENS

What is a wide angle lens?

A wide-angle lens is any lens with a set focal length that is shorter than the length of the sensor or film. For full frame sensors, a wide angle lens would be any lens with a focal length equal to or less than 35mm.

Any lens between 35mm and 24mm is considered a wide angle camera lens. Anything between 24 mm and 18mm is considered an ultra wide angle lens. **Below 18mm enters fisheye lens territory**. Fisheye lenses are common in action sports, but in photography and film can cause unwanted wide angle lens distortion.

What is a wide angle lens used for in film?

- Accentuating camera movement
- Establishing a more subjective point of view
- To create a larger frame for characters and settings

https://www.studiobinder.com/blog/what-is-a-wide-angle-lens-definition/#

24MM TESTS, THE LAKHIYANA:

THESE ARE FOUR REROLLS IN MIDJOURNEY WITH ONLY **'24MM LENS'** IN THE PROMPT WHICH GAVE RESULTS THAT ARE CONSISTENT WITH A WIDE ANGLE. IT WOULD STILL BE RECOMMENDED TO ADD DESCRIPTORS, SUCH AS **'WIDE ANGLE LENS'** AND **'DEEP FOCUS'**, BUT THESE LIMITED TESTS SUGGEST IDENTIFIABLE TRAITS OF 24MM LENSES, EXCEPT FOR FACIAL DISTORTION.

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 24mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 3:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 24mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 3:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 24mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 3:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 24mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 3:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

24MM TEST, THE LAKHIYANA:

A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **24MM LENS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, --AR 3:1 --V 5.2
[MIDJOURNEY 5.2]

24MM TEST, THE LAKHIYANA:

A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **24MM LENS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, --AR 3:1 --V 5.2
[MIDJOURNEY 5.2]

24MM TEST, THE LAKHIYANA:

A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **24MM LENS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, --AR 3:1 --V 5.2
[MIDJOURNEY 5.2]

CONCLUSIONS FOR THE 24MM LENS EFFECT:

WHILE MOST TESTS YIELDED ACCURATE RESULTS, THERE WERE SOME INCONSISTENCIES IN OTHER RE-ROLLS. **THEREFORE, THE MOST EFFECTIVE WAY TO APPROXIMATE A CONSISTENT WIDE ANGLE LENS LOOK IS BY ADDING RELEVANT DESCRIPTORS**, SUCH AS IN THE IMAGE BELOW:

CLOSE-UP PORTRAIT OF A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **24MM LENS, WIDE ANGLE LENS, DEEP FOCUS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING --AR 3:1 --V 5.2 **[MIDJOURNEY 5.2]**

What is a telephoto lens?

A **telephoto lens** has a longer focal length than a standard lens, yielding a magnified image and a narrow field of view. A telephoto lens allows you to photograph a subject that is far away. Typically, a lens is considered "telephoto" if its focal length is 60mm or longer.

A telephoto lens is not always a zoom lens but can be. A **zoom lens** is a lens with an adjustable focal length. A fixed focal length lens is referred to as a **prime lens**. Telephoto lenses can be either zoom or prime lenses. **Telephotos come in a variety of focal lengths from "medium telephoto" (70-200mm) and "super telephoto" (longer than 300mm)**.

https://www.studiobinder.com/blog/what-is-a-telephoto-lens-definition/

85MM TESTS, THE LAKHIYANA:

THESE ARE FOUR REROLLS IN MIDJOURNEY WITH ONLY **'85MM LENS'** IN THE PROMPT WHICH GAVE RESULTS THAT ARE CONSISTENT WITH A **TELEPHOTO LENS**. IT WOULD STILL BE RECOMMENDED TO ADD ADDITIONAL DESCRIPTORS, SUCH AS **'TELEPHOTO LENS'**, **'SHALLOW DEPTH OF FIELD'**, AND **'BOKEH'**, BUT THESE LIMITED TESTS SUGGEST IDENTIFIABLE TRAITS OF 85MM LENSES.

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 85mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 85mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 85mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

a 35 year old Pope who resembles Dev Anand holding mass in futuristic vestments in the remnants of a destroyed St. Peter's Cathedral, 85mm lens, subsurface scattering, golden light, cinematic color grading, diffuse-back-lighting, small-catchlight, --ar 2:1 --v 5.2 - Image #3 @jaznofrancoeur

85MM TEST, THE LAKHIYANA:

A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **85MM LENS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, --AR 2:1 --V 5.2
[MIDJOURNEY 5.2]

85MM TEST, THE LAKHIYANA:

A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **85MM LENS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, --AR 2:1 --V 5.2
[MIDJOURNEY 5.2]

85MM TEST, THE LAKHIYANA:

A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **85MM LENS**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, --AR 2:1 --V 5.2
[MIDJOURNEY 5.2]

85MM LENS, THE LAKHIYANA:

3/4 WORM'S EYE VIEW OF A 35-YEAR-OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **85MM**, SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING, DIFFUSE-BACK-LIGHTING, SMALL-CATCHLIGHT, LOW-CONTRAST, **SHALLOW DOF** --AR 3:2 --V 4 **[MIDJOURNEY 5]**

DEV PATEL IN A FUTURISTIC ABU GHRAIB LAYING ON HOT COALS AS SALMAN KAHN WATCHES, WORM'S EYE VIEW, STEAM, STYLE OF KUBRICK AND JOEL PETER WITKIN, HAUNTED AND ELEGANT BLUE TONES, WARM KEY LIGHT, **85MM,** DRAMATIC ANGLE, EXTREME PERSPECTIVE, DIFFUSE-BACK-LIGHTING --AR 2:1 --V 5 **[MIDJOURNEY 5]**

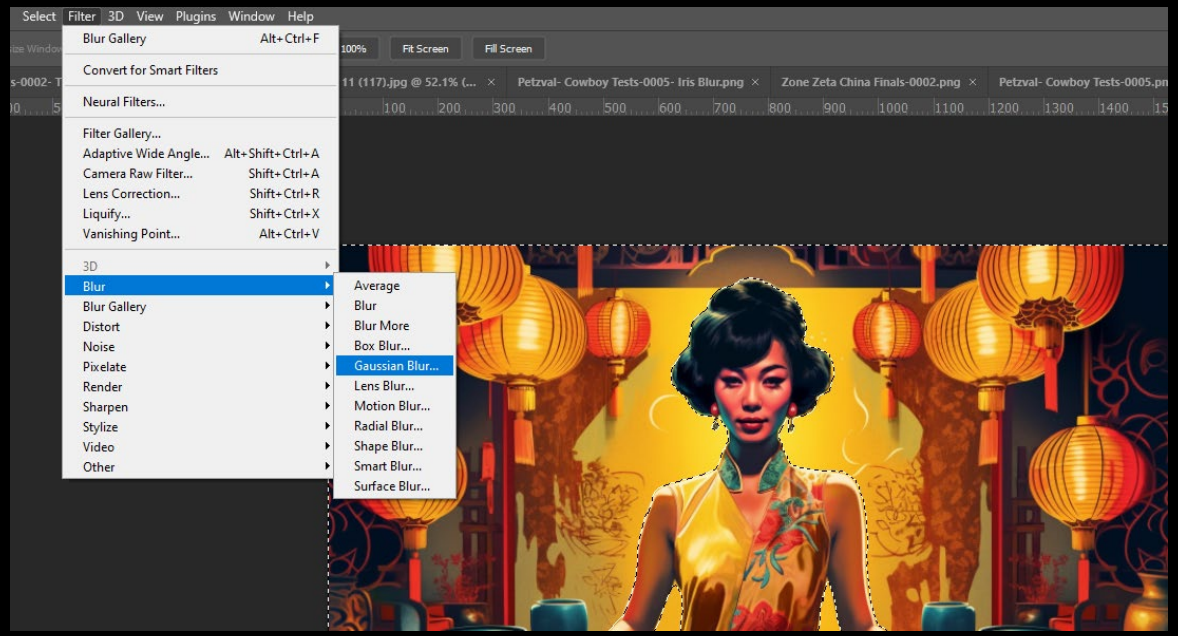
80MM / 100MM LENSES, SHINJUKU 2096 + THE LAKHIYANA:

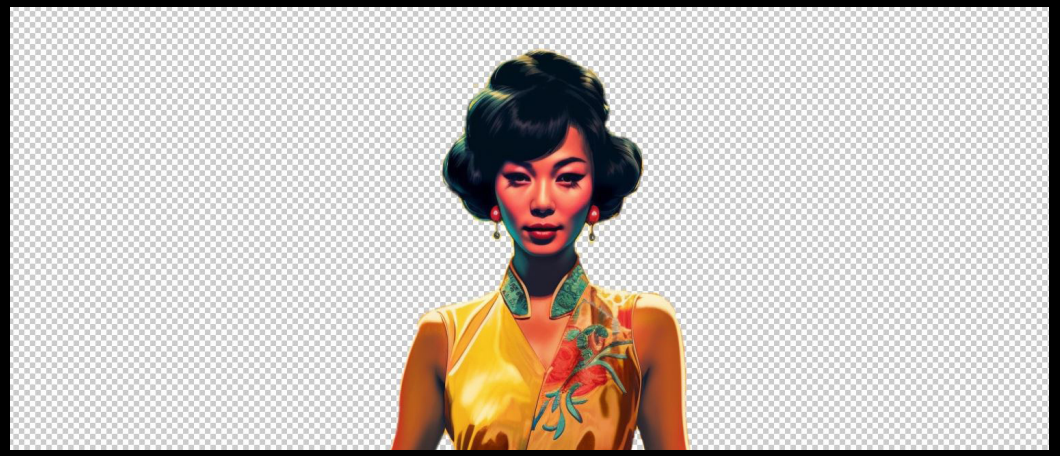
MOTHER AND CHILD IN FUTURISTIC SUITS LIT UP WITH INTERNAL LIGHTS IN SHINJUKU ALLEY HIDING FROM RIOTERS, CINEMATIC SHOT, PROFESSIONAL LIGHTING, **80MM** --AR 3:2 --V 4 **[MIDJOURNEY 4]**

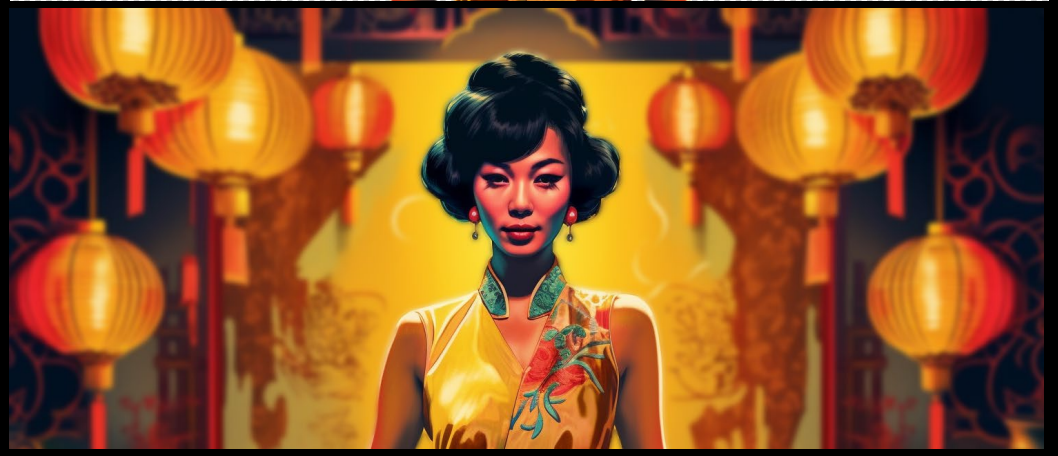
A WOMAN WHO RESEMBLES DEEPIKA PADUKONE AND ANGELINA JOLIE DANCING IN A HALLUCINATORY VORTEX WITH DEV PATEL IN A FUTURISTIC TUXEDO, **BOKEH**, RAYTRACING, **100MM**, STUDIO LIGHTING, DETAILED SKIN, DRAMATIC PERSPECTIVE, CHIAROSCURO, SMALL-CATCHLIGHT, LOW-CONTRAST --AR 3:2 **[MIDJOURNEY 5]**

Creating Shallow DOF in Photoshop

Easy Depth Of Field Effect In Photoshop
Step 1: Duplicate The Background Layer. ...
Step 2: Select The Area That Will Remain In Focus. ...
Step 3: Enter Quick Mask Mode. ...
Step 4: Apply The Gaussian Blur Filter. ...
Step 5: Exit Out Of Quick Mask Mode. ...
Step 6: Save The Selection. ...
Step 7: Apply The "Lens Blur" Filter.







https://www.webucator.com/article/how-to-apply-an-iris-blur-effect-in-adobe-photosho/

CONCLUSIONS FOR 85MM LENS EFFECT:

WHILE MOST TESTS YIELDED ACCURATE RESULTS, THERE WERE SOME INCONSISTENCIES IN OTHER REROLLS. **THEREFORE, THE MOST EFFECTIVE WAY TO APPROXIMATE A CONSISTENT TELEPHOTO LENS LOOK IS BY ADDING RELEVANT DESCRIPTORS**, SUCH AS IN THE IMAGE BELOW:

EXTREME CLOSE-UP PORTRAIT OF A 35 YEAR OLD POPE WHO RESEMBLES DEV ANAND HOLDING MASS IN FUTURISTIC VESTMENTS IN THE REMNANTS OF A DESTROYED ST. PETER'S CATHEDRAL, **85MM LENS, SHALLOW DOF, BOKEH,** SUBSURFACE SCATTERING, GOLDEN LIGHT, CINEMATIC COLOR GRADING --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

What is a Petzval lens?

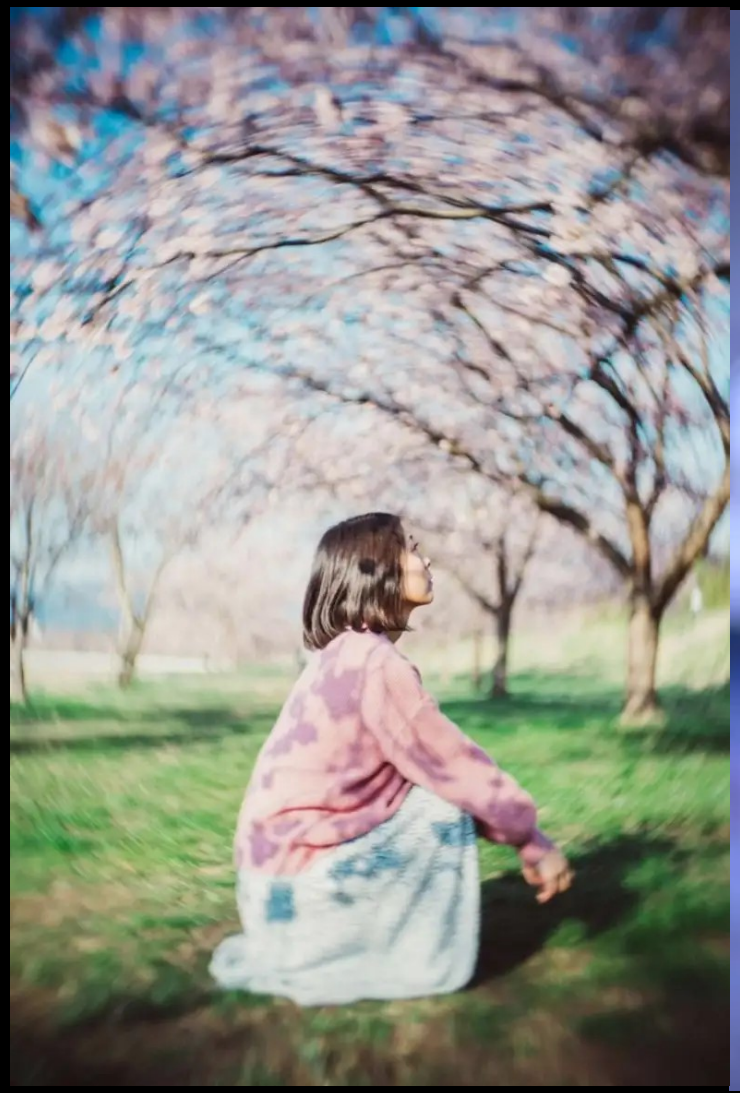
The Petzval lens is the first photographic portrait objective lens (with a 160mm focal length) in the history of photography. It was developed by the Hungarian mathematics professor Petzvál József in 1840 in Vienna.

The Petzval lens is known for delivering extreme sharpness in the center, strong color saturation, and a blurred effect in the out-of-focus area. Because of these characteristics, Petzval lenses are perfectly fit to produce portraits, especially when the photographer wanted the subject to be the center of attention. **It is often associated with creating a soft-focus aesthetic.**

https://en.wikipedia.org/wiki/Petzval_lens

PETZVAL 55MM LENS, LOMOGRAPHY:

OPTICS PLAY A CRUCIAL ROLE IN CAPTURING **BOKEH.** THE **ARTFUL SWIRLS AND DELICATE ORBS** THAT REGISTER ON FILM OR DIGITAL SCREEN CAN COMPLIMENT, ACCENTUATE, AND PUT EMPHASIS ON SEEMINGLY MUNDANE SUBJECTS. ANOTHER GREAT THING ABOUT BOKEH IS THAT IT CAN MAKE THE BACKGROUND A VITAL COMPONENT OF AN IMAGE. **HTTPS://WWW.LOMOGRAPHY.COM/MAGAZINE/341550-IT-S-ALL-IN-THE-LENS-REFINING-THE-ART-OF-BOKEH-WITH-THE-NEW-PETZVAL-55MM-F-1-7-MKII**



https://digitalrev.com/2019/05/27/new-petzval-lens-sends-bokeh-lovers-into-a-spin/

PETZVAL 85MM LENS TESTS, THE LAKHIYANA:

THESE ARE FOUR OF EIGHT REROLLS IN MIDJOURNEY WITH **'PETZVAL 85MM'** IN THE PROMPT, WHICH GAVE RESULTS THAT ARE CONSISTENT WITH THIS FAMOUS PHOTOGRAPHIC PORTRAIT OBJECTIVE LENS, INCLUDING AN INTERPRETATION OF THE UNIQUE **'ORB AND SWIRLING BOKEH' EFFECT**. ONE INTERESTING NOTE: BOKEH WAS NOT LISTED IN THE PROMPT. **IT IS STILL ADVISED TO ADD DESCRIPTORS SUCH AS 'SOFT FOCUS', 'SOFT EDGES,' AND 'SHALLOW DEPTH OF FIELD' TO APPROXIMATE THE LOOK OF THE PETZVAL LENS.**

a man dressed up in a glowing costume, Petzval lens, in the style of afrofuturism, cosmic themes, profile view, dariusz klimczak, vibrant stage backdrops, albert joseph moore --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

a man dressed up in a glowing costume, in the style of afrofuturism, petzval 85mm f/2.2, uhd image, cosmic themes, dariusz klimczak, vibrant stage backdrops, albert joseph moore --ar 3:2 --v 5 - @jaznofrancoeur (fast)

a man dressed up in a glowing costume, Petzval 85mm lens, in the style of afrofuturism, cosmic themes, profile view, dariusz klimczak, vibrant stage backdrops, albert joseph moore --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

a man dressed up in a glowing costume, Petzval lens, in the style of afrofuturism, cosmic themes, profile view, dariusz klimczak, vibrant stage backdrops, albert joseph moore --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

PETZVAL 85MM LENS TESTS, THE LAKHIYANA:

A MAN DRESSED UP IN A GLOWING COSTUME, IN THE STYLE OF AFROFUTURISM, **PETZVAL 85MM,** COSMIC THEMES, DARIUSZ KLIMCZAK, VIBRANT STAGE BACKDROPS, ALBERT JOSEPH MOORE --AR 3:2 --V 5 **[MIDJOURNEY 5]**

PETZVAL 85MM LENS TESTS, THE LAKHIYANA:

A MAN DRESSED UP IN A GLOWING COSTUME, IN THE STYLE OF AFROFUTURISM, **PETZVAL 85MM,** COSMIC THEMES, DARIUSZ KLIMCZAK, VIBRANT STAGE BACKDROPS, ALBERT JOSEPH MOORE --AR 3:2 --V 5 **[MIDJOURNEY 5]**

PETZVAL 85MM LENS TESTS, THE MONA LISA:

THESE ARE FOUR OF TEN REROLLS IN MIDJOURNEY WITH **'PETZVAL 85MM LENS'** IN THE PROMPT, WHICH GAVE RESULTS THAT ARE CONSISTENT WITH THIS FAMOUS PHOTOGRAPHIC PORTRAIT OBJECTIVE LENS, EXCEPT THE UNIQUE **'ORB AND SWIRLING BOKEH'** EFFECT. **IT IS STILL ADVISED TO ADD DESCRIPTORS SUCH AS 'SOFT FOCUS', 'SOFT EDGES,' AND 'SHALLOW DEPTH OF FIELD' TO APPROXIMATE THE LOOK OF THE PETZVAL LENS.**

Mona Lisa by Da Vinci, neutral lighting, Petzval 85mm lens --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

Mona Lisa by Da Vinci, neutral lighting, Petzval 85mm lens --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

Mona Lisa by Da Vinci, neutral lighting, Petzval 85mm lens --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

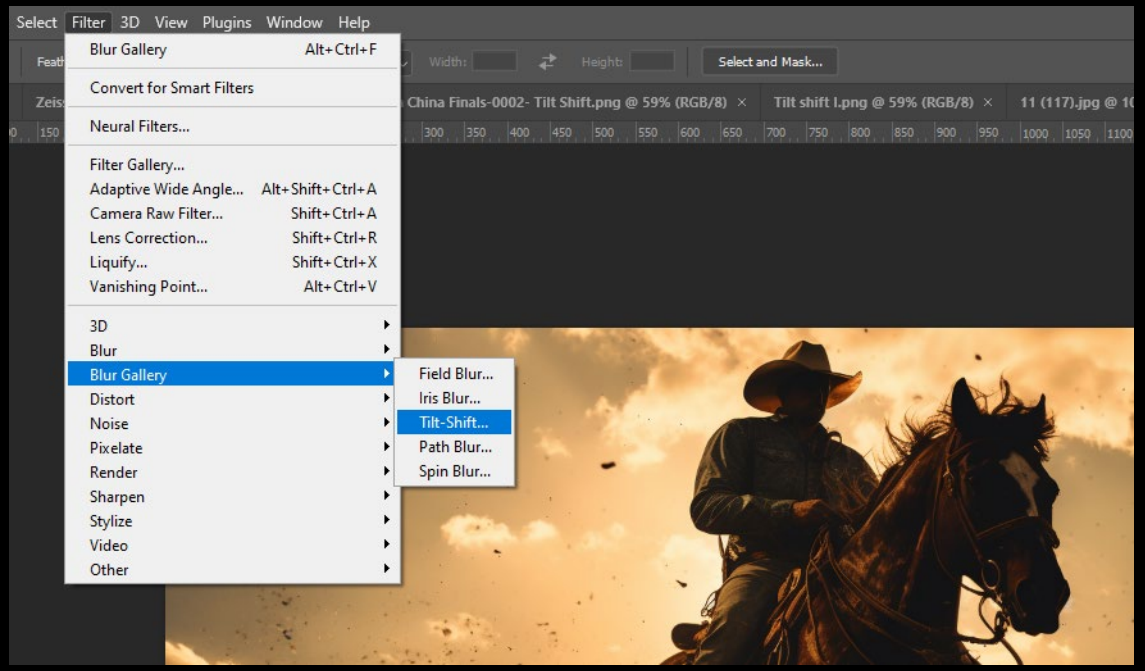
Mona Lisa by Da Vinci, neutral lighting, Petzval 85mm lens --ar 3:2 --v 5.2 - @jaznofrancoeur (fast, stealth)

PETZVAL 85MM LENS TESTS, THE MONA LISA:

MONA LISA BY DA VINCI, NEUTRAL LIGHTING, **PETZVAL 85MM LENS** --AR 3:2 --V 5.2 **[MIDJOURNEY 5.2]**

Using the Iris Blur Filter in Photoshop

You can approximate some aspects of a Petzval lens with the iris blur filter. **Go to Filter > Blur Gallery > Iris Blur .** The gallery interface features an Options Bar and Panels with blur controls on the image preview: **Ellipse Handles**: Drag to make blur shape rounder or more oval, or to rotate. **Feather Handles**: Drag to adjust where blur begins.



https://www.webucator.com/article/how-to-apply-an-iris-blur-effect-in-adobe-photosho/

CONCLUSIONS FOR THE PETZVAL LOOK:

WHILE MANY TESTS YIELDED ACCURATE RESULTS, THERE WERE NO NOTICEABLE RESULTS IN OTHER SETS NOT SHOWN HERE, EVEN WITH MULTIPLE RE-ROLLS. **THEREFORE, THE BEST WAY TO APPROXIMATE A CONSISTENT PETZVAL LENS LOOK IS BY ADDING RELEVANT DESCRIPTORS**, AS IN THE IMAGE BELOW:

COWBOY PORTRAIT, GOLDEN HOUR, **PETZVAL 85MM LENS [OR 55M], SOFT FOCUS, SHARP IN CENTER AND SOFT AT EDGES**, DAPPLED LIGHT, SUBSURFACE SCATTERING, CHIAROSCURO, HAUNTING, ELEGANT, CINEMATIC COLOR, --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

Why is 35mm the most versatile?

A **35mm lens** is a lens with a focal length of 35mm (millimeters). Focal length is the length from the optical center of the lens to the camera's sensor, but that's not super important to remember. What's important is what is a 35mm lens good for and what are the visual characteristics we often associate with it.

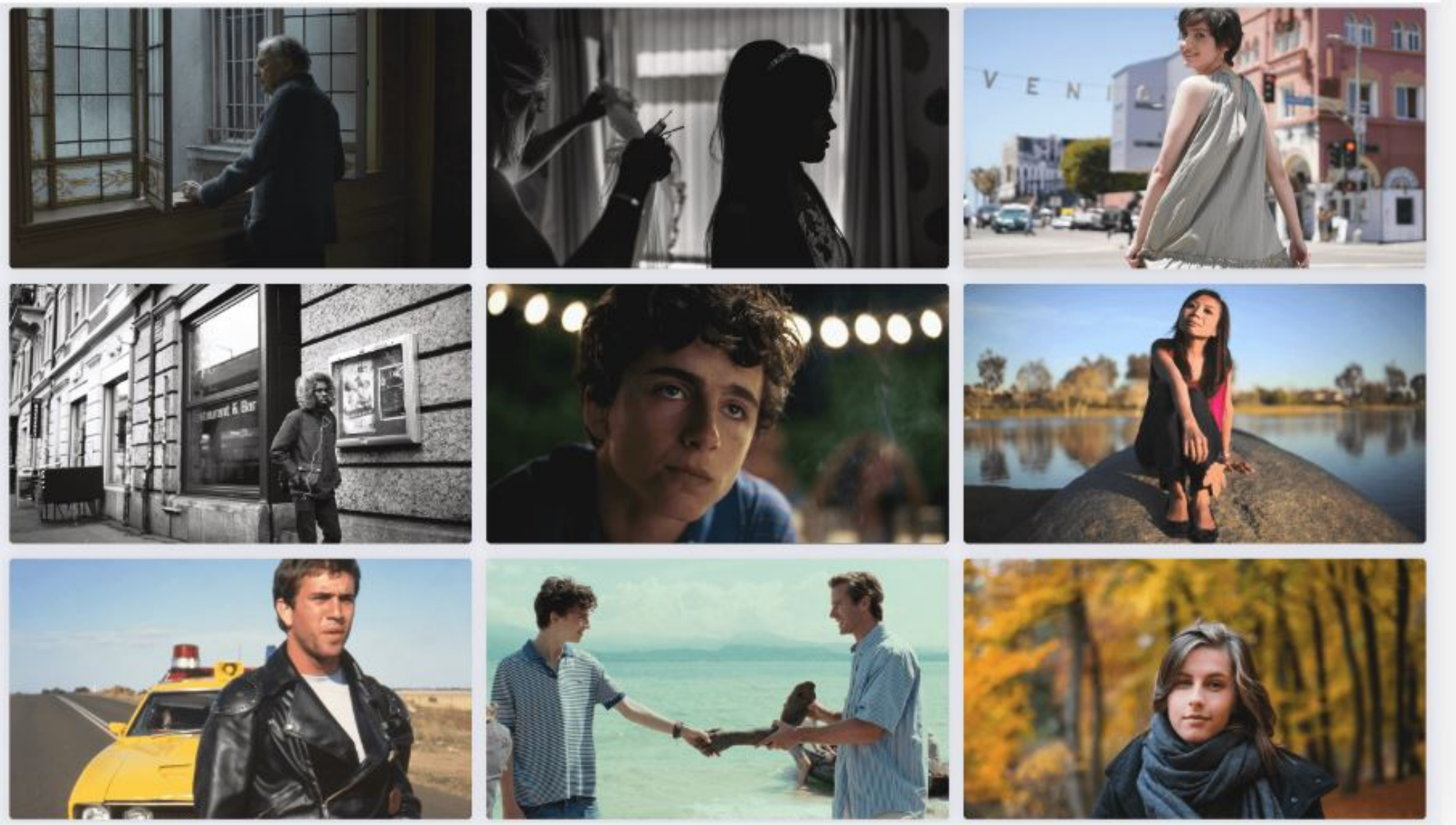
The 35mm is an extremely popular lens choice and a crucial tool for any photographer/cinematographer. And once again, **35mm is the focal length that most closely resembles how we see the world with our own eyes.**

Why 35mm?

- Semi-wide, but still a familiar, comfortable image
- One of the "standard" lenses used in film and photography

https://www.studiobinder.com/blog/what-is-a-35mm-lens-good-for/

35mm Mood Board:



https://www.studiobinder.com/blog/what-is-a-35mm-lens-good-for/

35mm Lens Mood Board

What does 35mm film photography mean?

When the term 35mm photography is used in a format setting, it usually refers to **film photography** — sometimes called **analog photography**. Film photography uses light-sensitive film in cameras to capture photos — whenever the film is exposed to light, an impression is captured.

A 35mm format — just called 35mm — describes a common type of image sensor format that's used in film photography. The general rule is, the larger the film, the better the resolution. **Smaller formats like 35mm will be noticeably grainier when printed — but that's often a much-loved result of film photography.**

Therefore, placing '35mm' into your prompt may actually be pulling from data sets that reference the analog photography aspect, rather than the focal length. This is what we will be testing in the next series of slides.

https://www.adobe.com/creativecloud/photography/hub/guides/what-is-35mm-photography.html

https://www.holygrain.com/35mm-film-grain-4k/

ASTEROID CITY, WES ANDERSON:

https://www.kodak.com/en/motion/blog-post/asteroid-city

*YEOMAN SHOT ASTEROID CITY USING AN **ARRICAM ST 35MM FILM CAMERA**, VARIOUSLY FRAMING THE ACTION IN 1.37:1 ASPECT RATIO USING COOKE S4 LENSES AND 2.40:1 WITH ARRI MASTER ANAMORPHICS. "WES PREFERS TO SHOOT ALL OF HIS LIVE-ACTION FEATURES ON CELLULOID," YEOMAN EXPLAINS. "WE BOTH LOVE THE INNATE TEXTURE AND COLOR OF THE FILMED IMAGE, WHICH CAN BE HARD, SOMETIMES IMPOSSIBLE, TO ACHIEVE DIGITALLY. **FILM GRAIN WAS AN IMPORTANT ELEMENT FOR THIS PRODUCTION, PARTICULARLY FOR THE B&W SCENES. WES AND I FELL IN LOVE WITH THE LOOK OF THE DOUBLE X B&W STOCK ON THE FRENCH DISPATCH, AS IT HAS A SUPERB SCALE OF TONAL CONTRAST AND GRAIN.***

AMERICAN GOTHIC:

AMERICAN GOTHIC PAINTING AS A PHOTOGRAPH, SATURATED COLORS --AR 2:1 --V 5.2 **[MIDJOURNEY 5]**

AMERICAN GOTHIC WITH 35MM FILM DESCRIPTORS:

AMERICAN GOTHIC PAINTING AS A **35MM PHOTOGRAPH, 35MM FILM GRAIN,** SATURATED COLORS --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

35MM FILM GRAIN, SHINJUKU 2080:

DUTCH ANGLE OCTANE RENDER OF FUTURISTIC SHINJUKU RIOT POLICE SPACESHIP EXPLODING, INTERPOLATING FROM BLUE TO ORANGE, SPOTLIGHTS, SOLDIERS ON FIRE, RAIN SOAKED STREETS, TORRENTIAL RAIN, LOOKING UP, NEON LIGHTS REFLECTED IN WINDOWS AND ON STREET, JOEL PETER WITKIN AND H.R. GIGER, ULTRA WIDE ANGLE, MOODY, ANAMORPHIC, VOLUMETRIC LIGHTING, CINEMATIC LIGHTING, **35MM FILM GRAIN**, IN THE STYLE OF FURY ROAD --V 4 **[MIDJOURNEY 4]**

NO 35MM DESCRIPTORS, AFGHANI WEAVING SERIES:

AFGHANI TRIBAL GIRL AT A LOOM MAKING A BEAUTIFUL COAT --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

NO 35MM DESCRIPTOR, AFGHANI WEAVING SERIES:

AFGHANI TRIBAL GIRL AT A LOOM MAKING A BEAUTIFUL COAT --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

35MM TESTS, AFGHANI WEAVING SERIES:

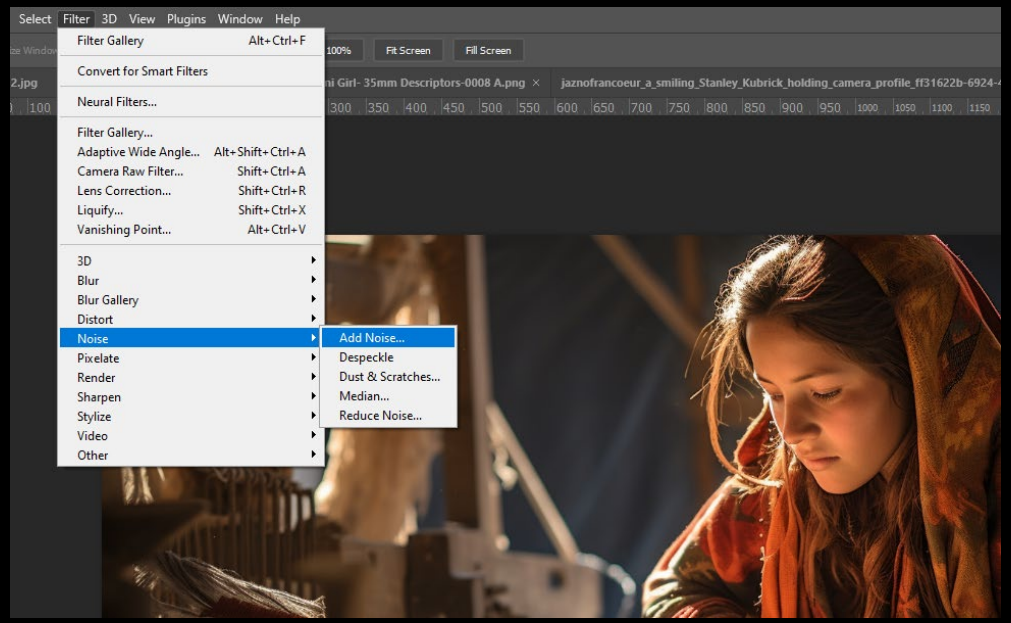
AFGHANI TRIBAL GIRL AT A LOOM MAKING A BEAUTIFUL COAT**, 35MM FILM, ANAMORPHIC LENS, FILM GRAIN** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

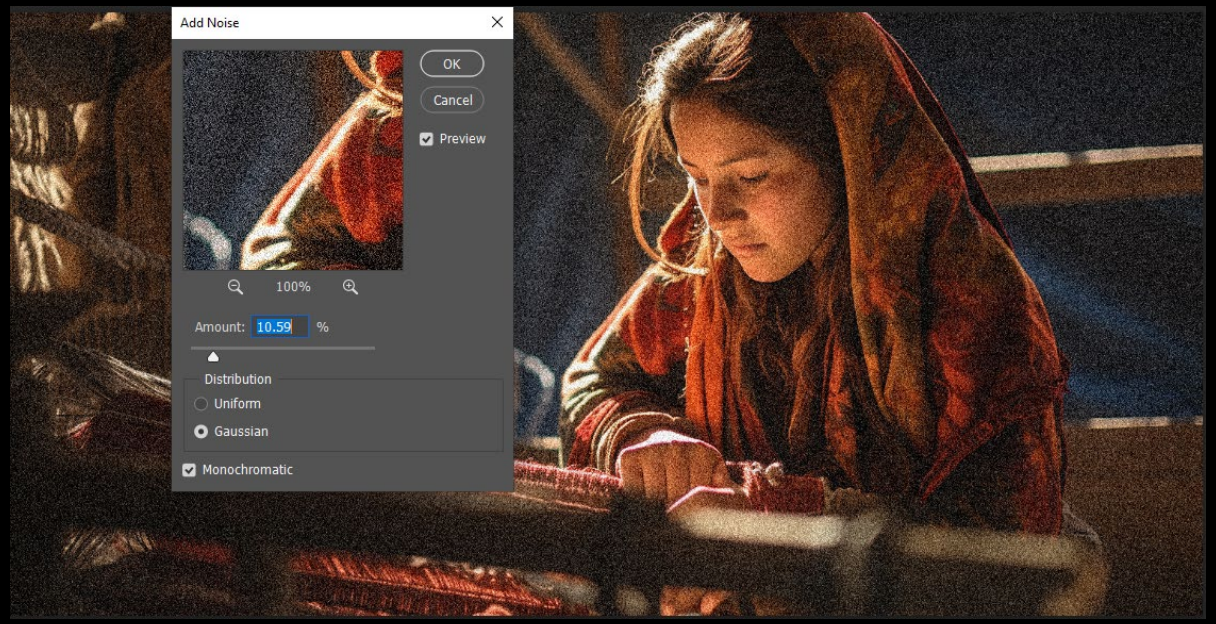
35MM TEST, AFGHANI WEAVING SERIES:

AFGHANI TRIBAL GIRL AT A LOOM MAKING A BEAUTIFUL COAT**, 35MM FILM, ANAMORPHIC LENS, FILM GRAIN** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

Using the Noise Filter in Photoshop to Emulate 35mm film grain

Go to **Filter > Noise > Add Noise**, make sure the distribution is set to **Gaussian** and check the Monochromatic option. **Monochromatic** will ensure that the grain doesn't have any color to it, and the Gaussian distribution will randomize the way the grain is laid out, instead of being in a predictable pattern.





https://giggster.com/guide/retouching/noise-film-grain/

CONCLUSIONS FOR THE 35MM LOOK:

WHILE THE DEFAULT IMAGES PRODUCED BY MIDJOURNEY ARE AESTHETICALLY PLEASING, ADDING **35MM** IN THE PROMPT, PLUS ADDITIONAL DESCRIPTORS SUCH AS **'ANAMORPHIC LENS'** AND **'35MM FILM GRAIN'** YIELDED EVEN BETTER RESULTS. MULTIPLE REROLLS LED TO THE SAME CONSISTENT LOOK: **MORE NATURALISTIC LIGHTING, IMPROVED COMPOSITIONS, AND A 'FILMIC' REALITY.**

AFGHANI TRIBAL GIRL AT A LOOM MAKING A BEAUTIFUL COAT, **35MM FILM, ANAMORPHIC LENS, FILM GRAIN** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

What is so special about Carl Zeiss lenses?

High-quality workmanship, outstanding light intensity and legendary **bokeh**. In contrast to standard autofocus lenses, ZEISS camera lenses offer highly precise, intuitive manual focus.

The ZEISS color rendition is relatively neutral. That isn't to say the resulting imagery is bland; on the contrary, ZEISS lenses reproduce colors that look and feel natural and realistic **and err on the side of cool rather than warm**. The clarity and high contrast of a ZEISS lens also helps achieve ultra-sharp imagery.

The ZEISS Planar 0.7/50 mm to the right was made famous by Stanley Kubrick.

https://zeiss.com

CARL ZEISS LENS, SIDE-BY-SIDE COMPARISONS:

IN 1902, ZEISS APPLIED FOR A PATENT FOR AN INVENTION THAT WOULD BECOME THE MOST FAMOUS AND MOST COPIED CAMERA LENS OF ALL TIME: THE TESSAR. IT ALLOWED THE USER TO ACHIEVE A PREVIOUSLY UNATTAINABLE LEVEL OF IMAGE SHARPNESS WITH ASTONISHINGLY LITTLE EFFORT, WHILE STILL BEING COMPACT. **ZEISS LENSES ARE RENOWNED FOR SHARPNESS AND STRIKING CONTRAST,** THOUGH THE CONTRAST CAN BE PROBLEMATIC WITH SHOTS WITH STRONG HIGHLIGHTS, WHERE DETAILS CAN GET LOST IN THE HIGHLIGHTS. **AGAIN, ZEISS LENSES ERR ON THE COOLER SIDE.**

https://www.filmmakersacademy.com/cinematography-online-lens-test/

https://www.cined.com/ben-horton-from-nat-geo-compares-canon-vs-zeiss-glass/

https://www.filmmakersacademy.com/cinematography-online-lens-test/

CARL ZEISS PLANAR 50MM F/0.7, THE NASA LENS:

THE CARL ZEISS PLANAR 50MM F/0.7 IS ONE OF THE LARGEST RELATIVE APERTURE (FASTEST) LENSES IN THE HISTORY OF PHOTOGRAPHY. THE LENS WAS DESIGNED AND MADE SPECIFICALLY FOR THE NASA APOLLO LUNAR PROGRAM TO CAPTURE THE FAR SIDE OF THE MOON IN 1966. STANLEY KUBRICK USED THESE LENSES WHEN SHOOTING HIS FILM BARRY LYNDON, WHICH ALLOWED HIM TO SHOOT SCENES LIT ONLY BY CANDLELIGHT.

HTTPS://EN.WIKIPEDIA.ORG/WIKI/CARL_ZEISS_PLANAR_50MM_F/0.7

https://www.cined.com/ben-horton-from-nat-geo-compares-canon-vs-zeiss-glass/

TESTS WITH NO CARL ZEISS LENS, SENSE & SENSIBILITY:

THESE ARE FOUR OF EIGHT REROLLS IN MIDJOURNEY WITH ONLY **CANDLELIGHT** AS A LIGHT SOURCE IN THE PROMPT. NOT SURPRISINGLY, THE OVERALL CAST OF THE RENDERS IS CONSISTENTLY WARM AND THE LIGHT DIFFUSE, AS ONE WOULD EXPECT FROM CANDLES AS AN EMITTER. THEORETICALLY, ADDING A CARL ZEISS LENS TO THIS PROMPT WOULD INCREASE THE SHARPNESS AND FOCUS, AS WELL AS BRING THE TEMPERATURE OF THE ROOM DOWN A NOTCH.

Candlelight scene, Victorian mansion, Sense and Sensibility --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Candlelight scene, Victorian mansion, Sense and Sensibility --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Candlelight scene, Victorian mansion, Sense and Sensibility --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Candlelight scene, Victorian mansion, Sense and Sensibility --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

TEST WITH NO CARL ZEISS LENS, SENSE & SENSIBILITY:

CANDLELIGHT SCENE, VICTORIAN MANSION, SENSE AND SENSIBILITY --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

CARL ZEISS PLANAR 50MM F/0.7 TESTS, SENSE & SENSIBILITY:

THESE ARE FOUR OF EIGHT REROLLS IN MIDJOURNEY WITH ‘CARL ZEISS PLANAR 500MM F/0.7’ IN THE PROMPT, WHICH GAVE RESULTS THAT ARE CONSISTENT WITH THIS FAMOUS NASA LENS, INCLUDING **HIGHER CONTRAST, INCREASED SHARPNESS, AND COOLER TONES (WITH THE EXCEPTION OF BOKEH, A COMMON ATTRIBUTE OF CARL ZEISS LENSES)**. I WOULD NORMALLY ADVISE ADDING ADDITIONAL DESCRIPTORS, SUCH AS ‘COOLER PALETTE’ OR ‘HIGHER CONTRAST’; HOWEVER, I HAVE DISCOVERED A LOSS OF SUBTLETY TO THE EFFECT, AS MIDJOURNEY TENDS TO MAKE MONOCHROMATIC IMAGES BASED ON PHRASES SUCH AS ‘COOL’ OR ‘WARM’ PALETTE. LIKEWISE, HIGH CONTRAST MAY CREATE IMAGES WITH LESS LIGHTING SUBTLETY. **MORE TESTING IS NECESSARY TO DOUBLE CONFIRM THESE RESULTS.**

Candlelight scene, Victorian mansion, Sense and Sensibility, Carl Zeiss Planar 50mm f/0.7 lens --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Candlelight scene, Victorian mansion, Sense and Sensibility, Carl Zeiss Planar 50mm f/0.7 lens --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Candlelight scene, Victorian mansion, Sense and Sensibility, Carl Zeiss Planar 50mm f/0.7 lens --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Candlelight scene, Victorian mansion, Sense and Sensibility, Carl Zeiss Planar 50mm f/0.7 lens --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

CARL ZEISS PLANAR 50MM F/0.7 TEST, SENSE & SENSIBILITY:

CANDLELIGHT SCENE, VICTORIAN MANSION, SENSE AND SENSIBILITY, **CARL ZEISS PLANAR 50MM F/0.7 LENS** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

TESTS WITH NO CARL ZEISS LENS, ROLLER DERBY GIRLS:

THESE ARE FOUR OF EIGHT REROLLS IN MIDJOURNEY, MINUS THE CARL ZEISS LENS. THE OVERALL CAST OF THE RENDERS IS CONSISTENTLY WARM. THEORETICALLY, ADDING A CARL ZEISS LENS TO THIS PROMPT WOULD INCREASE THE SHARPNESS AND FOCUS, AS WELL AS BRING THE TEMPERATURE OF THE SERIES DOWN A NOTCH.

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Speed Racer, subsurface scattering, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Speed Racer, subsurface scattering, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Speed Racer, subsurface scattering, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Speed Racer, subsurface scattering, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

TEST WITH NO CARL ZEISS LENS, ROLLER DERBY GIRLS:

DUTCH ANGLE CLOSE-UP OF MAD MAX FURY ROAD BURLESQUE VIOLENT ROLLER DERBY DIVA IN BETTY PAGE SMASHING INTO OPPONENT, MULTIPLE EXPOSURE, OPTIMIZED PHOTON CAPTURE, TETRADIC COLOR SCHEME, HIGH REFLECTIVITY, SPEED RACER, SUBSURFACE SCATTERING, DAPPLED NEON LIGHTS, DIMENSIONAL APPLIQUÉ, BARGELLO INTERPOLATING YELLOW TO BLUE --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

CARL ZEISS LENS TESTS, ROLLER DERBY GIRLS:

THESE ARE FOUR OF EIGHT REROLLS IN MIDJOURNEY WITH ‘CARL ZEIS’ IN THE PROMPT, WHICH GIVE SOME RESULTS THAT ARE CONSISTENT WITH THE CARL ZEISS LENS, PARTICULARLY **COOLER TONES**. UNLIKE THE CANDLE TESTS, BOTH SETS OF RENDERS SEEM TO HAVE AN EQUAL AMOUNT OF SHARPNESS AND CONTRAST, AND AGAIN, BOKEH IS NOT EVIDENT IN MANY OF THE RENDERS.

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, long exposure, optimized photon capture, tetradic color scheme, high reflectivity, Leica, Speed Racer, Carl Zeiss lens, subsurface scattering, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --q 2 --v 5.1 - @jaznofrancoeur (fast)

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Leica, Speed Racer, Carl Zeiss lens, subsurface scattering, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --q 2 --v 5.1 --q 2 --v 5.1 - @jaznofrancoeur (fast)

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Speed Racer, subsurface scattering, Carl Zeiss lens, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

Dutch angle closeup of Mad Max Fury Road burlesque violent roller derby diva in Betty Page smashing into opponent, multiple exposure, optimized photon capture, tetradic color scheme, high reflectivity, Speed Racer, subsurface scattering, Carl Zeiss lens, dappled neon lights, dimensional appliqué, bargello interpolating yellow to blue --ar 2:1 --v 5.2 - @jaznofrancoeur (fast, stealth)

CARL ZEISS LENS TEST, ROLLER DERBY GIRLS:

DUTCH ANGLE CLOSE-UP OF MAD MAX FURY ROAD BURLESQUE VIOLENT ROLLER DERBY DIVA IN BETTY PAGE SMASHING INTO OPPONENT, MULTIPLE EXPOSURE, OPTIMIZED PHOTON CAPTURE, TETRADIC COLOR SCHEME, HIGH REFLECTIVITY, SPEED RACER, SUBSURFACE SCATTERING, **CARL ZEISS LENS**, DAPPLED NEON LIGHTS, DIMENSIONAL APPLIQUÉ, BARGELLO INTERPOLATING YELLOW TO BLUE --AR 2:1 **[MIDJOURNEY 5.1]**

CONCLUSIONS FOR CARL ZEISS LENSES:

THESE TESTS SUGGEST **A COROLLARY BETWEEN THE ATTRIBUTES OF THE CARL ZEISS LENS (IN BOTH PHOTOGRAPHY AND FILM) AND THE IMAGES GENERATED IN MIDJOURNEY.** I DID NOT ADD DESCRIPTORS TO APPROXIMATE THE LOOK OF THE LENS, AND MAY NOT RECOMMEND THEM WHEN AMENDING THIS MODULE, DEPENDING ON THE CONSISTENCY OF FUTURE RESULTS. THE ONLY EXCEPTION WOULD BE ADDING 'BOKEH', AS IT IS A COMMON ARTIFACT OF ZEISS LENSES.

CANDLELIGHT SCENE, VICTORIAN MANSION, SENSE AND SENSIBILITY, **CARL ZEISS PLANAR 50MM F/0.7 LENS**, EXTREME CLOSE-UP, STARING AT VIEWER --AR 2:1
[MIDJOURNEY 5.2]

What is a tilt shift lens?

A **tilt shift lens** is one that changes the orientation and position of the lens mechanism with respect to the image sensor. Typically, a lens and sensor are parallel to one another on the same plane. With this lens, the ability to tilt and/or shift the lens in different directions changes the entire plane of focus, something otherwise known as the **Scheimpflug Principle**.

By changing the angle of the plane between the lens and the camera's sensor, one can change the scale of focus and the depth of field. **Changing the scale can allow your images to appear miniature**. And shifting or tilting can also minimize or maximize the blur behind your subject.

https://www.studiobinder.com/blog/what-is-a-tilt-shift-lens/

Above is a screen recording of the range of motion for a tilt shift lens. Follow the link below and mouse over the parameters to test for yourself! To the right is a view from Shanghai Tower I took with a 55m-200mm zoom. *[note: the video above will only play in Powerpoint mode]*

https://www.the-digital-picture.com/Canon-Lenses/What-Is-a-Tilt-Shift-Lens.aspx

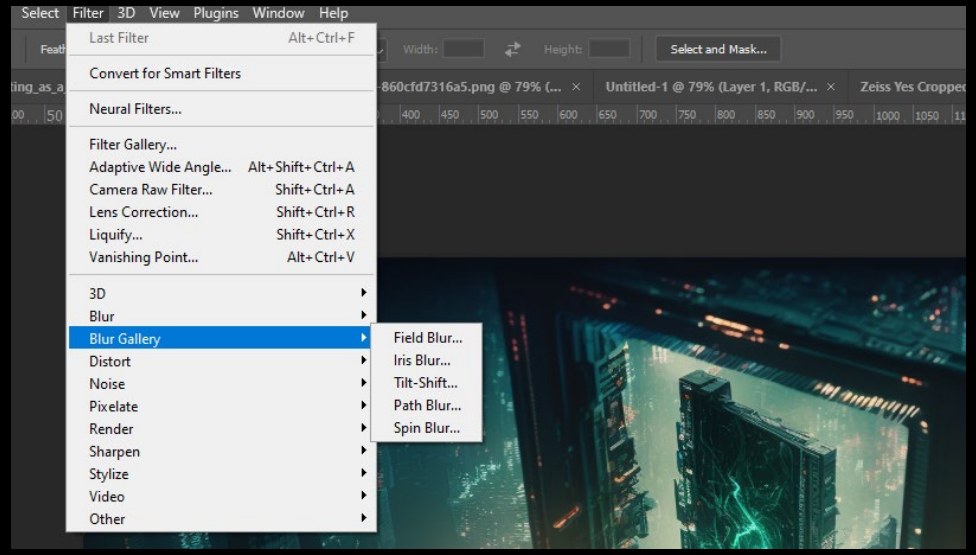
View from Shanghai Tower • 3200 x 2128 pixels • Shanghai, China • 7.14.2018 • f/4.8 • 1/1000 sec • 400 ISO • 174mm • Nikon D300 • Jazno Francoeur

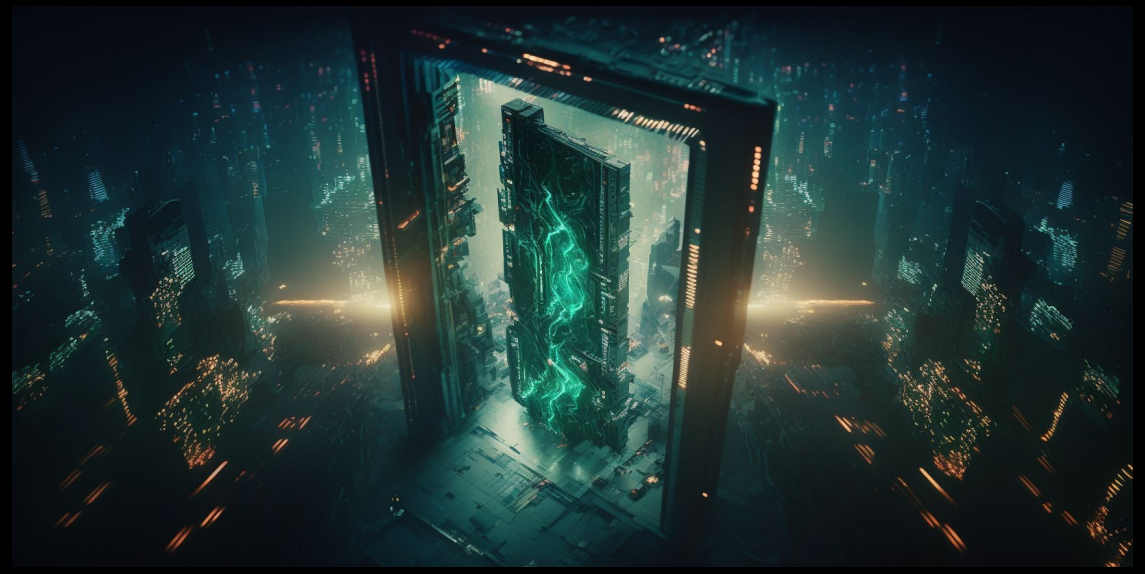
TILT SHIFT LENS, ROLLER DERBY GIRLS:

TILT SHIFT, A TATTOOED ROLLER BLACK DERBY DIVA IN BETTY PAGE ATTIRE SMASHING DRAMATICALLY THROUGH A SERIES OF REFLECTIVE MIRRORS, GLASS SHARDS EVERYWHERE, EXTREME PERSPECTIVE, CINEMATIC COMPOSITION, SUBSURFACE SCATTERING, DAPPLED NEON LIGHTS, MOODY LIGHTING --AR 2:1
[MIDJOURNEY 5.1]

Using the Tilt Shift Filter in Photoshop

Tilt-shift lenses create a unique distortion effect that makes the scene appear miniature. It's a fun creative effect that can actually be done **without a tilt-shift lens.** In Photoshop, go to **Filter > Blur Gallery and select Tilt Shift.** This will drop a pin in the image with adjustable lines that approximate where the effect will be applied. Go ahead and move the **pin** to the focus of the image. From there, you can **rotate the direction of the blur and adjust the feathering**.





https://www.slrlounge.com/how-to-create-a-convincing-tilt-shift-effect-in-photoshop

What is a fisheye lens?

A **fisheye lens** is a camera component used for shooting extremely wide angles, typically 180 degrees. Also referred to as a "super wide" or "ultra-wide" lens, it produces an image that appears distorted, giving it a more abstract yet dynamic aesthetic.

There are two main variations of this lens: full-frame and circular. A full-frame shot will have the distorted image taking up the entirety of the frame. Meanwhile, a circular shot will have a black border surrounding the spherical shot.

In the two shots to the right in the succeeding slide, I shot the first one at 26mm wide angle lens; the second is the same shot with a fisheye lens.

https://www.studiobinder.com/blog/what-is-a-fisheye-lens-photography/

Wide Angle Lens vs. Fisheye Lens

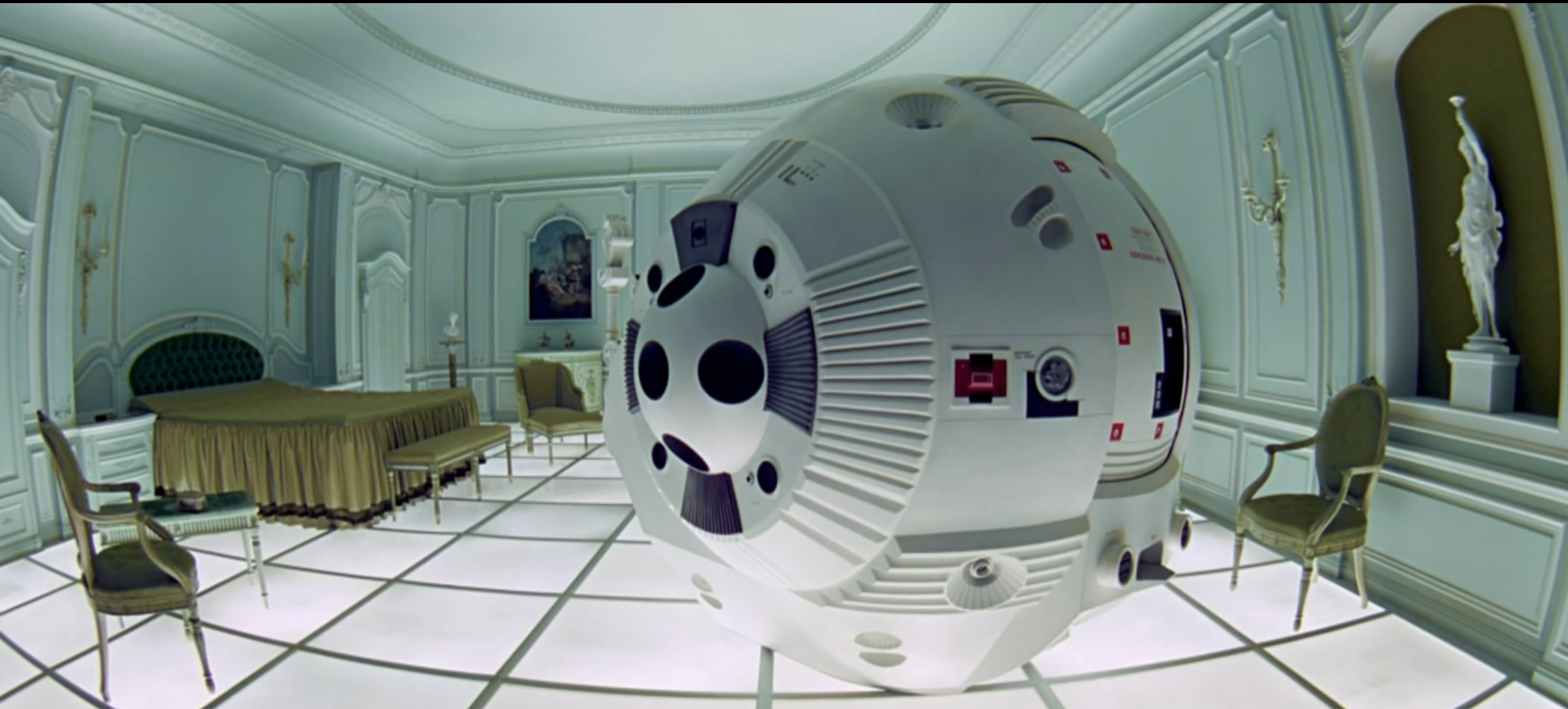
In both of these examples, I shot coverage with both a wide angle lens, then a fisheye. In both interiors, note the range of additional space included in the photograph when the fisheye was used. The distortion is an aesthetic choice and should not be an over-used effect.

El Manto de Estrellas I • 13.4" x 8.16" • La Sagrada Familia, Barcelona, Spain • 6.9.2012 • f/5.6 • 1/60 sec • 800 ISO • 10.5 mm • Nikon D300 • Jazno Francoeur

The Musician • 14.3 x 9.5 • Redhill, Singapore • 8.24.2010 • f/5.6 • 1/6 sec • 400 ISO • 10.5 mm • Nikon D300 • Fisheye Lens • Jazno Francoeur

FISHEYE LENSES, 2001: A SPACE ODYSSEY:

THE FINAL SEGMENT OF 2001 INCLUDES DISTORTED IMAGES TO CONVEY A SENSE OF EERIE UNEASE. STANLEY KUBRICK ALSO USED FISHEYE LENSES WHEN THE AUDIENCE IS LOOKING FROM THE HAL-9000'S POV.



EMULATING A FISHEYE WITH 360° CAMERAS:

Ricoh Theta is a line of **360-degree cameras** by Japanese manufacturer Ricoh. 360-degree videos, also known as surround video (also immersive videos or spherical videos) are video recordings where a view in every direction is recorded at the same time, shot using an omnidirectional camera or a collection of cameras.

https://en.wikipedia.org/wiki/360-degree_video

FISHEYE LENS TEST, HUNGRY GHOST FESTIVAL:

HTTPS://S.MJ.RUN/UPQB1WMWBZ4 EXTREME FISHEYE LENS DISTORTION, MAN PLAYING DRUMS BEHIND THE SCENES AT A LOCAL CHINESE OPERA PERFORMANCE, SINGAPORE, HUNGRY GHOST FESTIVAL, COLORFUL --AR 3:2 **--SEED 2553882964** **[MIDJOURNEY 5.1]**

Interestingly, **'fisheye lens'** in your prompt will result in subtle results, even with additional adjectives. Additionally, not every render will result in noticeable lens distortion.

RICOH THETA 360° CAMERA TEST, HUNGRY GHOST FESTIVAL:

HTTPS://S.MJ.RUN/UPQB1WMWBZ4 RICOH THETA 360 DEGREE CAMERA, MAN PLAYING DRUMS BEHIND THE SCENES AT A LOCAL CHINESE OPERA PERFORMANCE, SINGAPORE, HUNGRY GHOST FESTIVAL, COLORFUL --AR 3:2 **--SEED 2553882964** **[MIDJOURNEY 5.2]**

Adding **'Ricoh Theta 360 degree camera'** or **'spherical camera'** in your prompt will result in more accurate and consistent approximations of a fisheye lens.

TINY PLANET EFFECT TEST, HUNGRY GHOST FESTIVAL:

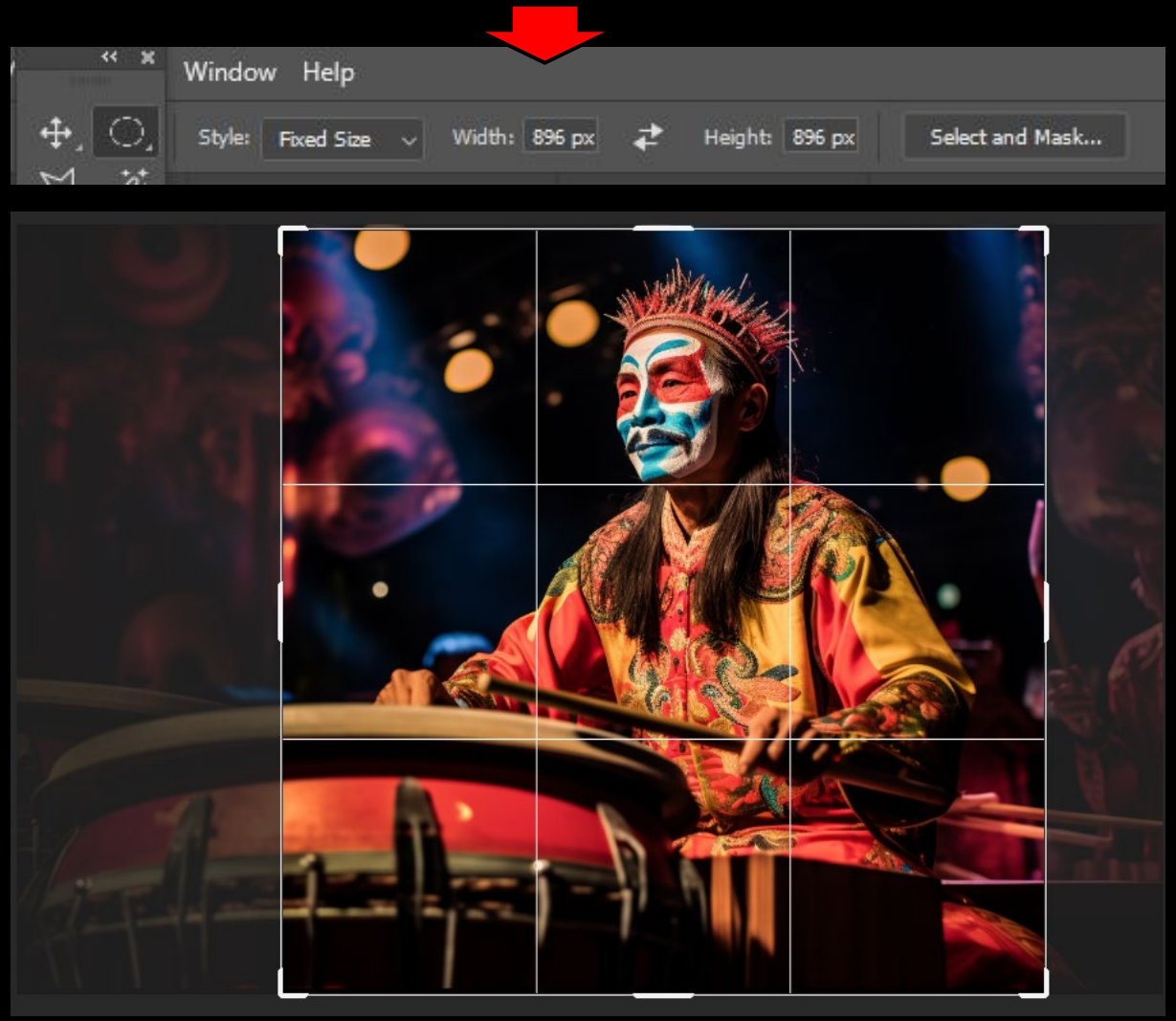
HTTPS://S.MJ.RUN/UPQB1WMWBZ4 STYLE OF TINY PLANET 360 DEGREE EFFECT, MAN PLAYING DRUMS BEHIND THE SCENES AT A LOCAL CHINESE OPERA PERFORMANCE, SINGAPORE, HUNGRY GHOST FESTIVAL, COLORFUL --AR 3:2 **--SEED 2553882964** **[MIDJOURNEY 5.2]**

Adding **'tiny planet effect'** in your prompt generally results in the most distortion, and often with a range of results that look like a normal fisheye lens or like the image below:

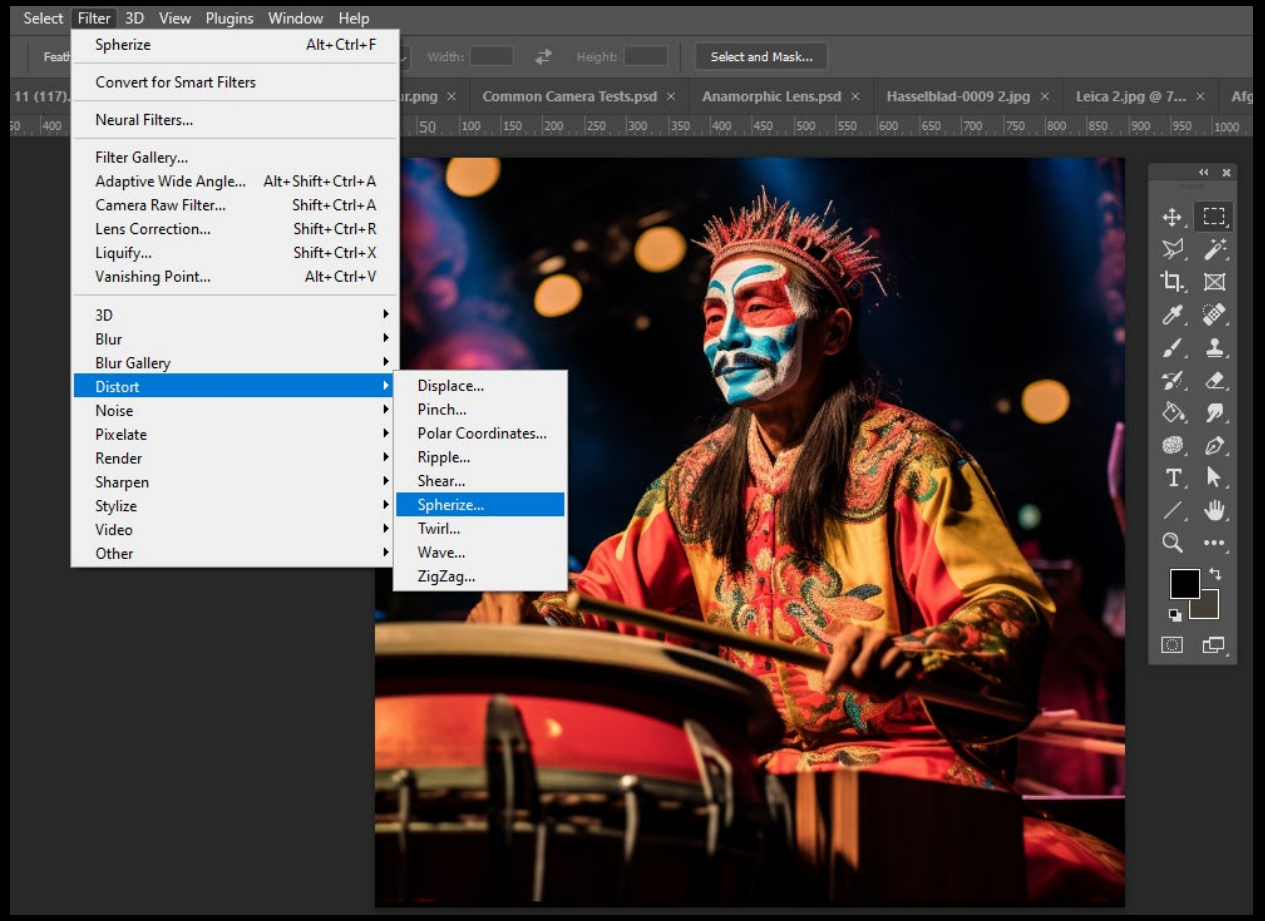
man running through rough neighborhood, ***style of tiny planet 360 degree effect*** *--v 5.2*

Using the Spherize Filter in Photoshop to Emulate a Fisheye Lens

Open image and use the crop tool to make a perfect square image. Click on the **'Crop' tool**, then hit shift. A small **cross-shape** will appear. Drag from the upper left corner to the bottom of the image, and it will create a perfect movable square. Select the area you want to crop and hit enter.



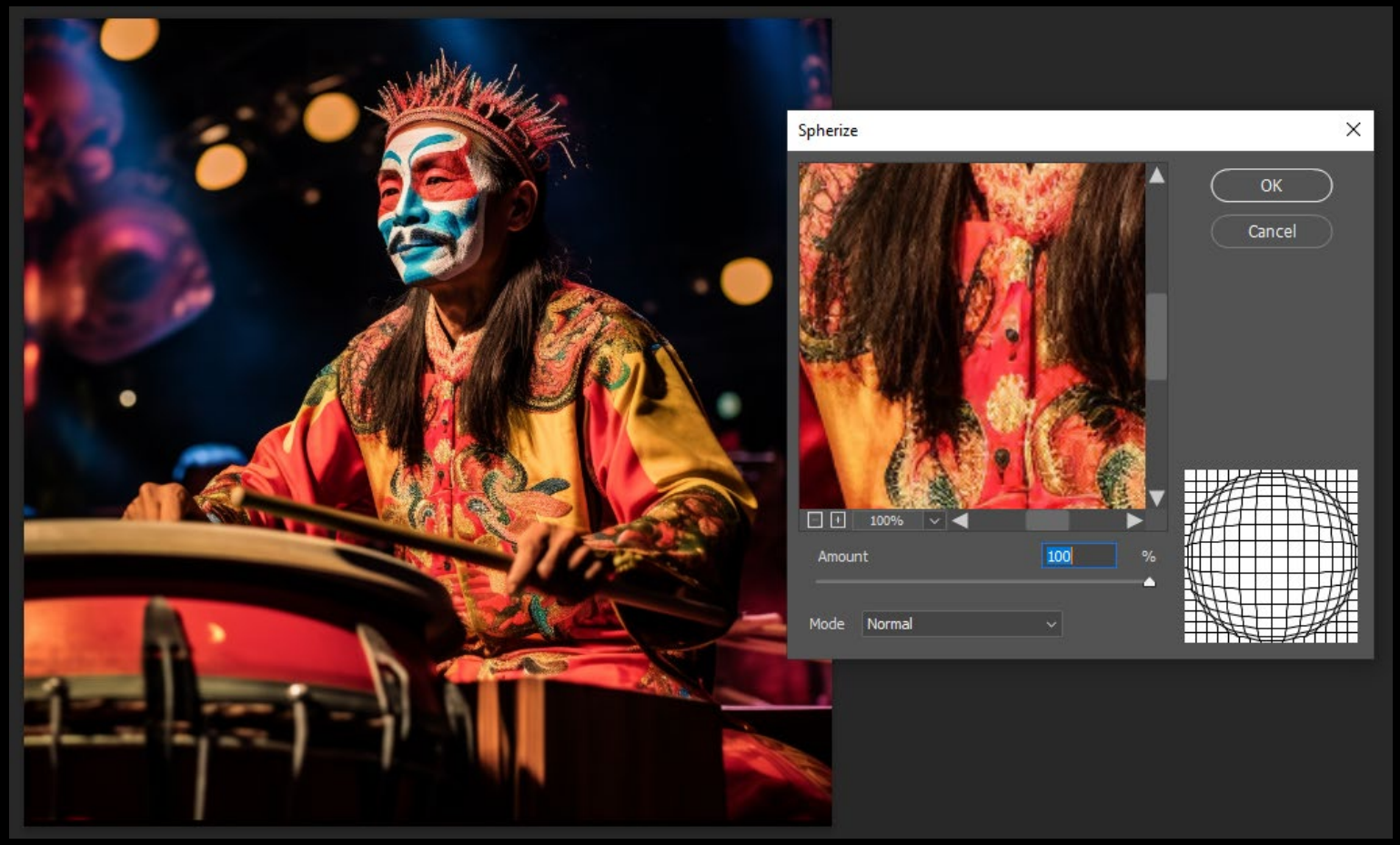
Select 'Spherize' under the 'Distort' menu under 'Filters'.



Using the Spherize Filter in Photoshop to Emulate a Fisheye Lens

As we are looking for a fisheye illusion, make sure **the slider is at 100%.** This will result on a perfect circle of distortion, with non-distorted corners.

Select **'Spherize'** under the 'Distort' menu under 'Filters'.



Using the Spherize Filter in Photoshop to Emulate a Fisheye Lens

Under **'Select'**, choose **'Inverse'.** Make sure background color is set to black, then hit delete. You may choose to feather the image's outer edges for a more polished look; regardless, the final result will look like a fisheye lens.

What is an anamorphic lens and what are its qualities?

An **anamorphic lens** is designed with additional glass elements that squeeze the image horizontally, allowing filmmakers to capture a wider field of view than the film or digital sensor would ordinarily allow.

In production there are typically two classes of lenses — anamorphic and spherical. **Spherical lenses** are the most common and project images onto a camera's film or digital sensor without affecting their aspect ratio.

https://www.studiobinder.com/blog/what-is-an-anamorphic-lens-definition/

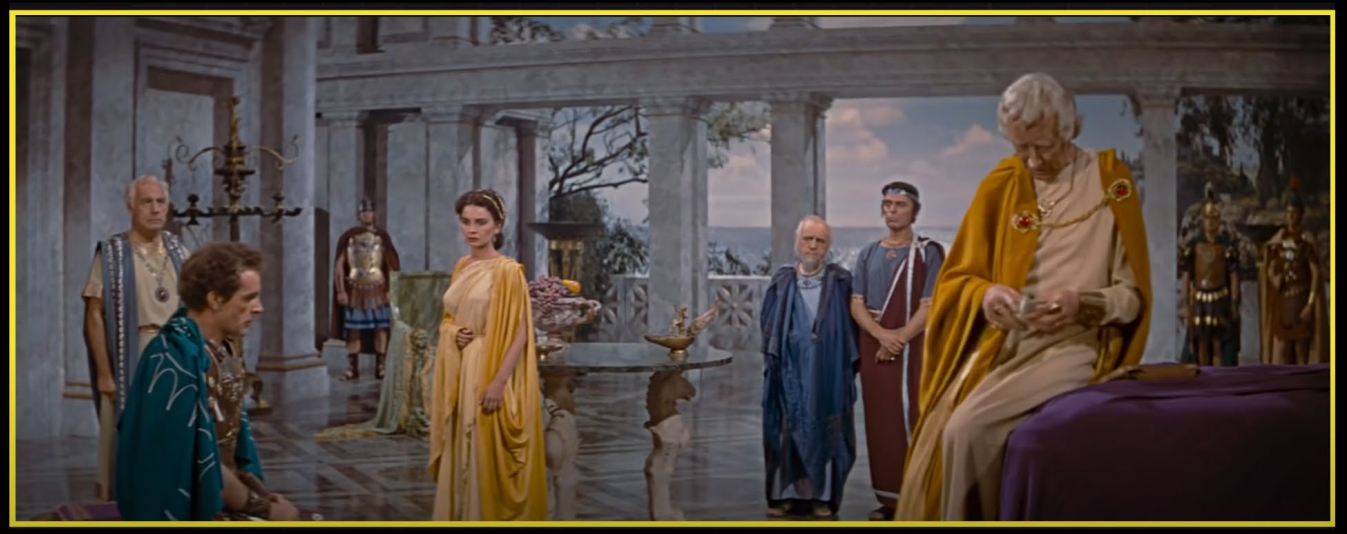
ANAMORPHIC LENS, SHINJUKU 2080:

AN ANAMORPHIC LENS GIVES A 'CINEMATIC LOOK', PARTICULARLY IN REGARDS TO DEPTH OF FIELD, STRETCHED BOKEH, ELLIPTICAL LENS FLARES, AND 'BREATHING' TRANSITIONS IN RACK FOCUSING (NOT SOMETHING YOU CAN EMULATE IN GENERATIVE STILL IMAGERY).

INJURED RIOTER IN FUTURISTIC AUSTERE WHITE FLOATING SHINJUKU HYPERBARIC CHAMBER WITH MULTIPLE TRANSFUSIONS, TOP DOWN VIEW, BLUE KEY LIGHT, RED FILL LIGHT, MOODY, **ANAMORPHIC,** CINEMATIC LIGHTING --V 4 --AR 3:2 **[MIDJOURNEY 4]**

ANAMORPHIC LENS, THE ROBE:

ANAMORPHIC LENSES ALLOWED FILMMAKERS TO BREAK THROUGH THE 4:3 BARRIER BY COMPRESSING IMAGES INTO A SQUARE (AS 35MM FILM IS A SQUARE FORMAT), THEN RECONFIGURING THEM WITH ANOTHER ANAMORPHIC LENS IN THE PROJECTOR (THIS HAPPENS NOW IN POST PRODUCTION).



OVAL-SHAPED BOKEH, VEGAS SERIES:

A COMMON TRAIT OF ANAMORPHIC LENSES IS **STRETCHED-OUT BOKEH THAT APPEARS AS OVALS.**

BOX CAMERA DAGUERREOTYPE, CLOSE-UP PORTRAIT OF AN ASIAN MALE IN PROFILE ON THE LAS VEGAS STRIP WITH A RED SCARF AND BLUE SHIRT, NEUTRAL LIGHT, NEUTRAL COLORS, **ANAMORPHIC LENS, BOKEH** --AR 2:1 --V 5.2 **[MIDJOURNEY 52]**

BARREL DISTORTION, VEGAS SERIES:

THERE ARE DISTINCT, CINEMATIC QUALITIES YOU GET WHEN SHOOTING WITH ANAMORPHIC LENSES. ONE OF THESE IS **BARREL DISTORTION, WHERE THERE IS DISTORTION AT THE WIDEST EDGES OF THE SHOT.**

BOX CAMERA DAGUERROTYPE, FULL FIGURE SHOT OF AN ASIAN MALE LOOKING IN LAS VEGAS BATHROOM MIRROR, TILED BATHROOM, **BARREL DISTORTION**, **ANAMORPHIC LENS** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

FOCUS FALLOFF AND ROLLOFF, VEGAS SERIES:

LIKE A PETZVAL LENS, AN ANAMORPHIC LENS WILL CAUSE THE IMAGE TO LOSE FOCUS AS IT MOVES AWAY FROM THE CENTER **(FALLOFF).** ADDITIONALLY, THE CHARACTER SILHOUETTES ARE SOFTENED AND MELD MORE SEAMLESSLY INTO THE BACKGROUND **(ROLLOFF).**

BOX CAMERA DAGUERREOTYPE, FULL FIGURE SHOT OF AN ASIAN MALE AND GIRLFRIEND WINNING AT A VEGAS CRAPS TABLE**, FOCUS FALLOFF, FOCUS ROLLOFF, ANAMORPHIC LENS** --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

ELLIPTICAL LENS FLARES, SHINJUKU 2080:

RIOTER JUMPING THROUGH STORE WINDOW IN FUTURE SHINJUKU, REFLECTIONS OF COLORFUL NEON LIGHTS IN SHARDS OF GLASS, RAY TRACING, EXTREME CLOSE-UP, WORM'S EYE VIEW, MOODY, **ANAMORPHIC, ELLIPTICAL LENS FLARE**, VOLUMETRIC LIGHTING, HASSELBLAD, CARL ZEISS LENS, CINEMATIC LIGHTING, **35MM-FILM-GRAIN** --V 4 --AR 3:2 **[MIDJOURNEY 4]**

J.J. Abrams & Zack Snyder overuse this effect, which can only be achieved using an anamorphic lens.

What is a lens flare?

Lens flare is caused by a bright light source shining directly into the lens. Also called lens glare, or light flare, a lens flare is a non-image forming light that is scattered in the lens system after it hits the front element of a lens. It reflects off the glass surfaces in the lens. Lenses with a large number of elements like zoom lenses are often most susceptible to lens flare. Flare is usually thought to be damaging to an image but there are times when it can be used to enhance the quality of the picture. **Common lens flare types: ghosting, veiling, starburst, and anamorphic flares.**

https://www.studiobinder.com/blog/what-is-lens-flare/

https://www.inspiks.com/downloads/high-resolution-lens-flares/

ELLIPTICAL LENS FLARE, THE LAKHIYANA:

¾ BIRD'S EYE VIEW OF A FUTURISTIC ELONGATED TELEPORTATION GATE MATERIALIZING SPACECRAFT INTO A SERIES OF MASSIVE FLOATING SMOKE-FILLED HANGARS, AWESOME SCALE, STYLE OF BLADE RUNNER 2001 AND ZAHA HADID AND THE PARTHENON, GOD RAYS, SUBSURFACE SCATTERING, **ELLIPTICAL LENS FLARE**, ELEGANT, MONOCHROMATIC WHITE PALETTE, HASSELBLAD, CHIAROSCURO, 85-MM-LENS --AR 2:1 --V 4 **[MIDJOURNEY 4]**

ELLIPTICAL LENS FLARE, SEED + BLEND TUTORIAL:

SHATTERED GLASS, A TATTOOED AFRICAN-AMERICAN ROLLER DERBY DIVA SMASHING HEADFIRST THROUGH FIERY GLASS, EXPLOSIVE GLASS SHARDS EVERYWHERE, EXTREME PERSPECTIVE, CINEMATIC COMPOSITION, SUBSURFACE SCATTERING, DAPPLED NEON LIGHTS, **ELLIPTICAL LENS FLARE**, MOODY LIGHTING --AR 2:1 --IW .01 **--SEED 2235705274 --V 5.1** **[MIDJOURNEY5.1]**

What is chromatic aberration?

Chromatic aberration, often called **"color fringing,"** is a common optical color distortion that results in stray color along the outline of objects within a photograph. This aberration effect occurs due to a lens' inability to focus the various wavelengths of white light onto the same focal plane. Because different wavelengths of light travel at different speeds, different colors can stray from a singular focal plane resulting in this chromatic aberration effect. Different colors appear depending on the type of aberration that occurs.

https://www.studiobinder.com/blog/what-is-chromatic-aberration-effect/

https://www.adobe.com/creativecloud/photography/discover/chromatic-aberration.html

CHROMATIC ABERRATION, THE FLOWER:

MAJESTIC WATERFALL, STYLE OF SARGENT, WIDE ANGLE, ELLIPTICAL LENS FLARE, IMPRESSIONISTIC, WPA POSTER, HOKUSAI, GRAPHIC, GOLDEN HOUR, **CHROMATIC ABERRATION**, TETRADIC SCHEME **[DALL-E 2]]**

CHROMATIC ABERRATION, THE FLOWER:

PHOTO-REAL WATERFALL, EXTREME REALISM, **LATERAL CHROMATIC ABERRATION::3** CINEMATIC COLOR, **COLOR FRINGING**, CINEMATIC ANGLE, GOLDEN HOUR, TETRADIC COLOR SCHEME, CAUSTICS, SUBSURFACE SCATTERING, REFLECTIONS, RAY TRACING --AR 2:1 --V 5.2 **[MIDJOURNEY 5.2]**

CHROMATIC ABERRATION, THE FLOWER:

MAJESTIC WATERFALL, STYLE OF SARGENT, WIDE ANGLE, IMPRESSIONISTIC, WPA POSTER, HOKUSAI, GRAPHIC, GOLDEN HOUR, **CHROMATIC ABERRATION**, TETRADIC SCHEME **[MIDJOURNEY]**

What is a Panini projection?

The **Pannini projection** is a mathematical rule for constructing perspective images with very wide fields of view. It is named in honor of Gian Paolo Pannini, an 18th Century Roman painter and professor of perspective, who may very well have used it to draw spectacular views such as the one to the right; for it can be realized with drawing instruments almost as easily as the standard rectilinear perspective projection. However it is not now taught in art schools, and was apparently never described in print before its recent rediscovery by a team of open source software developers.

You can use Panini projection to 'correct' panoramas with curvature.

http://tksharpless.net/vedutismo/Pannini/

FISHEYE DISTORTION VS. PANNINI PROJECTION:

STYLE OF JULIUS NEUBRONNER, BLACK AND WHITE, PIGEON PHOTOGRAPHY, VINTAGE, EXTREME REALISM, AERIAL VIEW OF PARIS CITYSCAPE 1920, PANORAMA, **FISHEYE LENS** --AR 32:9 --V 5.1 **[MIDJOURNEY 5.1]**

STYLE OF JULIUS NEUBRONNER, BLACK AND WHITE, PIGEON PHOTOGRAPHY, VINTAGE, EXTREME REALISM, AERIAL VIEW OF PARIS CITYSCAPE 1920, PANORAMA, **PANNINI PROJECTION** --AR 32:9 --V 5.1 **[MIDJOURNEY 5.1]**

ACKNOWLEDGMENTS:

MANY OF MY LIVE-ACTION PHOTOS TAKEN IN THIS SERIES CAN BE VIEWED AT **JAZNO.COM**. THANK YOU, **STUDIO BINDER SERIES**, WHICH CAN BE FOUND AT HTTPS://WWW.STUDIOBINDER.COM/BLOG (THE MOST COMPREHENSIVE REPOSITORY OF FILM AND PHOTOGRAPHY TUTORIALS ON THE WEB). AND OF COURSE, A NOD TO **WIKIPEDIA**, FOR PROVIDING A FAIR AMOUNT OF CONTENT/CONTEXT (ALL IMAGES AND TEXT HAVE BEEN ATTRIBUTED ON RESPECTIVE SLIDES, UNLESS CREATIVE COMMONS).

The next lecture in this series is **Camera Basics for Generative Art IV**, where we will cover color, film, and printing processes.