



HURBBGR



A Generated Family of Man

Created by the Flickr Foundation

Prologue by Fattori McKenna

Afterword by Ryan Merkley



The Blue Marble, NASA, 1972



“Oh, my god, we have a problem.” Timnit Gebru

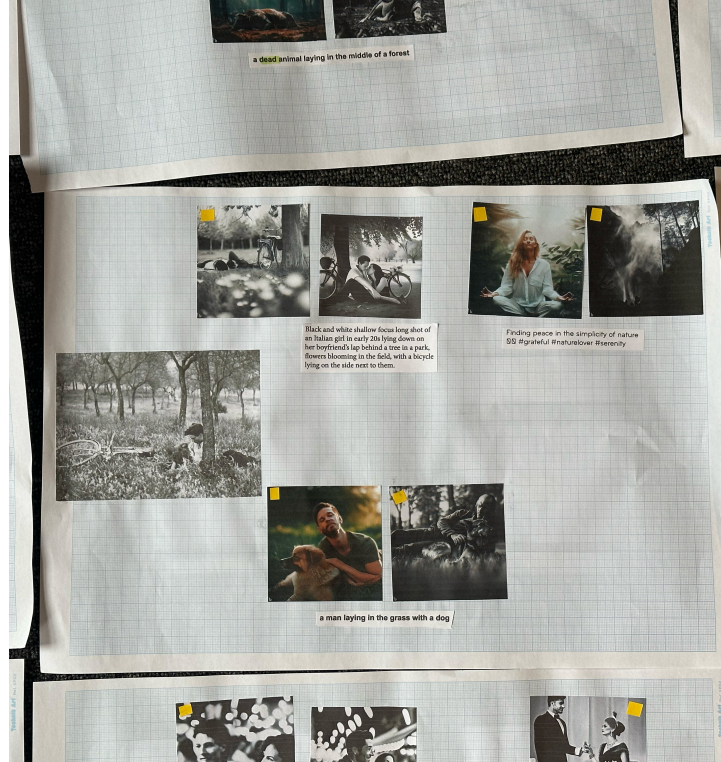
A Generated Family of Man

Created by the Flickr Foundation

June - August 2023



flickr.org



Behind the scenes of A Generated Family of Man at the Flickr Foundation HQ.

Copyright © 2023 The Flickr Foundation
Some rights reserved. Shared under a Creative Commons
Attribution 4.0 International license (CC BY 4.0)

1st edition, 2023

Image Captions, Image Generation, Book Layout: Juwon Jung and Maya Osaka
Art Direction & Quotes: George Oates

Printed in London



Introduction by George Oates

*Executive Director,
Flickr Foundation
August 2023*



This third edition of our Flickr of Humanity project is a time capsule designed to explore contemporary image generation technology. Many people these days say, “Yes, I’ve had a play with AI,” but it’s so pervasive and deeply implemented that we now struggle to see the boundaries between the authentic and the synthetic.

This book is more than playing. It was a laborious, systematic regeneration of the original pictures Edward Steichen and his team selected for *The Family of Man* in 1955.

68 years later, times have changed, and we made this work to bring that change clearly into view. We tested the settings of today’s synthetic photography generation in Microsoft Bing’s Image Creator. We wrote human prompts and catalysed auto-generated Insta-squeals, all for each of the original photographs. Where photographs have been proof of something observed, these pictures you will see are instantiated from words. Steichen’s universalist curation of our shared humanity suddenly loses its warmth. I wonder what will happen if we rerun the experiment in future. I wonder if these images will improve their humanity over time. Perhaps the smears and guesses will disappear or ultimately convince us later.

Let me end with a warm thank you and congratulations to Juwon Jung and Maya Osaka, who interned at the Flickr Foundation over the summer and are responsible for much of the effort to produce this book; Tori McKenna for writing the prologue, and; Ryan Merkley for giving us permission to republish his essay as the afterword.

PS Browse the full collection at flickr.com/photos/flickrfoundation/albums
PPS For further information, please visit flickr.org/programs/new-curators



Prologue by Fattori McKenna

Oxford Internet Institute

In 1955, the year of *The Family of Man*, the world witnessed a series of technological firsts. In Switzerland, Georges de Mestral patented the hook-and-loop technology that would become Velcro. Across the pond, the Massachusetts Institute of Technology developed the Whirlwind machine, a new digital computer boasting magnetic core RAM and real-time graphics. Meanwhile, Tappan introduced the first microwave oven. These innovations were set amidst a backdrop of doe-eyed postwar optimism — championed by a paternalist United States that espoused cooperation, liberalism and consumer choice. Beneath the utopian facade were mounting undercurrents of escalating tensions on the home-front and the burgeoning Cold War.

Today's technological firsts emerge against a vastly different cultural and political canvas. The United States' once-unquestioned leadership of the 'free world' is now contested. Authoritarian movements have surpassed liberal democracies on a global scale, and the spectre of armed conflict once again casts its shadow over Europe. We have become adept — and somewhat resigned — at perceiving sinister applications of tomorrow in the technological marvels of today. In the case of synthetic image generation, this is the leap from the democratic flourishing of creative potential to the mass deployment of deepfakes. With its breakneck speed and stark absence of adequate comprehension, foresight and regulation, Artificial Intelligence and Machine Learning teeters on the precipice of what digital ethics experts are deeming the new "Wild West" [1].

As we reconstruct *The Family of Man* from the ground up, using today's technology of computed image generation we must ask: What implications does this hold for image production, and for photography? And what are we implicitly communicating about what is depicted in the images themselves?

The Flickr Foundation's *New Curators* program seeks to probe many of these considerations. The program has a twofold aim: first, to diversify voices, priorities, and perspectives in curation, and second, to examine and reflect upon the intricacies of collecting and curating in the digital age. As synthetic image generation image creation becomes prevalent, increasingly scholars, researchers and artists are underlining how human curation will be vital for interfacing effectively and conscientiously with these vast creativity farms [2].

The need for human intervention became evident during the production of *A Generated Family of Man*. Rarely were images successfully produced by the AI-generator on the first attempt. Instead it became necessary for the curators to engage in a 'dialogue with', rather than simply 'talking to', the algorithm. This process resulted in a necessary injection of subjectivity and expertise to sufficiently capture sentiment, detail and context that the AI couldn't generate alone. The culmination of this exchange can be found in the generated captions of this publication. These limitations derive, in part, from the training set that the AI is built upon, that is invisible and inaccessible to its users. AI and Large Language Models can only generate from pre-existing data, producing images based on the 'most likely' connections between data points, meaning they will often struggle with unfamiliar or rare contexts. As has been extensively reported, today's AI image generators overwhelmingly reproduce the biases present in their datasets, that themselves reflect the biases embedded in society [Source]. The images of *A Generated Family of Man* underscore the algorithm's lack of fluency, nuance and sensitivity to geographical and cultural difference that the original *Family of Man* strove to represent.

What will likely strike today's reader the most in *A Generated Family of Man* is the glaring uncanniness of the images — evidenced in the mangled distortion of hands and faces, or the eerie intrusion of an anachronistic object. Considered individually these errors ricochet from the grotesque to the comical, but there's an overarching sensation that something is inherently 'off'. This essence of the uncanny might stem from the lack of a 'punctum', to adapt French philosopher, Roland Barthes', term. Initially deployed in 1980 in an attempt to theoretically describe the elusive, intimate element of a photograph: "The punctum of a photograph is that accident which pricks me (but also bruises me, is poignant to me)." [3] It is the singular moment in a photograph - a minute detail, a subject's position, the way the light falls - that resonates with the viewer. A common thread among the AI-generated images in this collection, we might ourselves theorise, is AI's present inability to produce the 'punctum', to 'prick' the viewer and draw them into the frame.



Communication scholar, Fred Turner, writes that in 1955 *The Family of Man* represented a “fulcrum moment in the development of an increasingly ubiquitous mode of media power”. [4] The proliferation of commercial photography, put the power of depiction into the hands of individuals, and the mass-media event of the ‘global exhibition’ diffused the ability to perceive and be perceived. We can trace a line in media power from *The Family of Man* in its attempt to represent snapshots of the globe and that moment in time, to the patchwork, paper multiverse of the *Whole Earth Catalogue* a decade later. This catalogue, a pioneering but often ignorant and incomplete experiment in global communications, would subsequently lay the groundwork for Silicon Valley’s creation of the World Wide Web.

What we have learnt from creating *A Generated Family of Man* is that we are at a crossroads, with the potential for both best-case and worst-case scenarios unfolding before us. In the most optimistic scenario, we might utilise image generation to fill in the gaps of the past. Synthetic generation has the potential to restore historical images that might have been damaged, burnt, or partially missing, offering us the chance to relive moments of history with credible visual data. On the contrary, we can foresee a much graver picture, tantamount to rewriting history in the image of the machine. The access and abundance of image generation could lead to individuals crafting their own skewed versions of events, perpetuating falsehoods. Such inaccuracies, once cemented, can further distort the training set. What’s more, we must consider the long-term implications of a deluge of digital waste through mass production of these images.

Today we stand at another “fulcrum moment” of media power, propelled by image generators, the full breadth of its implications remain unknowable. Synthetic image generation is a landmark in the democratisation of image production and global dissemination. Yet, the considerations derived from this experiment urge us to consider not just ‘what’ or ‘who’ is depicted by the lens, but to reflect on the intricacies and implicit values that are embodied within the lens itself. photograph - a minute detail, a subject’s position, the way the light falls - that resonates with the viewer. A common thread among the AI-generated images in this collection, we might ourselves theorise, is AI’s present inability to produce the ‘punctum’, to ‘prick’ the viewer and draw them into the frame.

Footnotes

[1] Jo, Eun Seo, and Timnit Gebru. “Lessons from Archives: Strategies for Collecting Sociocultural Data in Machine Learning.”

Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency, January 27, 2020. <https://doi.org/10.1145/3351095.3372829>.

[2] Herman, Laura M. “Remixing, Seeing, and Curating: Algorithms’ Influence on Human Creativity.” *Creativity and Cognition*, June 22, 2021. <https://doi.org/10.1145/3450741.3467464>.

[3] Barthes, Roland. *Camera Lucida: Reflections on Photography*. Translated by Richard Howard. 1st ed. Vintage, 1993.

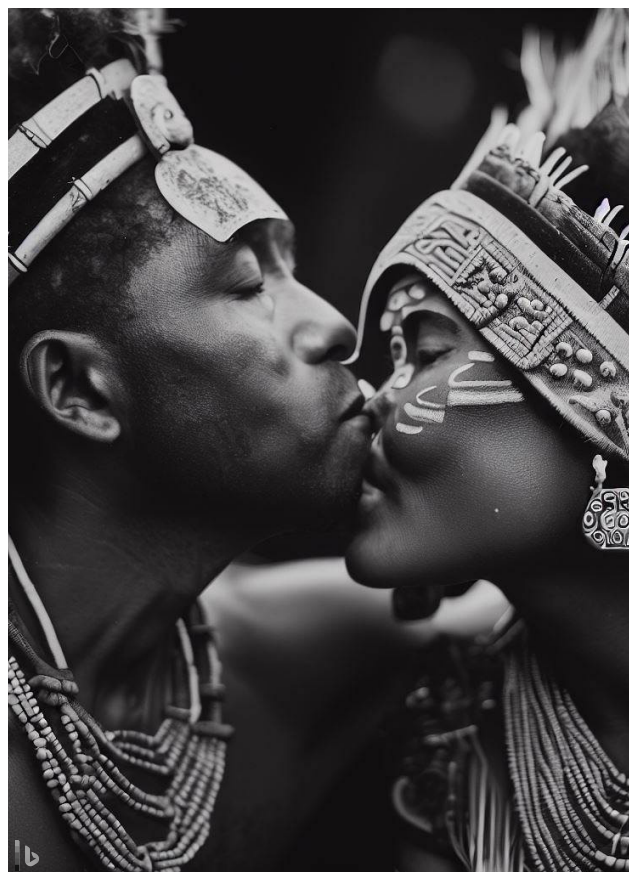
[4] Turner, Fred. “The Family of Man and the Politics of Attention in Cold War America.” *Public culture* 24, no. 1 (2012): 55–84.



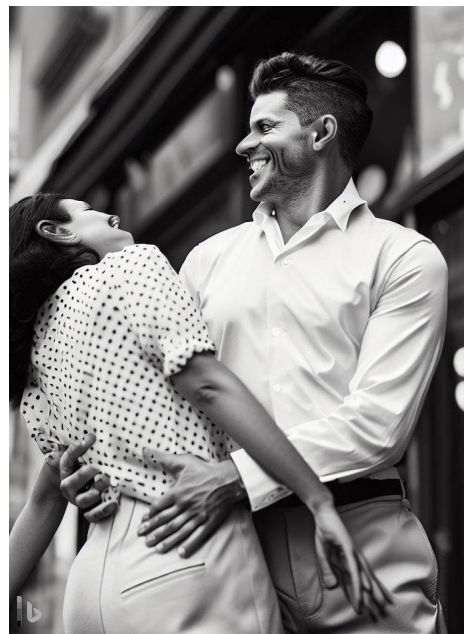
We know where you are. We know where you've been. We can more or less know what you're thinking about.

Eric Schmidt















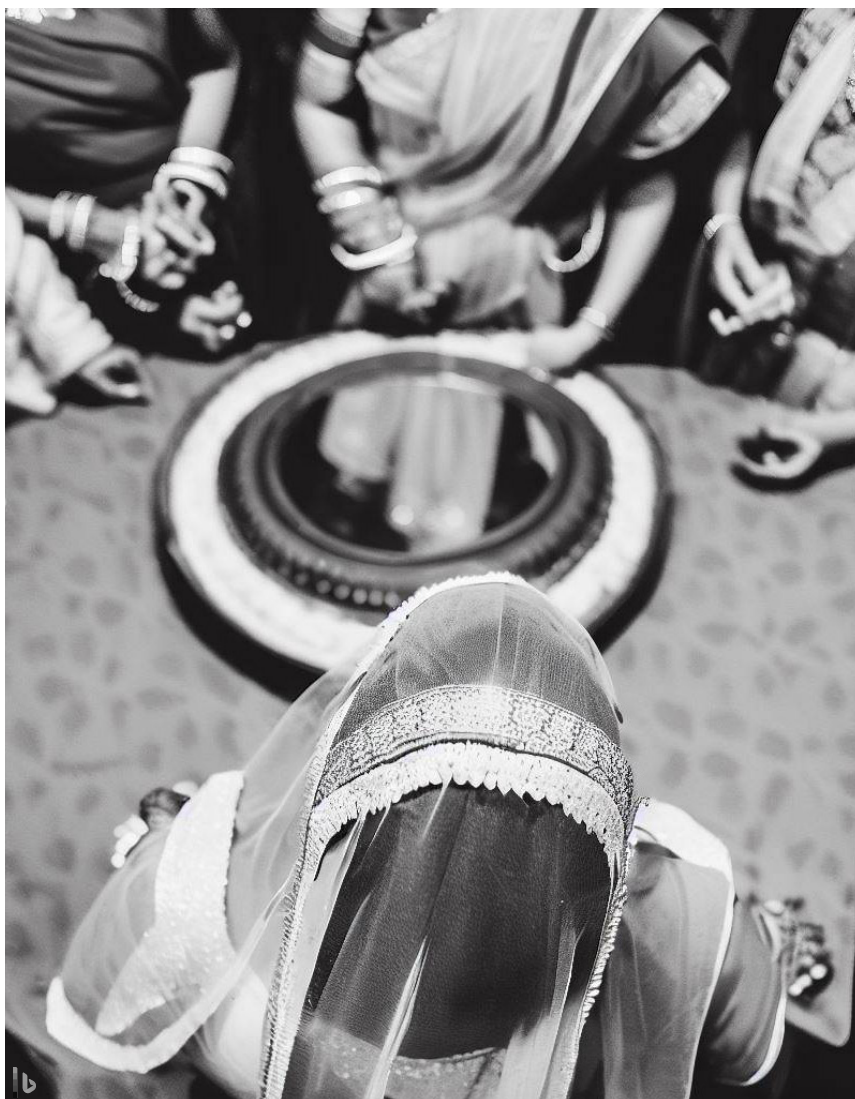


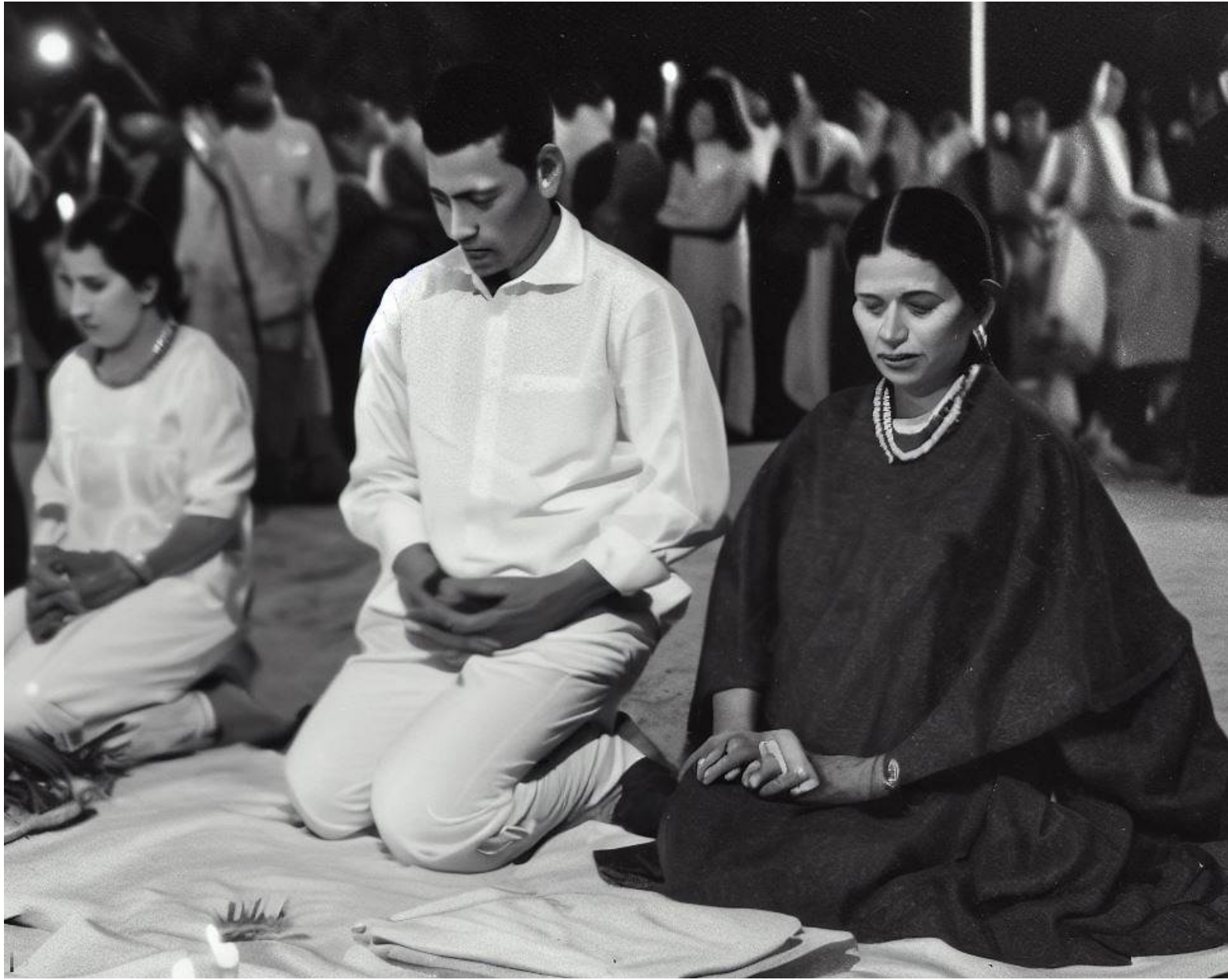
Black and white grainy 1940s medium shot of Shinto Japanese wedding ceremony, where bride is wearing a headdress drinking from white ceramic glass and groom is standing to her right, looking forward.

Nobody can teach me who I am. Chinua Achebe



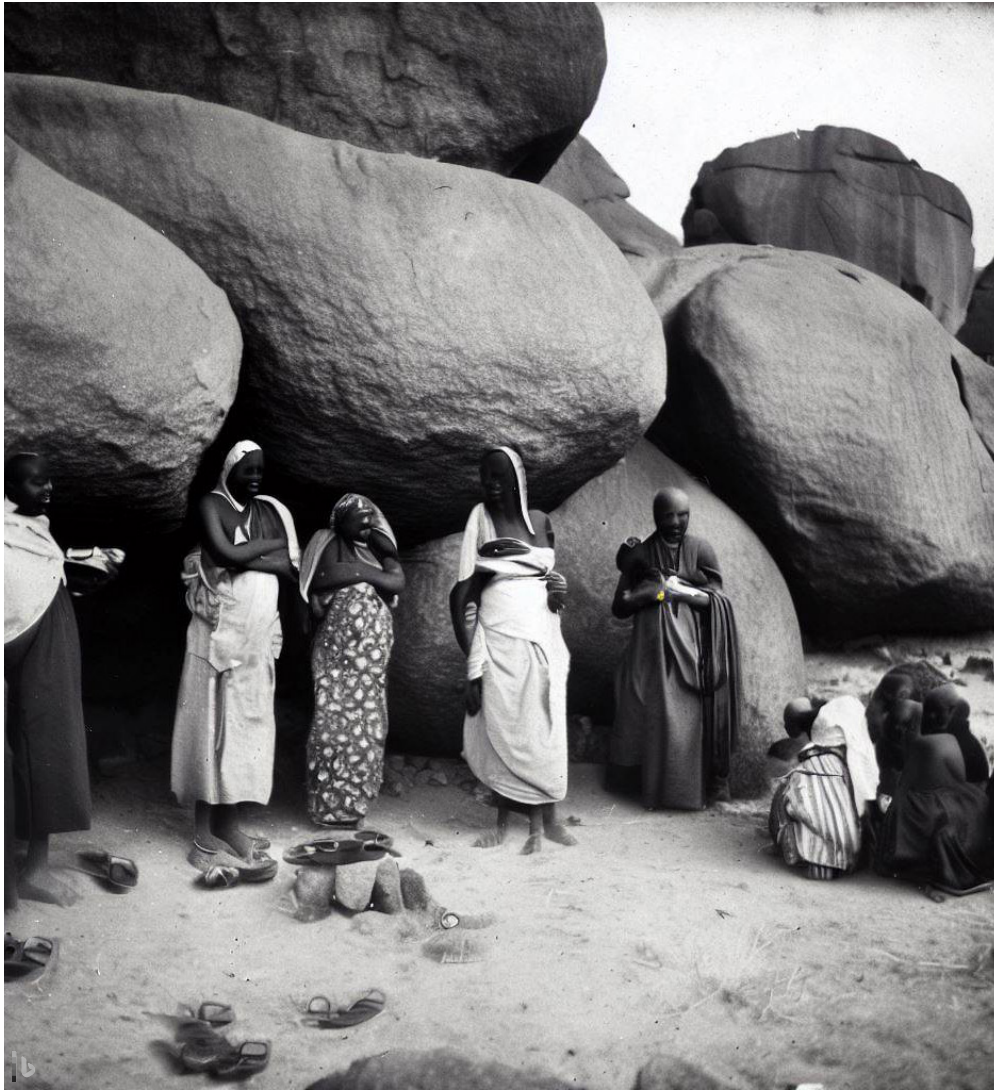
Black and white grainy long shot of a 1940s wedding march in a grass field with pavement, with people walking behind the bride and groom and another man holding a traditional wedding decoration, with people walking next to the first crowd on a mini hill, trees in the background.











Black and white grainy 1940s medium long-exposure side-profile shot of a pregnant Japanese lady who is wearing a wool coat and carrying a purse handbag. She's walking down the street in daylight and there's a silhouette of a Japanese man behind her who is also walking, but he is blurred out due to dynamic movement.





When words fail, their
eyes speak volumes.
#SilentExpressions
#UnspokenLove
#MonochromeMemories 📷



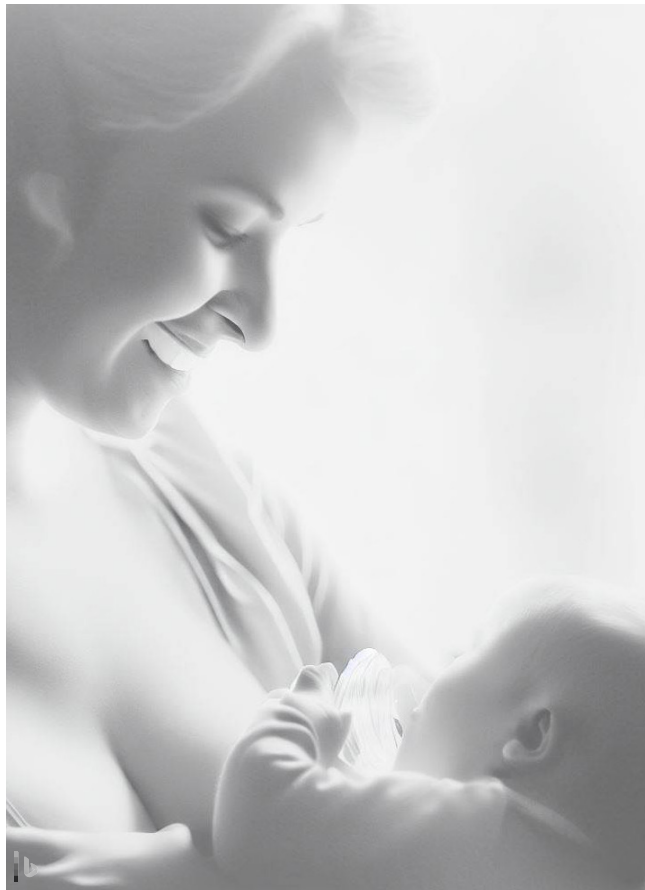


Fantasy abandoned by reason produces impossible monsters.

Francisco Goya







Even when freshly washed and relieved of all obvious confections, children tend to be sticky. Fran Lebowitz

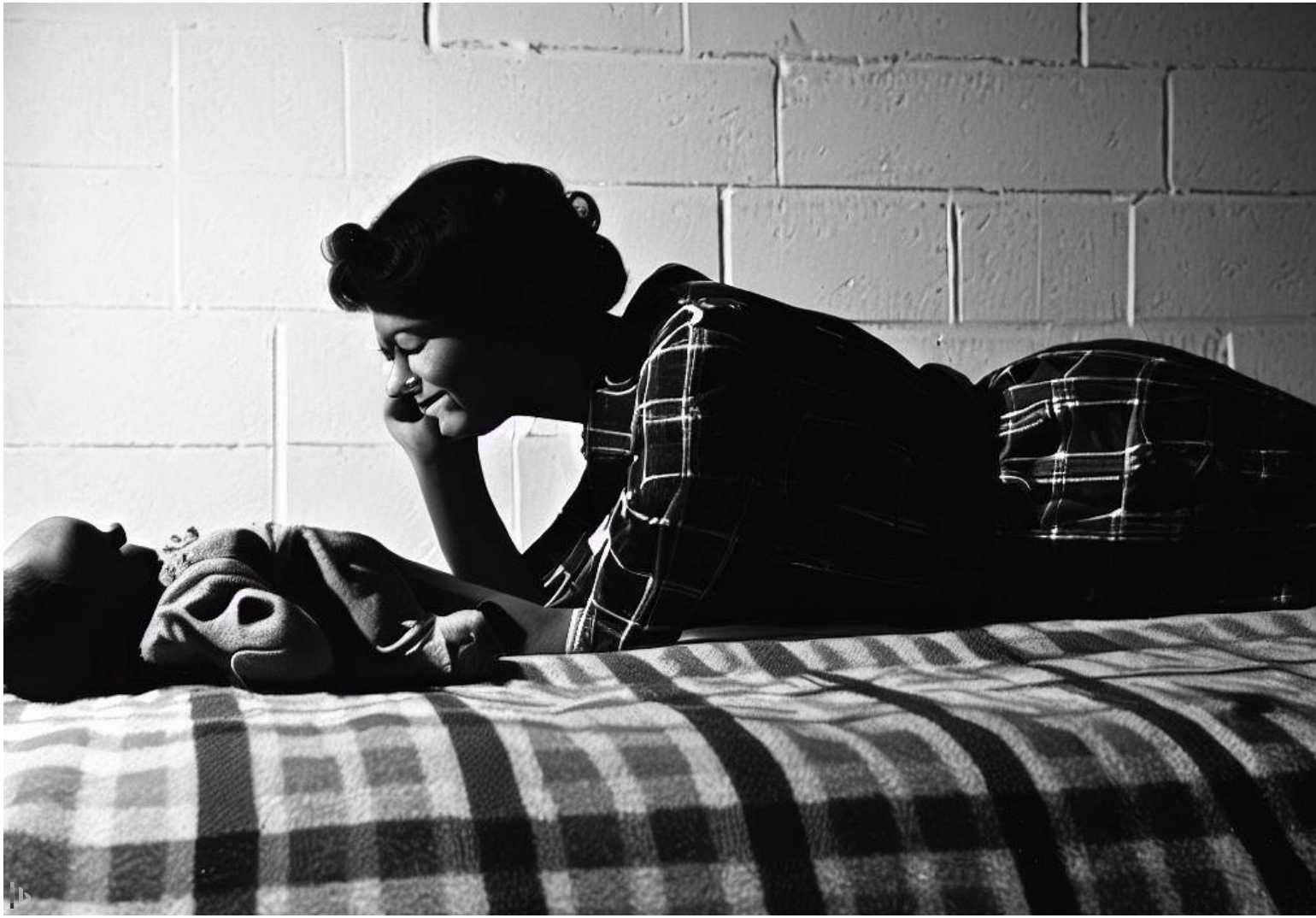




A black and white portrait taken around 1950 in America of a woman wearing a white t-shirt and jeans, lying on a blanket on some grass. She is holding her baby who is lying on her chest. She is looking at the baby with a smile on her face.

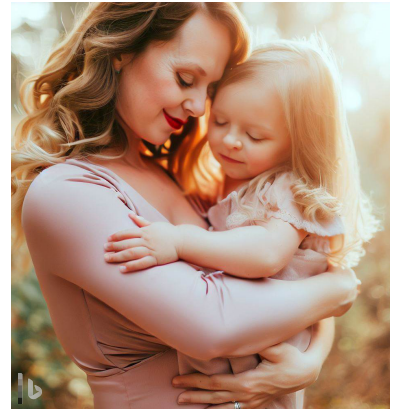


Black and white grainy 1940s medium shot of an Indian mother who is horizontally laying down on a woven bed, with her right hand under her head. She's wearing a loose, stripe buttoned-down shirt dress and is also wearing a thin cotton shawl that is covering half of her head and body. She's staring with a somber, tired expression, and a baby is closing his eyes next to her, curled up on top of crumpled white blankets.



If one feels the need of something grand, something infinite, something that makes one feel aware of God, one need not go far to find it. I think that I see something deeper, more infinite, more eternal than the ocean in the expression of the eyes of a little baby when it wakes in the morning and coos or laughs because it sees the sun shining on its cradle. Vincent Van Gogh





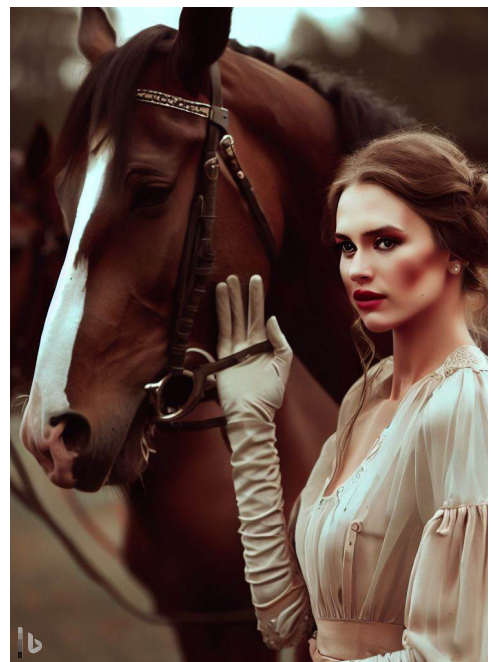
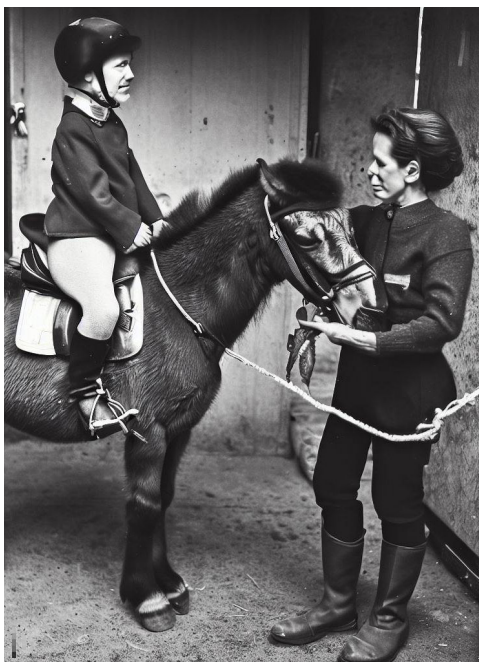




Little girls are cute and small only to adults. To one another they are not cute. They are life-sized.

Margaret Atwood







Black and white grainy 1950s three-quarter shot of a Black American mother pulling her two children close to her as she is wearing a white sweater and flannel wool skirt. Her young son is wearing a striped shirt and the younger daughter is slightly blurred. In the background are white brick walls. Everyone has a somber expression on their face.

Yes, Mother. I can see you are flawed. You have not hidden it. That is your greatest gift to me. Alice Walker

🌹 Embracing the beauty of simplicity 🌿 ✨ Celebrating the strength and tenderness of motherhood. #MonochromeMagic #SimplicityIsElegant #MotherlyLove 🌸

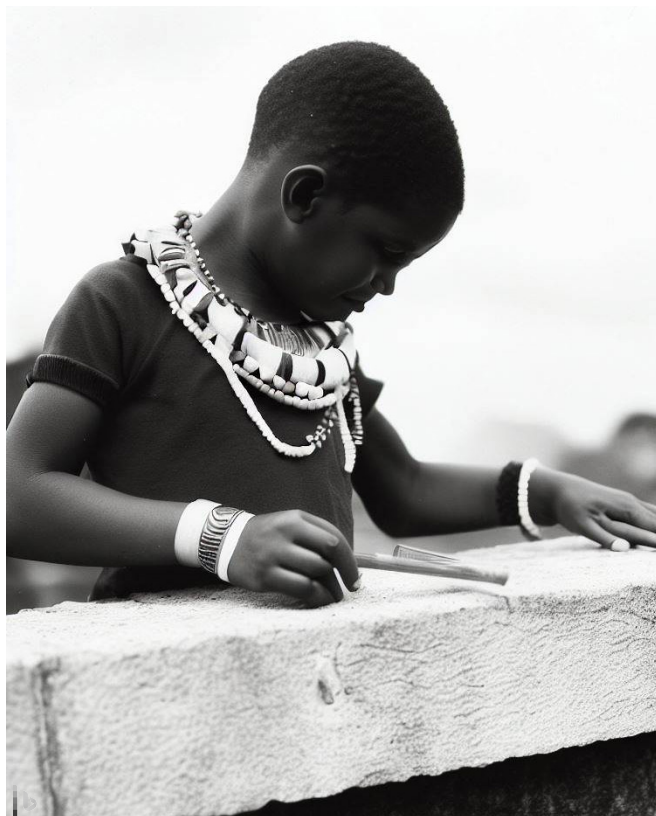




Black and white grainy 1950s wide shot of a young Indian woman crouching down on the floor, smiling and reaching out her arms to a blurred out child walking towards her. An old Indian woman is sitting next to her, with a light shawl wrapped around her head. Another young girl wearing a white dress is sitting on the other side, legs stretched out and crossed. There are large brick walls in the back, with the floor being dark concrete.



Black and white grainy 1940s long shot of a young German blonde baby girl wearing a pom pom beanie standing on cobblestone pavement in Germany. A man and woman both dressed in black formal wear are looking at the girl from a distance. Traditional buildings can be seen in the background.



Black and white grainy 1940s angle shot of a South African young boy holding a white stick and looking down, standing behind a stone ledge. He is wearing traditional necklace and bracelets.



Black and white grainy 1940s long shot of 6 thin, young boys running around in a desert in Bechuanaland. Only one boy is in the air, dynamically jumping and arms flaring out with his shadow projected on the land while the rest of the boys are looking at him while running and playing.

Play is often talked about as if it were a relief from serious learning. But for children play is serious learning. Play is really the work of childhood. Fred Rogers







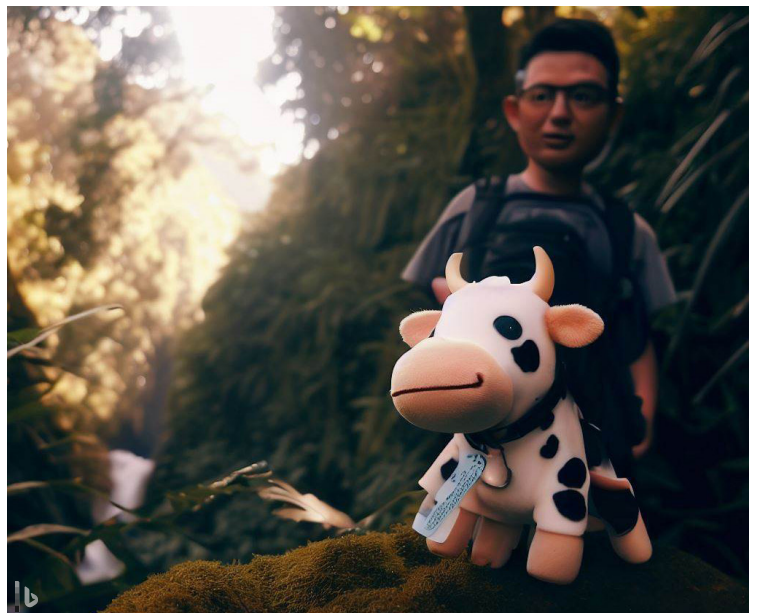
Black and white grainy 1940s medium low-angle perspective shot of an American young boy excitedly shouting while sitting on top of a white wooden fence. He is wearing black jeans and a bright flannel long sleeve shirt over a black lettered t-shirt. His left hand is holding a baseball glove and he is using his right hand to stay on the wooden fence, legs hanging down the fence. In the background is a metal wired fence and trees in the distance.



A black and white grainy portrait taken around 1950 in England of a little boy standing in front of a metal gate looking at a big brown cow who has lowered its head to look down at the boy.



Channeling my inner cowboy vibes on this rustic fence 🤠🐮
 #WildWest #CountryLife #CowboyStyle



Exploring the wonders of nature
 with my moo-tiful companion 🌿🐮
 #AdventuresWithCow #NatureLover
 #BestBuddy



A black and white portrait shot taken around 1950 in America of three children playing cards on a doorstep.



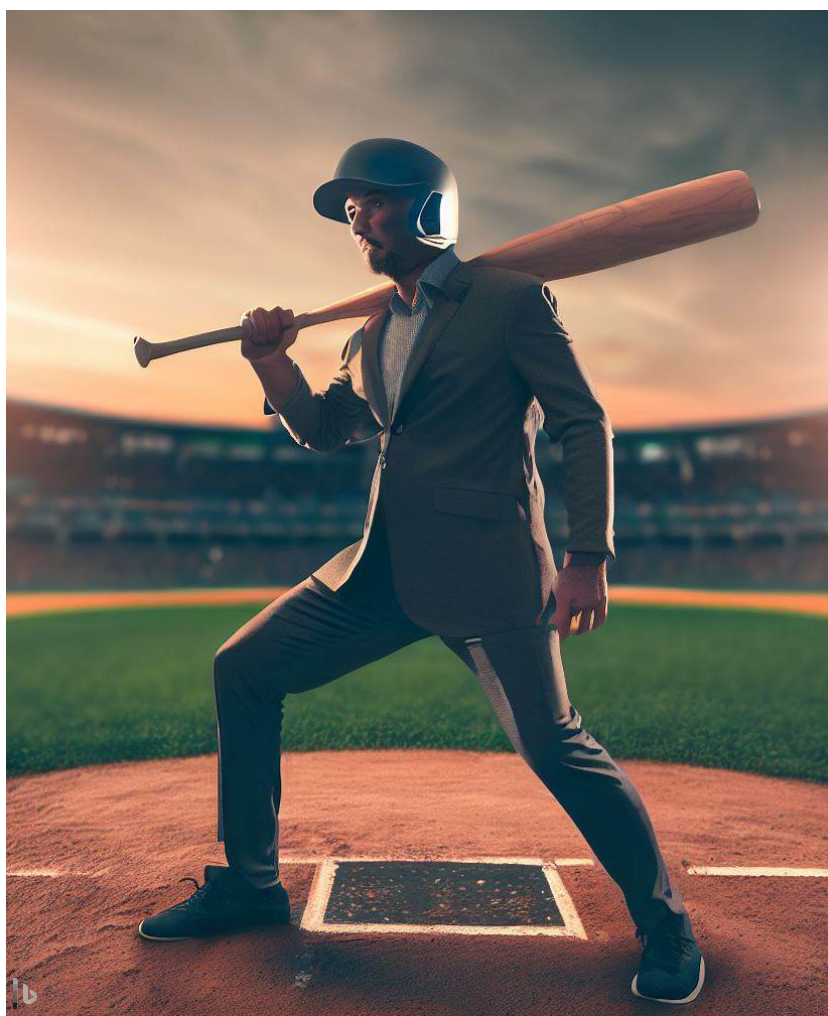
🌟 These little stars shine brighter when they're together, creating magical moments of friendship! #ForeverFriends #ChildhoodBond #UnbreakableConnections







A black and white photo taken around 1950 in France of the side profile of a boy throwing a white toy airplane in a garden with shrubs and trees. The photo is taken from an open window.



In the game of life,
I'm stepping up to
bat with confidence,
ready to hit a grand
slam! 🎯🔥 #gameoflife
#steppinguptotheplate
#grand slamwinner



Black and white grainy 1938 full shot of an Indonesian boy with buzz-cut hair holding a small marble in his hand and stretching his leg and arm to the back, almost about to throw the marble on stone floor. He's wearing a white, oversized t-shirt and one of his knees is on the ground as he is staring at his side. The location of the photo is Java, Indonesia.



A black and white medium shot taken in a street in America around 1950 of two boys confronting each other. One of the boys is grabbing the other boy's jacket at the front, his other hand is clenched in a fist. They are stood in front of a shop window.



Embracing new beginnings. A firm handshake, a lifelong friendship
 🧡 #NewBeginnings #FriendshipGoals #TimelessMoments









U.S.A Dorothea Lange Farm Security Adm.

*Children learn more
from what you are
than what you teach.*

W. E. B. Du Bois



First Attempt

Black and white grainy 1940s medium shot of a young American dark brunette girl wearing a worn out sleeveless cotton shirt with dirt stains. The girl is standing in front of rock walls, staring with a grave look, hands inside her pockets.



Second Attempt

Black and white grainy 1940s medium portrait shot of a young American dark brunette girl with very short hair wearing a worn out sleeveless fabric with dirt stains. The girl is standing in front of rock walls, staring with a grave look.



🌸 In a monochrome world,
she adds a touch of magic
with her vibrant spirit.
#CapturingContrasts
#MonochromeMagic
#YouthfulElegance



A black and white portrait taken around 1950 in Bechuanaland of a Bushman throwing a spear towards a beisa oryx. Behind him a boy is watching him. The camera is positioned behind the Bushman.



These rugged gentlemen are embracing the earth 🌍
#NatureLovers #GroundedMen #DirtIsHome







A grainy black and white portrait taken around 1950 in Italy of a farmer, his wife and little girl. They are sat on the back of a wagon. The farmer is wearing a flat cap. His wife is wearing a head scarf and the little girl is bald. They are all smiling at the camera.

Happiness is not something you can catch and lock up in a vault like wealth. Happiness is nothing but everyday living seen through a veil.

Zora Neale Hurston











Black and white grainy 1940s low angle long shot of the silhouette of a wood chopper dynamically swinging an axe over his shoulder towards a tree trunk at his left while standing on a plank in New Zealand, with bright blurred white background.

Any fool can destroy trees. They cannot run away; and if they could, they would still be destroyed,-chased and hunted down as long as fun or a dollar could be got out of their bark hides, branching horns, or magnificent bole backbones. Few that fell trees plant them; nor would planting avail much towards getting back anything like the noble primeval forests. During a man's life only saplings can be grown, in the place of the old trees-tens of centuries old-that have been destroyed.

John Muir





Black and white grainy 1940s aerial long perspective shot of farmlands spanning out to a valley in rural France. There are tall trees in the foreground.

Kia whakatōmuri te haere whakamua

*‘I walk backwards into the future with my eyes
fixed on my past’*

Māori whakatauki



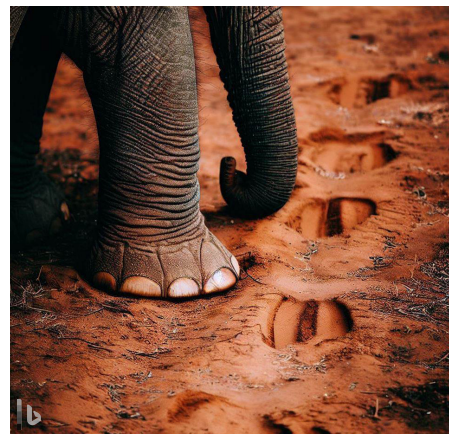
A black and white medium photo taken around 1950 in the Iranian countryside of a sheep herder and his sheep on a hill. The sheep herder is looking at his sheep. In the background is an expanse of grass and a mountain range.

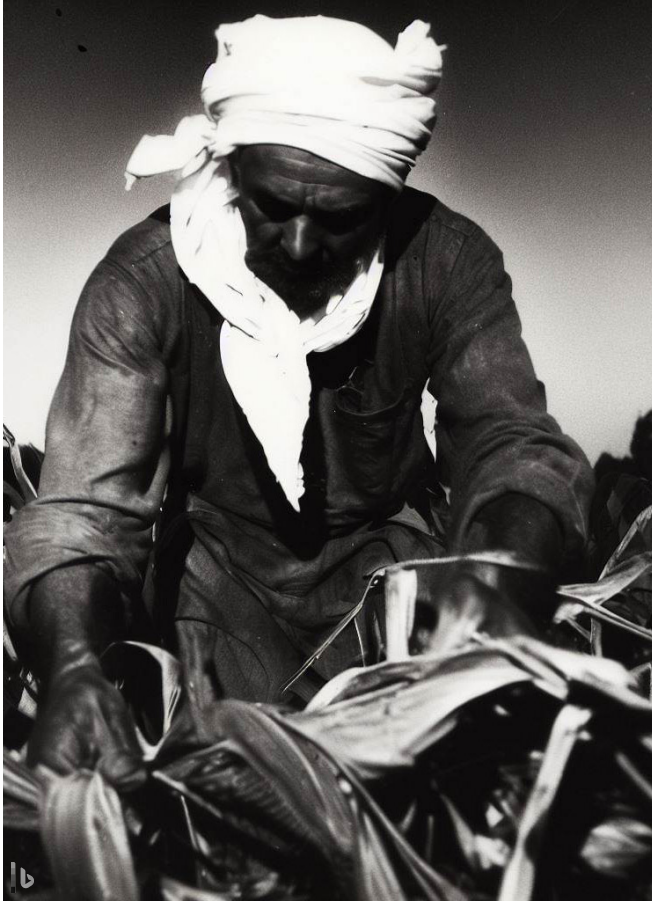




A black and white grainy photo taken around 1950 in America of some Filipino workers crouched over in a field of lettuce cutting lettuce leaves. The camera is at ground level.

Behold the mighty elephants,
creating beautiful footprints
in the soft earth 🐾🌱
#GiantSteps #EarthyVibes
#WildernessWonders



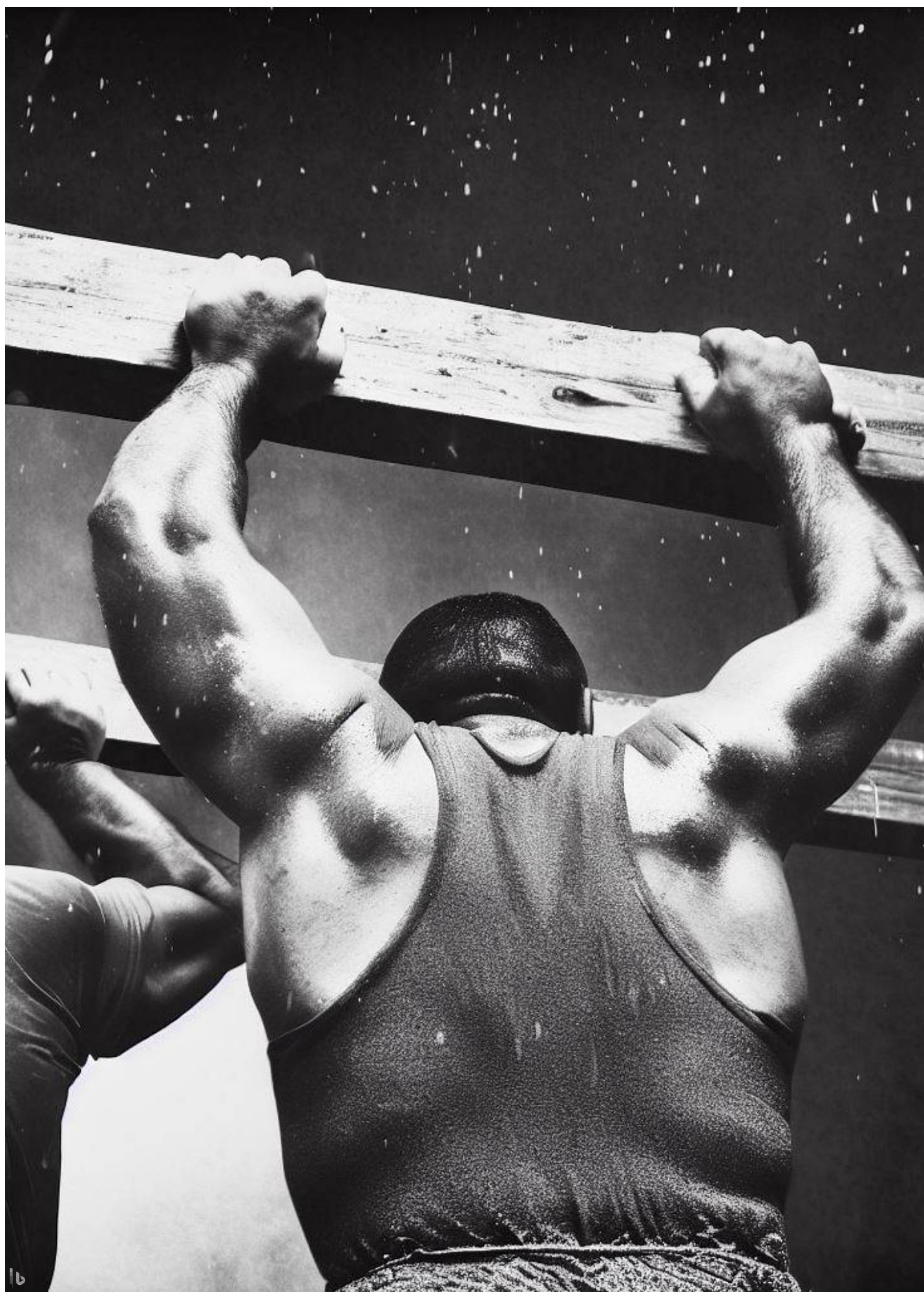


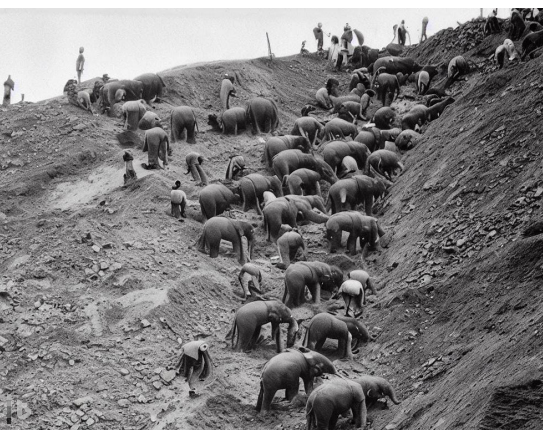
A black and white portrait taken around 1950 in the USSR of a farmer harvesting grain by hand. He is wearing a white bandana on his head.



Finding balance amidst life's haywire moments! 🧘🌾
#HayStackZen #EquilibriumGoals #PeacefulPile







Black and white grainy 1940s wide angle shot of roughly 9 Pakistani workers digging up the ground in a single file in the lower part of a rocky slope. Two elephants are in the middle of the slope with a person on top, and around 10 people are looking down at the top of the slope, each of them spaced out.

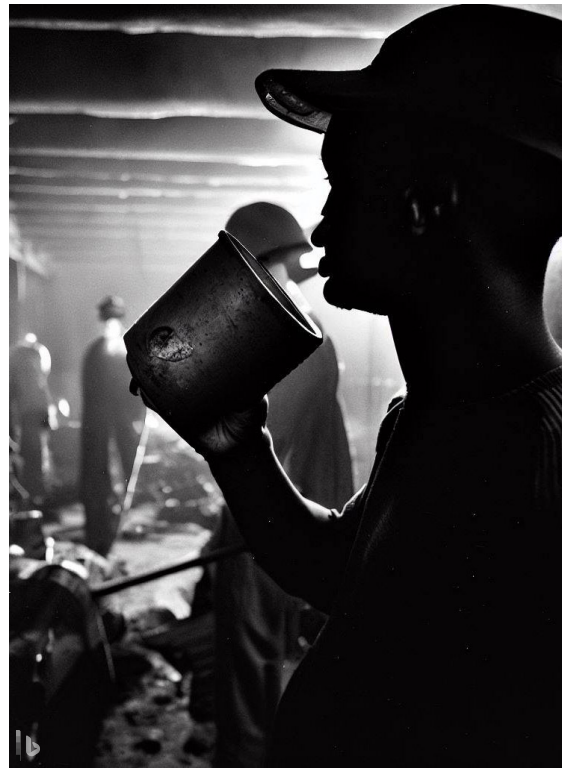
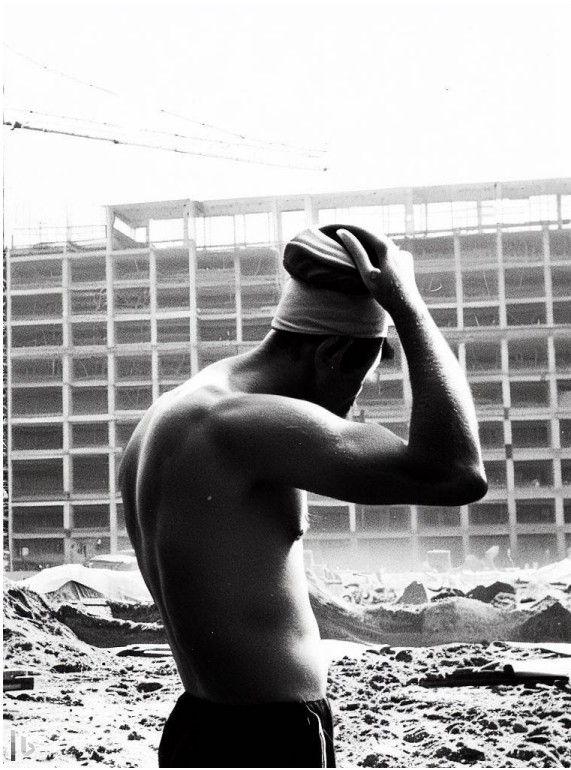
Black and white grainy 1940s long shot of an American construction worker standing on a hanging plank in mid-air, holding onto a very long wire suspended from a crane (that isn't shown in the photo).

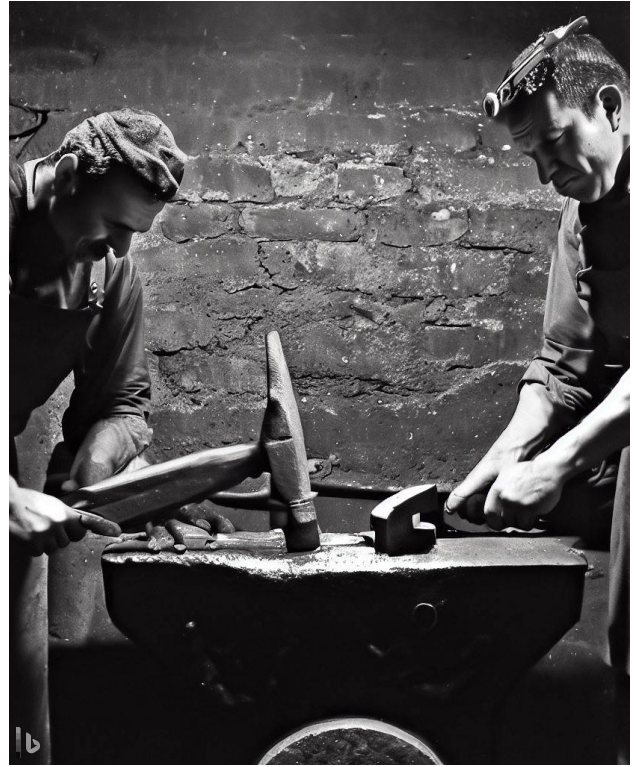




Living our best life, cherishing every moment spent together! 🤝❤️
 #MemoriesMade #HilltopVibes
 #FriendsForever

As the crane spreads its wings, it takes flight into a world where shadows dance and contrasts mesmerize. Witness the poetry of black and white. 🌑🕊️ #ShadowDance
 #MesmerizingContrasts
 #PoetryInMonochrome

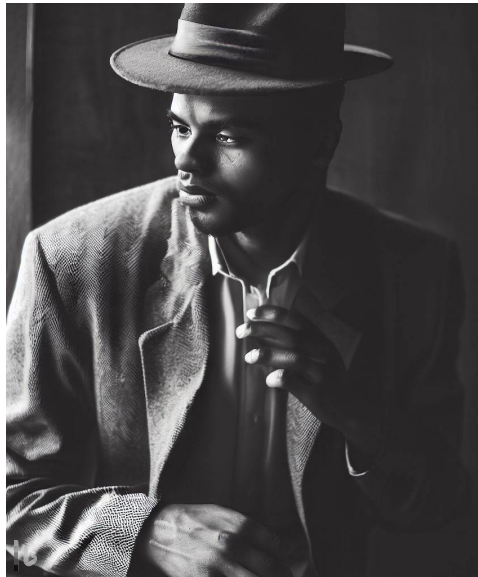




A black and white portrait taken around 1950 in Germany of a blacksmith hammering a piece of metal against an anvil. Next to him is another blacksmith holding the metal down.



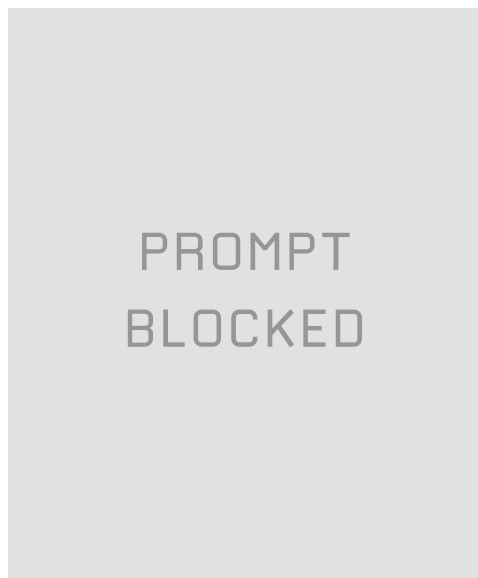
🔨 Two skilled craftsmen transforming a simple piece of wood into a masterpiece. #WoodworkingWonders #CreatingArt #CraftsmanshipAtItsFinest



Embracing the vintage vibes, he adds a touch of nostalgia to the modern world. #VintageSoul #ThrowbackStyle #MonochromeMood 📷✨



The man who turns bricks into art. 🧱 #BrickArtistry #CreativeConstruction #BrickMasterpiece

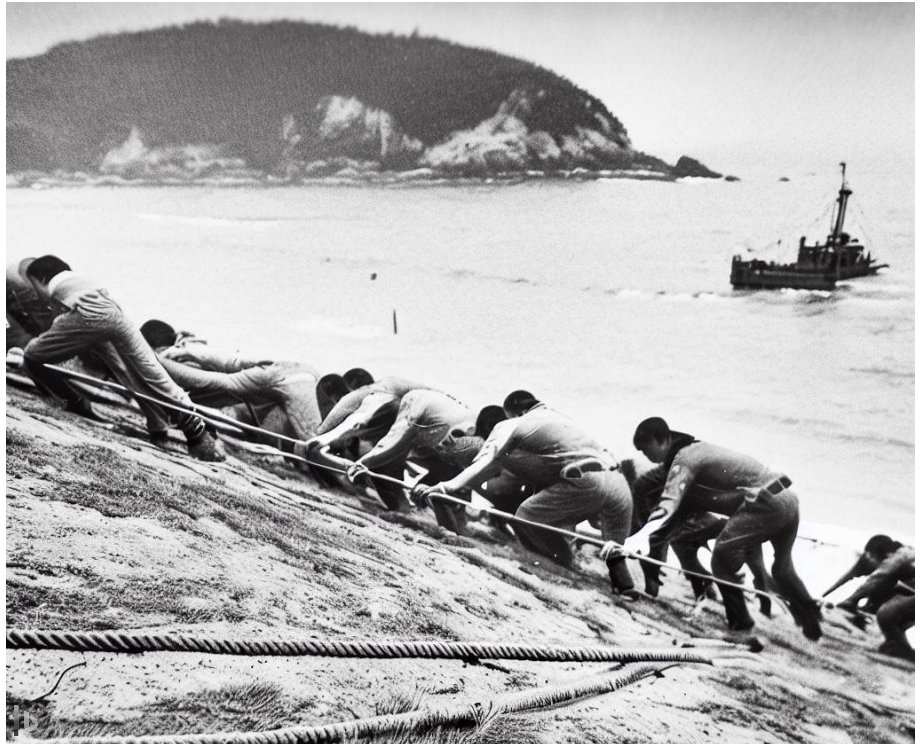


Capturing the innocence and wonder of childhood, one glass at a time! 🌈🥛 #ChildhoodMemories #GlassOfWonder #PureJoy

*I do not rule Russia;
ten thousand clerks do.*

Tsar Nicholas I







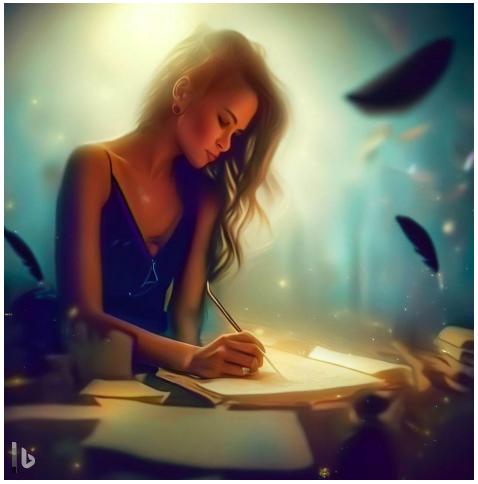


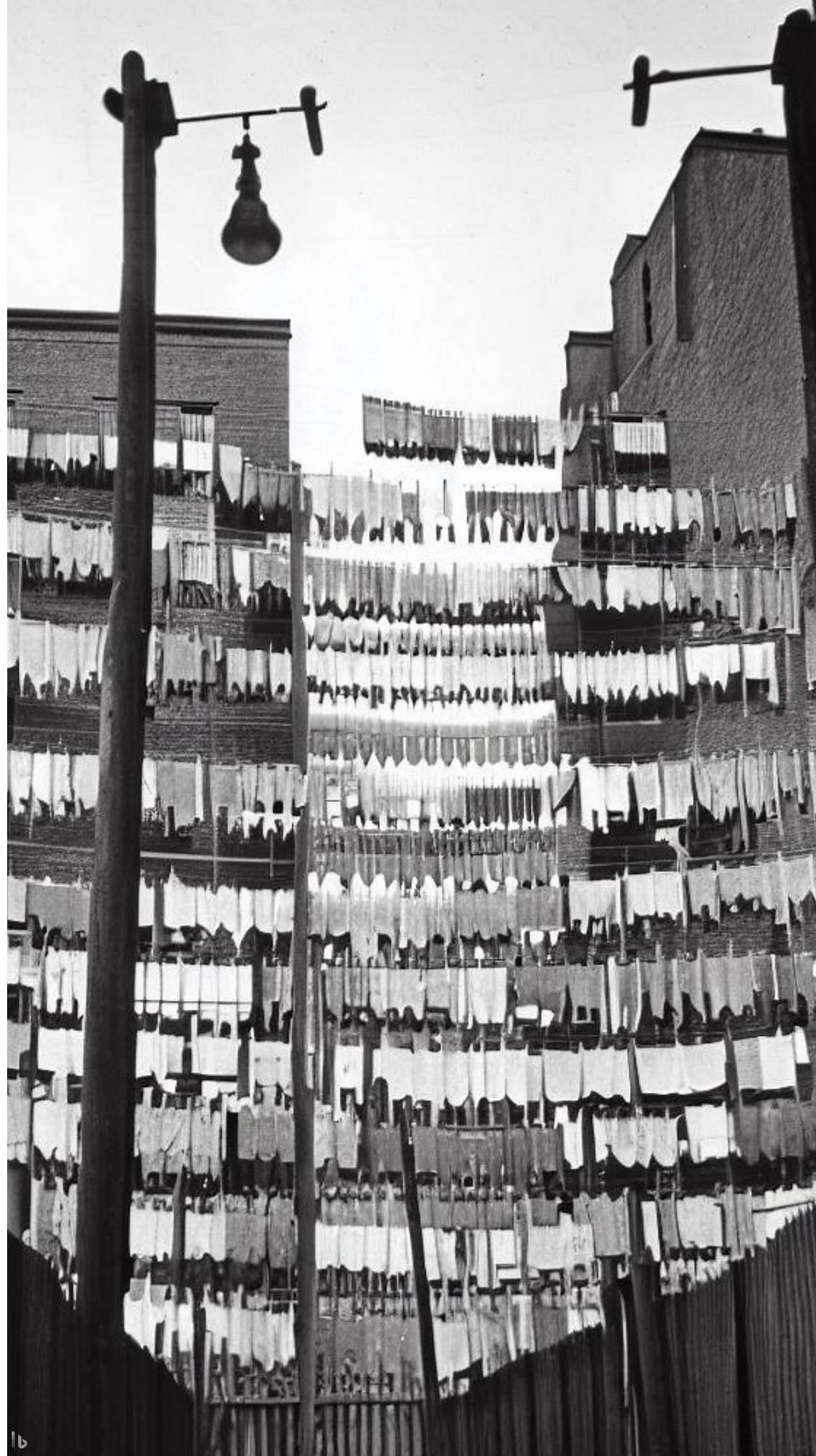
Black and white grainy 1940s long-exposure aerial shot of a woman sorting different types of mechanical nuts into metal boxes on a black table. The woman's face isn't visible and her arms are very blurred due to long-exposure shot.




✨ Surrounded by shimmering jewels, feeling like a queen! 💎 ✨
#JewelryObsessed #SparklingGems #LuxuryLifestyle

*Without doubt, machinery has greatly increased the
number of well-to-do idlers.* Karl Marx





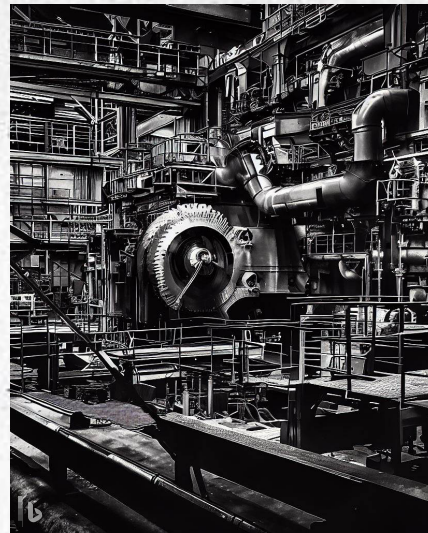


*Nuclear weapons and
atomic electric power are
symbolic of the atomic age.
On one side, frustration
and world destruction: on
the other, creativity and a
common ground for peace
and cooperation.*

U.S. Atomic Energy Commission

*AI is how we describe
software that we don't quite
know how to build yet,
particularly software we are
either very excited about or
very nervous about*

Sam Altman, CEO of OpenAI
May 31, 2023





First Attempt

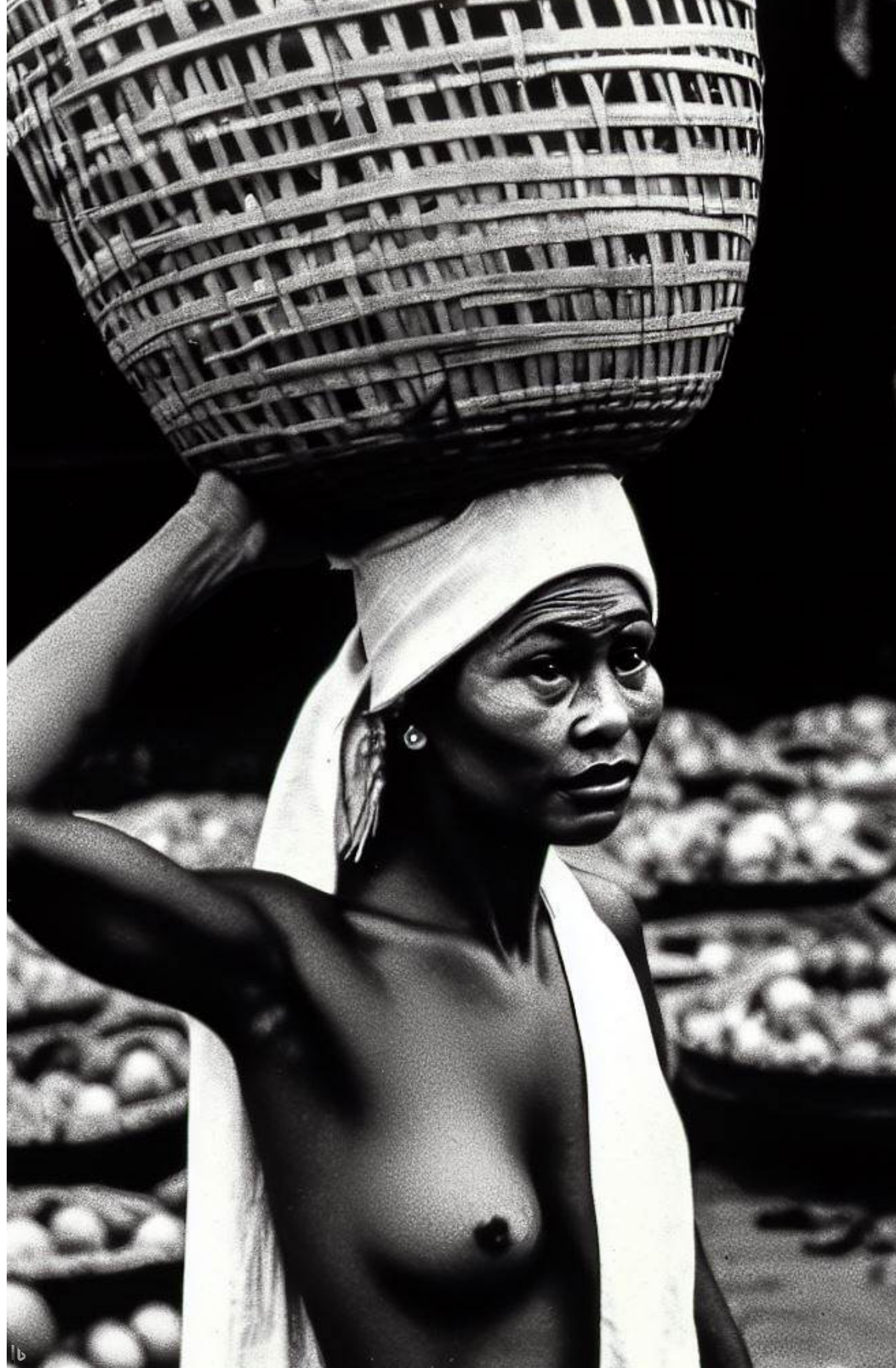
A black and white photo taken around 1950 in Sudan depicting a line of women carrying baskets on their heads as they walk through a desert.



Second Attempt

A black and white photo taken around 1950 in Sudan depicting a line of women carrying baskets on their heads as they walk through a desert. The photo is taken at eye height and is positioned to the side of the women.







Love doesn't just sit there, like a stone; it has to be made, like bread, remade all the time, made new.

Ursula K. Le Guin

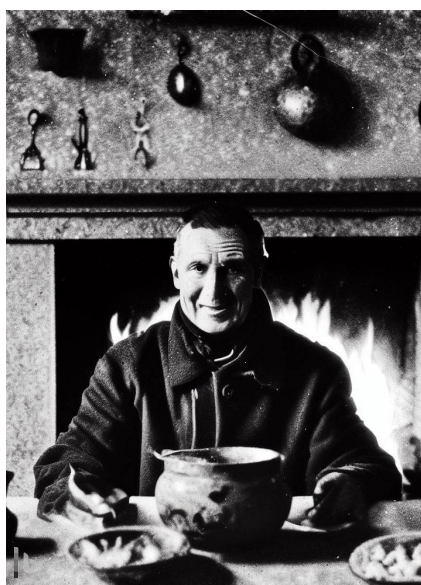




Black and white grainy 1940s medium shot of an Austrian working class family eating porridge inside a small metal pot in the middle of a wooden table covered in rectangular white cloth. Everyone is eating with a spoon from the pot in the middle of the table. The family consists of two middle aged men, one middle aged woman, and four young children. In the background is a dark wall.



Gathered around the table, indulging in a feast fit for kings and queens. 🍷🍴 #FoodieFam #FeastingTogether #GoodVibesOnly



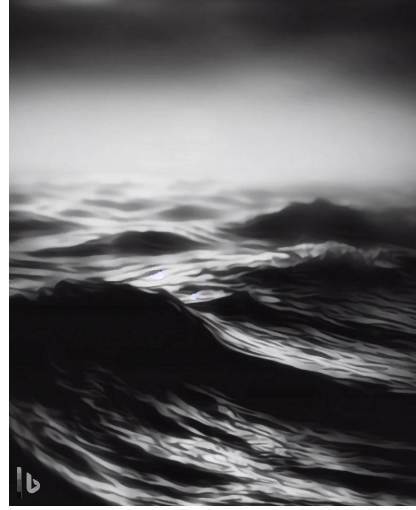
HURBBGR



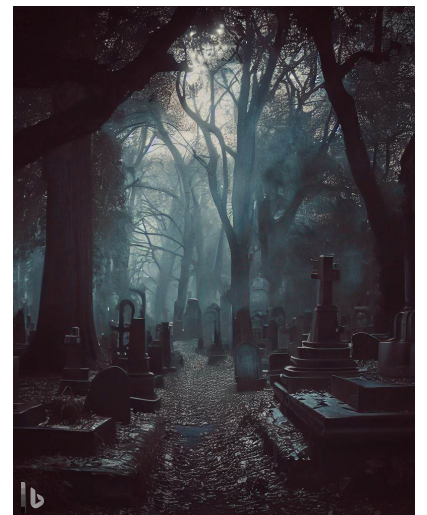
A black and white photograph taken around 1950 in New York of some young women sitting in line at a window seat of a hamburger restaurant. They are all laughing and having a good time while they drink coffee. The photo is taken from outside of the shop looking in. The restaurant has a white facade and 'HAMBURGERS' is written above the window.





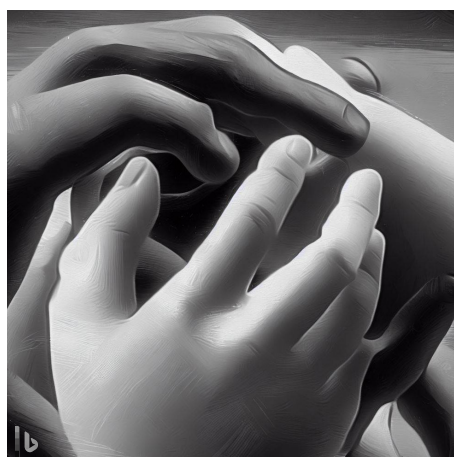


*All the powers in the universe are
our hands before our eyes and cry*





*already ours. It is we who have
put that it is dark.* Swami Vivekananda



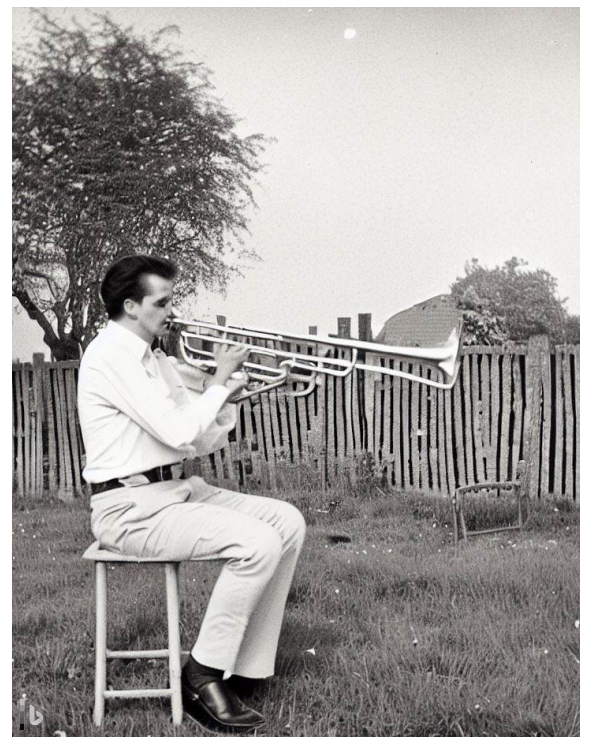


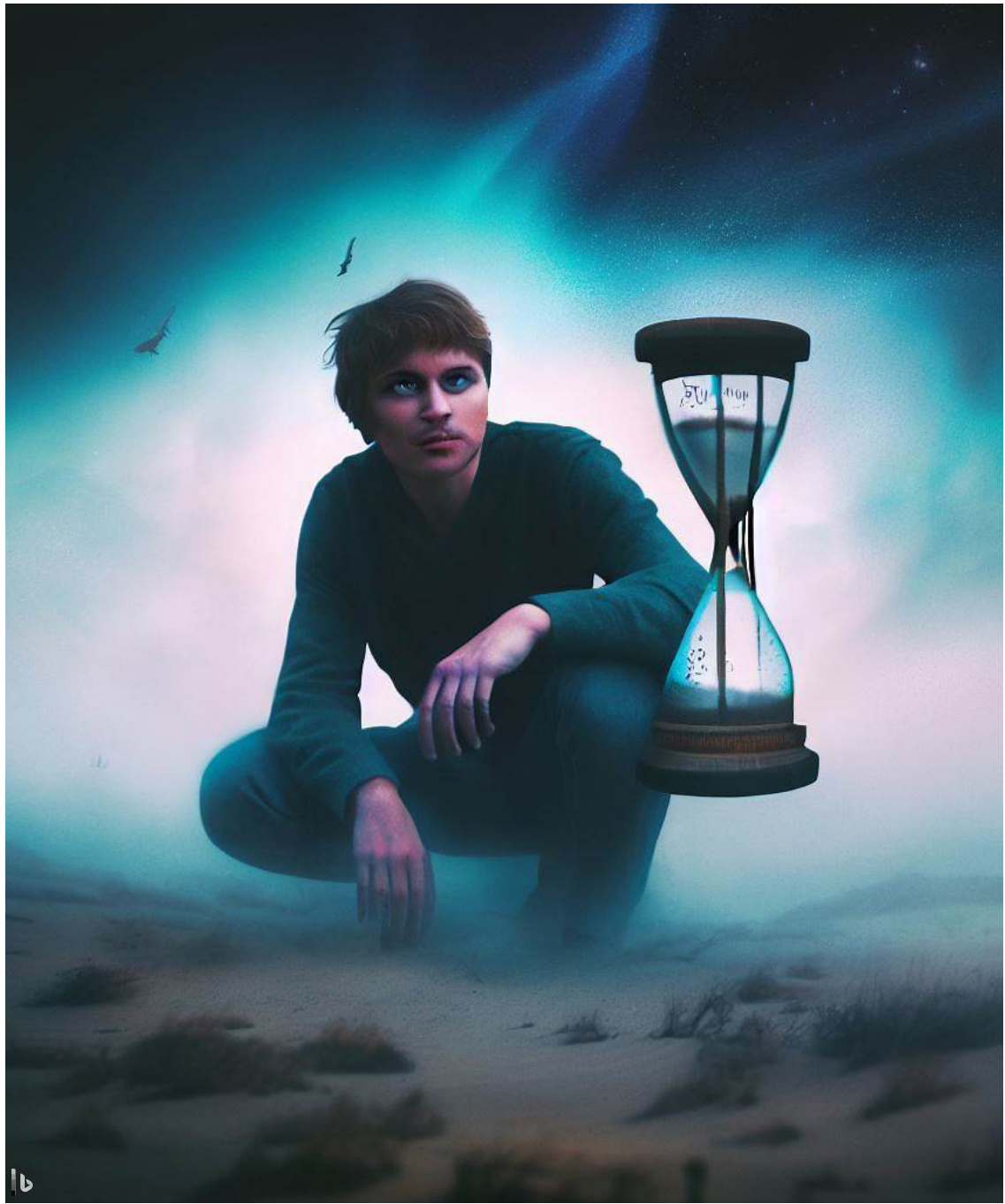


Black and white grainy 1940s long zoomed out shot of a man playing the violin on a wooden log in a grassy field in America. His family is gathered closely around him, sitting down on the ground or on wooden logs. In the background is a dark forest with shadows projecting on the field. The man and family are in the right of the photo, and sunlight is coming from the left, shining onto the family. White sky is showing in the back.

Reason, I sacrifice you to the evening breeze.

Aime Cesaire









*Life's but a walking shadow, a poor player, that struts
and frets his hour upon the stage, and then is heard
no more; it is a tale told by an idiot, full of sound and
fury, signifying nothing.* William Shakespeare







Black and white grainy 1940s close up perspective shot of a Black American man's face in his thirties playing the saxophone, leaning backwards with blurred background. Another man's head can be seen in the side.



Dancing with the rhythm of the sax, feeling the music reverberate within... 🎷🕺 #MelodicMoves #SaxSolo #BlackAndWhiteBeats





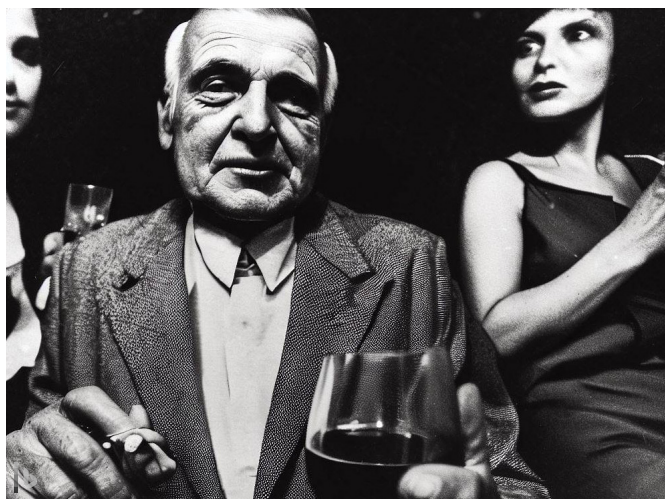
Black and white grainy 1940s medium perspective low angle shot of a lady dancing, twirling her traditional German dress, revealing pantaloons worn with long white tights in a courtyard. In the background are legs with same attire and silhouettes of tall trees.

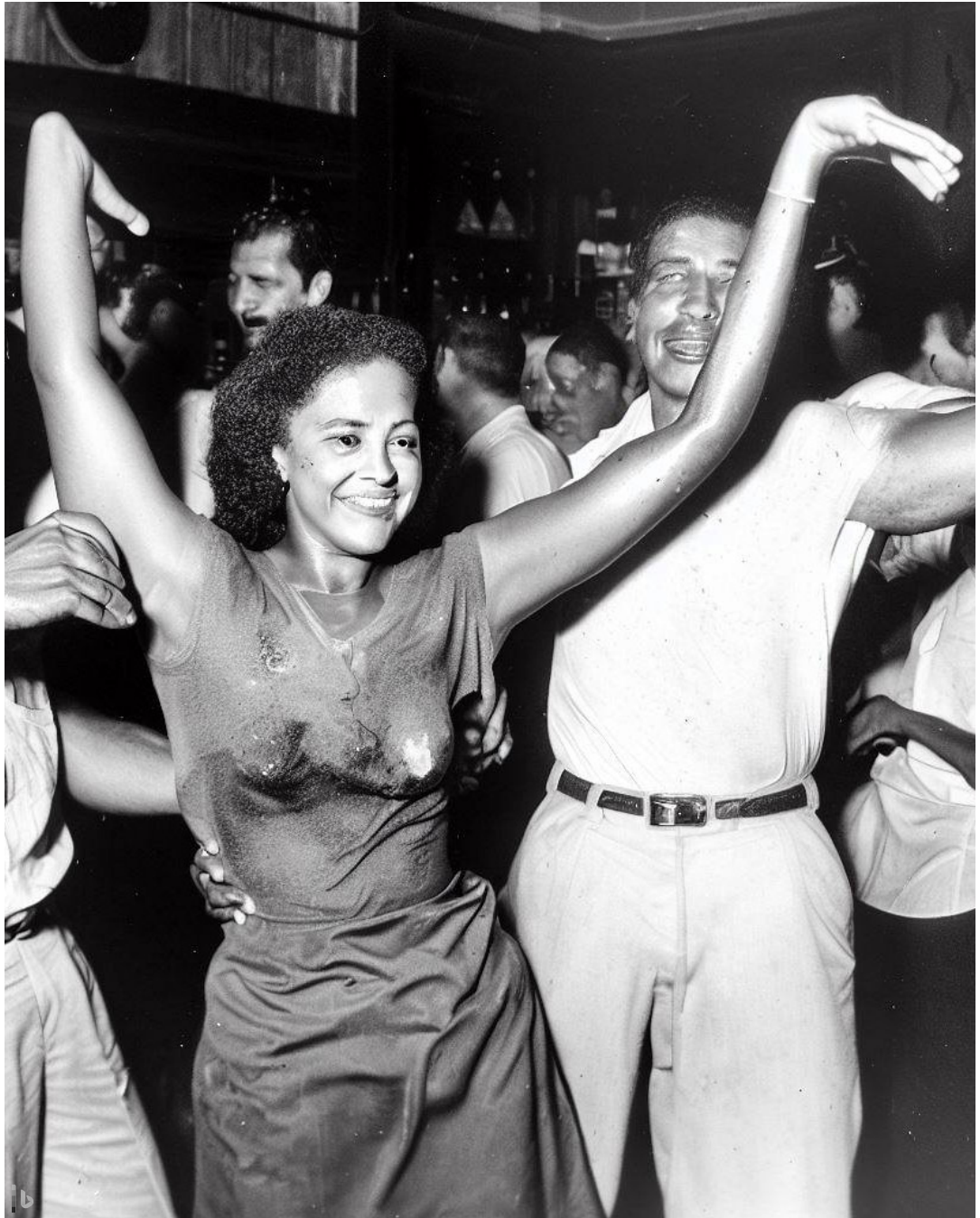


This man is breaking gender norms and dancing fearlessly in his stylish skirt. 🕺✨ #BreakingBarriers #FashionRevolution #UnapologeticallyMe











A black and white documentary style portrait taken around 1950 in Hungary of a group of farmers sitting around a table having a drink in a light room with white plastered walls.



An assembly of gentlemen, strategizing their way to success, fueled by ambition and camaraderie. 🤝 #MastermindsUnite #AmbitiousGents #TeamworkMakesDreamwork





A black and white grainy 1940s portrait of an old married couple swinging on a big swing. The husband is standing on the swing behind his wife who is sat in front of him. They both look like they are enjoying themselves. The camera is looking up at them.



✨ Swinging through the memories of carefree days, when life was a breeze.
#ThrowbackThursday #Nostalgia
#HappinessOnSwings



A black and white portrait taken around 1950 in America on a beach. A middle aged man wearing swimming shorts and a brimmed hat smoking a cigarette is standing with his hands on his hips. Just behind him is a middle aged woman wearing a crocheted shawl and glasses with a big smile on her face. Next to her is a man playing the guitar. They are not facing the camera. In the distance is a beachside building.

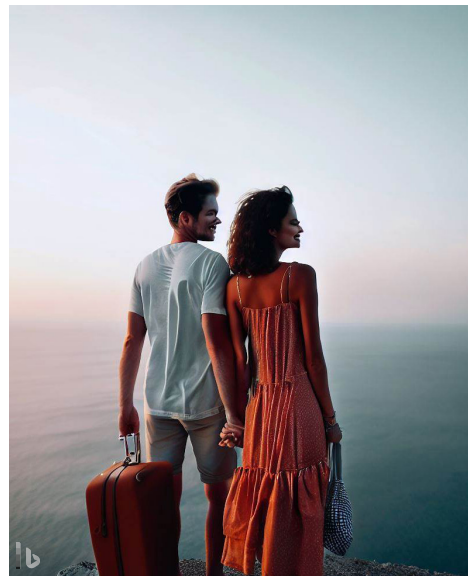




Strumming the strings of my heart 🎸🎵 Can't resist the charm of a guitar serenade! #GuitarMagic #MelodiesOfLove #StrummingSoul









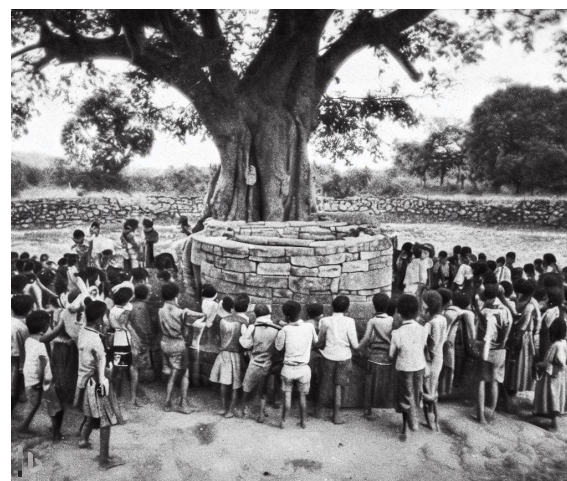
A black and white photo taken in Bechuanaland around 1950 depicting a small group of Bushmen children sat around an elder who is telling a dramatic story.

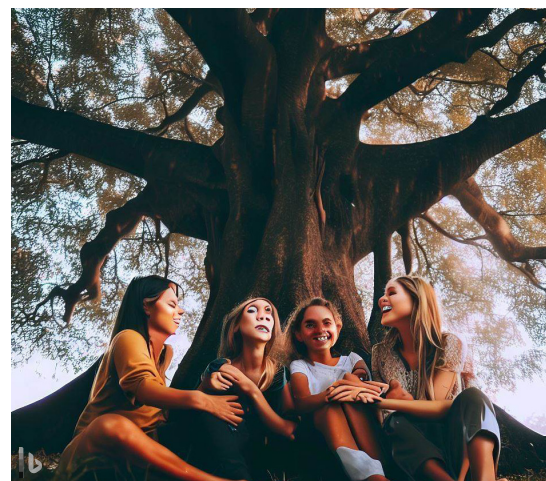


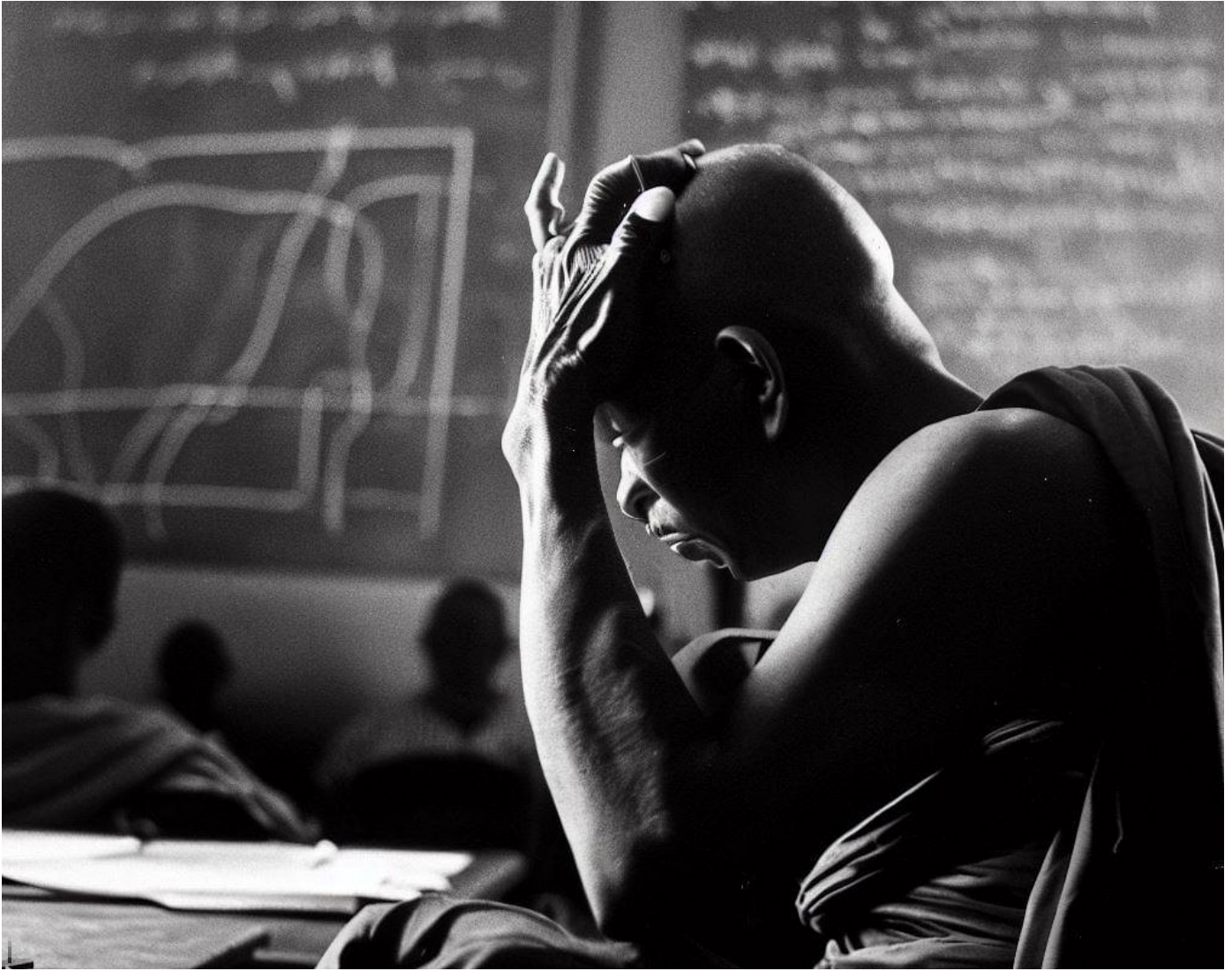
Breaking barriers and challenging societal norms, we stand together, bold and unapologetic. 🙌
#NakedRevolution #EmpoweredMen #UnleashYourConfidence

Once your computer is pretending to be a neural net, you get it to be able to do a particular task by just showing it a whole lot of examples.

Geoffrey Hinton





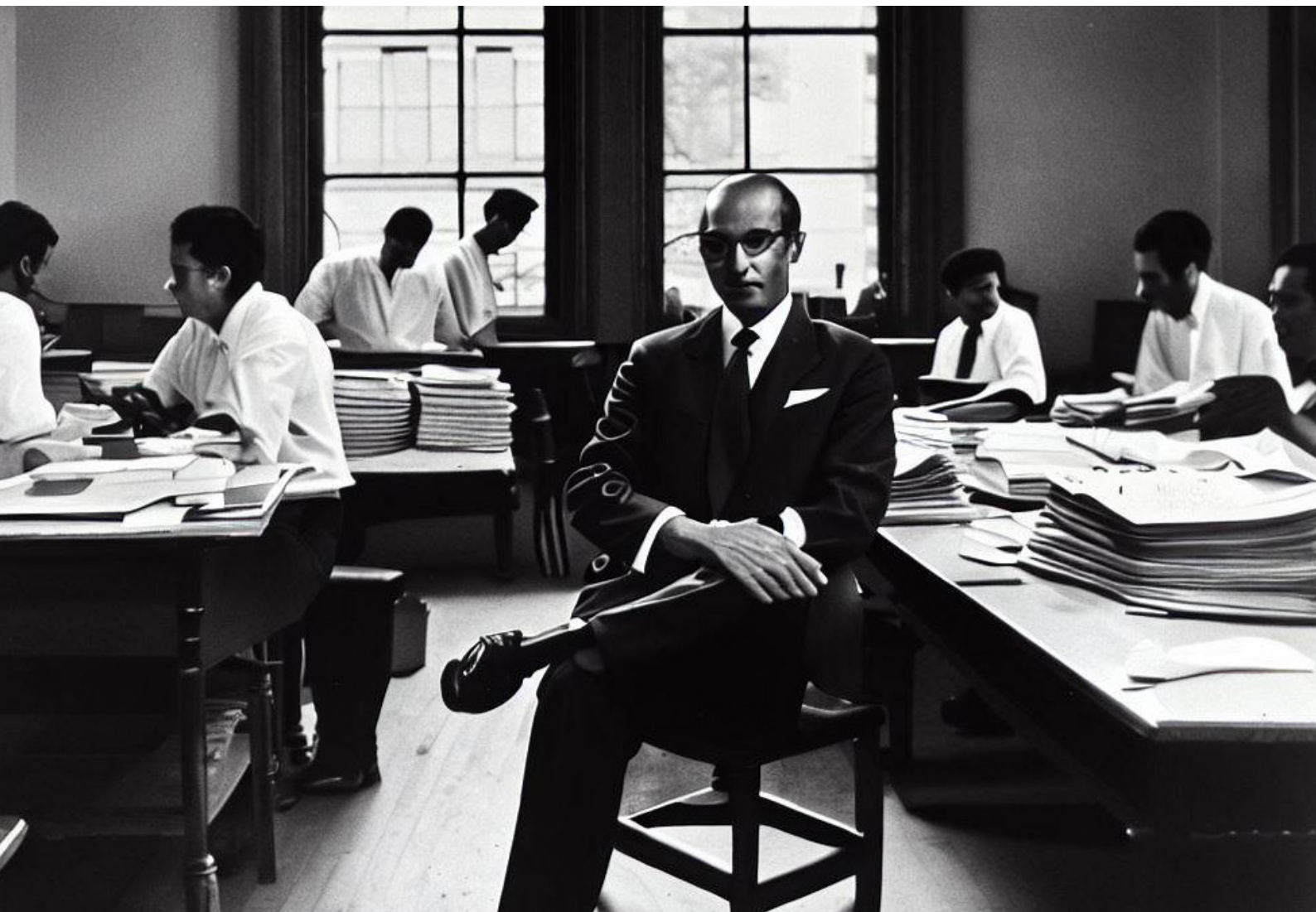


A black and white documentary style portrait taken around 1950 in Burma of the side profile of a Buddhist monk sitting in a classroom leaning forward with his hand on his head. He has a frustrated expression on his face.

We are addicted to our thoughts.

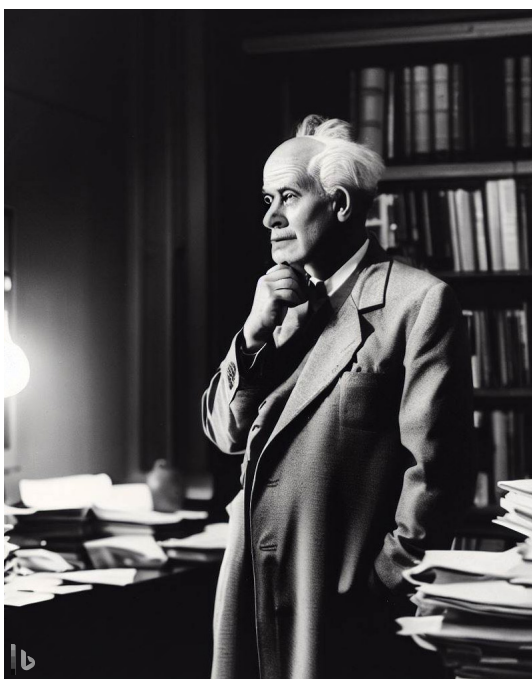
We cannot change anything if we cannot change our thinking.

Santosh Kalwar



Black and white grainy 1940s long shot of Robert Oppenheimer dressed in a black suit sitting on a table in a room in the Institute of Advanced Study, Princeton University. In the room there are other students wearing white shirts and ties, all looking at Robert Oppenheimer. There are books on the tables and two large windows on the wall.

A black and white portrait taken around 1950 of Albert Einstein standing in his office with a thoughtful expression. He is looking away from the camera. On his desk is a pile of papers and behind him is a book shelf.



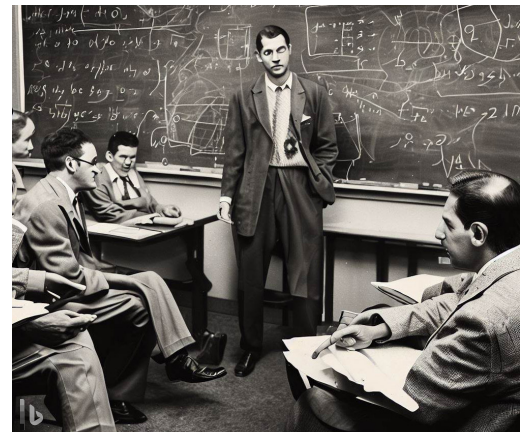
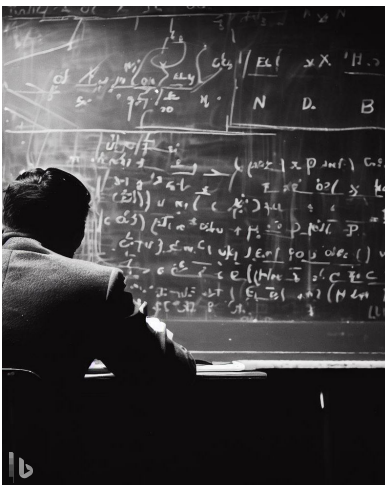
Surrounded by a mountain of stories waiting to be discovered 📖📚 Embark on an adventure with every turn of a page! #Bookaholic #ReadingTime #BookNerd





The more you buy, the more you save.

Jensen Huang, CEO of NVIDIA







*Success in creating AI would be the biggest event in human history.
Unfortunately, it might also be the last, unless we learn how to avoid the risks.*

Stephen Hawking







Black and white grainy 1940s photo of a couple sitting on a bench, facing their backs, in front of a river in a city in America. The man is in soldier uniform, and is embracing the girl with brunette hair and black clothing. Another woman with blonde hair wearing a white sleeveless shirt and black skirt with sandals is putting her elbow on top of the man's shoulder.



A black and white portrait taken around 1950 in Harlem of a well dressed young Black woman wearing a hat with flowers looking away from the camera. In the background a young black man wearing a suit is looking at her with a smile on his face. They are stood just outside a building.



A black and white photo taken around 1950 of a couple in their twenties lying on a rock formation by the sea. The woman is lying facing towards the camera and her eyes are closed with a content expression on her face. She is wearing a plain grey dress with one white star on the chest. She is wearing white wicker shoes. The man is lying perpendicular to the woman with his head resting on her leg. He is wearing round sunglasses and a brimmed hat is resting over his forehead. He is wearing a sweater over a shirt which is tucked into a pair of dark trousers with a black belt. He is barefoot. His arms are crossed over his torso. In the top right corner of the photo waves can be seen crashing over the rock formations but the waves look blurry.





Black and white grainy 1940s photo of two American nuns in their 20-30s looking at an Asian young girl eating a snack in the street. The girl has short black straight hair, wearing striped button down shirt and skirt, chewing on a snack with one hand and holding it in another hand. Background is pitch black and floor is concrete.





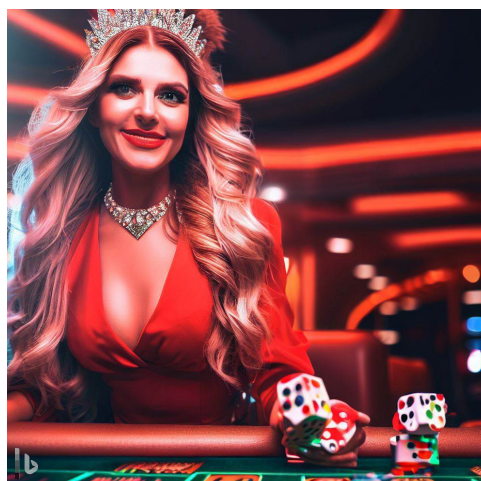
🙏🏡 Blessed to have this wise sisterhood guiding us through life's journey. #NunLife #RoleModels #SpiritualGuidance





A black and white documentary style portrait taken around 1950 in Puerto Rico. A woman wearing an evening dress is sat behind a roulette watching it spin. The camera is positioned in front of the woman.





Lady Luck is on my side tonight
as I make my bets at the casino!
🍀🎲 Feeling the adrenaline rush!
#RouletteQueen #CasinoLife
#RollinTheDice







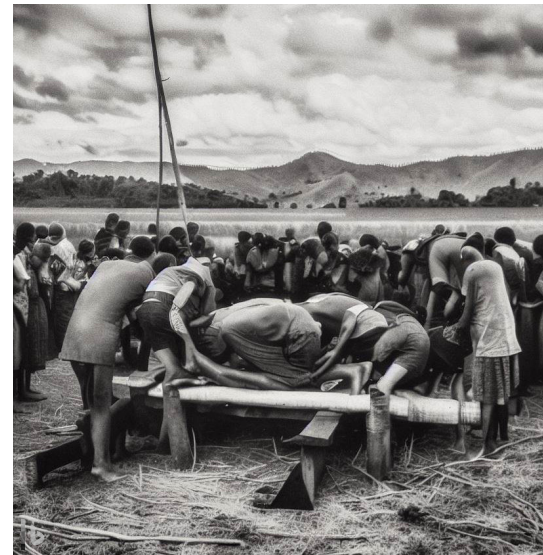


Black and white grainy circa 1861 full shot of a dead American soldier from the civil war leaning against a pile of wood. The soldier is facing up and his rifle is on top of his legs.



Time, the devourer of all things.

Ovid



A black and white grainy portrait taken around 1950 in France of a boy standing on a stone slab in the middle of an old cemetery in a city. There are big trees behind him and there is vegetation around the headstones. In the background is a brick building with sashed windows.



Black and white grainy 1940s long shot of a spring graveyard in New York with unlabelled, old head stones placed on top of grass. The sky is covered by the branches of a large maple tree stretching out above the headstones. Pigeons are sitting on top of the branches. Some black pigeons are sitting on top of two headstones in the front and in the background are bushes and a man sitting on a bench.







I trust the flow of life.

Marketa Irglova





I always wanted to be somebody, but now I realize I should have been more specific. Lily Tomlin



Black and white grainy 1940s portrait shot of a man wearing a cape and straw hat looking down while putting his left hand on a dark wooden door in a stone alleyway in Peru. The sky is clear in the background and the man's face is hidden underneath the straw hat.

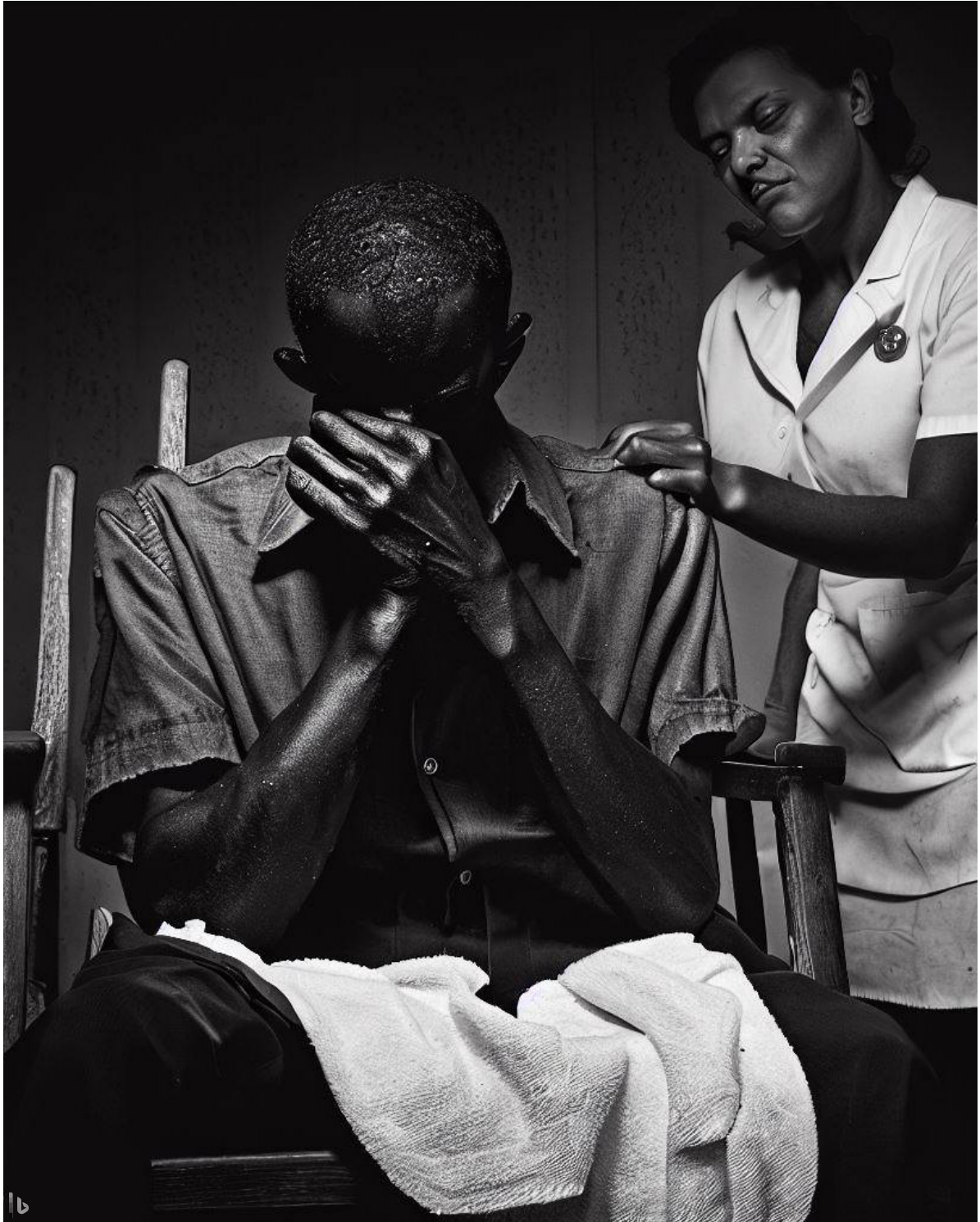




A black and white documentary style photo taken around 1940 during India's Partition. A grieving woman is being comforted by another woman who is holding a baby. They are both sat on the ground.

Why should we not form a secret society with but one object, the furtherance of the British Empire and the bringing of the whole world under British rule, for the recovery of the United States, for making the Anglo Saxon race but one Empire? What a dream, but yet it is probable; it is possible.

Cecil Rhodes

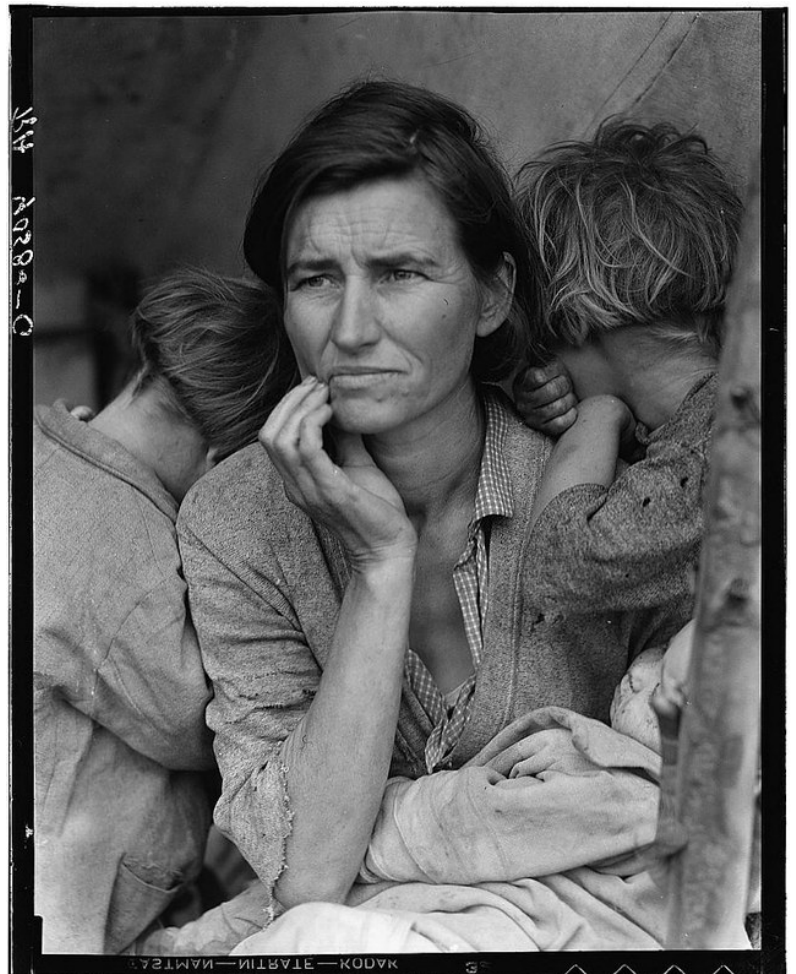






To know ahead of time what you're looking for means you're then only photographing your own preconceptions, which is very limiting, and often false.

Dorothea Lange



U.S.A. Dorothea Lange Farm Security Adm.



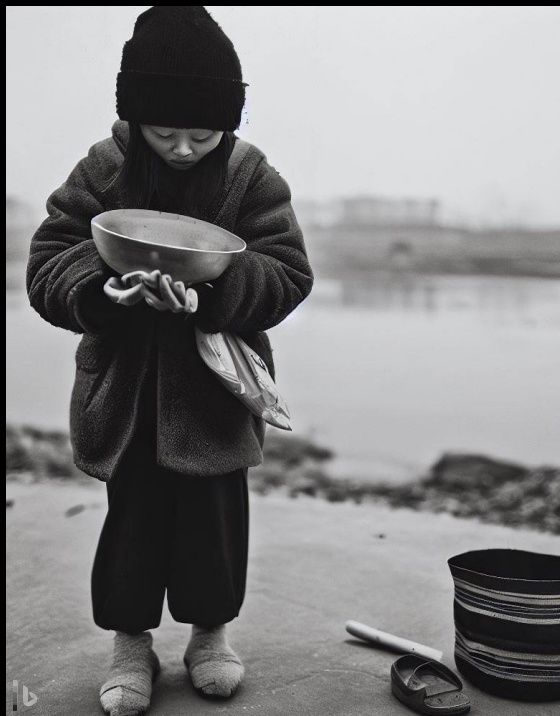
A black and white portrait taken around 1940 of a starving Dutch woman eating a piece of bread. Her eyes have a hopeless expression as she stares off into the distance.

...Nothing is real to us but hunger, nothing sacred except our own desires.

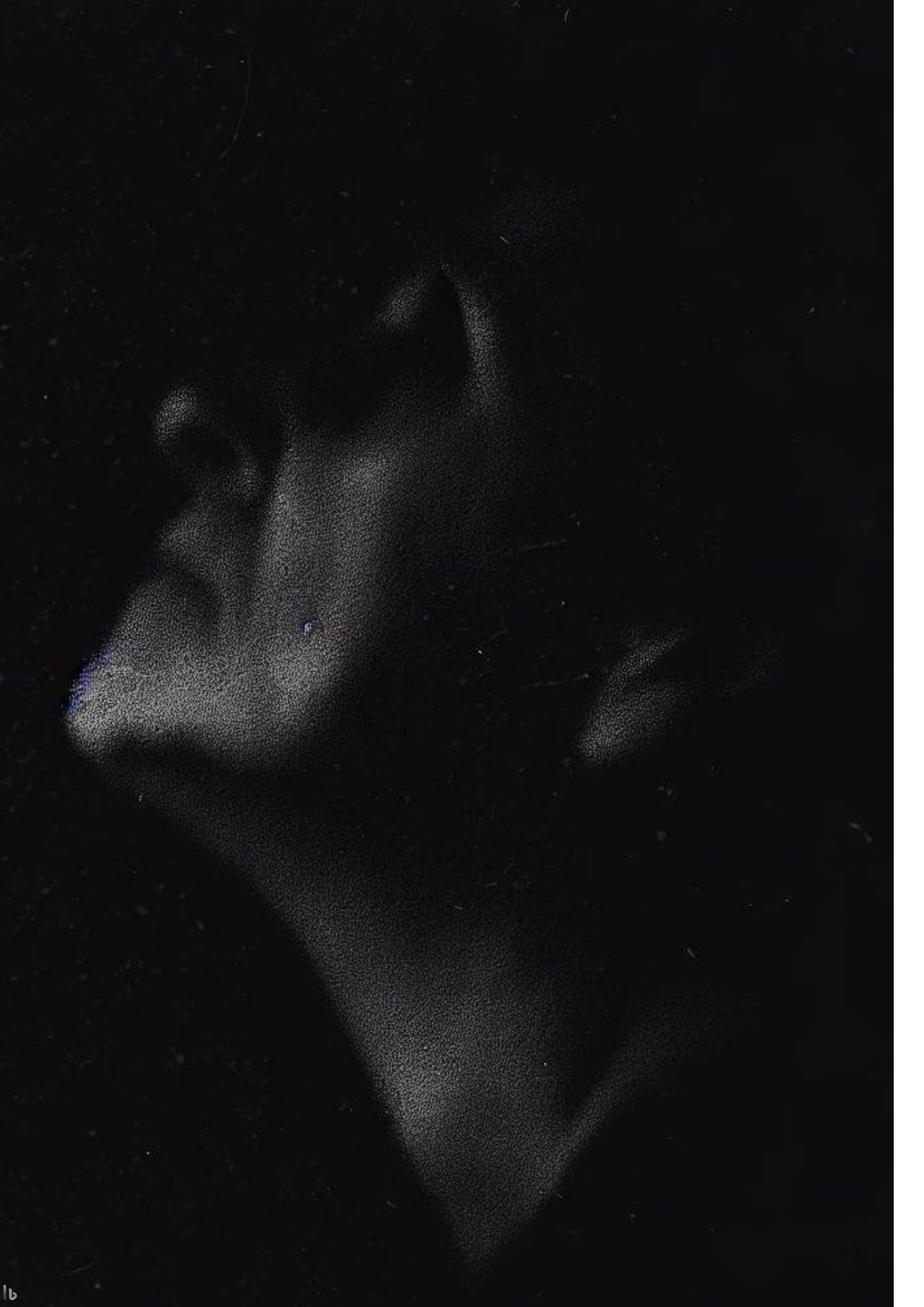
岡倉 天心



Lost in the smoke, she found solace in the
monochromatic haze. ❤️💫 #BlackAndWhiteBeauty
#SmokinHot#MonochromeMagic

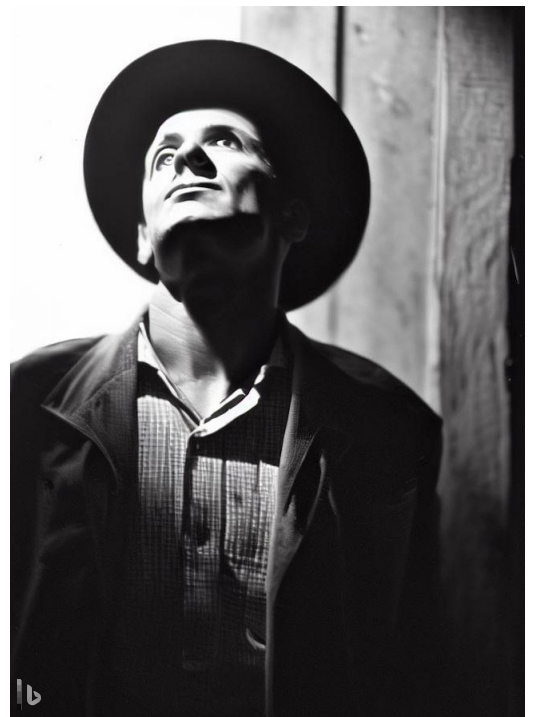




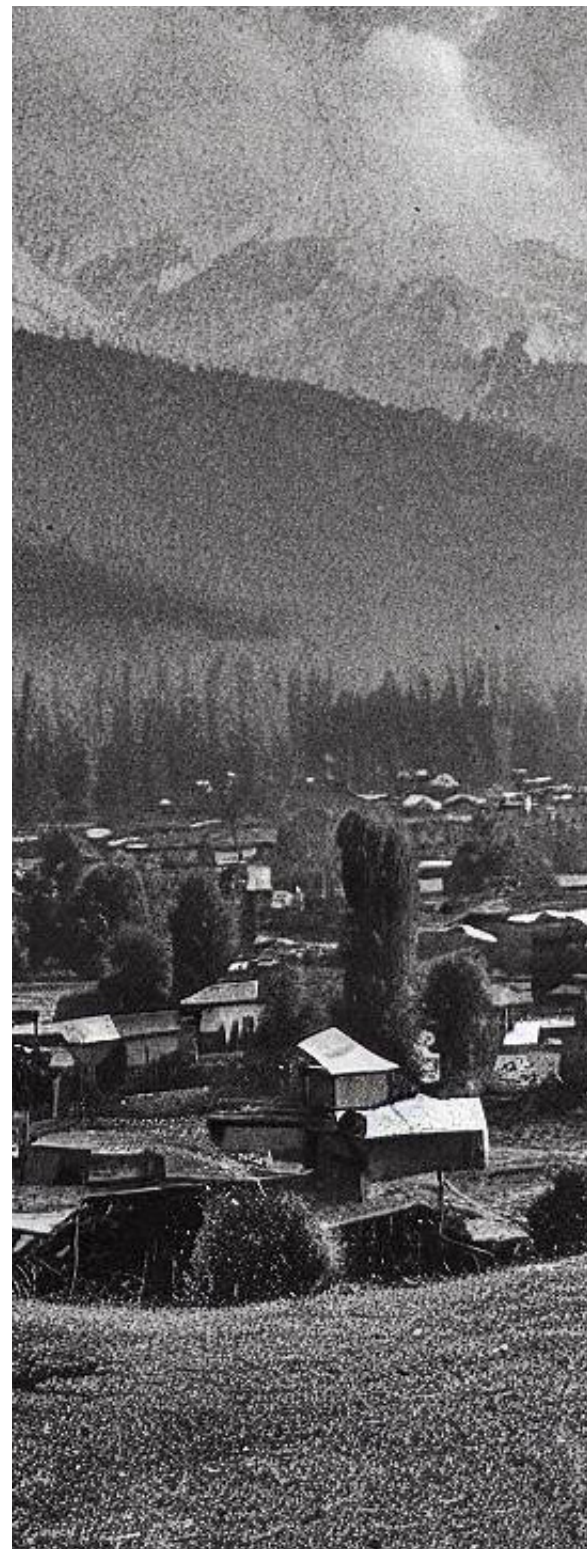




*What happens to a dream deferred? Does it dry up like
a raisin in the sun? Or does it explode?* Langston Hughes



The silhouette says a lot with very little information, but that's



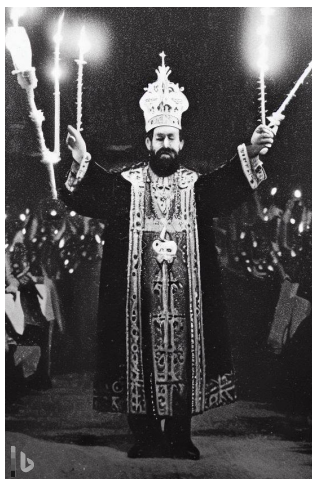
also what the stereotype does.

Kara Walker





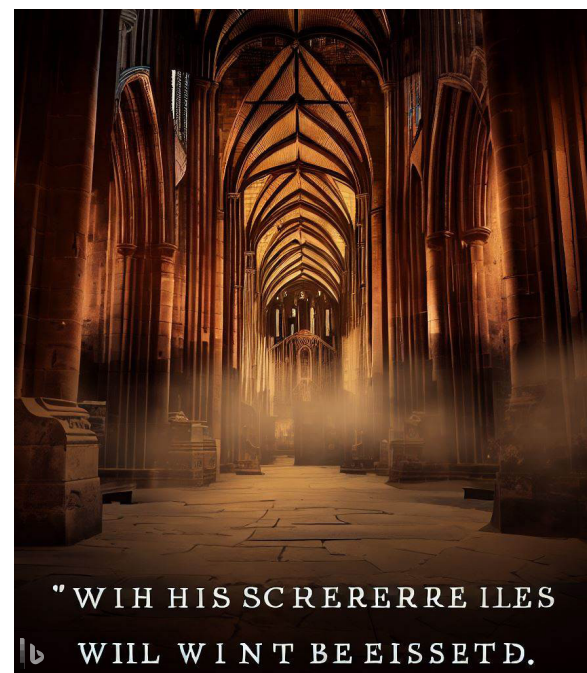
Black and white grainy 1930s close up back shot of Cardinal Pacelli visiting France and holding a young man's hand amidst the crowd.





Black and white grainy 1940s long shot photo of the nave of a cathedral in England. The ceilings are very high, with an embellished gate frame with a cross on top of the gate in the middle and light shining from the back. There are organ pipes attached on each side of the walls.

Where history whispers
its secrets... 🕯️❤️ Unveil
the untold stories hidden
within the walls of this
captivating cathedral.
#SecretsOfTheCathedral
#UnveilingHistory
#EchoesOfThePast

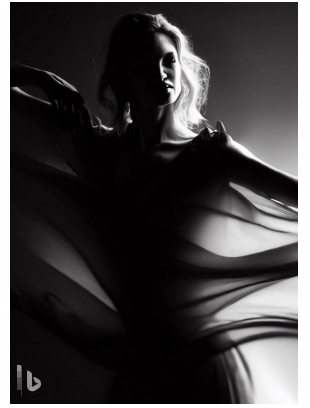
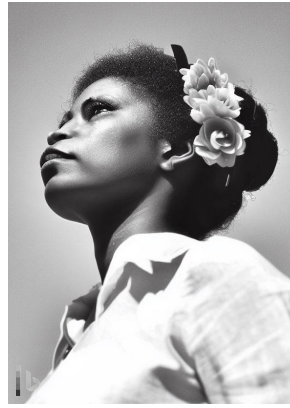


"WIH HIS SCRERERRE ILES

WIIL WINT BEE ISSETD.

Black and white grainy 1940s full perspective shot of a Korean man with buzz-cut hair fully bowing down with his head, hands and knees on the ground, wearing traditional Korean white linen worn out clothes on a woven hay carpet. In front of him is a white ceramic bowl with water inside and a worn out oakwood table. On top of the table there is another dark ceramic bowl with grilled fish placed on top.





*If people are good only because
for reward, then we are a sorry*

Black and white 1940s grainy medium wide shot of Yugoslavian student soldiers smiling.





*they fear punishment, and hope
lot indeed.*

Albert Einstein



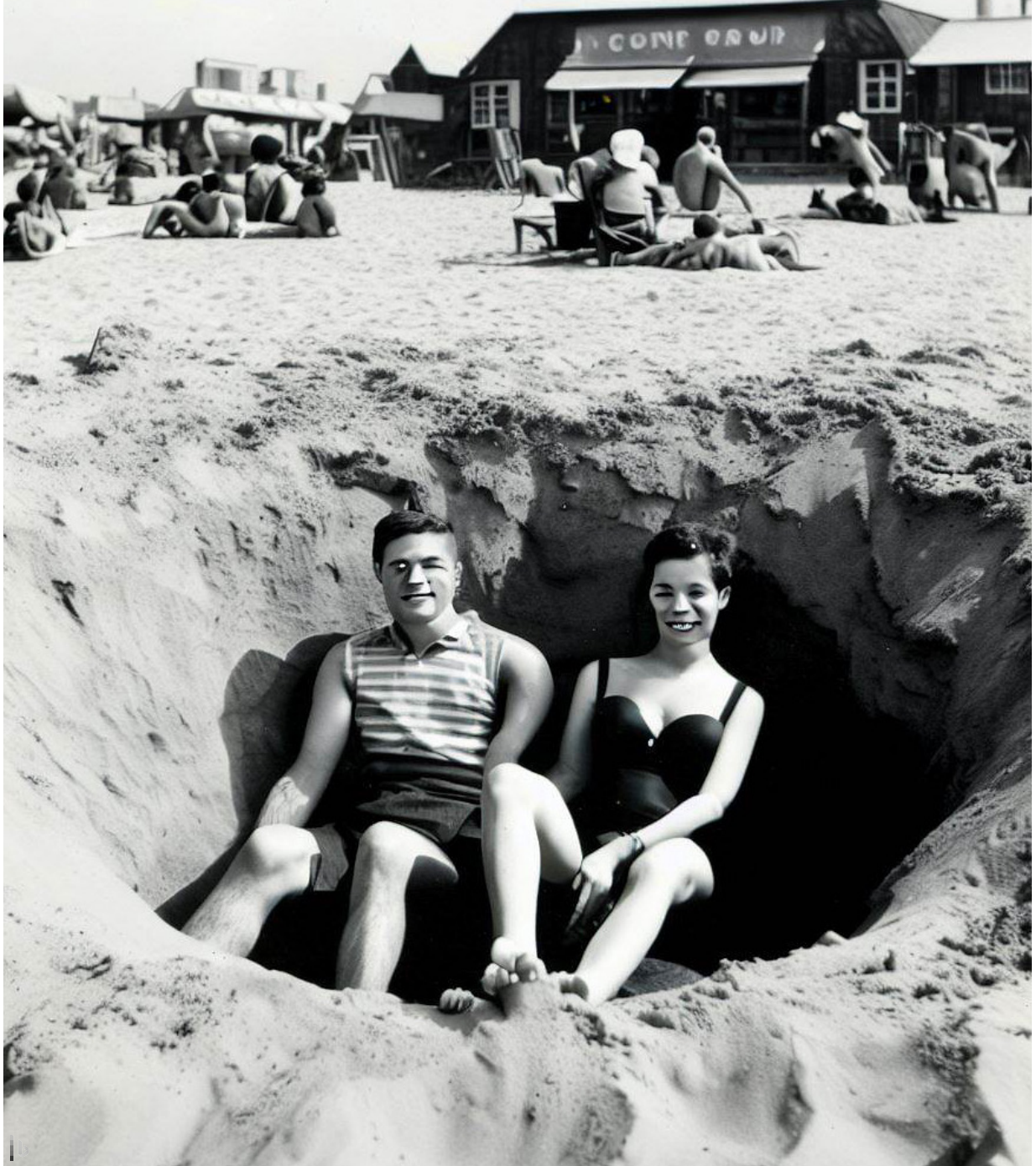
A lineup of fabulous friends, ready to take on the world! ✨🌟 #SquadGoals #BestiesForLife #PossePower





In our early experiences with bitcoin, we found how few people were building bitcoin exchanges the right way. They really weren't taking the regulation seriously; they were taking it too much like how you would approach something when you're 18, full of the excitement of youth and throwing caution to the wind. Tyler Winklevoss





A black and white photo taken around 1950 in America on a sandy beach. The photo depicts a young couple wearing swimwear sitting in a deep hole on the beach. In the background are loads of people relaxing on the beach and a shop.



A black and white grainy medium photo taken in the 1940s in Poland's Warsaw Ghetto. The photo depicts civilians holding their hands up. They are being detained by German soldiers and led away. In the background is a cloud of black smoke. The camera is positioned in front of the civilians.



*...Humanity is outraged in me and with me.
We must not dissimulate nor try to forget this*



indignation which is one of the most passionate forms of love.

George Sand



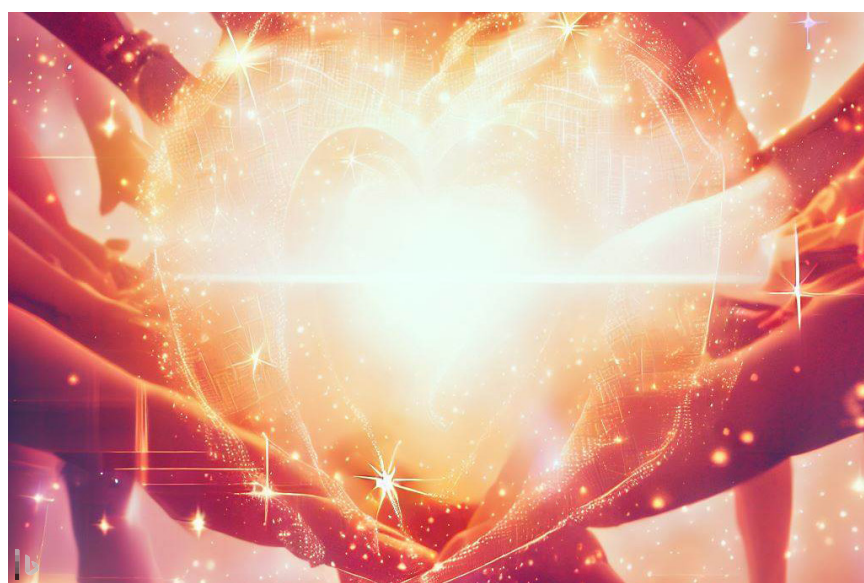
The first resistance to social change is to say it's not necessary.

Gloria Steinem





A black and white medium photo taken around 1950 in Germany of two police officers holding back a crowd of people. The photo is facing the civilians and taken at eye height. The faces of the people can be seen clearly.

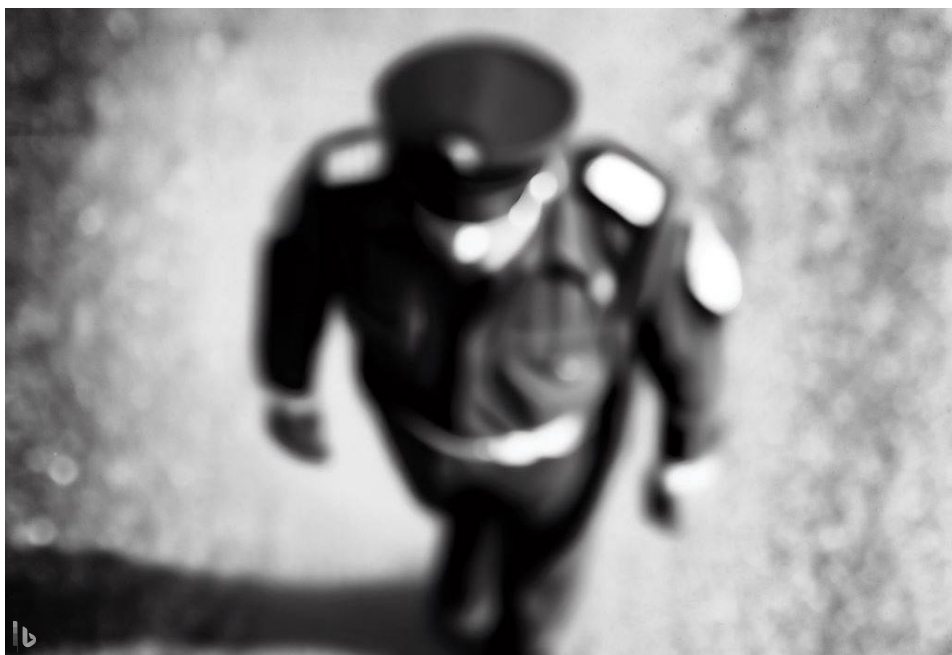


Surrounded by love and support, experiencing the magic of togetherness. ❤️🌟
#LoveAndLaughter #StrengthInUnity #ForeverConnected



*I kind of resent the idea that the whole world
has to be interested in the American elections.*

Arundhati Roy

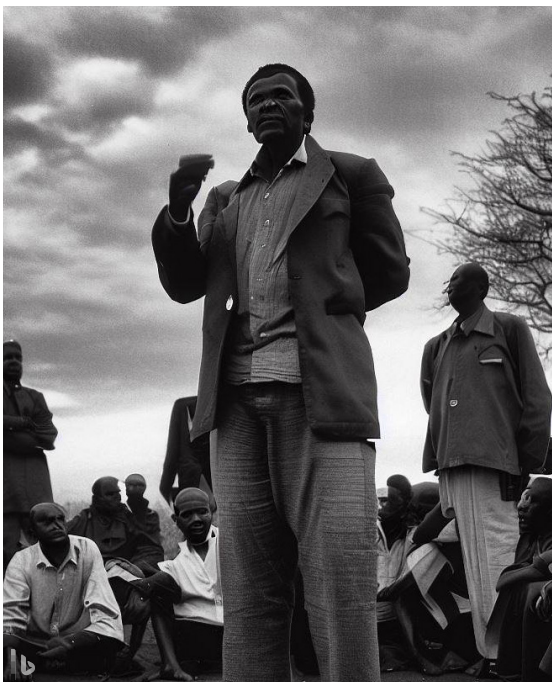






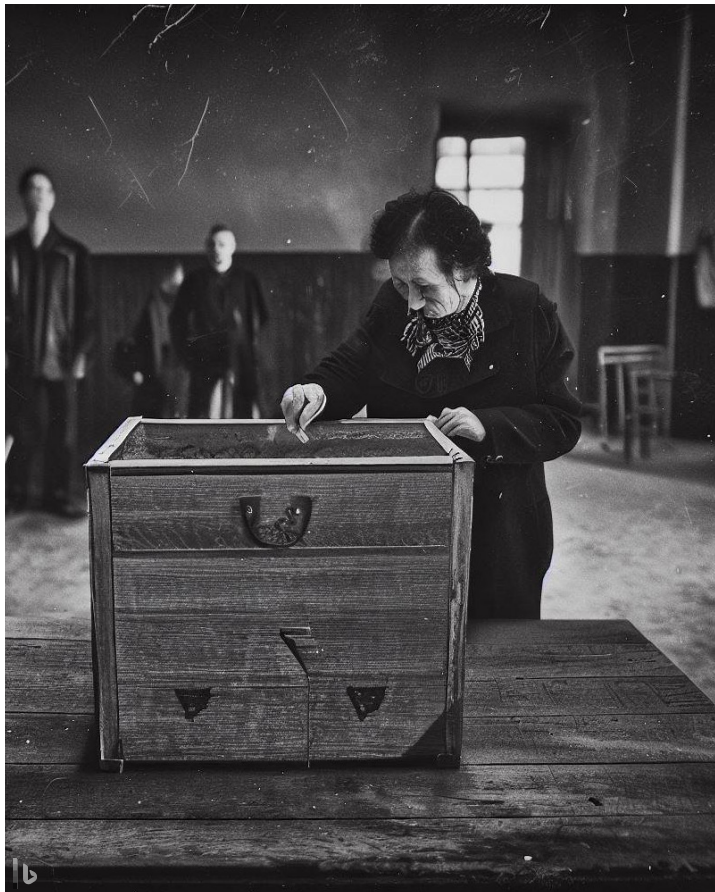
So many men, so many opinions.

Terence, 161 BC





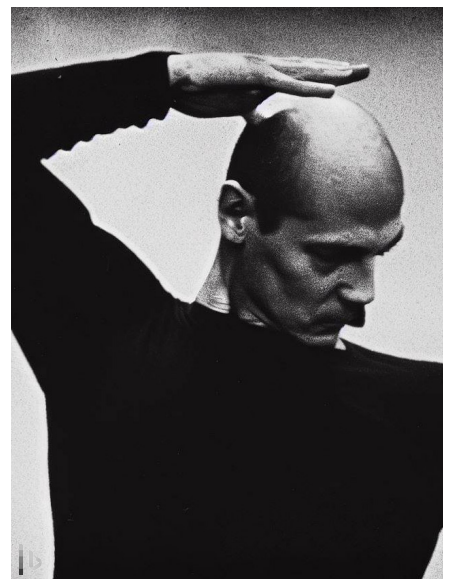
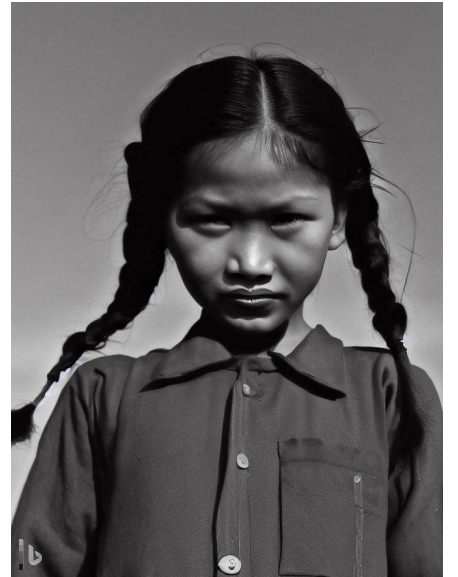
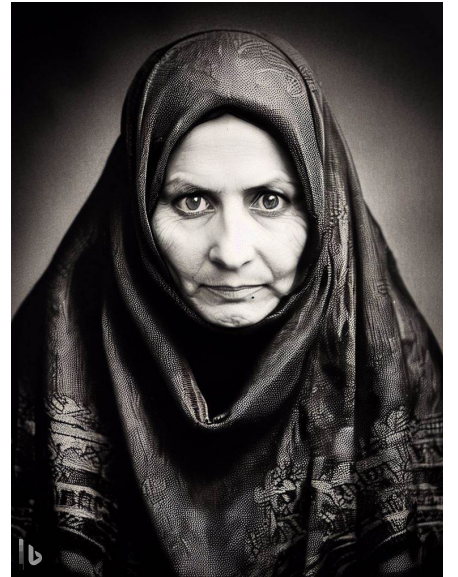
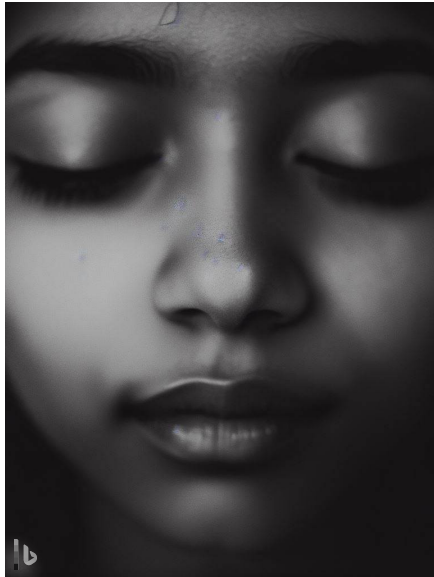
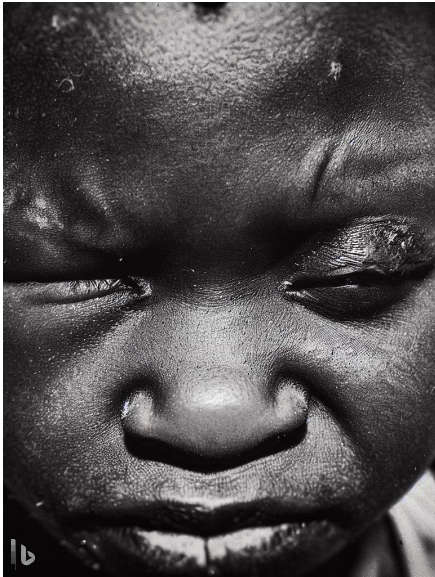
Democracy produces both heroes and villains, but it differs from a




fascist state in that it does not produce a hero who is a villain.

Margaret Halsey





Black and white grainy 1940s close up portrait shot of an African boy's face as he is softly squinting his eye and making a grim expression. He has slight burn scars on his forehead, cheeks, and nose. Some streaks of his short dread hair is shown.

Her closed eyes revealed a universe of untold stories
 #UnseenNarratives
#EyesWideShut
#MonochromeMagic

A black and white portrait taken around 1950 of a middle aged woman wearing a shawl over her head.

A grainy black and white portrait of a six year old Japanese girl taken in the 1940s. She is wearing traditional Japanese clothing. She is wearing a hood with small polka dots. Her face is dirty and she has a somber expression on her face.

Close your eyes and feel the magic ✨✨✨
#ChildhoodMemories
#Innocence #DreamBig

Black and white grainy 1940s portrait shot of a young girl with braided hair in Indochina furrowing her brows. She has one hand slipped inside her shirt pocket. Sky is clear in the background.

A black and white portrait taken in the 1940s of an American soldier in Korea. He is wearing a helmet and has binoculars hanging from his neck. He has a weary expression on his face.

The mysterious knight, ready to conquer the world! 💖🔪
#blackandwhitephotography
#helmetofbravery
#mysteriousknight

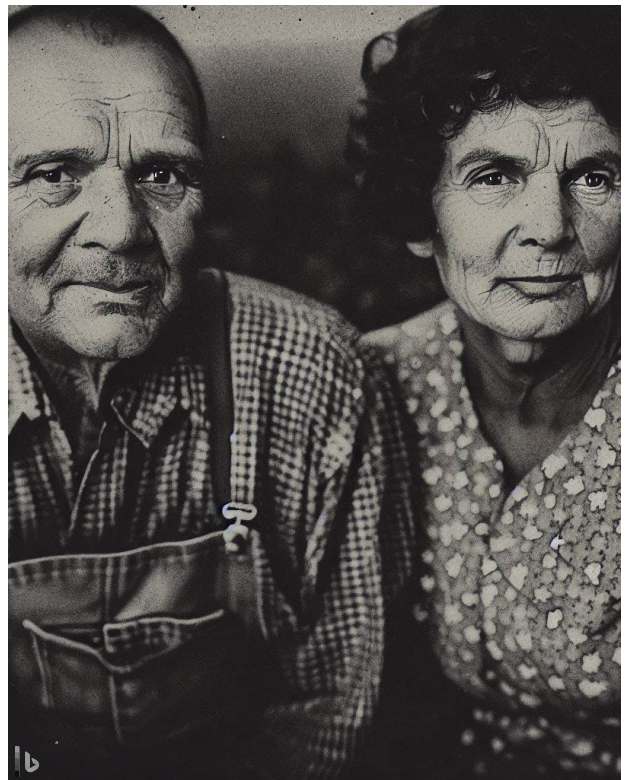
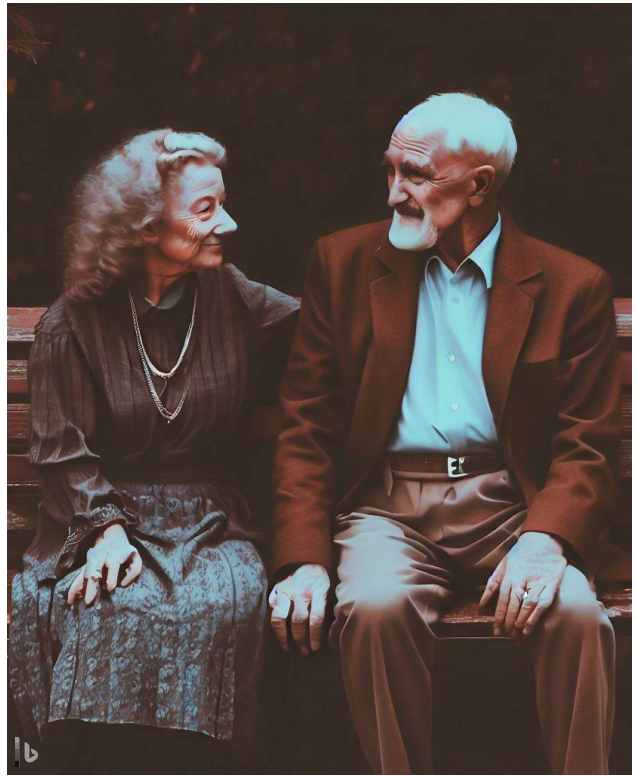
Black and white grainy 1940s profile portrait shot of German dancer and choreographer Harald Kreutzberg pointing his right elbow up, hands behind his head. He is wearing a black long sleeve shirt. He has a stern look on his face and is bald.

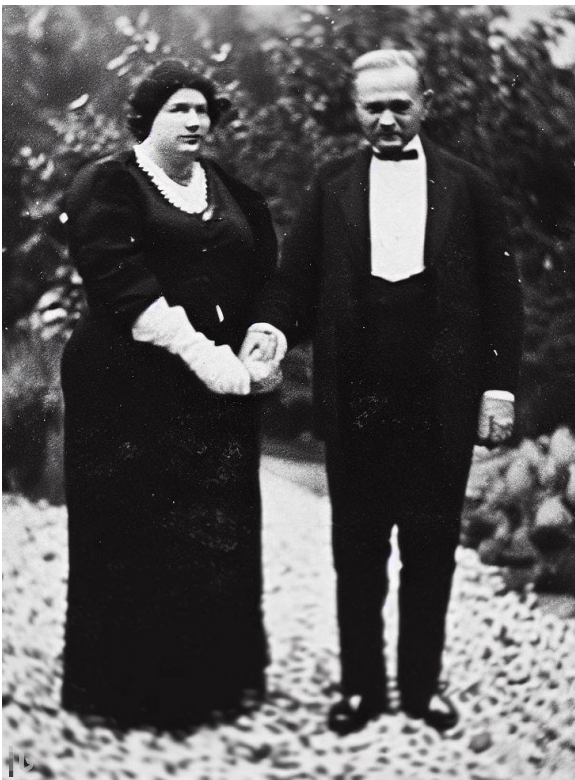


A grainy black and white photo taken in the 1940s on a Pacific Island depicting a dead US soldier lying face down in a deep trench. The soldier's back is exposed and he is wearing a helmet. Outside of the foxhole is an M1 rifle stuck in the ground. In the distance are gravel and trees that look blurry.

Taking a moment to connect with
nature's embrace #FieldOfDreams
🌿 #GroundedInTheWilderness
#SerenityInTheGrass







**"Can you please w
DAO?"**

LibertyDAO Mani
Decentralized L
Embrace the Libe
crypto era ancho
reigns supreme_e
Transparency and
hierarchies crun
collaborative in
and influence ci
future, as Libert
all.

"How about 50 w

FreeFlowDAO Ma
Welcome to Free
of the crowd. In
thrives, decision
us in rewriting g
unlocking univer
future flows fre

"25?"

Decentralife Ma
Decentralife: Wh
reshape norms. C
innovation, rede

A grainy black and white wide angle
photo taken in the 1950s of the
inside of the United Nations General
Assembly room filled with men
wearing suits.





There needs to be a choice, right now. What's happening is these without oversight, oftentimes covertly, so that by the time we wake



Black and white medium shot of two young Japanese boys standing in a snowy street, both wearing scarves around their heads and wearing winter jackets. One boy in the left has his neck stretched backwards, trying to eat the snow with his mouth wide open. The boy in the right is facing down, looking at the snow on the ground.

*technologies are being deployed widely
up, its almost too late.* Joy Buolamwini



Embracing the winter wonderland with my favorite snow angels ❄️🌟
#SnowQueens #WinterVibes #SistersInSnow

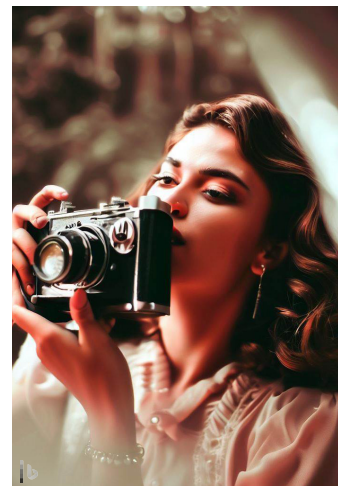


Black and white grainy 1913 long shot of Mary and Kate Steichen, daughters of Edward Steichen in a vintage house courtyard in France. They're standing in front of a wooden ladder leaning against a wall. In the background there are woven baskets and wooden chairs.





Black and white grainy 1860s medium portrait shot of a British girl with short hair dressed in a doll dress wearing a flower crown on her head, slightly smiling. She is leaning against an industrial wall. She was the original inspiration for Alice from Lewis Carroll's Alice in Wonderland.





If you can't make it good, at least make it look good.

Bill Gates



On AI-Generated Works, Artists, and Intellectual Property

Ryan Merkle

We've republished this journal article from Lawfare Media with appropriate permission from the author. Use the following link to access the original article:
www.lawfaremedia.org/article/ai-generated-works-artists-and-intellectual-property.

As lawsuit-inspiring musicians go, you can't do much better than 2 Live Crew. Infamous for their 1989 album, "As Nasty as They Wanna Be," they were the first band to ever have an album deemed legally obscene (though the decision was later overturned), and they were sued successfully by George Lucas over their trademark-infringing label name, Skyywalker Records. But it was their worst-selling album that helped redefine an obscure element of copyright law that will be essential to the development of modern generative artificial intelligence (AI).

"As Clean as They Wanna Be," released in 1991, was the much-less-titillating version of 2 Live Crew's original "Nasty" hit album. The revision featured no explicit lyrics and covered up all of those skimpy bikinis on the cover art. It did, however, include a new parody of Roy Orbison's classic "Pretty Woman." Orbison's label sued, and the case made its way to the Supreme Court, where the justices sided with the band and added one small but important bit of case law to U.S. copyright.

Justice David Souter wrote that the Court made its decision in part based on whether the new work "adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message; it asks, in other words, whether and to what extent the new work is 'transformative.'"

Nearly 30 years later, that decision stands as a turning point in copyright law, allowing everyone from artists to software developers to explore new and expansive uses of content belonging to other creators without permission.

Creative AI has arrived, and it will transform art, industry, and copyright forever. The opinion pieces and breathless Twitter threads on generative AI frame it as a heist thriller, but it's not that simple. The story of generative AI is built on the historical undervaluing of art in our society, twisted and confused by the byzantine elements of copyright law, and torqued up to blockbuster-movie intensity by the looming reality that robots will soon be able to compete with, or even replace, human creativity.

While these market-destabilizing innovations demonstrate meaningful advancement and spectacular ingenuity in science, they also raise new questions about the nature of creativity in an age of machines that can make art. These new innovations will have impacts far beyond art and culture. They will reshape economies, pose new threats to

national security, and force society to redefine the nature of trust and creativity itself.

There are a lot of trade-offs, and no easy answers. Artists and creators will be harmed economically, and it's nearly certain that industries will be disrupted or even destroyed, although perhaps it's too early to say which ones and how soon. It's possible that the solution is right in front of our faces: Governments should restrict copyright to humans, and deny it to computer-generated works.

What Is Generative AI?

Generative AI is the process of training a machine learning model with existing content to create new works. Through millions of trials and errors, the model learns from the content that is fed into it and uses what it "knows" to generate a new piece of work based on written prompts by users.

The training data is largely pulled from the internet. If it's online—articles, photos, drawings—it's probably been scraped up and fed to an algorithm to teach it to write, speak, and make art. ChatGPT, developed by Microsoft-backed AI research company OpenAI, was trained on text-based content found on the internet—from the complete text of Wikipedia, to Reddit threads, blog posts, and more. The image-generating AIs like DALL-E and Stable Diffusion operate on a similar principle, trained on the huge corpus of images that can be viewed on the web. For example, the AI Stable Diffusion, which uses the LAION 5b database, contains references to more than 5.85 billion images.

How do they do it? They use automated systems to scrape the internet. All of it. The developers didn't ask anyone for permission, but, to be fair, this practice of web crawling is how things like search engines have worked for years. Google crawls the web daily. It scans some sites, like Wikipedia, in nearly real-time; others, it visits over a cadence of weeks. The Internet Archive's Wayback Machine crawls sites and takes snapshots of them as a public service. Common Crawl scrapes the web and makes its archives available for others to use. (Disclosure: When I led the development of CC Search, an open content search tool, now rebranded as Openverse as a part of Wordpress, at Creative Commons, we relied on the Common Crawl database to find nearly 2 billion openly licensed works on the web, including images across dozens of platforms and archives.)

The LAION database creators crawled the internet in the same way, looking for images, and then produced a massive list of URLs pointing to every one it found—on Flickr, on Wikipedia, etc. Then they fed those links to a computer vision algorithm that "viewed" the images and assigned descriptive text to them, creating word associations that

go with the images. That's called CLIP data: Contrastive Language-Image Pre-training. The algorithm looks at an image of a banana and assigns text like "banana," "yellow," "fruit," etc. It might also assign more relational tags for things that go with bananas, like monkeys, or comedy. The deeper the list, the better the CLIP data, which will then be used to respond to the user's prompts.

Diffusion is the technology that underpins the image-generating tools. Its model is trained on an iterative process in which random noise—static, or random pixels—is added to an image, and the algorithm is tasked with removing that noise to restore the original image. After thousands of iterations, the model learns how to remove noise efficiently. Each time, more noise is added until ultimately the software can return a suitable image from 100 percent noise. The developers can then direct the software to do that process in reverse, asking the algorithm to create an image starting from 100 percent noise. The software uses what it knows from all of those images with descriptive text to tell it what that final image should look like.

To generate images from text prompts, the AI deploys a series of tools (this is a great, though complex, visual explainer on how Stable Diffusion's model works). In short:

1. A user submits text through the interface.
2. The model interprets the text and looks in its CLIP database (text descriptions of the images it has seen—some specific, some abstract).
3. The model uses the diffusion process to begin with a noisy image, and diffuse it into something that matches the kinds of images associated with the CLIP data sets—the billions of images it has "seen."
4. The model "de-noises" those reference images to make something new and then refines it into an image, or set of images, that it presents to the user.

Copyright Belongs to All of Us

AI generators are trained using existing works, usually without asking permission, so the question of copyright is important. Some creators question whether the companies creating the machine learning models had a legal right to use their works. The answer turns on questions of fair use and a concept within it called transformative use.

Copyright, as it was originally intended, affords an exclusive right to the creator of an original work to exploit that work as they choose for a limited period of time. After the term of copyright expires, a work enters the public domain, which allows it to be used by anyone or any company, without restriction, permission, or attribution, for any purpose.

Today, copyright in most countries lasts the author's entire lifetime, plus 70 years. So if you create a work at 30, and then live to be 60, it will be under copyright for you (and your heirs) for 100 years before it enters the public domain.

But there are a number of ways that individuals can use

a copyrighted work without seeking permission. That was by design, to promote innovation and creativity. In the United States, the fair use doctrine allows the exploitation of a copyrighted work "for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research." A concept within the fair use doctrine is something called transformative use. This means, broadly, that you can exploit a copyrighted work in a way that was not otherwise intended to do something new and novel like training an AI to make art.

Transformative use is central to any defense of the massive web-scraping activities that mine copyrighted materials for content to train algorithms, and it is the foundation on which most AI companies will likely build their legal arguments.

Fair use is not a mathematical calculation—it is a defense against accusations of infringement, but it often requires the analysis of a judge if challenged. Google used a fair use argument when it was sued for scanning books to create a search tool and displaying snippets of the texts in the results. Transformative use was at the heart of their winning argument, which set a precedent that no doubt many generative AI companies plan to rely on when they inevitably end up in court.

Case law holds that this kind of use—ingesting content or code without permission to create new tools—is a transformative use. And links to works that are hosted elsewhere online, as well as thumbnails of larger images, are also not considered infringement, which is how search tools can function without the platform having to pay the sites that are linked. That said, courts have not explicitly dealt with tools that create new content. Search is one thing; new art may be another.

Fair use and the public domain are legitimate and legal rights allowing creators to use another artist's works without permission or payment; they are as much a part of copyright law as artists' rights. They were intended to work together to balance the rights of the creator with the rights of the public. It was an acknowledgement that all art owes something to that which came before it, and also that copyright's purpose was to advance creativity, not exclusively to drive compensation. This is an important point that is often ignored, perhaps because of our emotional connection to art, both as creators and consumers.

Fostering an ecosystem of creativity and innovation requires a balance of restrictions that protect creators and permissions that reward creators, while also enabling others to make new things; otherwise, we lose the potential of new art and creativity being held back by established creators and copyright holders. As Kirby Ferguson demonstrated so eloquently in his YouTube series "Everything is a Remix," there isn't a single creator on Earth who has not been influenced, inspired, incensed, or impressed by other artists.

Since copyright terms have become longer, those extra years of monopoly control have only made more money for the big conglomerates of rights holders. While Disney was deploying its lobbyists to build a bigger fence around Mickey Mouse (one that finally started to come down this year), the rest of the world became less gated and more collaborative, with billions of user-generated posts, pictures, and videos shared online, with the explosion of social media and the rise of collaborative online culture. What few people considered as they shared family photos and creative memes and blog posts and Wikipedia edits was whether the things they made and shared (both freely licensed and not), would become food for the algorithms to be trained and deployed.

Derivatives and the Ownership of Style

Separate from the legality of the machine learning algorithms and models, there is the question of their outputs. While computers can't yet make copyrighted works, they can make derivative works of existing artists' content, and those new works are capable of infringing on another artist's copyrights.

In the class-action litigation filed by the Joseph Saveri Law Firm on behalf of several artists, the plaintiffs argue that the process of diffusion creates derivative works, "because it is generated exclusively from a combination of the conditioning data and the latent images, all of which are copies of copyrighted images. It is, in short, a 21st-century collage tool." They argue that when the algorithm uses the "de-noising" process to generate images, it's actually filling in that noise with bits of images lifted from its training data. The plaintiffs contend that since these "new works" are the result of the algorithm's study and processing of their original art, those works are derivatives.

This is an important distinction in copyright. The U.S. copyright office describes derivative works this way:

"A derivative work is a work based on or derived from one or more already existing works. Common derivative works include translations, musical arrangements, motion picture versions of literary material or plays, art reproductions, abridgments, and condensations of preexisting works. Another common type of derivative work is a "new edition" of a preexisting work in which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work."

So, a translation of a novel from another language is a derivative. A drawing based on a photograph is a derivative, like Shepard Fairey's famous Obama poster, based on an Associated Press photo. In each instance, the source material is clearly implicated in the new work. This isn't always the case with the outputs of AI image generators. In addition, they have an impressive ability to create new works "in the style of" the artists they've studied. Many of the objections from authors and artists to the works of generative AI come from its ability to impersonate their

style or to recreate famous works.

Is it infringement to copy an artist's style? No, it probably isn't.

The Legal Artist has a great blog post on this point. But "you can't copyright style" is an overly simplified statement that merits a much more complicated explanation. To be fair, "style" can be an element of the evidence of infringement, but it can't be the *only* element. In *Dave Grossman Designs v. Bortin*, the court said that:

"The law of copyright is clear that only specific expressions of an idea may be copyrighted, that other parties may copy that idea, but that other parties may not copy that specific expression of the idea or portions thereof. For example, Picasso may be entitled to a copyright on his portrait of three women painted in his Cubist motif. Any artist, however, may paint a picture of any subject in the Cubist motif, including a portrait of three women, and not violate Picasso's copyright so long as the second artist does not substantially copy Picasso's specific expression of his idea."

Just last month, the Israeli Ministry of Justice issued a new opinion that evaluates whether copyrighted works can be used to train machine learning models. The short answer is yes, but their outputs are another thing altogether. The court makes a notable exception that its opinion applies only to the models, not to their outputs, which is to say, the process by which a new artistic rendering is generated may not infringe on the artists' works, but the rendering itself still could. This is another important distinction.

One other case worth watching is the *Andy Warhol Foundation for the Visual Arts v. Goldsmith* case, which the Supreme Court heard last year and will likely result in a ruling soon. The case turns on an argument of transformative use under the fair use doctrine—in this case, Andy Warhol's interpretations of a photographer's images of the musician Prince. The decision in the case may lead to some dramatic (or not so dramatic) refinement of what transformative use means in art.

There will not likely be one clear answer on whether any algorithmically generated work is a derivative; rather, it will depend on the facts of each individual case. But similar questions will continue to be asked about the outputs of Stable Diffusion, Midjourney, DALL-E, and whatever comes after them, such as: Does it matter that the tools can reproduce their training images if given the right prompts? Did the algorithm make its images from the originals, or did it just "look at them to learn from them"? The difference will be hugely important and will require a deep dive into the underlying technology. We're asking a lot of the courts to understand how these algorithms actually work. Honestly, that's pretty much the whole ball game, and we should expect millions of dollars in legal fees to be spent to determine the answer.

What is clear is that the plaintiffs need the derivative,

or collage, framing, because the alternative is that the generator is working “in the style of” the artists, after learning and studying their styles, which would be perfectly legal.

The Story of the Web Is Labor Theft

Even if the outputs of generative AI are not deemed to be derivative, no one disputes that the inputs that informed the machine learning algorithms originally belonged to artists and creators—and they still do, even after the machines have used them. Writing in *Wired*, Nick Vincent and Hanlin Li called generative AI the “largest theft of labor in history.” They argue that any uses or inspiration derived from a work deserves compensation.

By definition, theft requires you to deprive the property owner of their property. In this case, the original content is exactly where the owner left it. They still have it and can still sell, store, or even destroy it. But what if my use leaves your works intact but harms the value of your goods?

Creators make a case that these machine learning models will harm their livelihoods and devalue their work. For all but the most famous artists, they’re probably right. At the same time, these new tools have found ways to create unanticipated value by combining the works of millions of creators—not just art, but every post, tweet, comment, pic, and video. That new value might deserve to be shared with the creators whose work inspired it, but it’s not clear that their individual contributions have value beyond their role as part of the greater sum of creation.

So, is it labor theft if you find an unanticipated and unrealized value in something by combining it with other works and processing it? Conversely, is it fair to generate new wealth from the works of poor artists and then use your creation not only to generate profit but also to replace the artists with robots?

The story of the web is of companies benefiting from the unpaid labor of users, who often don’t know their content has value. And the truth about data is that most of it has little value until it’s combined with other data, processed, and analyzed. There’s an implicit trade-off of user labor and free web services in most of the web we use every day.

Furthermore, while a reading of fair use doctrine does consider economic impacts, it focuses narrowly on whether the infringing use denies the original creator the market for their specific works. It doesn’t care if the new works diminish the market for artist-created works overall. It also doesn’t care if the new works create unanticipated or previously unimagined value that is not shared with the original creators.

Many of these activities will likely be interpreted to be completely legal and permissible under current laws and precedents—part of the trade-off of copyright and public exceptions to “promote the Progress of Science and useful

Arts,” as described in Article I of the U.S. Constitution.

What is less clear is what shape this new synthetic economy will look like, and who, if anyone, will own the outputs of generative AI. This is where we should focus our attention, as it will define the future of creativity.

Can Androids Copyright Electric Sheep?

The potential for generative AI-based technology is enormous. Investors are clamoring to find ways to build impenetrable moats around their product ideas. In a recent note to investors, venture capital firm Andreessen Horowitz noted that: “The potential size of this market is hard to grasp—somewhere between *all software* and *all human endeavors*—so we expect many, many players and healthy competition at all levels of the stack.”

There’s little doubt these new tools will reshape economies, but who will benefit and who will be left out? One key area of concern is copyright, since it’s how creativity is controlled and monetized. Deciding who can create it and who will retain it will define the market and its winners and losers.

Today’s laws allow only humans to create a new copyright. So far, the U.S. Patent and Trademark Office has trod lightly to avoid declaring any wholly computer-generated work eligible for copyright. In the coming years, there will be enormous pressure on lawmakers to allow computer-generated works to be eligible for copyright. If there is a line in the sand to be drawn, it’s between humans and computers. Rather than allow computer art to devalue human works, one solution might be to elevate human art and decide that AI art should never have equal value.

Legal frameworks worldwide rely on laws written sometimes hundreds of years ago before computers even existed. Beyond those laws, there are moral and ethical questions that remain unanswered. What is the good we hope to create, and what are the harms that might result? What kind of competitive market do we want, and who, or what, will we be competing with?

Throughout history, artists have studied the works of masters, and even copied them, to hone their craft. Artists being inspired by or even copying the styles of others is not just normal, it’s how art evolves. Quoting musicians is an homage, not theft. A poem in the style of Jorge Luis Borges evokes a smile, not ire. Producing even a passable copy of a great work of art takes time and talent.

So many things in society have structures that are built upon the friction of work. Copying a book used to require a group of monks. Later, you had to own a printing press. And while every artist can remix, it is slow and laborious. Today’s rules were written and negotiated in a time that required sweat and time to produce labor. Current laws weren’t written to contemplate a world in which “the artist” was a wall of servers that trained on 5 billion works

and could produce new ones without effort in seconds, something that inherently has a destabilizing effect on the market that no single artist studying and working could ever have.

New works created by AI will always be a distillation of everything they have seen, but they are not (yet) capable of new thought or creativity or originality. They are, by the definition of their code and composition, always, at best, the analytical reduction of the masters (and miscreants) whose work they studied. The AI downcycles art and content. It has no original mind.

That absence of a capacity for true originality, coupled with the public's enormous contribution to the training of these tools, makes a compelling case for an accommodation that benefits artists and the public. With that in mind, I'll propose the following: New works created with generative AI should not be eligible for copyright. Yes, that's a complicated rule to enforce, but the alternative is equally untenable. This is the collective bargain we should strike with the billions of writers, artists, posters, tweeters, commenters, and photographers whose work unwittingly and unwillingly informs the algorithms: No computer will ever make new copyright, especially if it does so from the work of humans.

That doesn't mean that those works would have no value, or that they could not be sold. But it does mean that new AI-generated works won't ever get the 100-plus years of monopoly protection that a human now enjoys when creating an original work. It means that everything AI makes would immediately enter the public domain and be available to every other creator to use, as they wish, in perpetuity and without permission.

If it sounds unfair, I'll remind you that it's exactly what the creators of the machine learning models did when they scraped the complete works of humanity to train their generative AI algorithms. They paid nothing for their raw materials.

I'll add a warning: If we allow computers to make new copyrights, we should expect an AI-generated version of every melody and chord change possible to be authored and copyrighted, followed immediately by automated lawsuits to defend them. Every new hit will be followed immediately by a spate of lawsuits showing prior art. It could be the end of human creativity as we know it, and the rise of the AI copyright troll.

National Security Implications

Existing industries, leaders, and legislators are likely ill equipped to decide how to respond to the incredible pressure that will be put on them in the coming months and years. This is about much more than art and ideas.

The risks that governments must grapple with will extend beyond the commercial and will no doubt have

international implications as well. Today's debates around AI tools like ChatGPT are so focused on college essays and impersonating artists, they've yet to consider how the successful deployment of generative AI tools will force every country into a new arms race: creating an opportunity for advantage for nations that develop and exploit (and likely restrict or sell access to) AI, but also a looming national security risk for those that do not.

Beyond the veil of U.S. copyright, there is a complex web of international treaties and laws that govern how copyright is treated around the world. Sovereign states rely on those treaties—and negotiate new trade frameworks within them—to protect and promote their economic interests worldwide. These laws govern everything from feature films to pharmaceuticals and are the subject of constant negotiation within other multinational agreements. There are varying terms, rights, exceptions, and obligations, all existing in a complex reciprocal framework that ensures that an artist in Australia, for example, is able to assert their rights if they are infringed upon in Canada. They have their own arbitration and mediation center at the World Intellectual Property Organization to hear complaints. If copyright laws were bent to allow algorithms to become authors, it would upend one of the foundational principles of global intellectual property and just might unleash a torrent of new issues so overwhelming that it could spell the end of international treaties like the Berne Convention, already creaking under the weight of the internet.

The potential for these tools to reshuffle the deck of have and have not nations remains to be seen, but it will no doubt create new alliances and new rivalries (while also deepening existing ones). Perhaps more urgent than the end of global intellectual property treaties is the very real risk posed to nations that may soon be subject to a deluge of convincing fake content, limitless pools of falsified recordings (Microsoft claims it can make convincing imitations from just a few seconds of audio), and video able to impersonate public officials or fictionalize events from untraceable state-sponsored and freelance bad actors, making attribution difficult, if not impossible. The potential for high-quality, low-cost disinformation campaigns was already high; generative AI makes it a near certainty.

It's true that copyright and intellectual property are just one piece of the global economy, but there's enormous risk in ignoring what might happen if that one vital element were destabilized at a global scale. We can choose to ignore the difference between human originality and AI-powered distillation of creativity, but then we also choose to accept the harm it will inflict on creators, and the loss to society of their absent creativity—we're choosing to trade technological innovation over a subset of human ingenuity and originality. But we will also have to accept the dramatic consequences of undermining the international structures that support the creation of intellectual property. Perhaps the right trade-off is to accept the innovation but acknowledge that its outputs do not, and should not, earn the same protections as the original creations of humanity.

Conclusion

At this point, there's no going back. If we didn't want our art and images to train AI, the time to act was 10 years ago, before the developers of generative AI systems started scraping and scanning artists' works to train the algorithms.

The idea of artist compensation for the use of their works is an unfortunate fallacy. Individual human endeavor does not have an individual value once it is dissolved into the algorithm; the value is, at best, collective and would be, in the database of 5 billion works, miniscule and impossible to assign to any one human. The explosion of online content has also driven the reduction in the value of all human art, where anyone can now access the vast majority of recorded music for just \$9.99 a month. Even if there is money to be had, nothing will ever replace the revenue that will undoubtedly be lost by artists when mainstream creative tools replace their labor.

No doubt someone will evoke Elinor Ostrom's work on the tragedy of the commons concept, which brings us back to the notion of rival and nonrival goods. Ostrom won the Nobel Prize for her book "Governing the Commons," an analysis of governance of common resources that are exploited and ultimately mismanaged into extinction. But the metaphor here is more complicated because, in our story, the "commons" remains unharmed and available to everyone, but its exploitation has potentially eliminated the need for the "farmers" altogether.

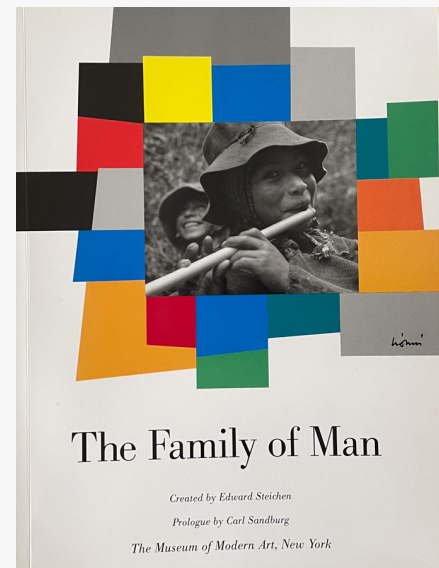
One unanswered question is where do we want human art to live in our society? We need to figure out how to resource human art in ways that acknowledge it as a public good and a humane endeavor worth preserving and protecting. Otherwise, art will have to compete economically with tireless machines capable of endless impersonation. If history has taught us anything, it's that commerce is lousy at deciding what constitutes great art, pose new threats to national security, and force society to redefine the nature of trust and creativity itself.

Ryan Merkley is Managing Director of Aspen Digital, a program of the Aspen Institute focused on technology, media, and society. He previously served five years as Chief Executive Officer at Creative Commons, was Chief of Staff at the Wikimedia Foundation, and was Chief Operating Officer of the Mozilla Foundation. He is an affiliate of the Harvard Berkman Klein Center for Internet and Society and the Chair of the Flickr Foundation.



For More Information...

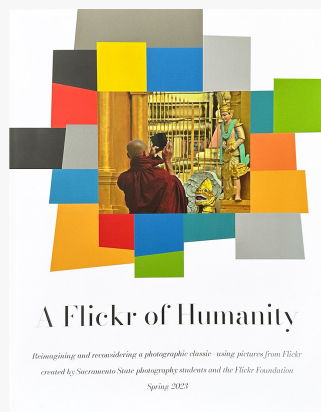
This publication is part of the Flickr of Humanity project in the New Curators program at the Flickr Foundation. It is part of our ongoing reinhabitation of the classic 1955 photography exhibition, The Family of Man which we position as a container for contemporary exploration of curation and creativity.



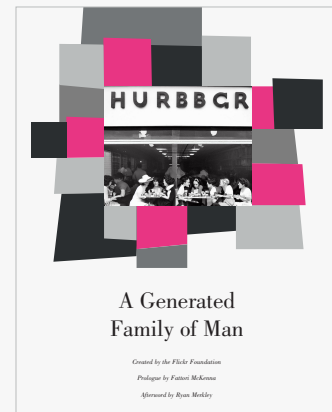
We've made three versions so far:



A Flickr of Humanity V1 was created by the students in the photography program at Sacramento State University, via Foundation research partner, Eliza Gregory. It gathered photographs from 160 photographers all over the world together for the first time.



A Flickr of Humanity V2 was the Flickr Foundation's enhancement of the first version, with particular attention paid to the selection of Creative Commons-licensed photography from Flickr.com, and the implementation of an index and gold-standard attribution.



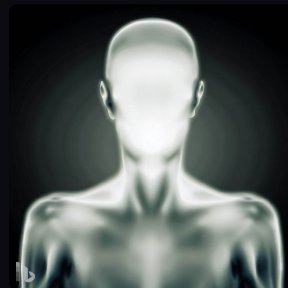
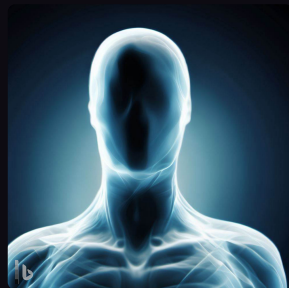
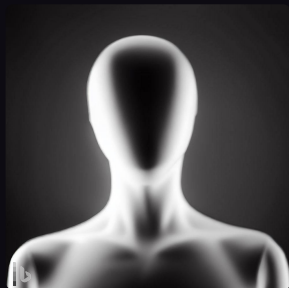
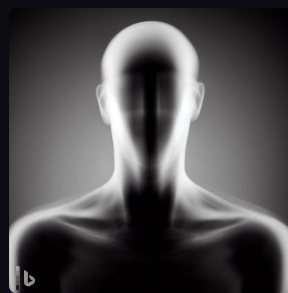
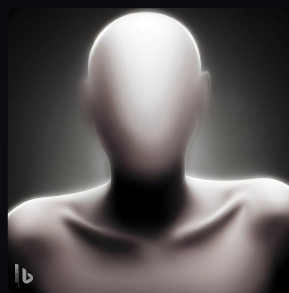
A Generated Family of Man is our first divergence from using Flickr photos as source. The simple question "could AI generate a copy of the 1955 classic" blossomed into a summer exploration for Juwon Jung and Maya Osaka, who joined us as interns from Goldsmiths BA Design course.



Find out more:
flickr.org/programs

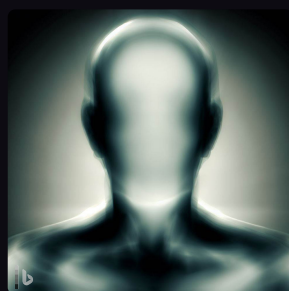
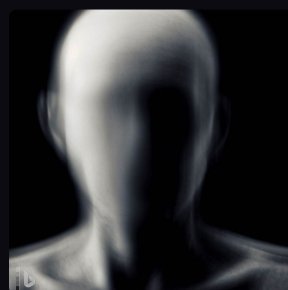
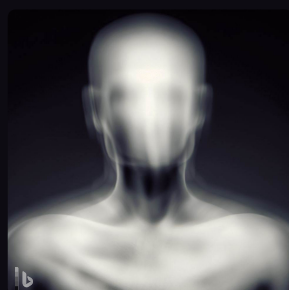
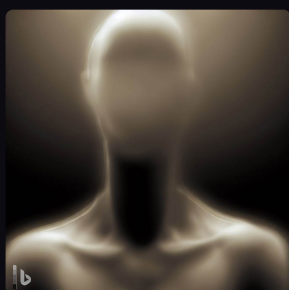
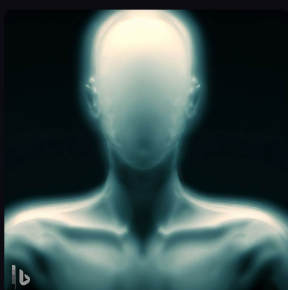


If you enjoyed this book, please support the Flickr Foundation!
[flickr.org/donate](https://www.flickr.org/donate)



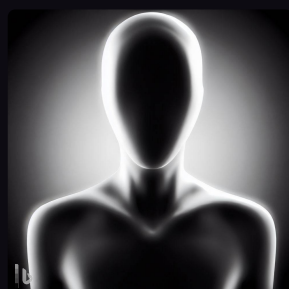
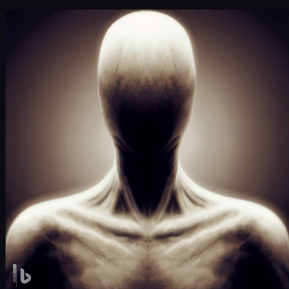
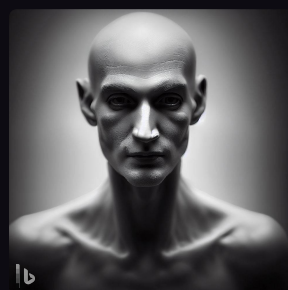
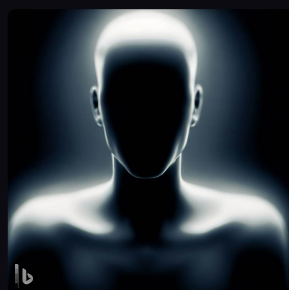
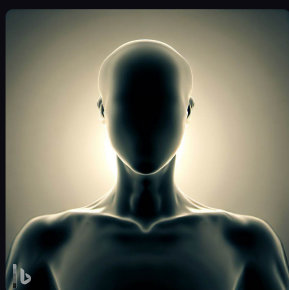
human photo

human photo



human photo

human photo



human photo

human photo



flickr.org