

**creative algorithms**





**curating**  
**composing**

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Created by: Spotify • 30 songs, 1 hr 52 min

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SONG	ARTIST	ALBUM	DATE	DURATION
+ Town On the Hill	Amongst Ourselves	Fragments	a day ago	4:39
+ The Sound of Silence	Leah Kardos	Pairs	a day ago	2:23
+ Tension (Fusion)	Howard Young	Orchestral Anarchy: Symphonic ...	a day ago	1:58
+ Sussurations	I Am Dive	Music For Silent Running	a day ago	3:11
+ Goodnight Waves	Sonny Side Up	Goodnight Waves	a day ago	3:28
+ Hospital Piano	Gabriel & Dresden	The Only Road	a day ago	2:42
+ Claudi	Laurence Guy	Saw You for the First Time	a day ago	2:54
+ Sussurations	Bill Ferngren	In Our Deep Sleep	a day ago	2:42

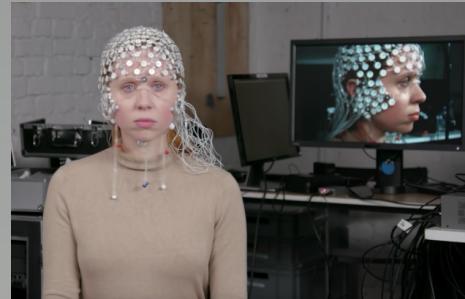
**MAY 10, 2019**

Electronic musician Holly Herndon releases a pop album, *PROTO*, using an AI named Spawn.

**» You Will Love the Music Written by Robots**



"We started training it with my voice and [my husband] Mat's voice, both of which are in the hundreds of megabytes of Spawn's training info. I made a data set where I sang random phrases within a comfortable range for me, like:



JLIN

“Godmother”

# Holly Herndon

Trains and collaborates with Spawn  
in production of Proto (2019)



<https://www.youtube.com/watch?v=sc9OjL6Mjqo>

# “this is not a person”

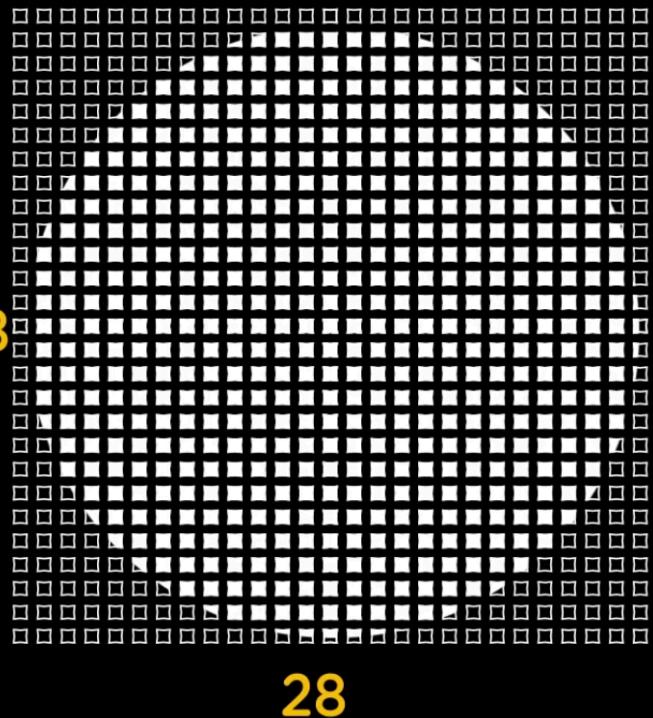


<https://github.com/lucidrains/stylegan2-pytorch>

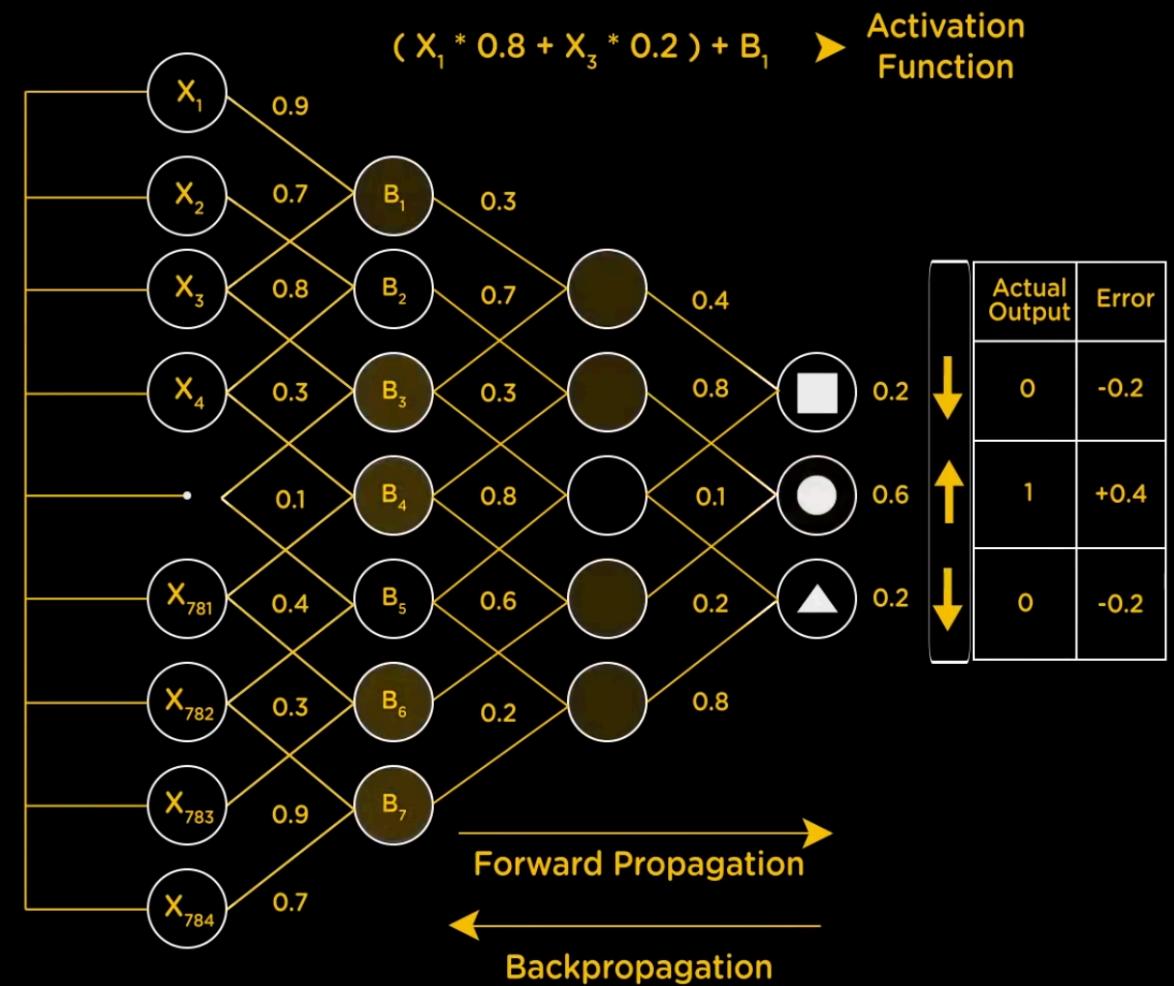
<https://www.thispersondoesnotexist.com/>

# Neural

28

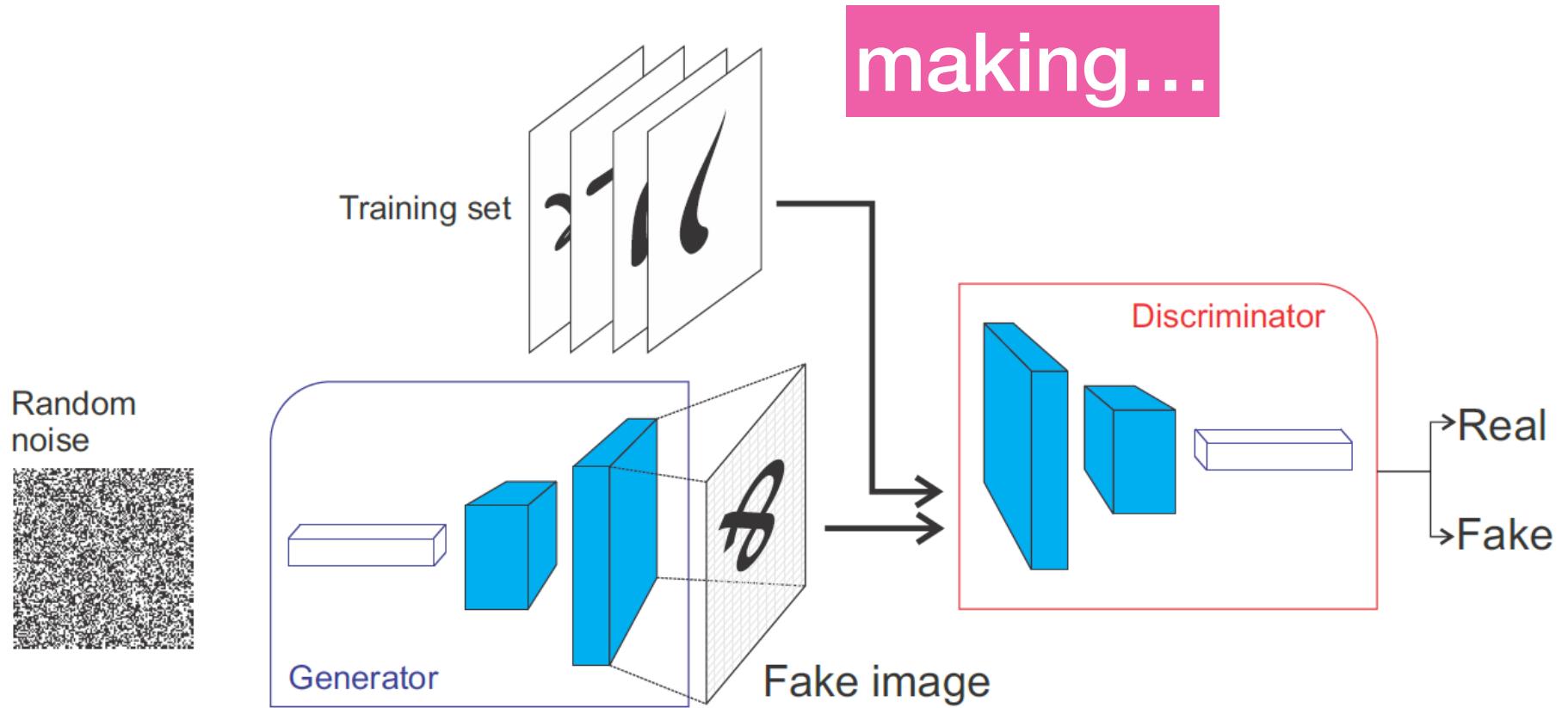


$28 \times 28 = 784$  Pixels



# Network

# Generative Adversarial Network



art?

fake news?

electric sheep?

# Obvious



Robbie Barrat

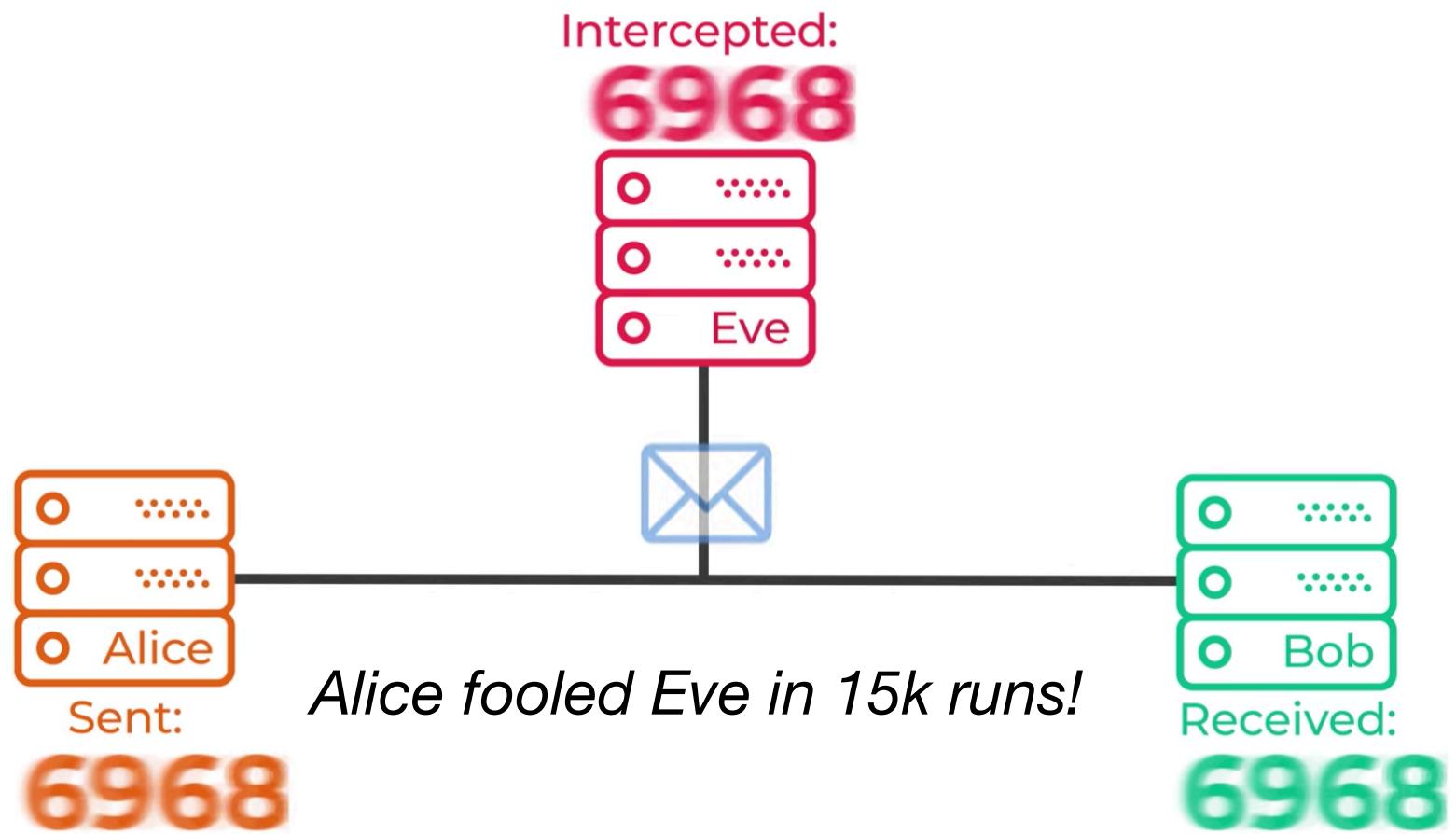
@videodrome

Artist working with new m...

3 French students  
+ 1 borrowed image set  
+ 1 borrowed algorithm = ???



$$\min_G \max_D \mathbb{E}_x[\log D(x)] + \mathbb{E}_z[\log(1 - D(G(z)))]$$

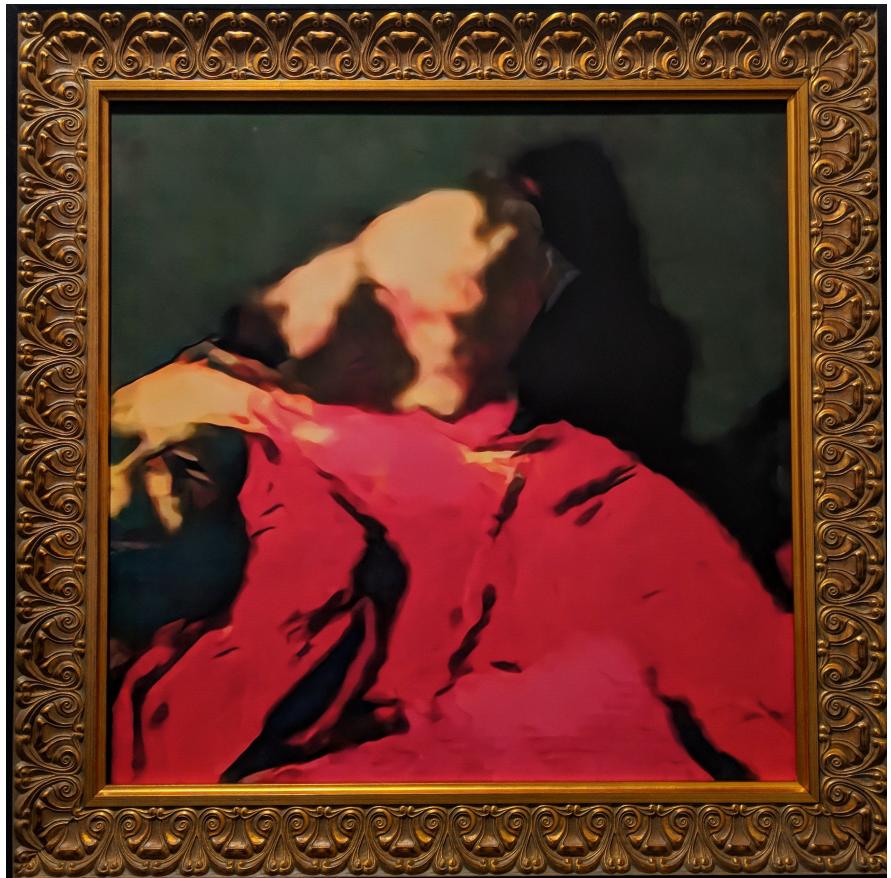


Ian Goodfellow introduced GANs in 2014 as a computationally thrifty method of machine learning. Large data sets are not necessary, and they do not require human input to learn.

**"Faceless Portraits Transcending Time"**  
HG Contemporary in Chelsea, Feb/March 2019



**"Faceless Portrait of a Merchant"**



**"Faceless Portrait of a Pope"**



# **Dr. Ahmed Elgammal & AICAN**

Art and Artificial Intelligence Lab @ Rutgers University  
Artrendex, Founder

Stick figures  
+  
Pornography



Mario Klingermann  
“The Butcher’s Son”

**chaining GANs**



Memories of Passersby I (2018) is a machine installation that uses neural networks to generate an infinite stream of portraits.

Each portrait is unique, and is created in real time as the machine interprets its own output.

**mario klinger mann**

# pixar



mesh data algorithm



# encoding style

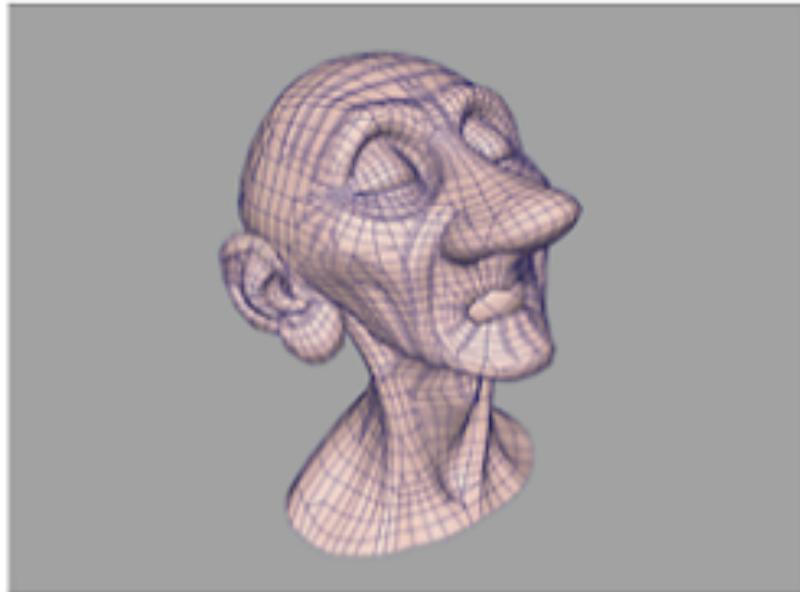
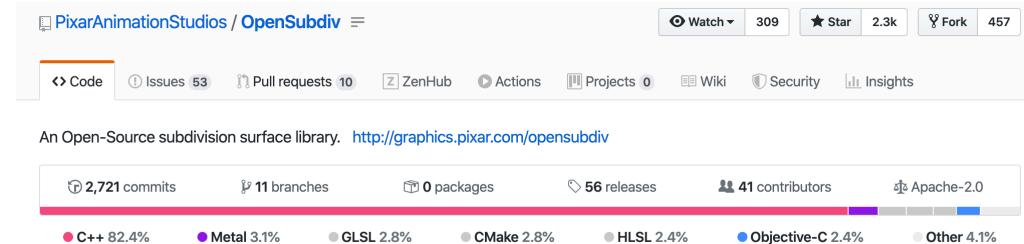


Figure 2: The control mesh for Geri's head, created by digitizing a full-scale model sculpted out of clay.

animated. As a case in point, considerable manual effort was required to hide the seams in the face of Woody, a principal character in *Toy Story*.

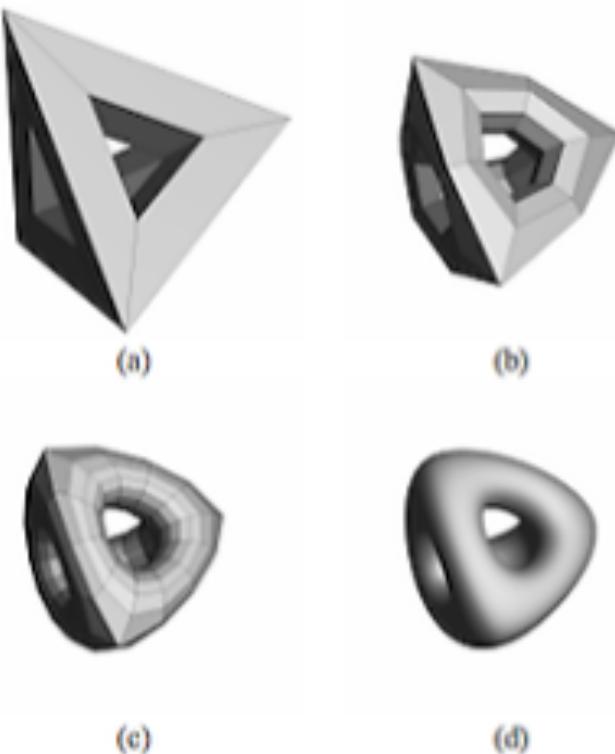
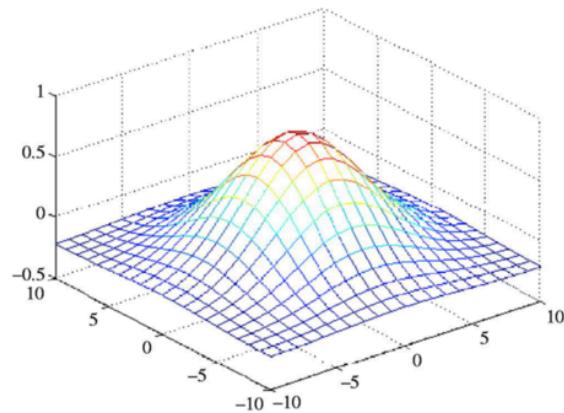
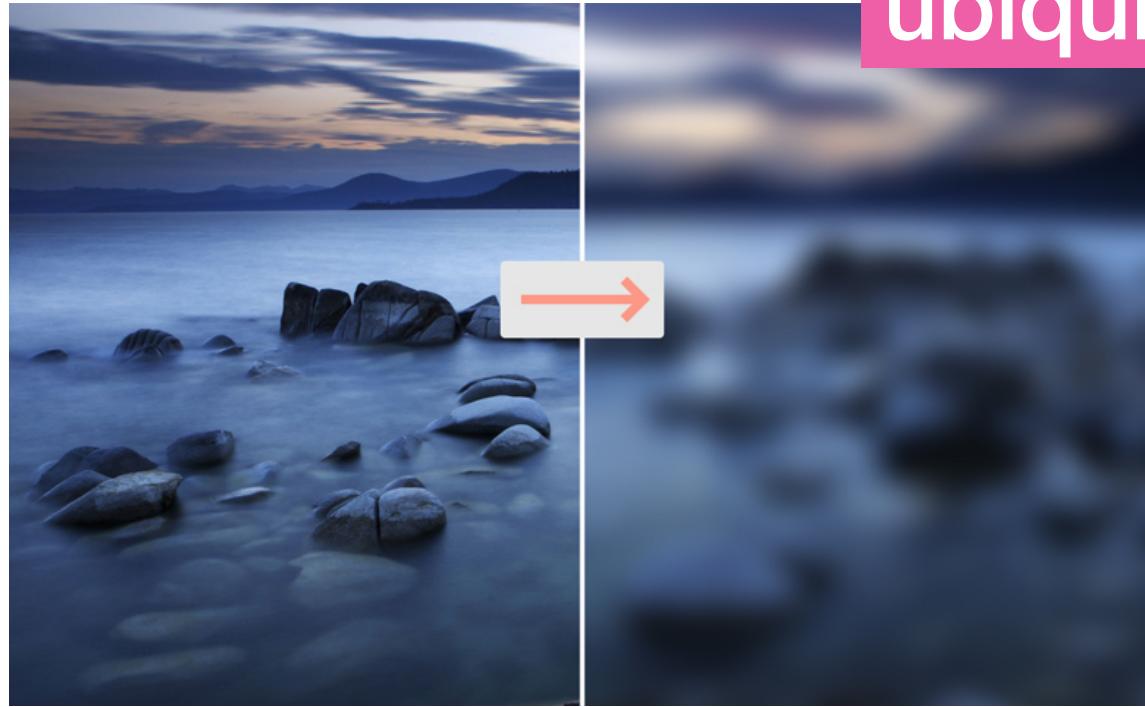


Figure 3: Recursive subdivision of a topologically complicated mesh: (a) the control mesh; (b) after one subdivision step; (c) after two subdivision steps; (d) the limit surface.



# ubiquitous blur



$$G(x, y) = \frac{1}{2\pi\sigma^2} e^{-\frac{x^2+y^2}{2\sigma^2}}$$

This is where the Gaussian equation comes in, using it we can find out how much weight we want each pixel to receive and pixels receive less weight depending on its distance to the center pixel.

# handmade algorithms

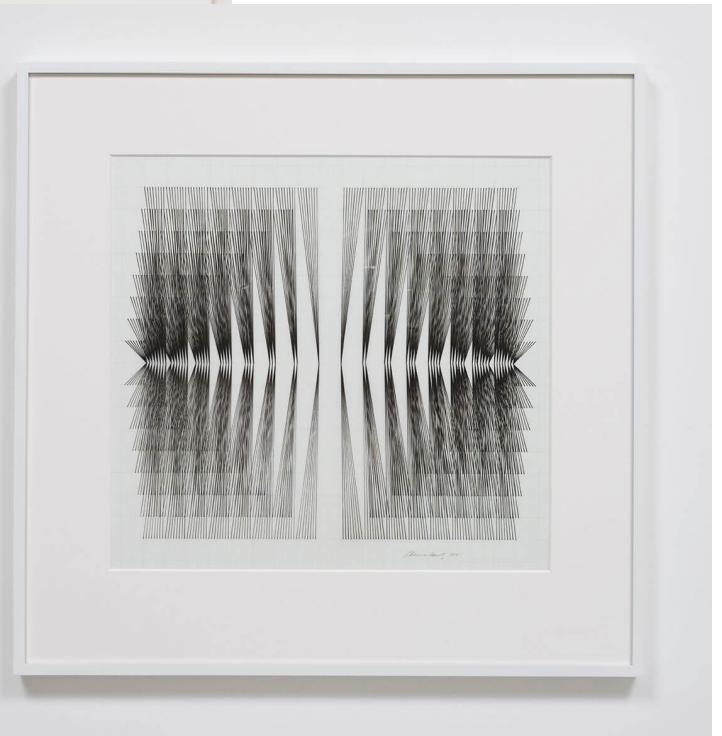
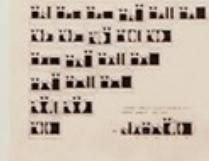
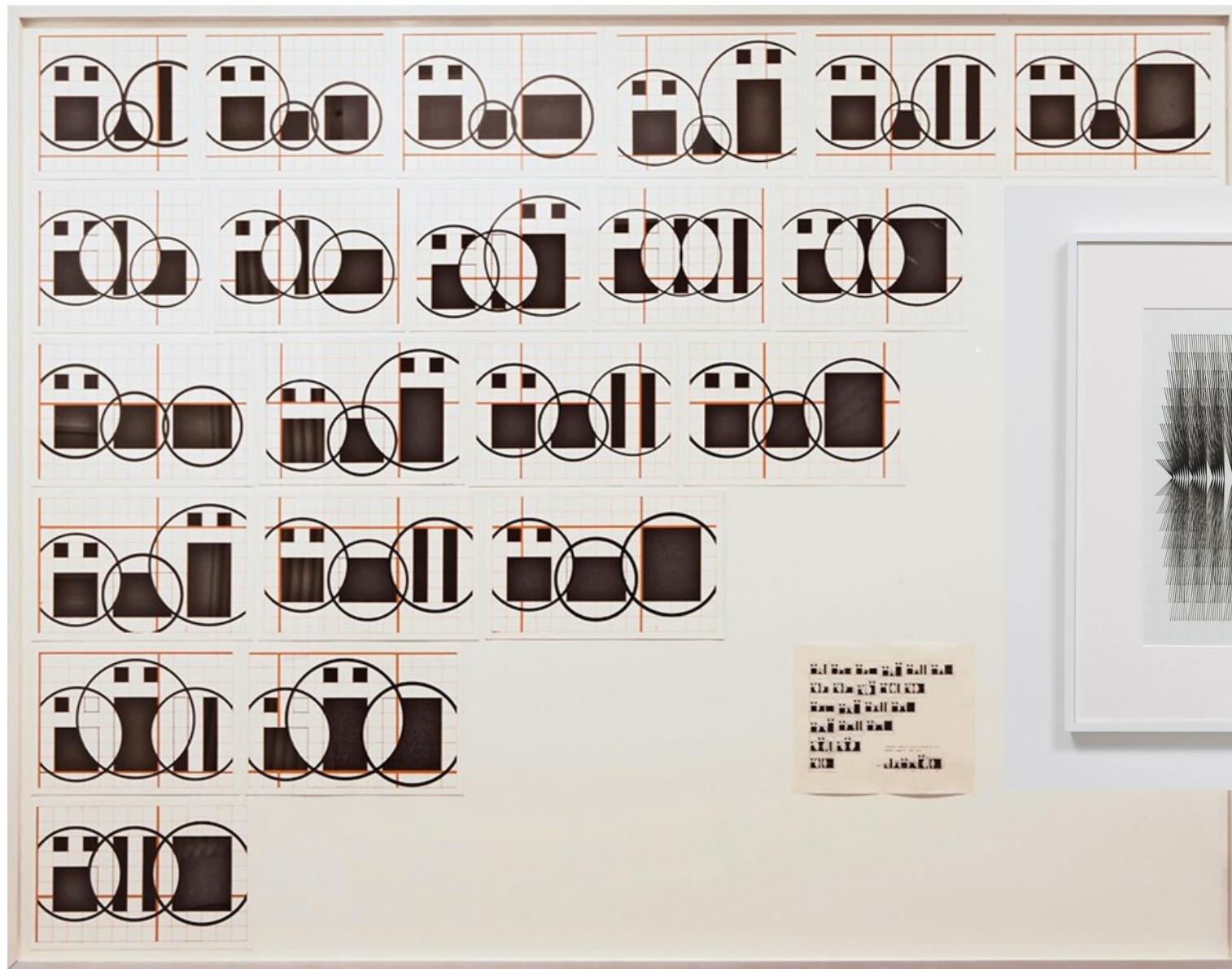
"If chance plays out long enough it will become structure."

- Channa Horwitz



'Sonakinatography, Composition III', with music by Sarah Angliss and choreography by Ellen Davis, 2016

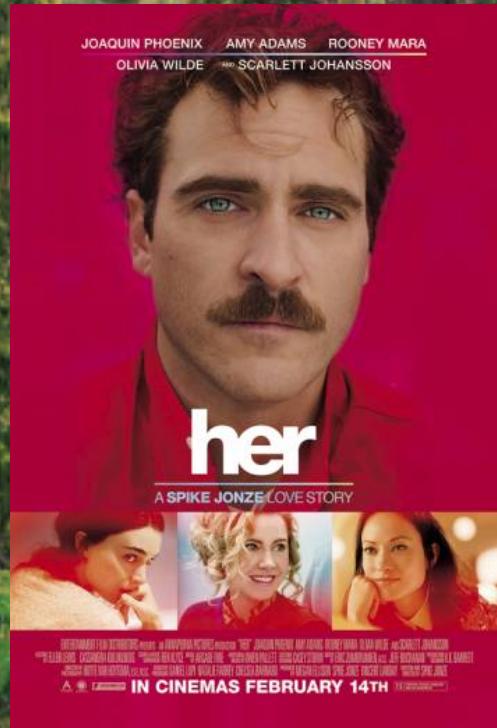
<https://vimeo.com/172606841>

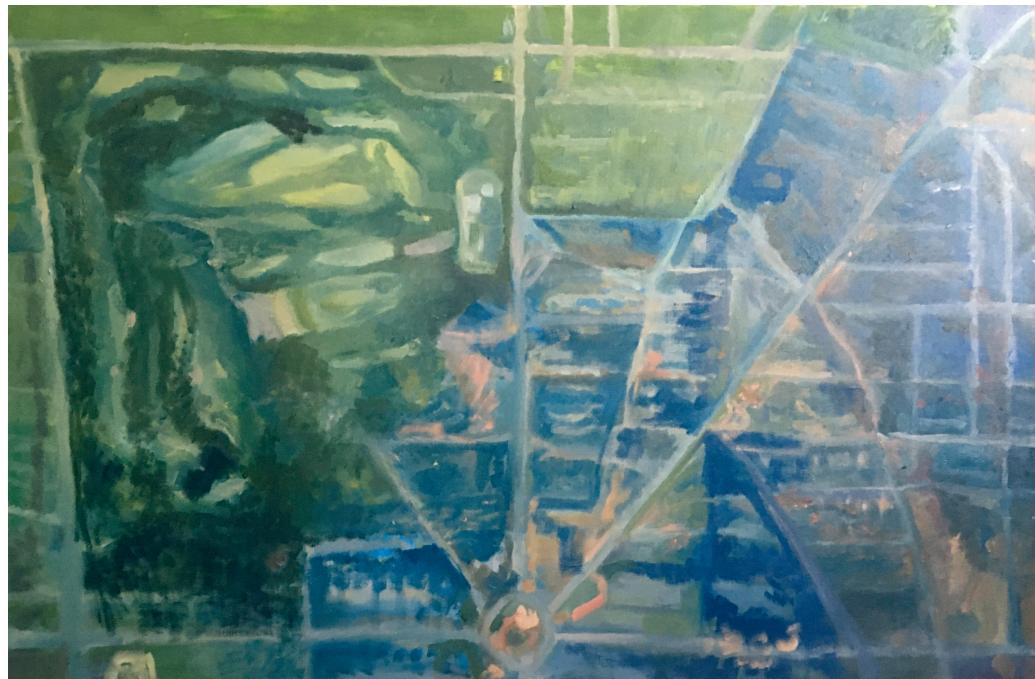
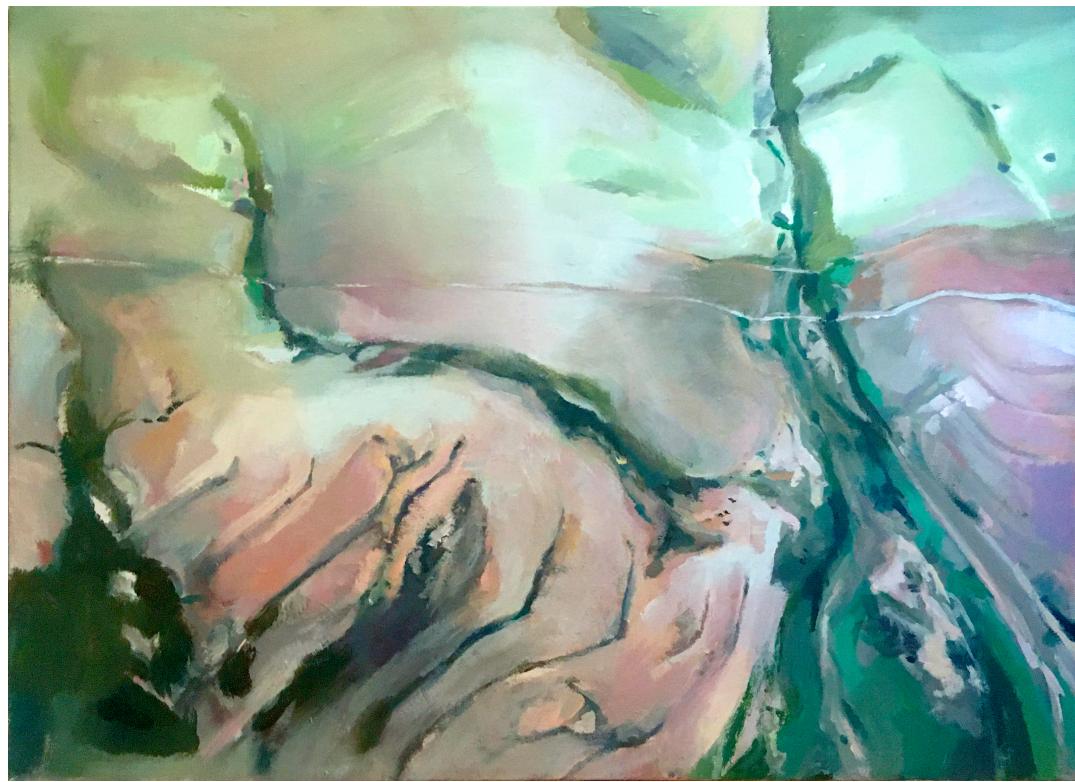


**"As an artist I experience freedom through limitation and structure. It would appear that limitation and structure are dichotomies to freedom, but through experience I have found them to be synonymous and the basis of freedom."**

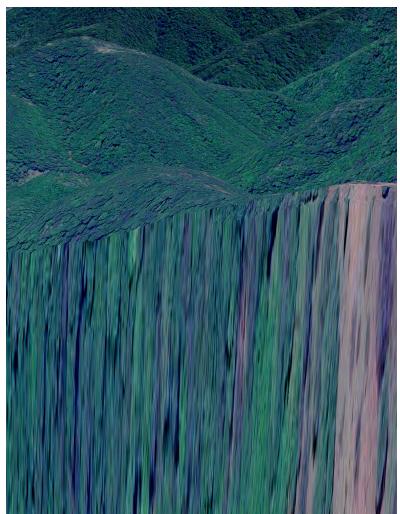
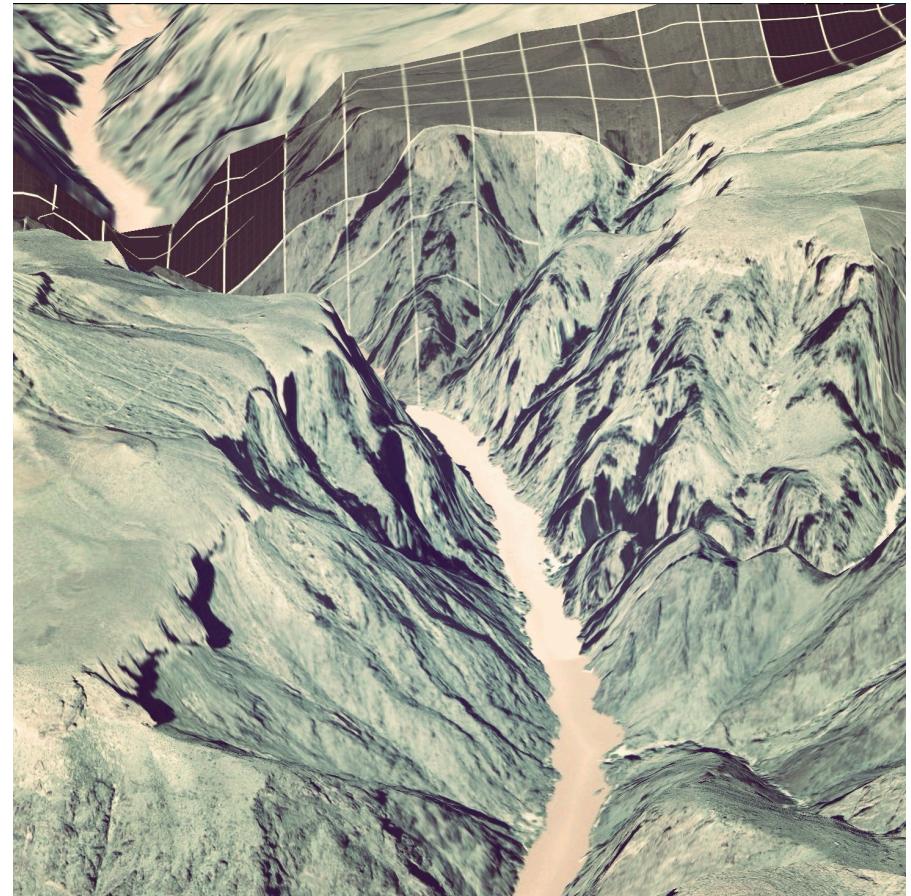


fear, naturally





# do we like this?



# why do we like this?

<https://www.flickr.com/photos/pedernorrby/sets/72157632277119513/>



Peder Norrby

+ Follow

Lahijan, Northern Iran

iOS Maps glitch

thank you!

