

Materiality of the Virtual: Digital Technology and the Climate Crisis

Hunter Vaughan



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HOLLYWOOD'S DIRTIEST SECRET

The Hidden Environmental
Costs of the Movies

HUNTER VAUGHAN

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Intellect Journals

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Hunter Vaughan



University of Colorado **Boulder**

WHERE FILM MEETS PHILOSOPHY



Godard, Resnais,
and Experiments in
Cinematic Thinking

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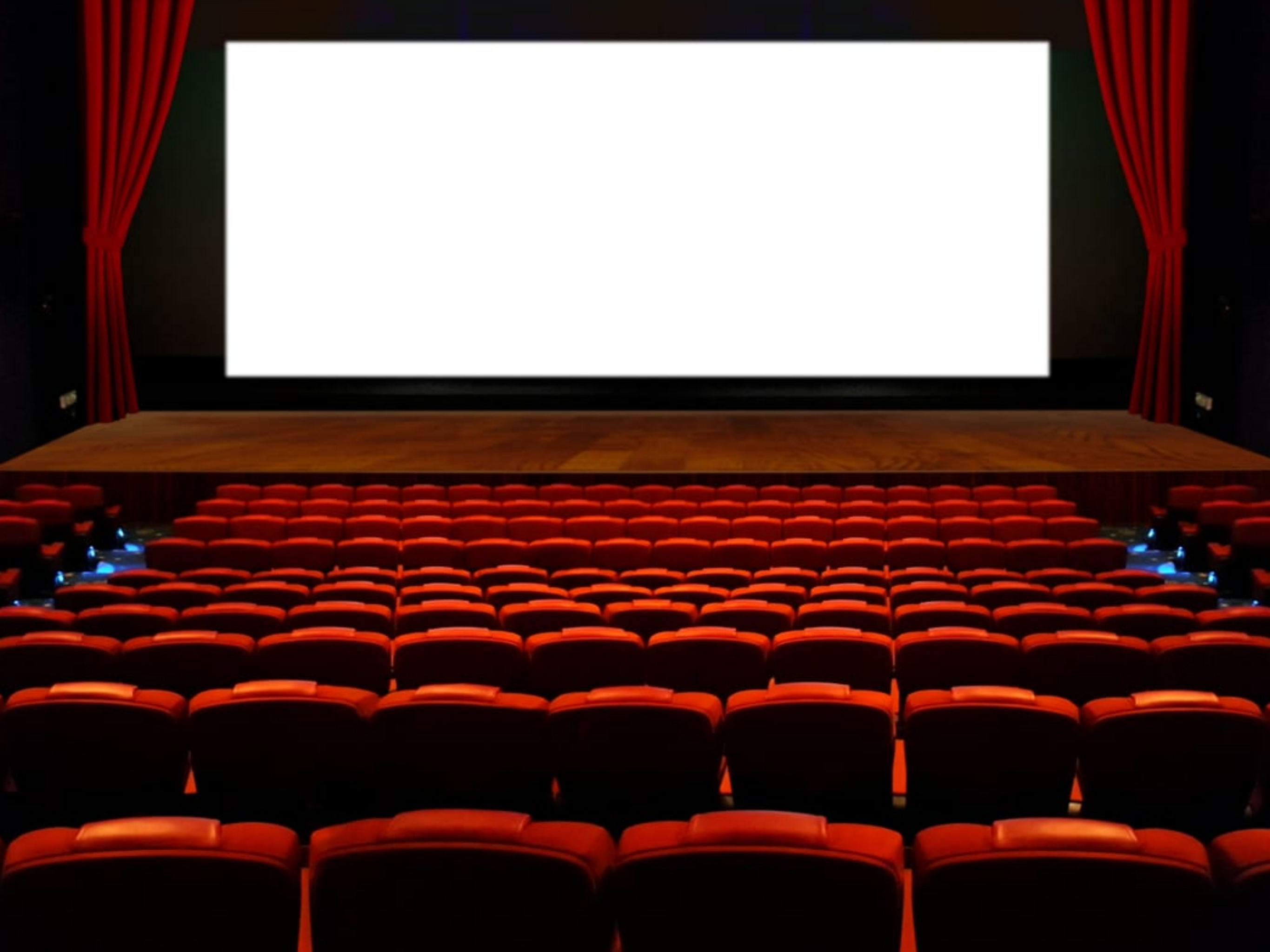




Avatar (dir. James Cameron, 2009)



IS THE DIGITAL REVOLUTION
a
GREEN REVOLUTION?









Convergence Culture

A photograph of a crowded outdoor event, possibly a festival or market, where many people are using their smartphones. The scene is filled with people of various ages and ethnicities. In the foreground, a man in a black t-shirt is looking at his phone, and another man in a black t-shirt is also looking at his phone. In the background, a man in a green shirt with a backpack is looking at his phone, and a woman in a plaid shirt is also looking at her phone. The text "SERVER SCREEN CULTURE" is overlaid on the right side of the image in a large, white, serif font.

SERVER SCREEN CULTURE



SERVER SCREEN CULTURE





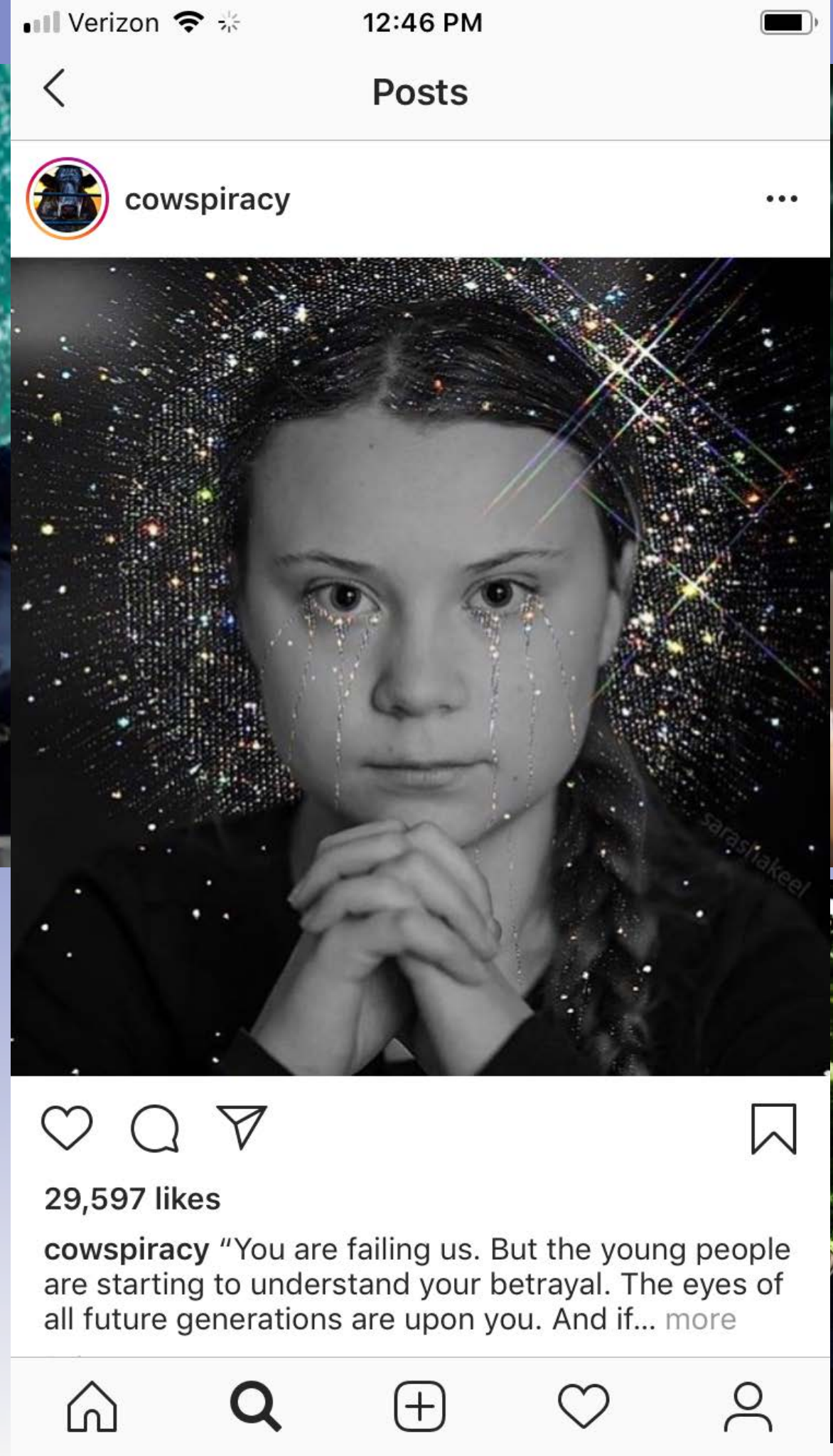
SERVER SCREEN CULTURE



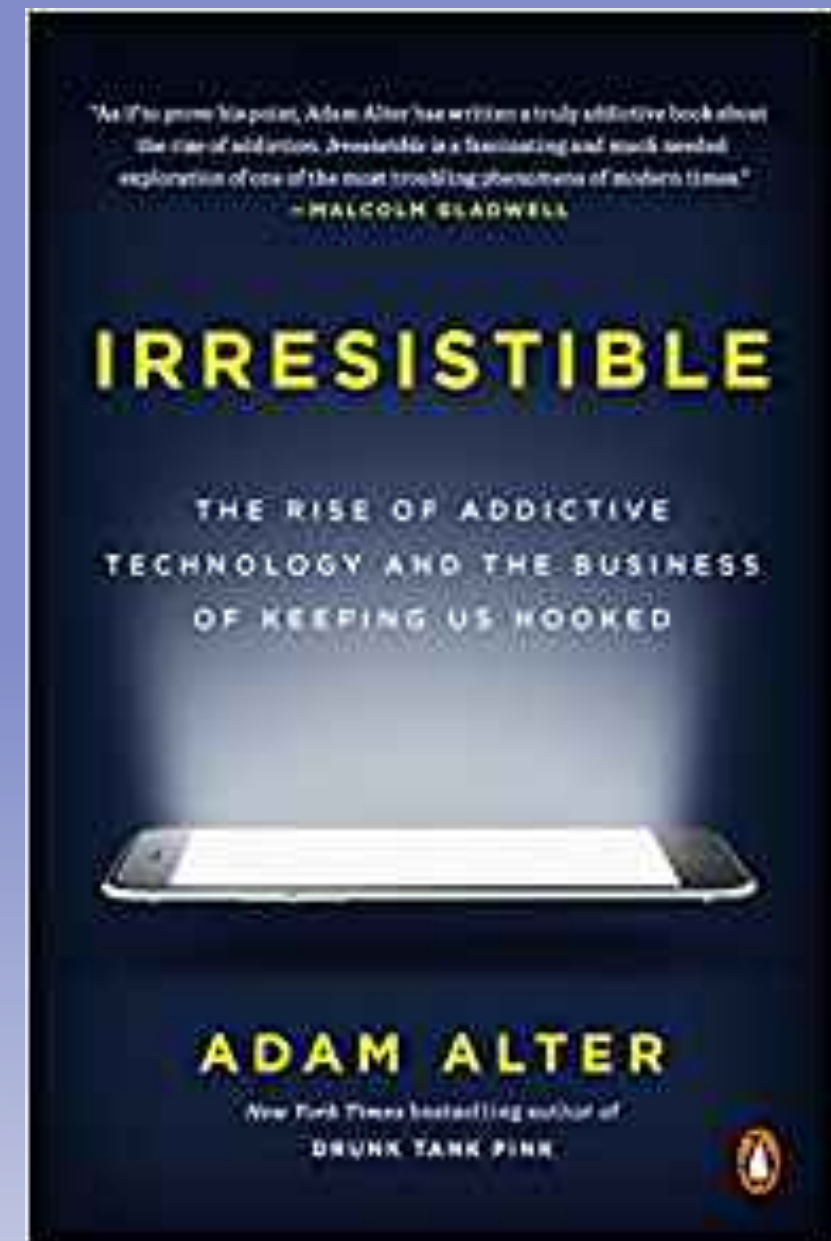
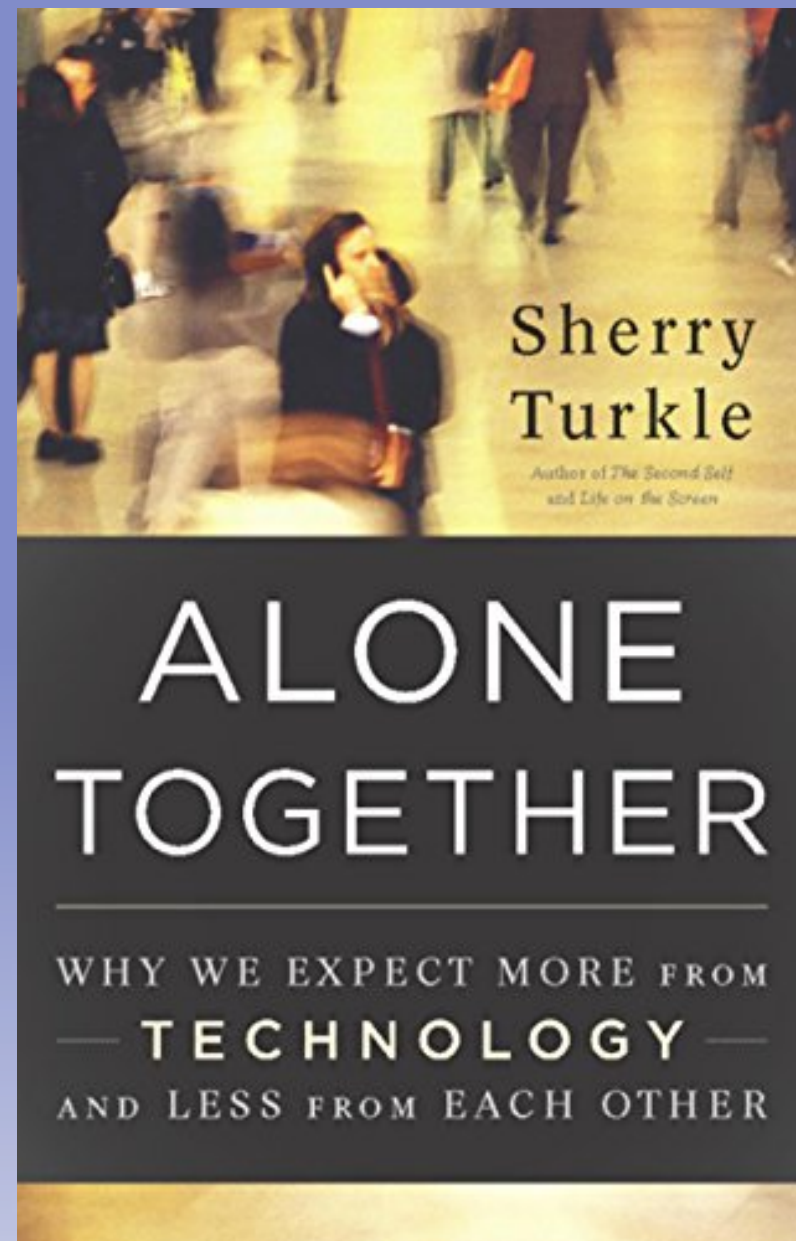
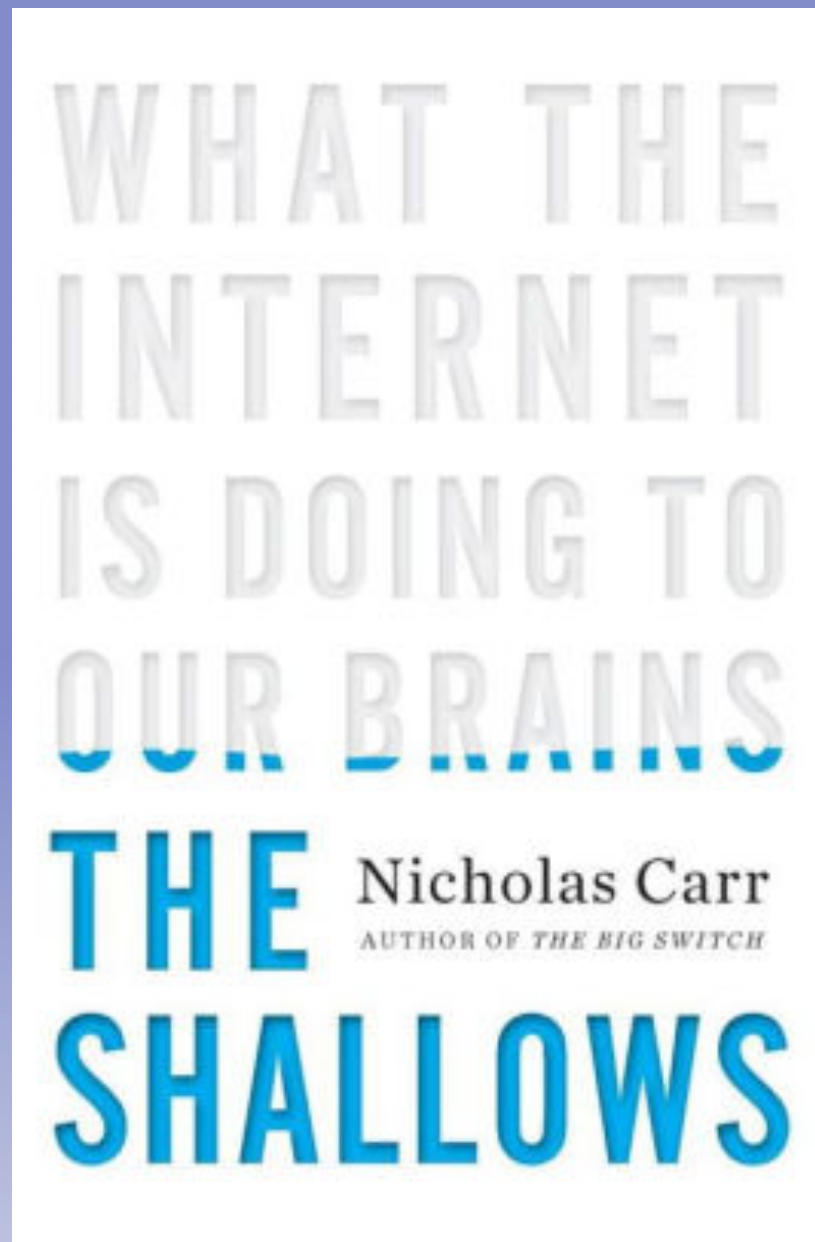


SERVER SCREEN CULTURE

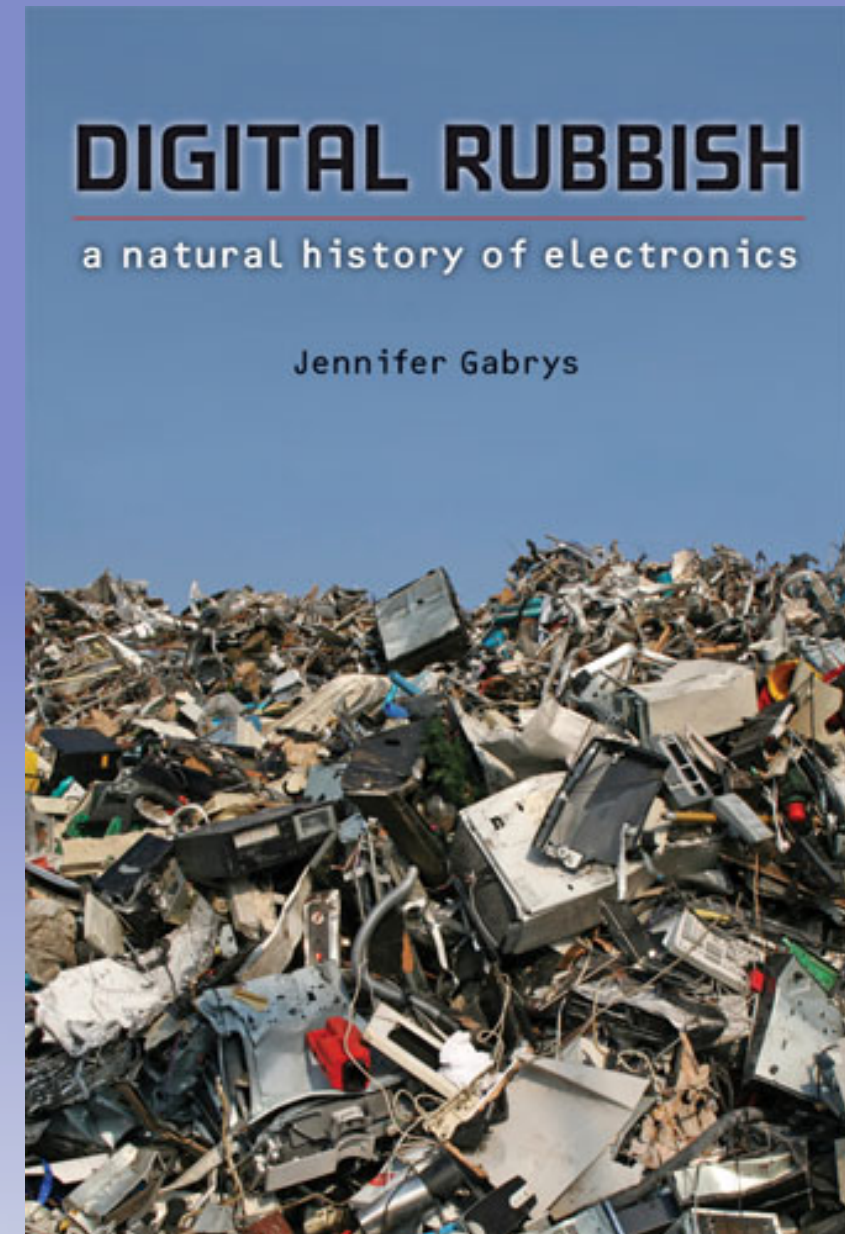
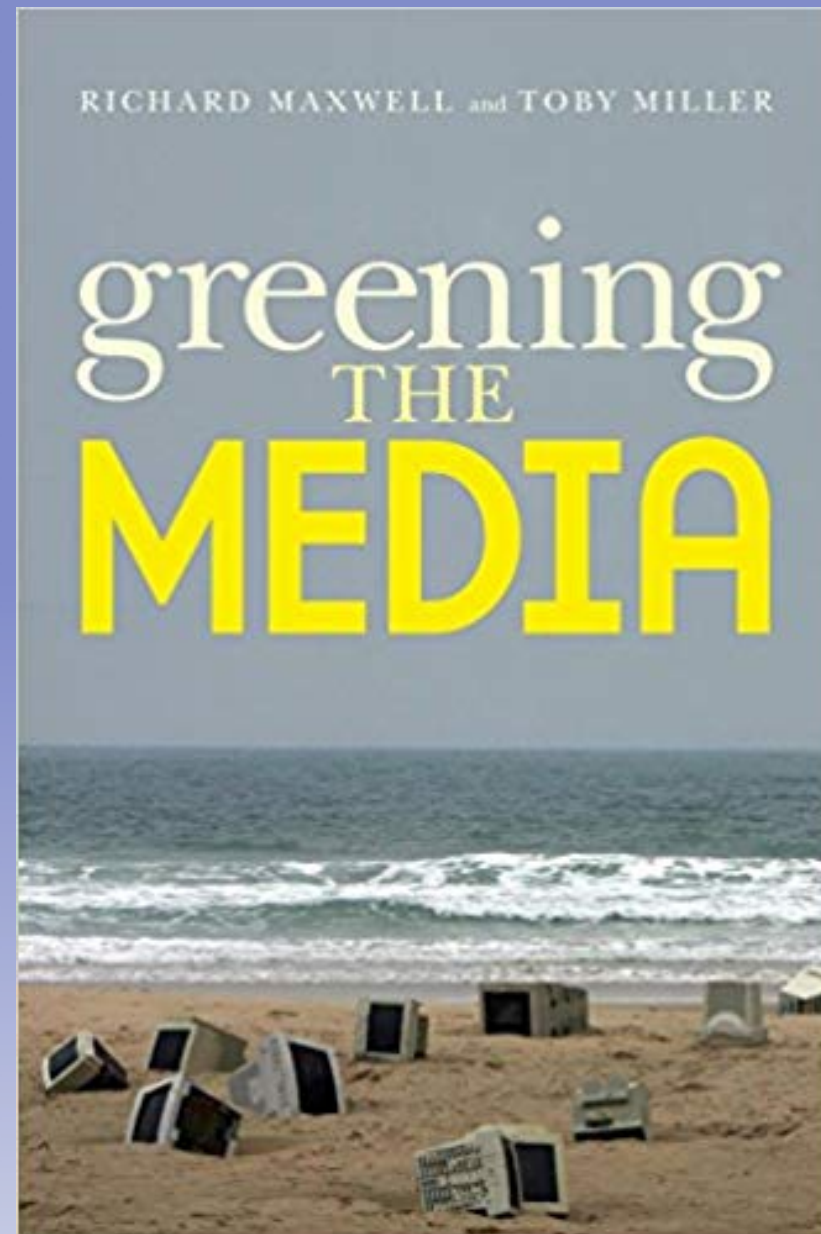
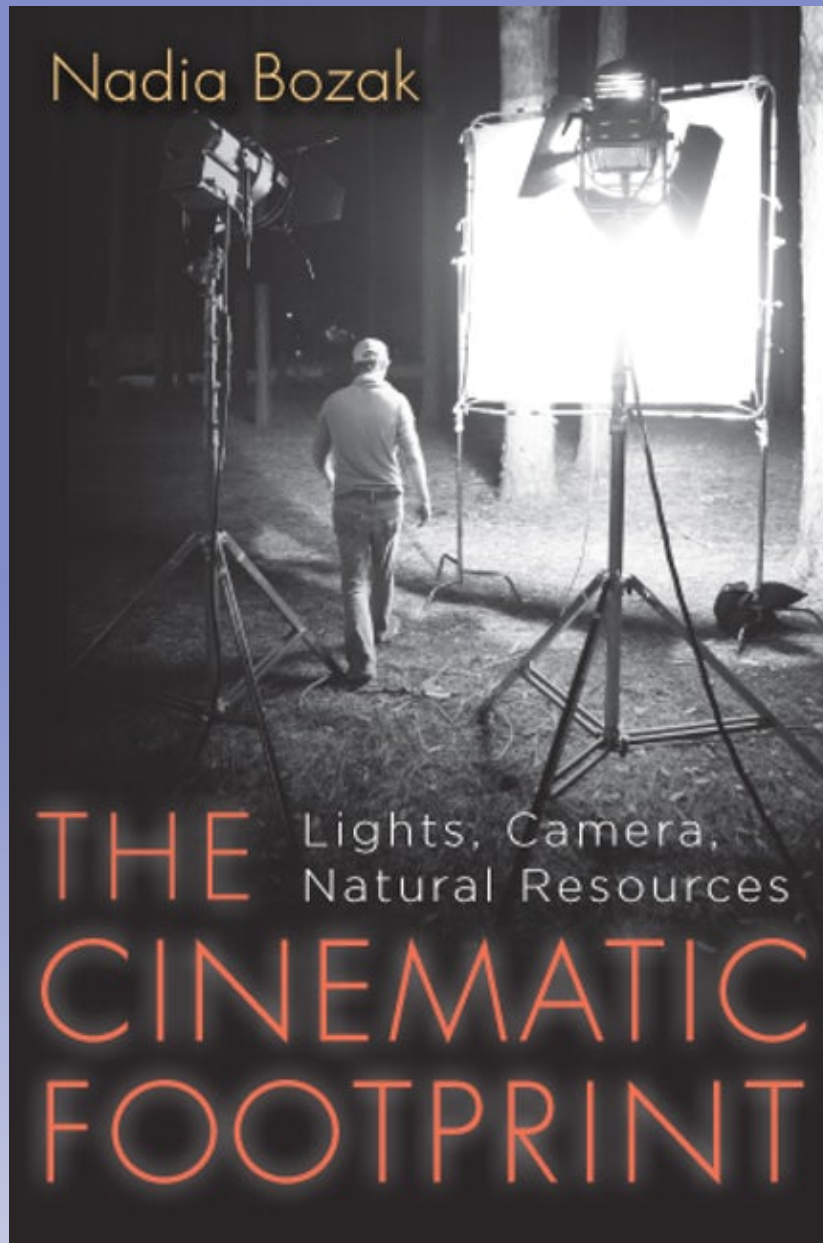




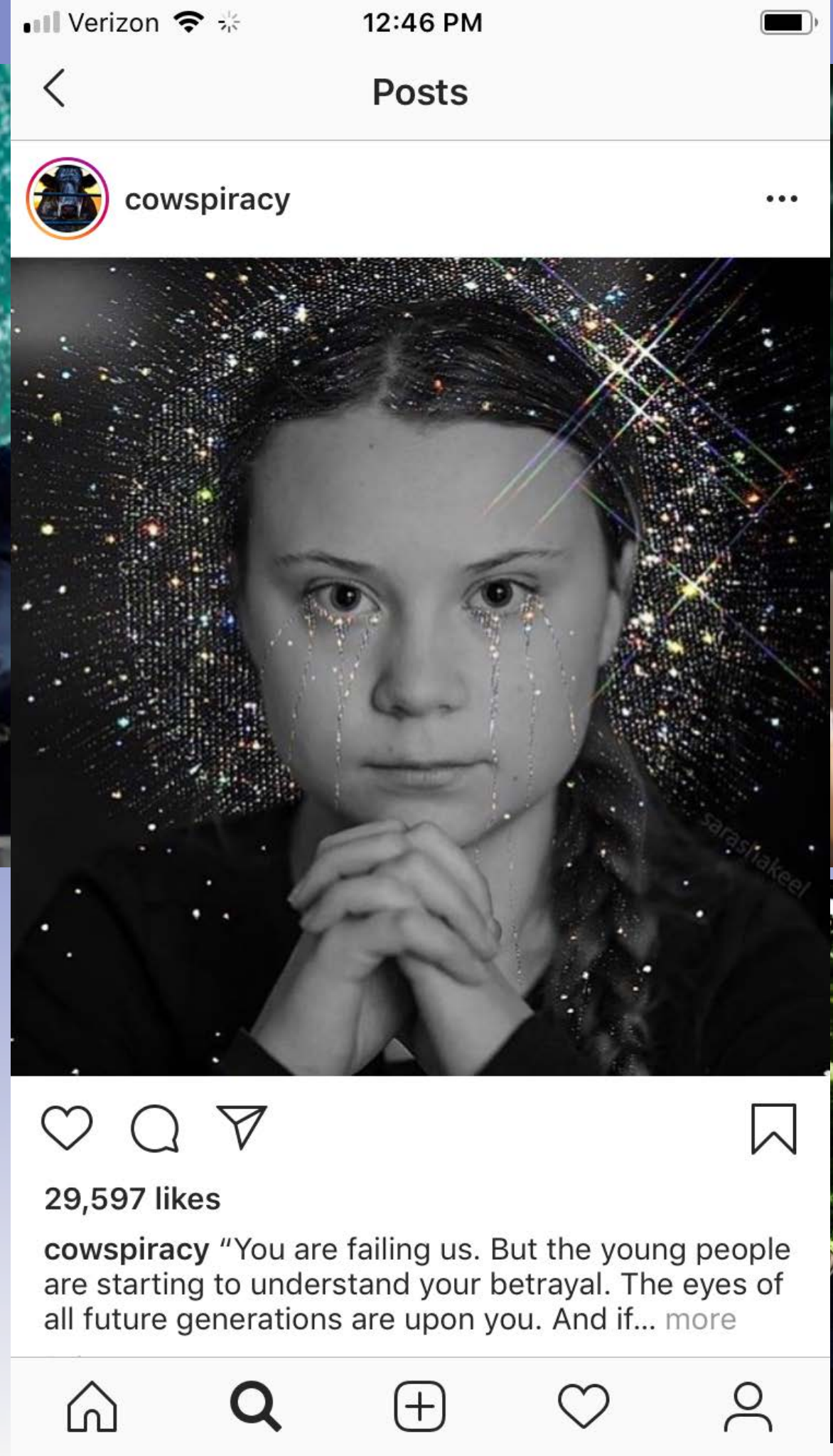
SERVER
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CULTURE



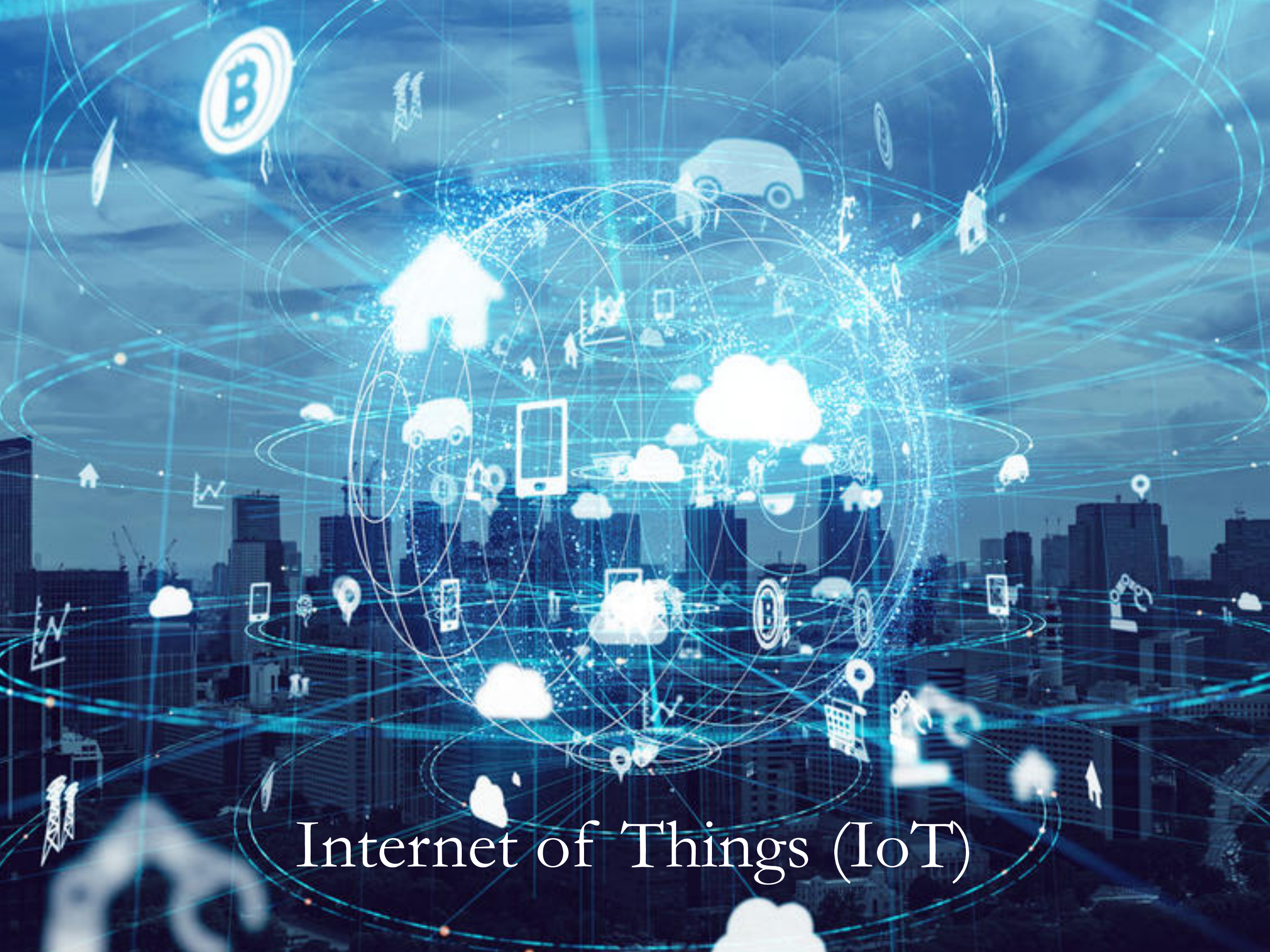
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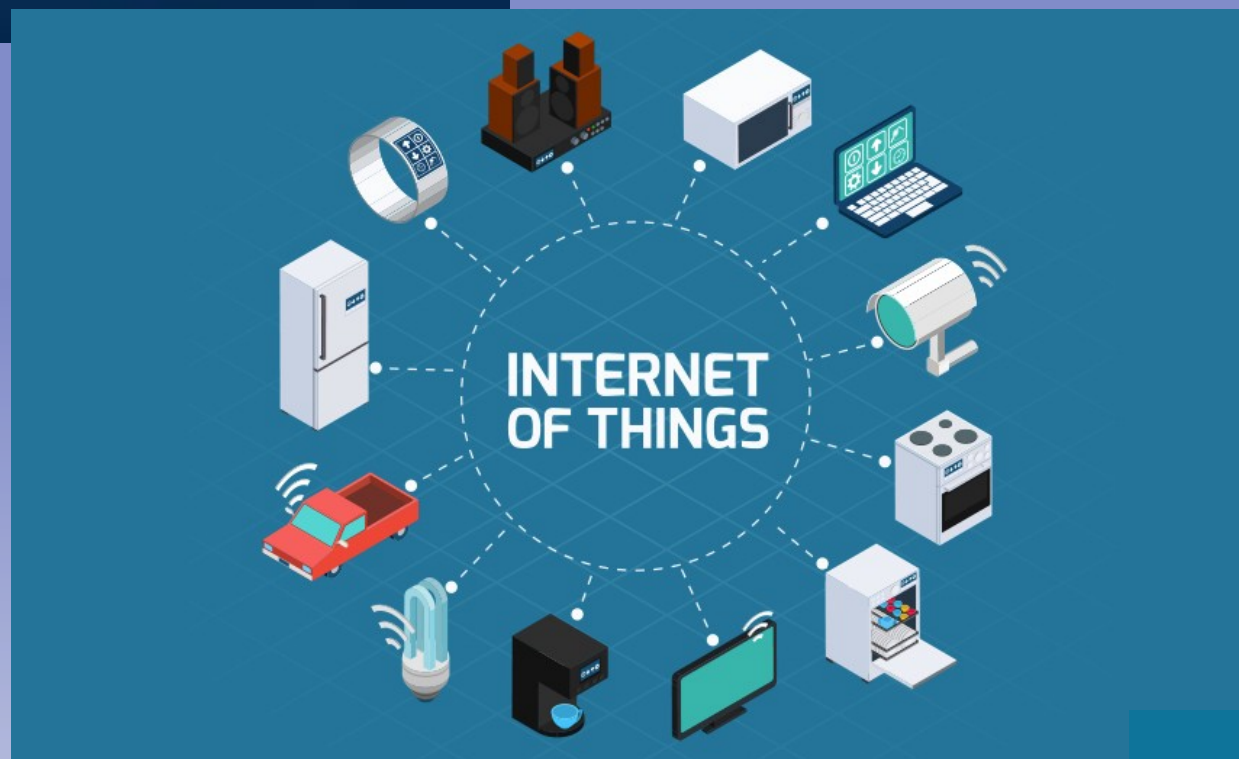
SERVER SCREEN CULTURE



SERVER
SCREEN
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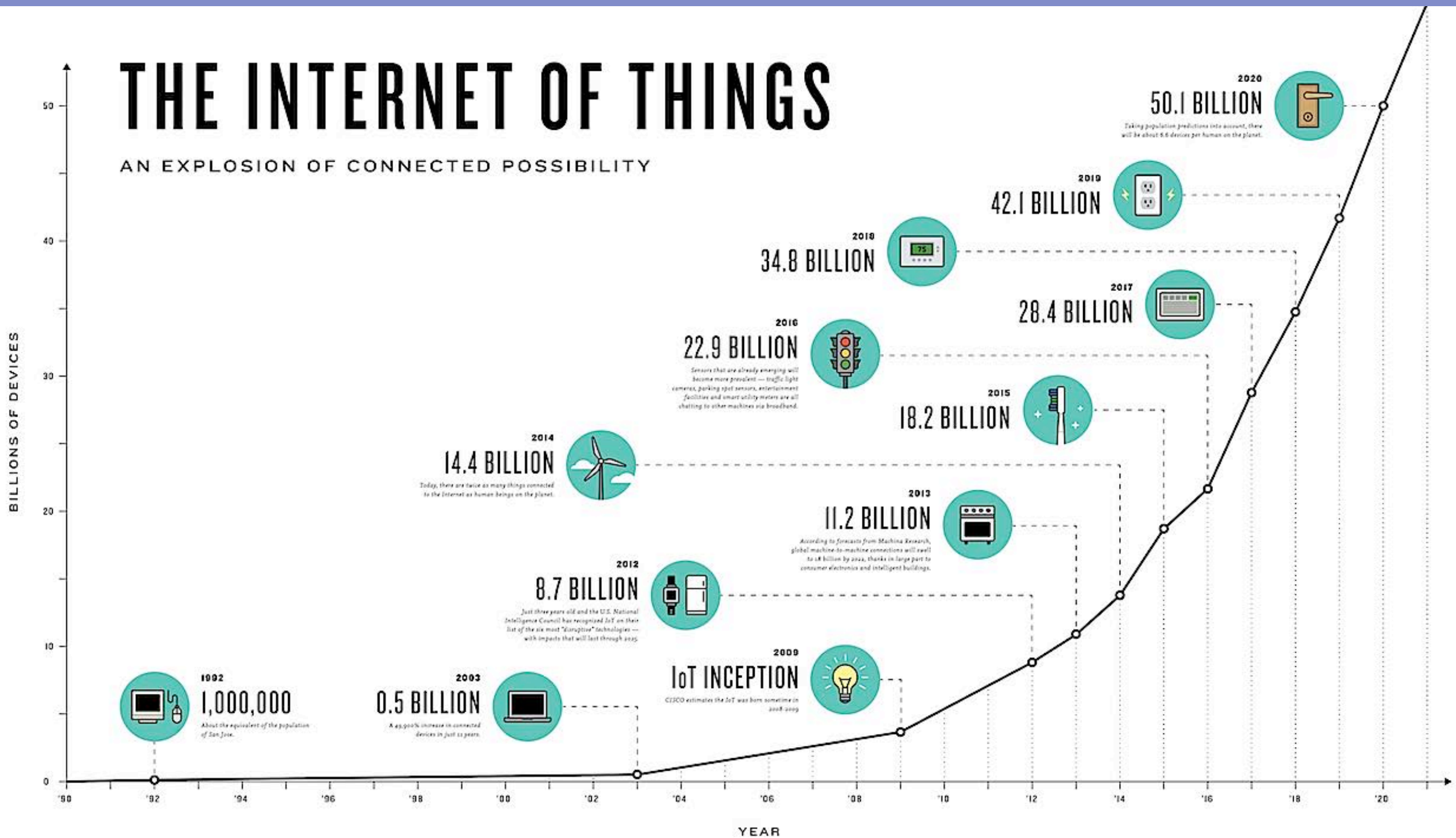


Internet of Things (IoT)



THE INTERNET OF THINGS

AN EXPLOSION OF CONNECTED POSSIBILITY



The Internet of Things

The Internet of Things (IoT) connects machines and devices to one another. IoT can help all industries become more efficient, productive and safer.

To become connected an object must be able to:



2003-2010:

10 - 20 BILLION

things connected to the internet today⁽¹⁾



By 2020 this number is estimated to grow to

40 - 50 BILLION⁽¹⁾



That's roughly 5 connected devices per person on earth!

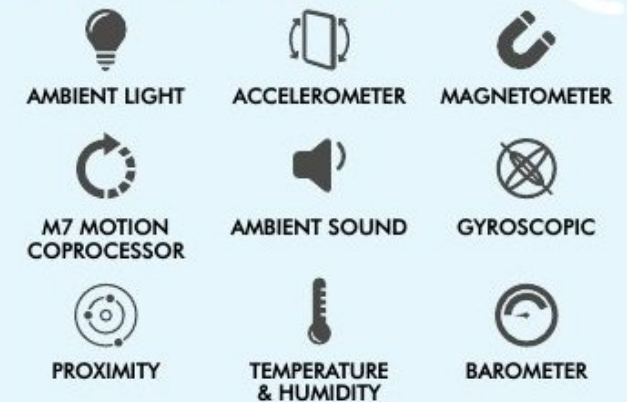
The Rise of Sensors

Sensors enable IoT. Every object, even the human body.



Anything that is hard to monitor can become easy.

Today's devices have between 6-9 sensors:



The opportunities generated by IoT far outweigh the risks

For businesses to fully realize the great potential of IoT, they will need to be prepared for the risks that lie ahead.

The insurance industry is well positioned to help businesses navigate an IoT world.

IoT Risks:



Industries currently benefitting from IoT:



Safety Driverless cars, worker accident prevention **Efficiency** Biometric banking, smart TVs & thermostats

Decision Making Data driven insights **Infrastructure** Risk triggers, electrical networks & predictive maintenance

A New Economic Age

The 2020 annual global economic potential across all sectors is estimated up to

\$14.4 TRILLION⁽³⁾

That is the current GDP of the European Union!

Cost of an Accelerometer

2007 1 Axis:

\$7⁽²⁾

Today 6 Axis:

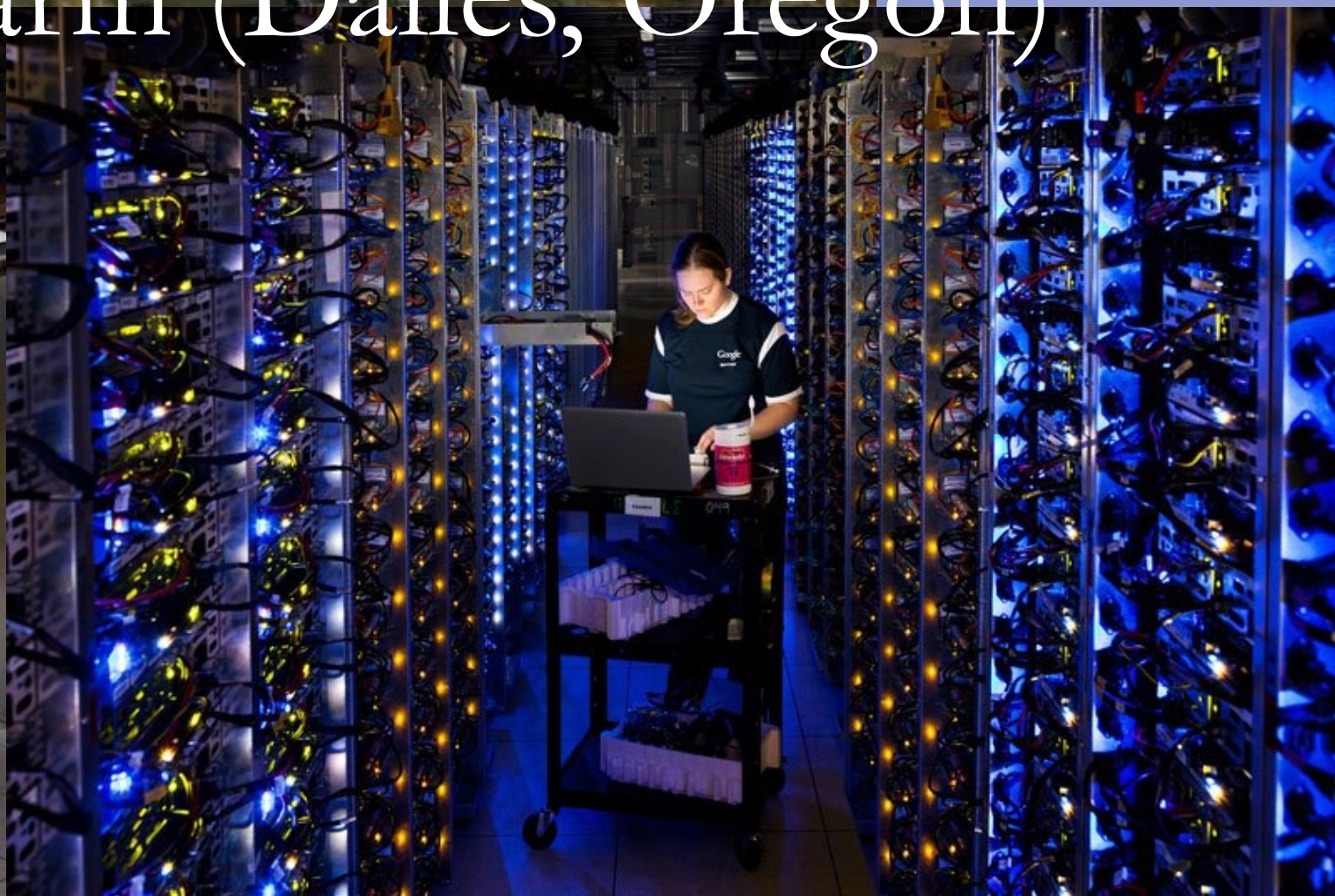
\$0.5

Cheap sensors are accelerating the growth of IoT.

The decrease in cost of sensors has fuelled the number of connected devices:



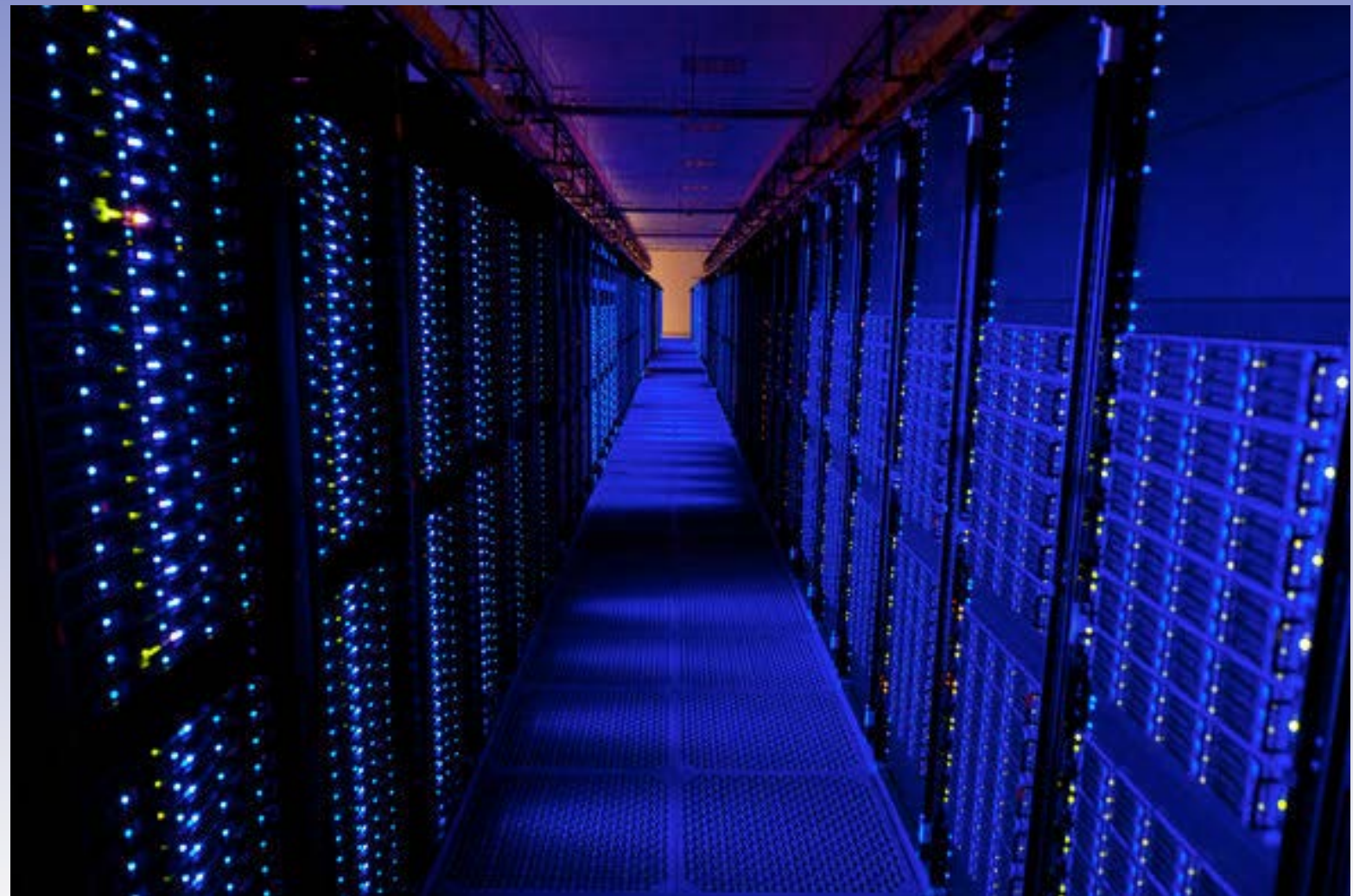
Google Server Farm (Dalles, Oregon)



Facebook Server Farm
Forest Park, N.C.



Amazon Web Services
Servers



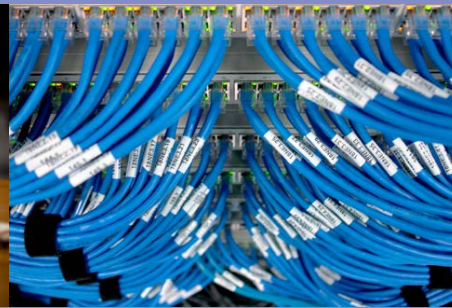


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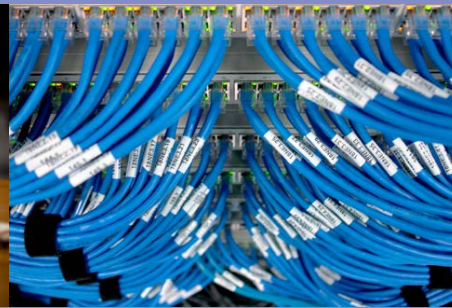
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Minotto Phezo Dizolele - www.dizolele.com





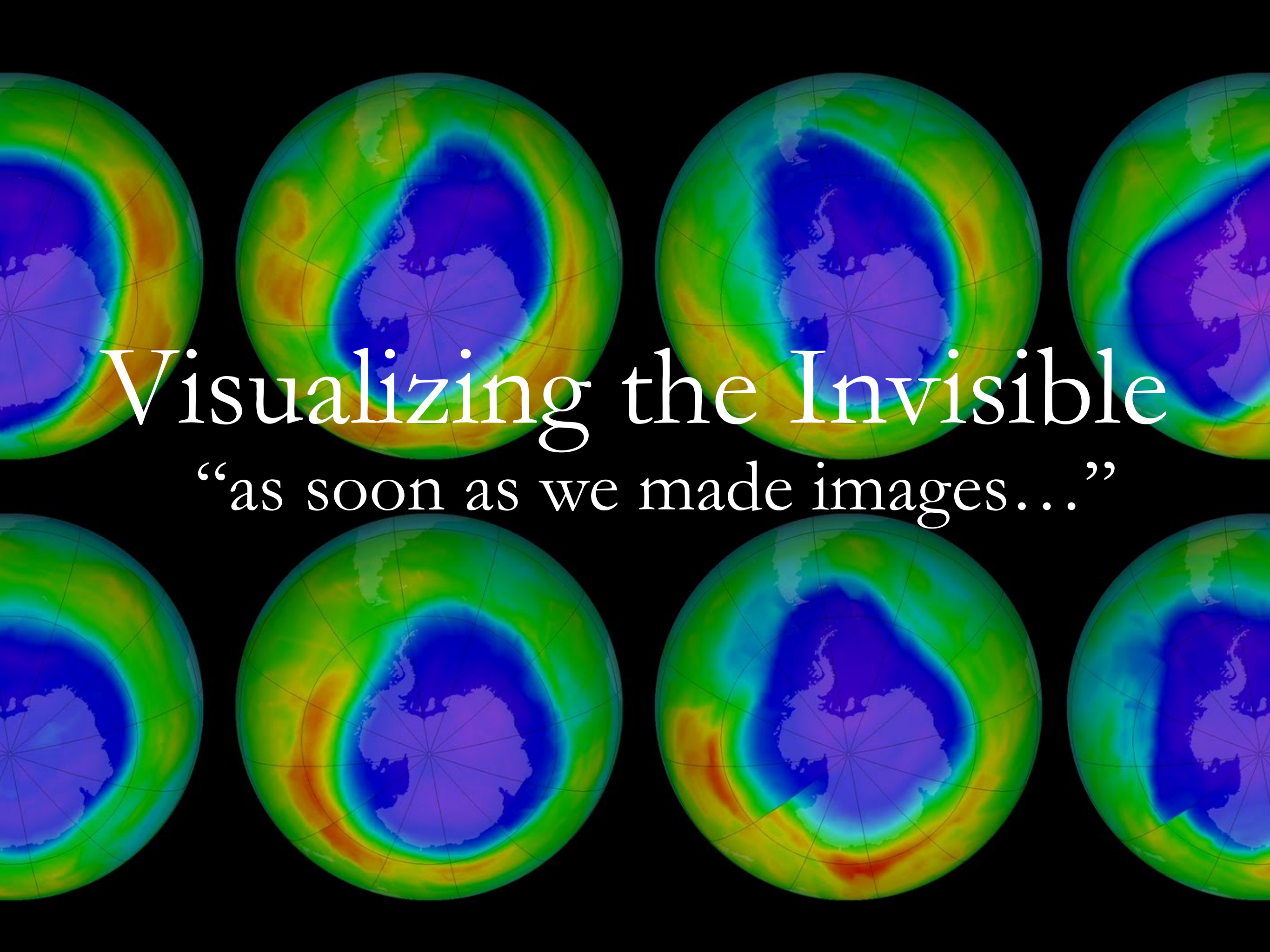
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Visualizing the Invisible

“as soon as we made images...”



Environmental Activism



Who to Follow on Instagram
for Your Daily Dose of **Green**



ENVIRONMENTAL MEDIA



SURFRIDER FOUNDATION About Us Our Work Why Surfrider? Our Network Blog Store Get Involved [GIVE](#)

DRILLING IS KILLING

The Trump Administration plans to open the Atlantic, Pacific, Eastern Gulf, and Arctic to new offshore oil drilling. Offshore drilling is a dirty and destructive business that will harm our ocean and coastal communities. We are witnessing the largest assault on our ocean in American history.

[TAKE ACTION](#) [SHARE](#) [JOIN SURFRIDER](#)

Offshore Drilling Planned off Your Coasts: Time to Speak Out!

Following the theme of sacrificing the public's favorite natural areas for the benefit of oil and gas companies, the Trump administration has just

YOUR LOCAL COAL BURNING POWER PLANT HAS A NEW FILTER.

HER NAME IS MIA.

Pollution from coal-fired power plants is making our kids sick — 1 in 10 already suffer from asthma. Our kids deserve better than a city with smog-filled summers. Tell President Obama to stand up to polluters. Text COAL to 69866 to take action for cleaner air. sierraclub.org/coal

SIERRA CLUB
FOUNDED 1971

Immersive Media & Our Connection to the Real



Mom: Don't sit too close to
the TV. It's bad for your eyes



20 years later





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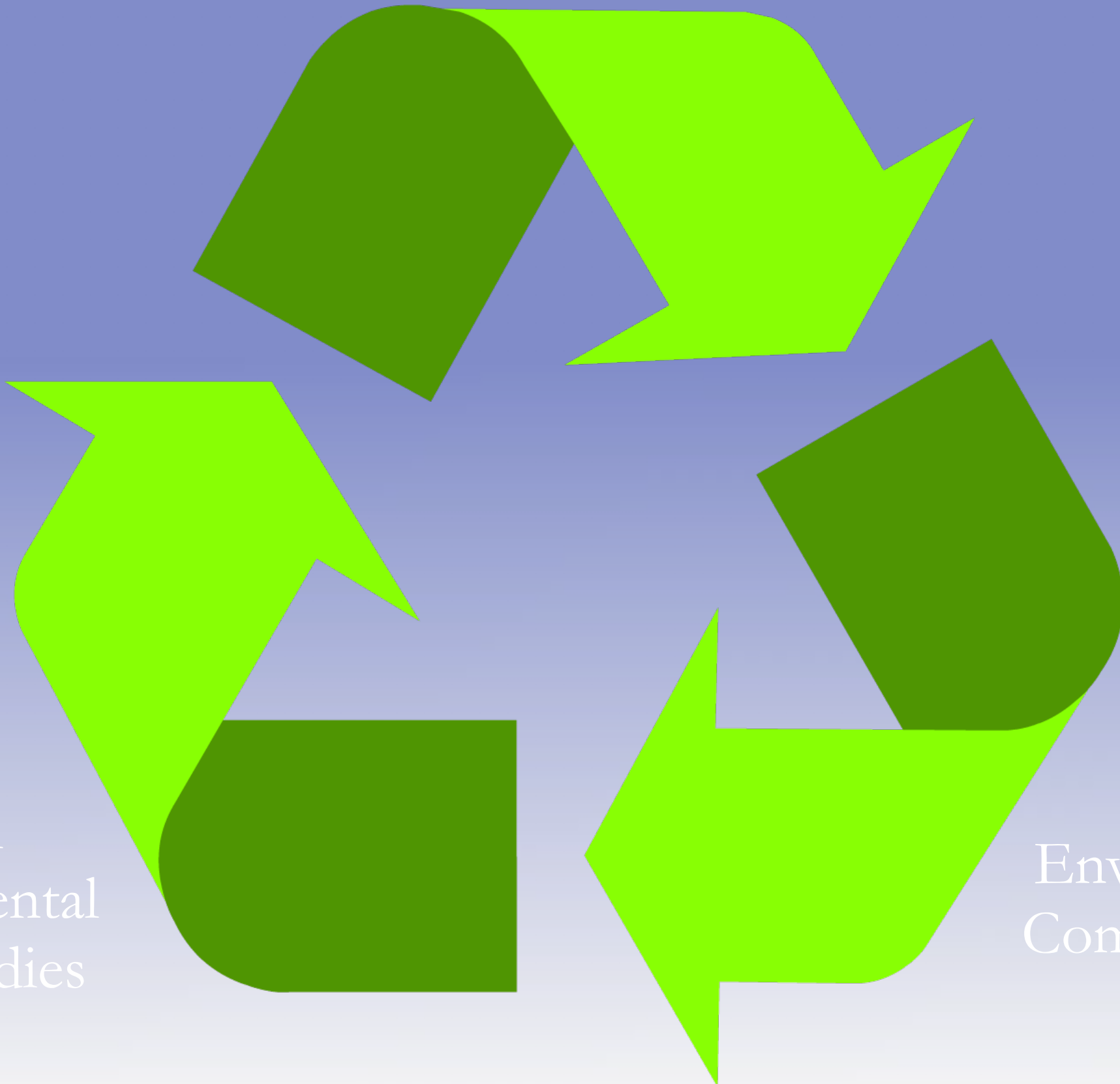


Next?

Green Production
Management

Critical
Environmental
Media Studies

Environmental
Communication



THANK YOU!!!

CONTACT ME:

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www.huntervaughan.net

FIND OUT MORE:

Journal of Environmental Media (Intellect Books)

Hollywood's Dirtiest Secret (Columbia University Press)