Global Implications of a Ubiquitous Metaverse and an AI Future

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IV International Congress on Legal Strategy (CIEL)

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- Program materials are available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4002551

The Metaverse

An immersive virtual world serving as the locus for all forms of work, education, government, and entertainment experiences.

Territorially boundless, persistent, and resistant to domestic policies.

Fueled by synthetic media and generative AI, the metaverse has the potential not just to supplement real-world experiences but to substantially supplant them.

CIEL
IV CONGRESO
INTERNACIONAL
ESTRATEGIA
LEGAL

INSTITUTO
OMG

Conceptual Reference

The future influences the present just as much as the past.
—— Friedrich Nietzsche

The present has long since begun to grind to a halt.
—— Alvin Toffler

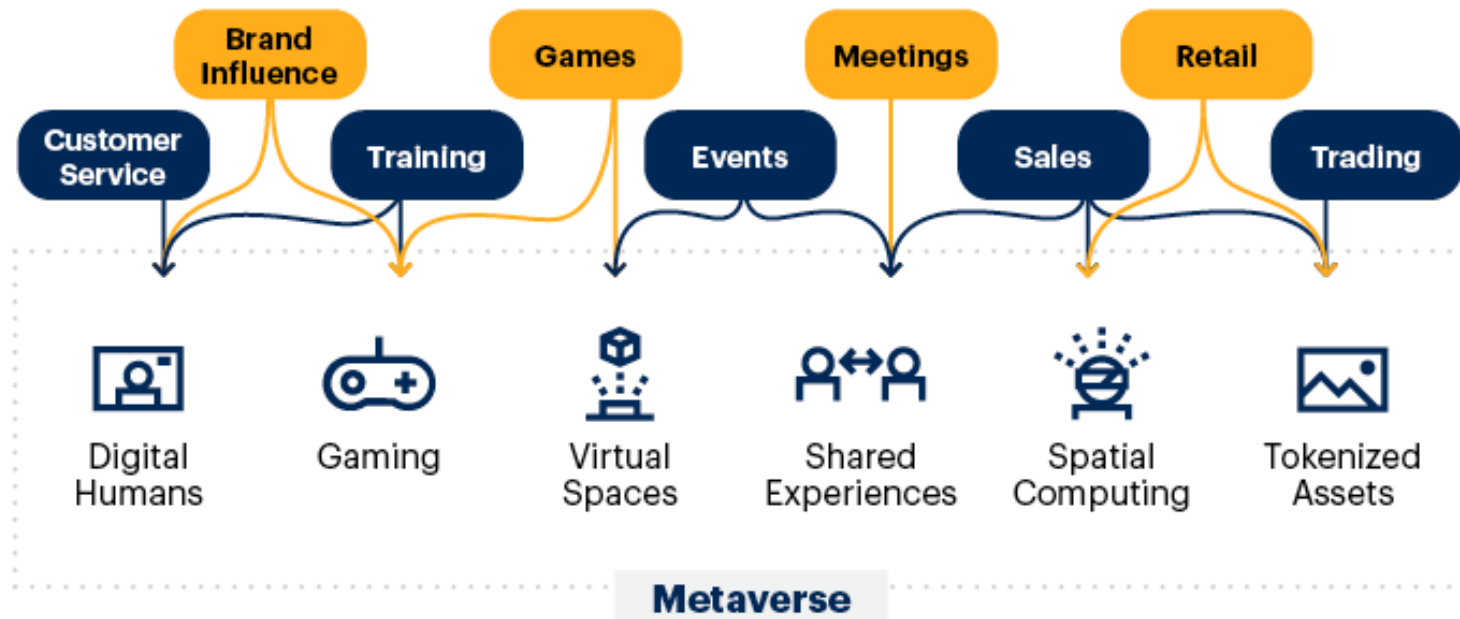The future is already here. It's just not evenly distributed.
—— William Gibson

Part I:

What is the Metaverse?

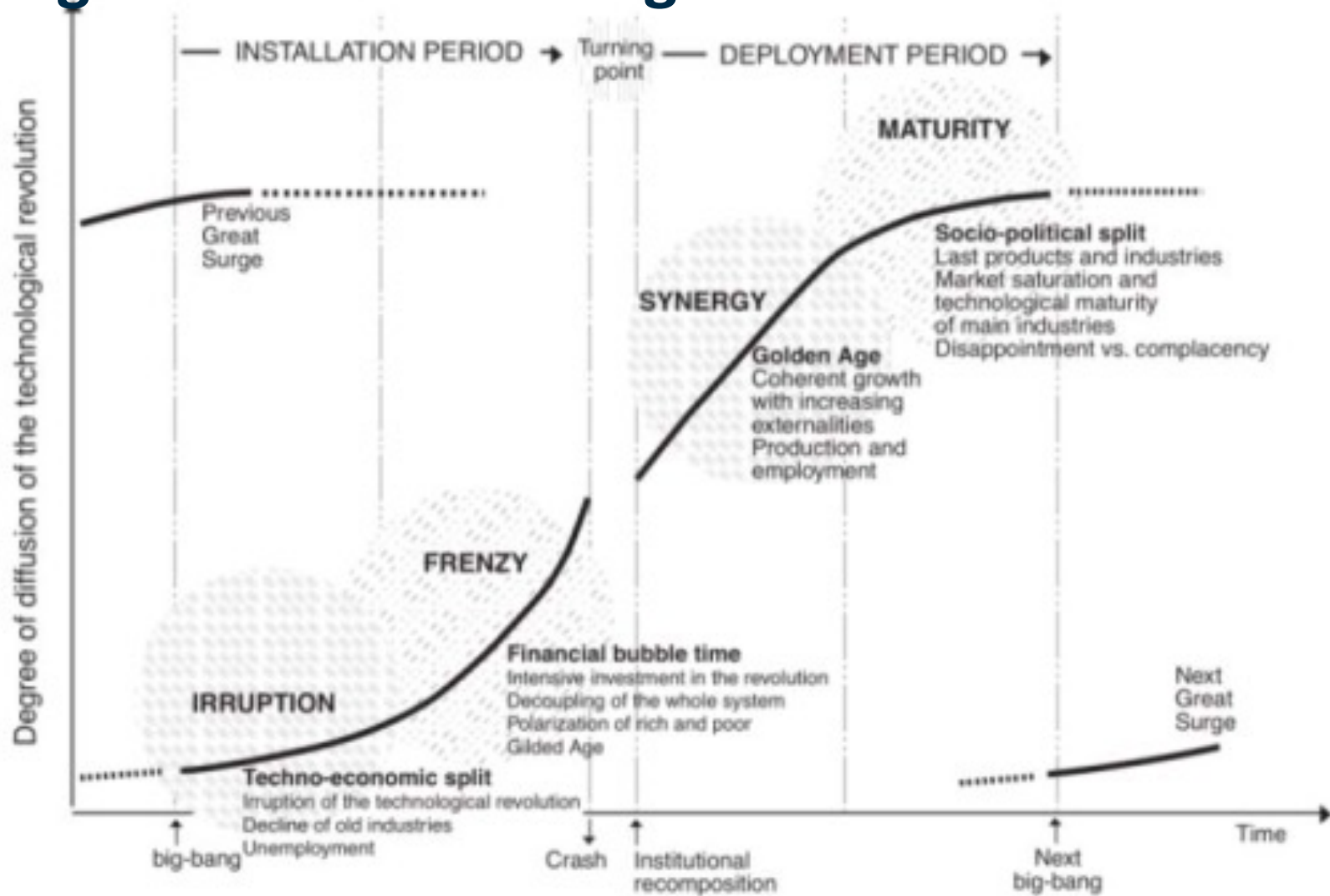# Opportunities in a Metaverse (Now and in the Future)

Brand Influence

Games

Meetings

Retail

Customer Service

Training

Events

Sales

Trading

Digital Humans

Gaming

Virtual Spaces

Shared Experiences

Spatial Computing

Tokenized Assets

Metaverse

gartner.com

Gartner.

Technological Revolution: Degrees of Diffusion

The Death and Birth of Technological Revolutions.

Use of Metaverse and AI:

Bank of America Is Using the Metaverse, AI to Train Its Hires

China's Government Led Metaverse

- Digital Twins

- Mixed AR/VR

- Utilization of blockchain (though for China, not cryptocurrency)

- Deemphasis on gaming

- Social Credit system to score participants based on their moral credit score.

THE INPUT | What is taken into consideration when calculating a social credit score?

Traditional input

- Income-tax payment
- Loan repayment
- Credit-card bills
- Utility bills
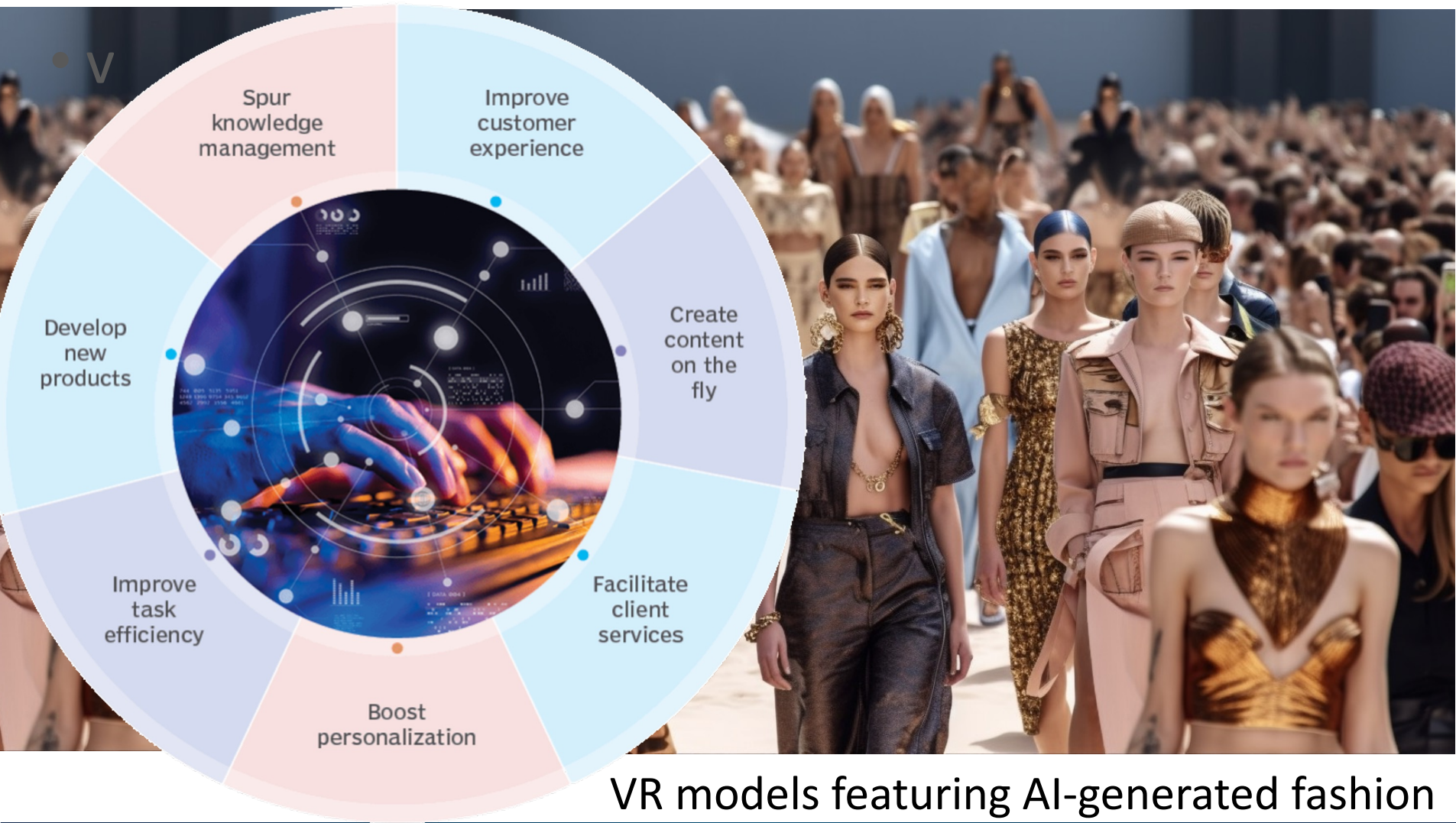- Payment of court judgments

Social input

- Adherence to traffic rules
- Adherence to family-planning limits
- Payment for public transportation
- Academic honesty
- Volunteer activity
- Filial piety
- Criminal record

Online input

- Interactions with other internet users
- 'Reliability' of information posted or reposted online
- Shopping habits

Part II: Explosive Opportunities (and risks) of AI

Spur knowledge management

Improve customer experience

Develop new products

Create content on the fly

Improve task efficiency

Facilitate client services

Boost personalization

VR models featuring AI-generated fashion
At the first AI Fashion Week

Narrow AI's Ongoing Development

In 2005, Ray Kurzweil wrote that "Artificial intelligence permeates our economy." "Narrow" focuses on a particular task.

"In 1997, Garry Kasparov, head in hands, lost a chess match to IBM's Deep Blue.

20 years later, Go champion Ke Jie was defeated by the AI company DeepMind's AlphaGo Master."

general or strong AI is a machine or system that demonstrates "the full range of human intelligence" or meets "the full range of human performance across any task."

General AI may bring with it the ability of the machine intelligence to exceed human capacity, and for this stage, the label may be "artificial superintelligence."

From supervised learning to unsupervised deep neural networks

- Supervised learning: Rules and options were programmed into the computer using labeled datasets.
- Unsupervised learning uses machine learning algorithms to analyze and cluster unlabeled data sets.

INPUT LAYER   HIDDEN LAYERS   OUTPUT LAYER
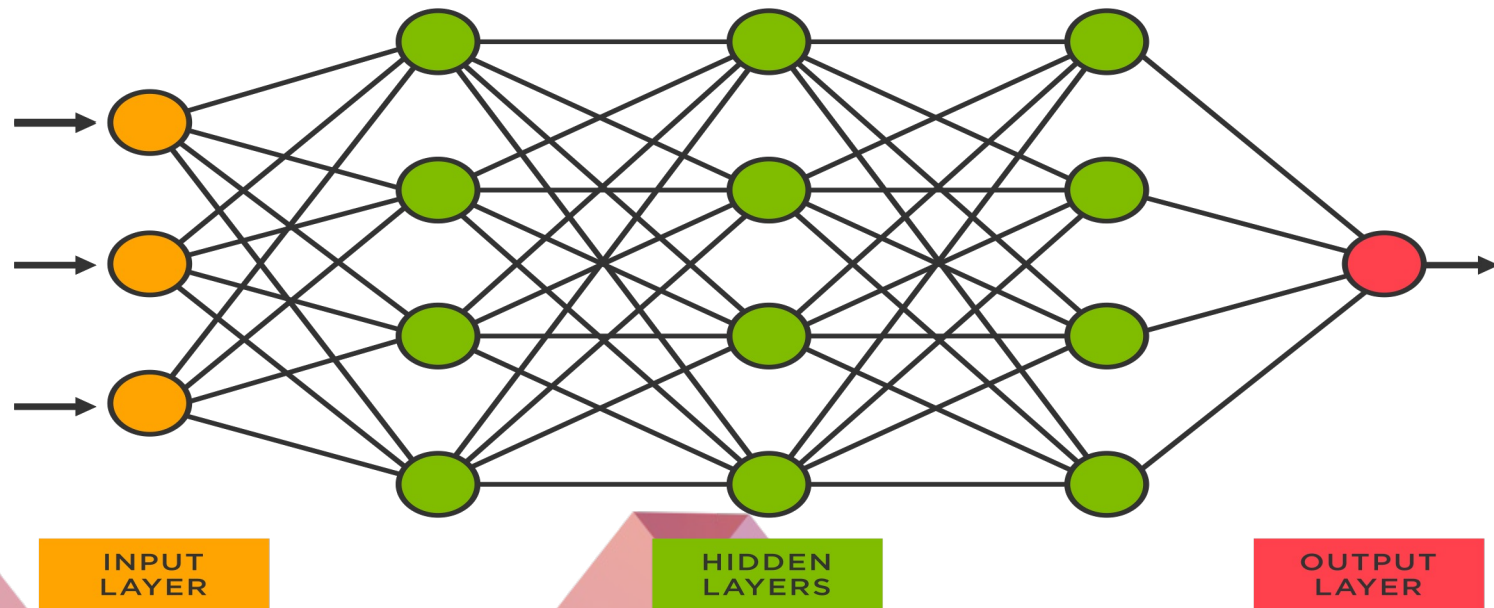
- Artificial neural networks (ANNs), are comprised of node layers, containing an input layer, one or more hidden layers, and an output layer.

Generative AI – Produces Content not Thought

- Generative AI creates synthetic content
- Text and images: blog posts, program code, poetry, and artwork
- GAN systems make deepfakes, voice replicators, animated avatars

Image Generation

- Images from Text
- Images from other Images
- Retouching human photographs
- Creating AI images of people that do not tie back to specific individuals
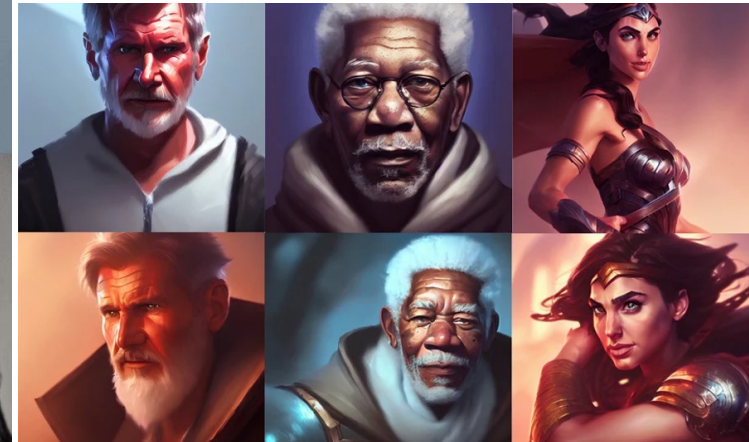
Text (and speech) to Text

- Chat functions for search

- Copywriting for marketing

- Chatbots in customer service

- Generating alt-image text for websites (great for meeting ADA requirements)

- Story-telling to help writers with plotting, dialogue, or character, etc.
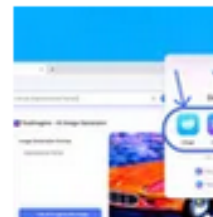
- News?

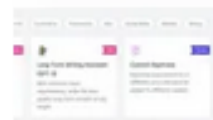- Sports stories?

- Bots?

ChatGPT
The best AI chatbot overall
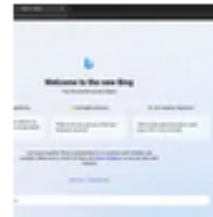
Microsoft's Bing ChatGPT
The best AI chatbot for search engine uses
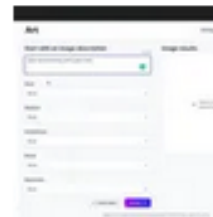
Jasper
The best AI chatbot for businesses and marketers

YouChat
The best ChatGPT alternative

Chatsonic by Writesonic
The best AI chatbot for news

Audio: Music and Voice

- AI used to simulate professional voice overs, including that of James Earl Jones (by contract)
- Can be used to replace audiobook readers and voice over talent
- Can also be used for audio fraud
- Lost Tapes of the 27 Club, suicide prevention effort to compose "new" songs from the likes of Kurt Cobain, Amy Winehouse and Jimi Hendrix — members of the infamous "27 Club."
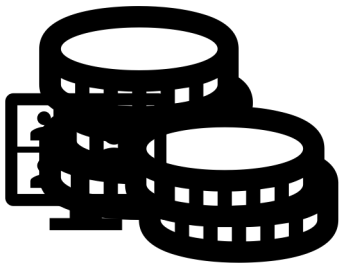
Code and Design

Possible Attributes of the AI-Infused Metaverse

- Engaging
- Persistent
- Populous
- Live
- (Functionally) Infinite
- Economically Stable
- Interoperable
- Both Open and Closed Platforms
- Both Digital and AR

AI will Fuel the Entertainment Metaverse

- AI Bots create the world needed to make the environment dynamic

- Roblox, Fortnite, World of Warcraft had millions of users

- Most metaverse environments don't

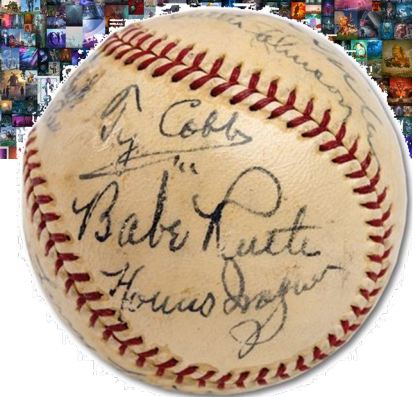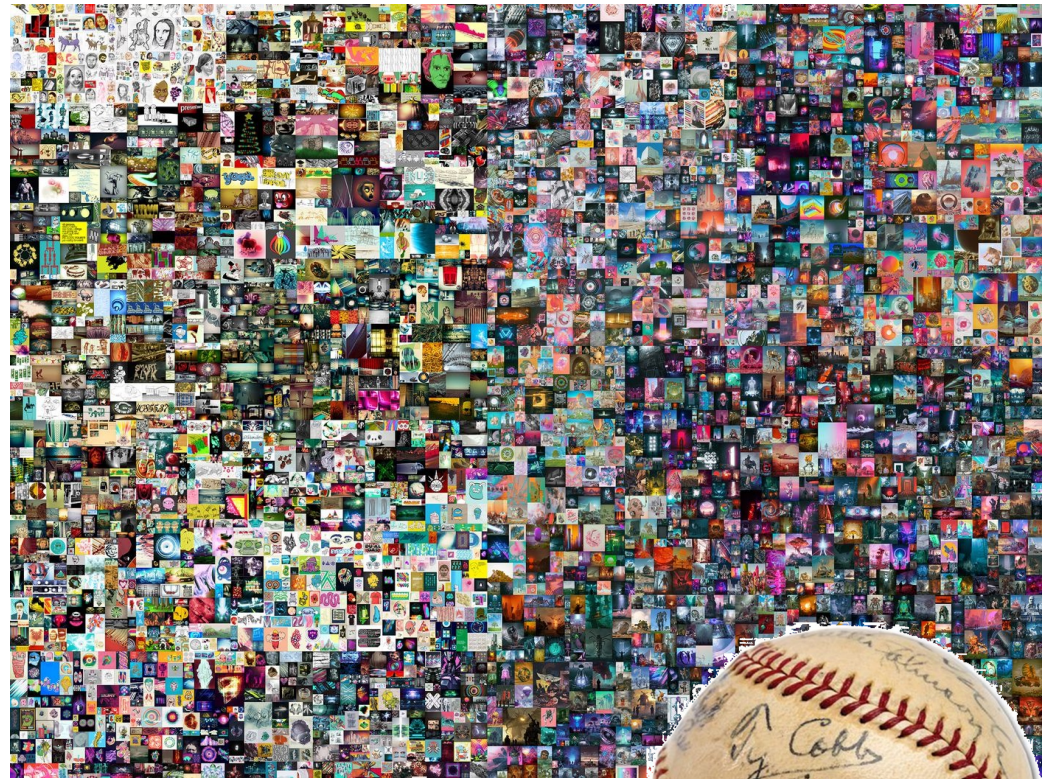- Most metaverse environments need specific interactions

Part III: The Web3 Economy

- Move away from ad-based economy that empowers largest ad brokers to control markets (Google and Facebook, Amazon)

- Democratize the economy through crypto-based micropayments

Web 3.0

# The Need for a Stable Economy - Abstract Economics as Shared Value

Lessons from the Dutch Tulip Market

- All assets, from food to land to oil have an arbitrary assigned value based on the shared community's needs and perceptions.

- The best of tulips cost upwards of $1 million in today's money (but with many bulbs trading in the $50,000 - $150,000 range). At the market's peak, the rarest tulip bulbs traded for as much as six times the average person's annual salary.

- After the crash, the prices returned to the commodity prices before the run-up.

- Stocks, bonds, in-game assets, all have these same volatility risks. Games have the additional risks that rule changes or publisher control can radically destroy value (or sometimes increase value) and the publisher may seek profits itself.
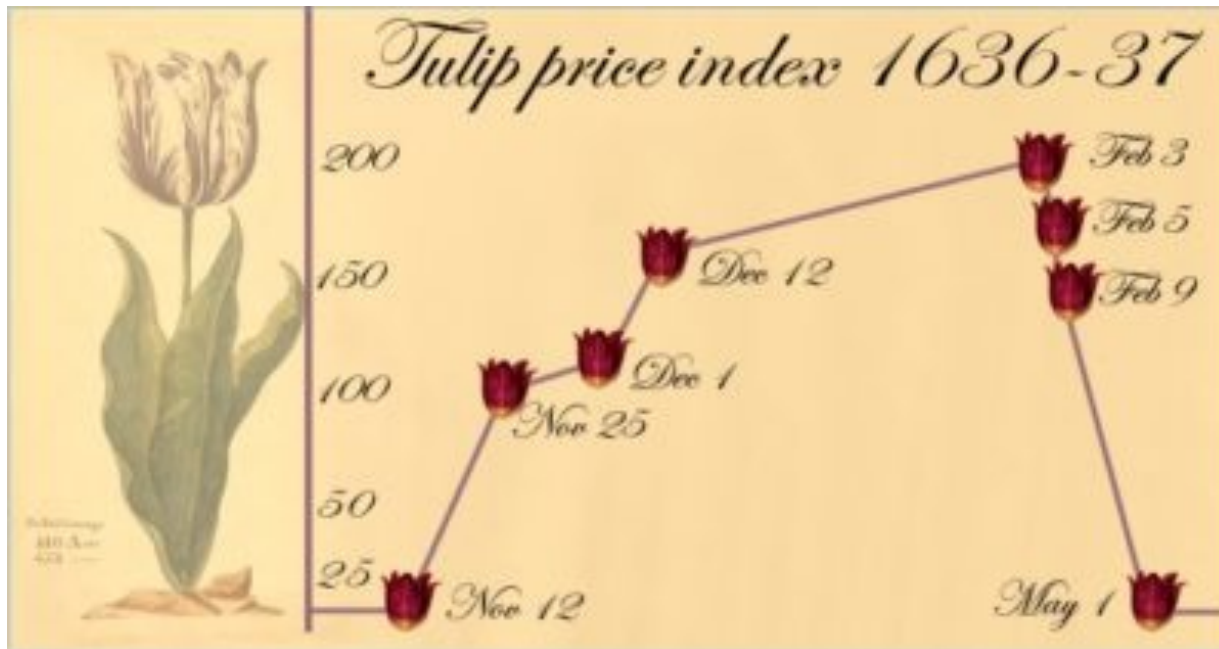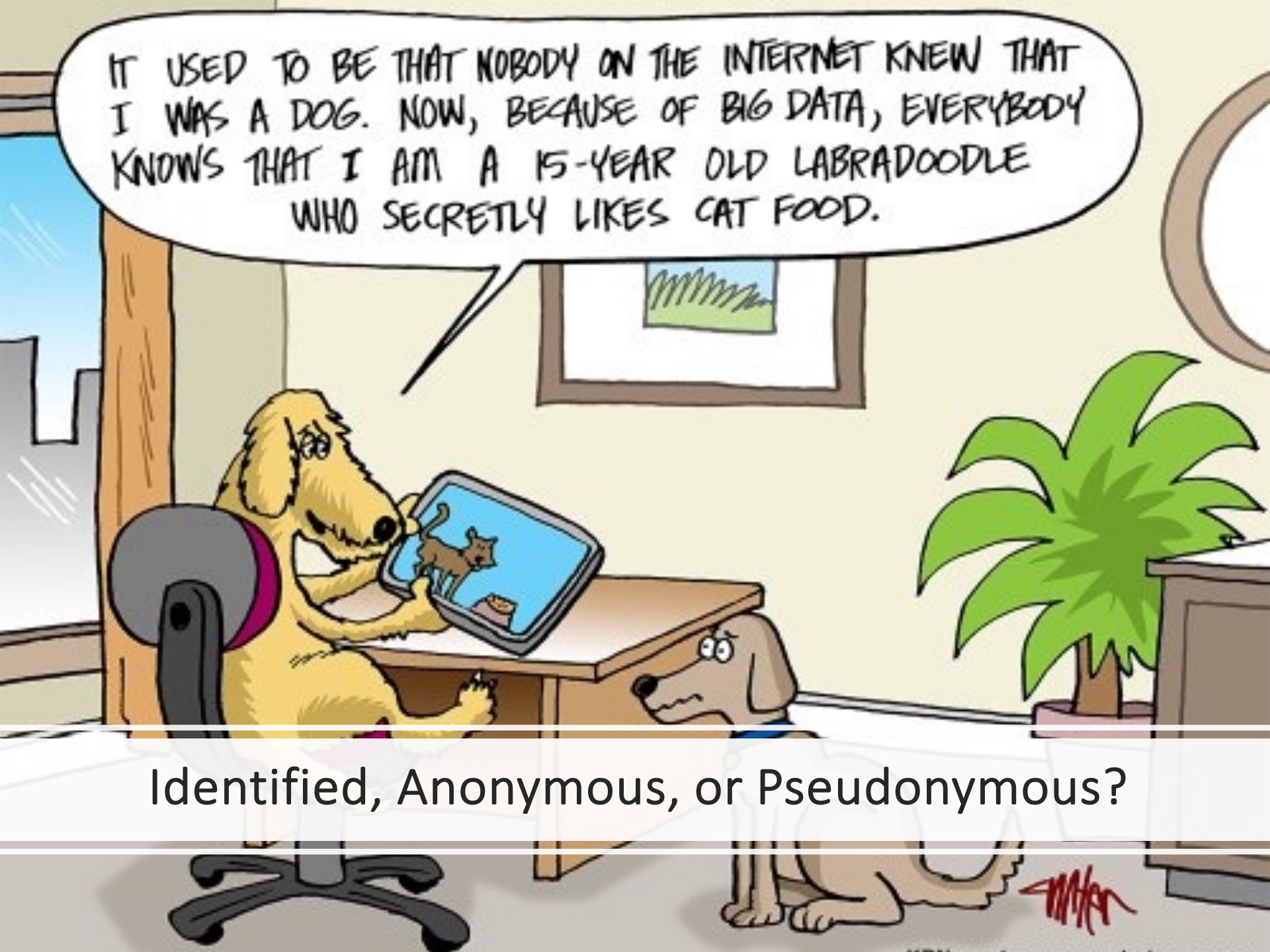
Identified, Anonymous, or Pseudonymous?

Why Does the Metaverse Matter Now?

Global Battle for Metaverse Leadership

Who will win?

Countries
South Korea
China
USA
Barbados
Spain

and Corporations
Samsung, Niantic
Tencent, ByteDance
Meta, Google, Nvidia

Corporate Battle for Web3 and the Metaverse

Web3 evangelists want a decentralized metaverse, but these corporations have a different agenda:

- Apple - Vision Pro, avoids the use of the term "metaverse" while highlighting AR uses and gaming

- Microsoft – HoloLens, Teams, Office, Minecraft, Bob, Xbox, and the "Enterprise Metaverse" … and Activision acquisition

- Meta (Facebook) – Oculus Rift, Gaming, Ad Based

- Nvidia – Omniverse platform and suite of synthetic media tools to build metaverses

- Google – Google Glasses 2.0 [discontinued] (purchased North), AR computing

- Amazon – AWS services, Prime Video

- Epic Games – Fortnite and Unreal Engine

- Niantic – AR games (Pokémon Go, Ingress, Wizards Unite)

- Roblox

- Tencent – China's leading video game firm and stakeholder in Epic Games and Blizzard Activision

- Bytedance – TikTok (Douyin in China) has Paradise Island, a social platform metaverse

Global Battle for Metaverse Leadership

DSA, DMA, and the EU Battle for the Digital Regulations

www.polgeonow.com

Also part of the EU (not shown):
--Canary Islands (Spain)
--Madeira (Portugal)
--Azores (Portugal)
--Many (but not all) French
   overseas territories

ICELAND

Faroe Islands
(Denmark)

EUROPEAN UNION

- **Current member** (dark blue)
- **Official candidate** (medium blue)
- **Recognized as a potential candidate** (light blue)
- **Former members** (pink)

(As of April 2023)

SWEDEN

FINLAND

NORWAY

EST.

LATV.

RUSSIA

KAZAKHSTAN

DENMARK

LITH.

RUS.

BELARUS

IRE.

Isle of Man (UK)

UK

Guernsey (UK)

Jersey (UK)

NETH.

GERMANY

POLAND

UKRAINE

Borders depicted as
they are recognized
by the EU.

BEL.

LUX.

CZECHIA

SLOVAKIA

MOLD.

GEORGIA

AZER.

LIECH.

AUST.

HUNGARY

ARM.

FRANCE

SWITZ.

SLOVEN.

ROMANIA

IRAN

ITALY

CROATIA

BOSN.

SERB.

BULGARIA

SAN MARINO

MONT.

KOS.

MONACO

N.M.

TÜRKIYE
(TURKEY)

PORTUGAL

ANDORRA

SPAIN

VATICAN
CITY

ALB.

SYRIA

IRAQ

Ceuta (Sp.)

Gibraltar (UK)

Melilla (Sp.)

ALGERIA

TUN.

MALTA

GREECE

CYPRUS

Akrotiri (UK)

Dhekelia (UK)

LEB.

JORDAN

SAUDI ARABIA

MOR.

ISRAEL

Intellectual Property Law

- **Authorship and Inventorship requires human creativity**
- **Copyright issues involving the training of the data**
- **Copyright issues in the use of the images, and perhaps text when the output infringes existing users**
- **Trademark issues in the training**
- **Dilution and tarnishment inherent in the training data**
- **Lessening the need for brands as AI becomes the true source identifier**
- **Expanded use of psychographic marketing to make brands focus on emotional relationships rather than product attributes**
- **Rights of publicity with images in the data sets**
- **Self-identified individuals claim rights when marketers did not use real humans as evidence of where the image came from**
- **Trade secret issues with disclosures to the AI**
- **Misuse of the AI tools by unauthorized employees resulting in disclosure**
- **Patentability for algorithms, software**

STATES
D FOREIGN
COPYRIGHTS

COPY

WILL PROTECT
YOU FROM

Copyright: Getty Images v. Stable Diffusion

Even the watermarks were copied by the AI.

Trademarks are also captured on backdrop.

Trademarks: Heinz exploring its own mark in Dall-E 2

- Text-to-image tools like DALL-E 2 are "trained" by crawling the Web and "learning" hundreds of millions of text and image associations.

- The tool can produce images that include logos, trademarked characters, and other intellectual property—such as

- SpongeBob at Best Buy

- Homer Simpson in Psycho

- ancient Rome Spider-Man

- Santa shopping on Amazon

- An "angry mob" of Ronald McDonalds protesting working conditions, in the style of Caravaggio

Rights of Publicity: Hotpot use of stars for marketing

Defamation: Deepfakes and Disinformation

Altered video falsely depicting
Ukrainian President Volodymyr
Zelensky ordering troops to surrender;
Pope falsely sporting puffer jacket

Marketing and Manipulation: AI Avatar Miquela, Milla Sofia

- Lil Miquela - The perpetually 19-year-old robot with three million followers on Instagram

- Milla Sofia (originally 19 but repackaged to 24), another "virtual influencer"

Digital Redlining

Integrated ads and messages can be customized in real time to each separate demographic target group

Digital Segregation has Already Begun

- Since 2017, English Premier League and English Football League have used "virtual replacement perimeter technology," to alter in-stadium ads on television.

- Used to show different ads in different markets based on the recipient's geolocation. It can or will be able to use more granular choices based on viewer identification.
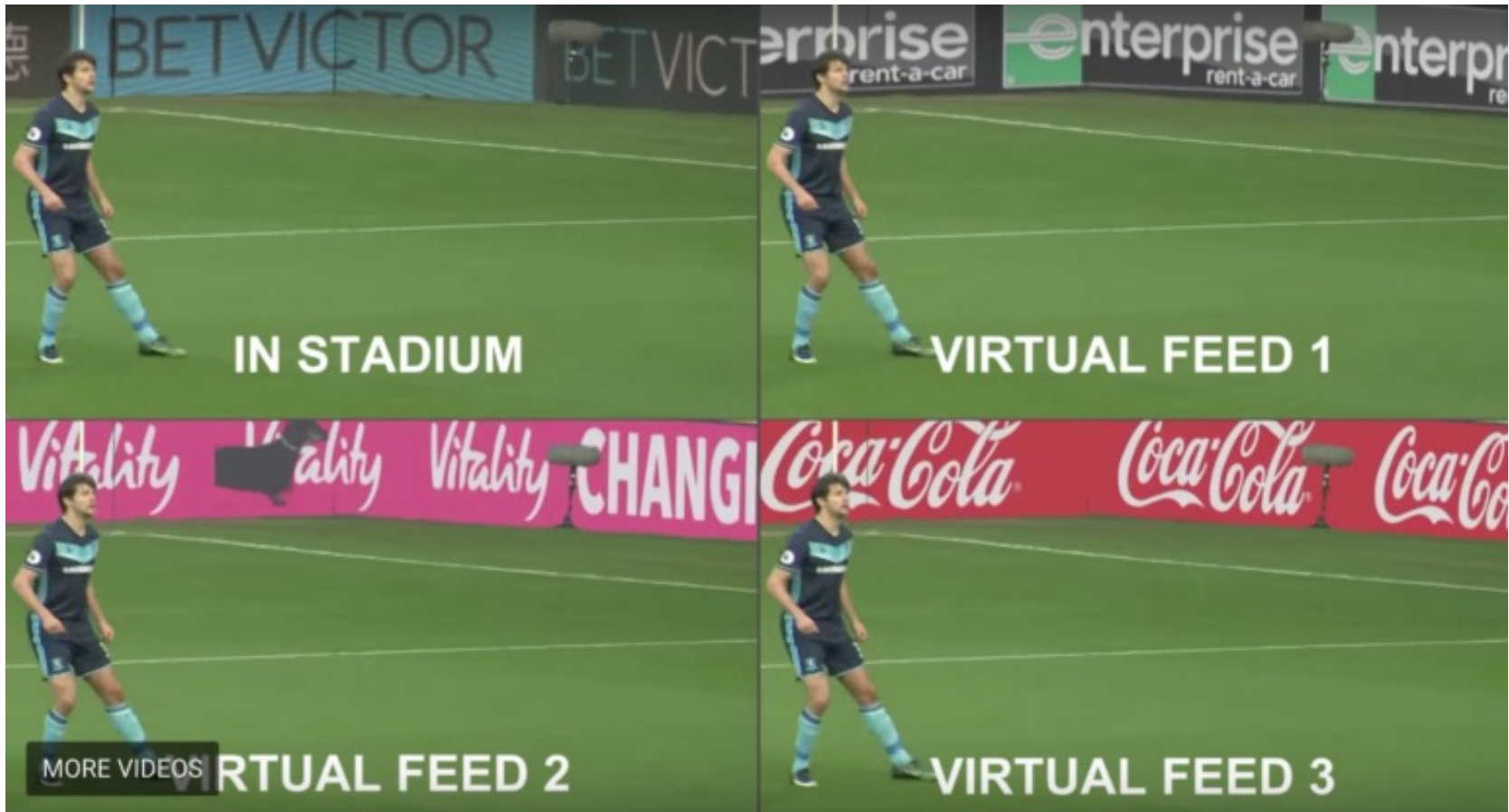
Liability for Dangerous Content

- Adherence to Civil Rights Laws
- Terms of Service and Community Standards
- Defamation by Algorithm
- Dangerous and Unethical Advice
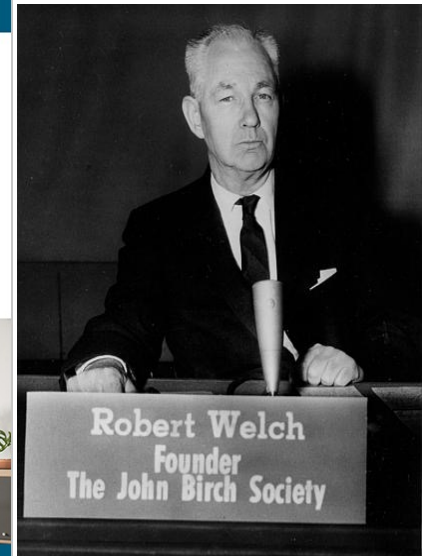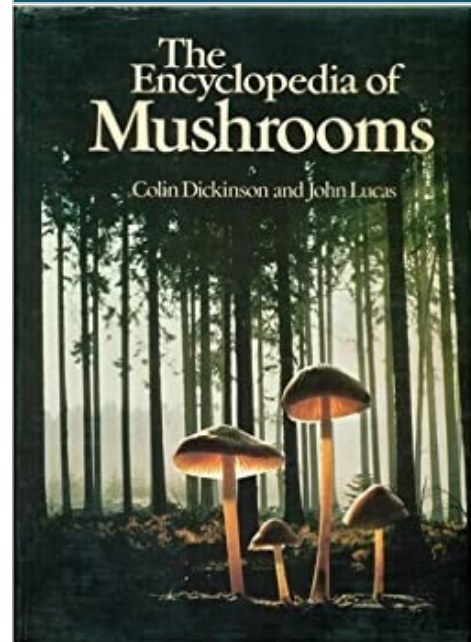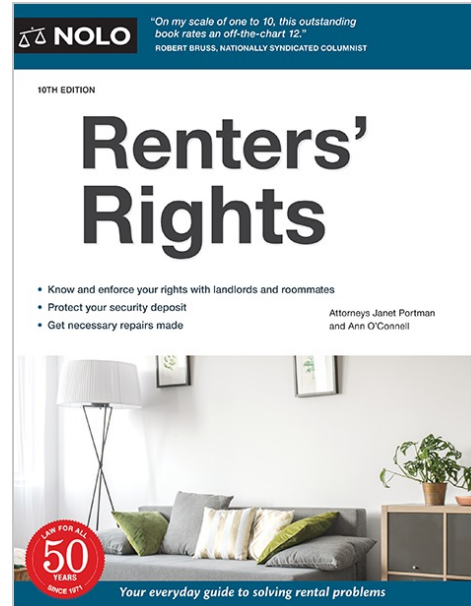
Success

The existential threat of AI

The Problem of Bleed

The Problem of Bleed

Videogame Law

- Contracts, including pre-existing rights issues
- Intellectual Property
- Publicity Rights in Performers
- Maybe publicity rights if users make selfies and avatars

Videogame Bleed

- In-game money, tokens, or assets become resalable outside the game, triggering money transfer laws
- Games have payouts of value transforming them into regulated gambling

Metaverse Bleed

- What happens when a game becomes a
  - University?
  - or a software company?
  - or Doctor's Office?
- Anonymity becomes required identity verification, heightened privacy and security requirements, state and federal compliance
- In-game rewards become financial transactions
  - Regulation is territorial by country and sometimes by state; a ubiquitous metaverse cannot meet all 193 UN Member countries' laws
- The BYOD problem transforms into a BYOW problem
  - Malicious code in avatars
  - Data exfiltration
- Every regulator wants jurisdiction over everything, everywhere

The "Law" of the Metaverse

Sources of Law

- Nation-State Authority
- Treaties and Int'l Bodies
- Corporate Oversight
- Participatory Governance

Driving Societal Levers

- Economic Opportunity
- Entertainment
- Community
- International Concerns
- Lack of Predictability
- Digital Divides – economic, race, nationality, gender, age

Categories of Law

- Contracts (including EULA/ToS, B-B, B-C, and impact on pre-existing agreements)
- Property (perhaps only by analogy)
- Constitutional Issues (Commerce Clause First Amendment, Fourth Amendment, Tenth Amendment, Eleventh Amendment)
- Electronic Communications Privacy Act (ECPA); Title III
- IP (Copyright, Trademark, Patent, Publicity Rights, Trade Secrets)
- Gaming Laws
- Revised Uniform Fiduciary Access to Digital Assets Act (RUFADAA)
- Privacy Laws (Data Privacy; Biometrics, CFAA, etc.)
- Consumer Labeling and Trade Laws (for out-of-game transactions)

Add'l Categories of Law

- Telecommunications Law, Title 47
- Education, Employment, and Nondiscrimination Laws (ADA, Title IX, Civil Rights Act, FCRA, etc.)
- CDA §230; DMCA §512
- Securities Laws
- Banking Laws and Currency and Foreign Transactions Reporting Act
  - Know Your Customer
  - Anti-Money Laundering
- Commodities Futures Trading
- Corporate Transparency Act
- Foreign Investor Risk Review
- Anti-Terrorism Laws
- Law of Armed Conflict

Considerations for the Creators in the Metaverse

- Who is a creator?
    - Traditional copyright creators such as graphic artists, musicians, story-tellers, choreographers, and real-world artists who digitize their own work for use in the metaverse
    - Performers who use their avatars to engage in the environment, including Twitch streamers, etc.
    - Clothing designers, jewelry designers, and creators of utilitarian objects that they import into the metaverse
- What is the context?
    - Each site within a metaverse and the metaverse itself will have contractual terms that include mandatory rules about the ownership and assignment of rights imported or created for use in the site and on the platform
    - These contractual rules might limit use elsewhere, ownership, commercialization, misuse, association with other rights, and more
- Copyright operates differently
    - Clothing is utilitarian and outside of copyright, but a drawing of clothing is within the scope of copyright
    - New renderings of works outside of copyright may be protected by copyright – drawings of cars are different that using a car in a film

Considerations for the Creators in the Metaverse

- Creators often borrow but the environment is a corporate-owned fictional world, not a real world
    - More like fan fiction than the public domain
    - All music and most copyrighted images imported into the metaverse require permission
    - The environment is copyrighted by the site within the metaverse and the metaverse platform, subject to the contract between those two parties
    - Like fan fiction, each copyright owner, each site, and each location will have its own tolerance for unauthorized use
- Trademark and Publicity Rights operate nearly the same
    - The use of famous brands (and other brands) or other people's name, image and likeness may not be used in a commercial context but are generally available for an expressive work
    - As soon as there are opportunities for revenue in the metaverse site, it is possible that it is commercial use
    - If goods or services are sold, it is definitely commercial use
    - If the site operates as an advertisement for the site operator's goods or services, it is likely commercial use

Contractual Considerations in the ToS/EULA

- Exclusivity – does the agreement limit the user to only this service or preclude content generated from being used elsewhere

- Noncompetition – does the agreement limit the user from making content that competes with licensor

- Content restrictions – does the agreement limit the user from making content deemed "inappropriate" according the standards of the licensor on any basis

- Copyright restrictions – does the agreement limit the user from using some or all of the copyrights of licensor or any third party

- Trademark restrictions – does the agreement limit the user from using the trademarks of licensor or any third party

- Publicity Rights restrictions – does the agreement limit the user from using the publicity rights of licensor or any third party

- Commercial Use restrictions – does the agreement limit the user from using the resulting content for any commercial purpose or charge a royalty at various revenue points

- Account restrictions – does the agreement grant the licensor the power to terminate the account and potential destroy or erase the content created by the user

- Broadcast restrictions – does the agreement specify or limit the use of the content to make video streams or video clips for other platforms

Additional Contractual Provisions in the ToS/EULA

Standard additional topics likely to be addressed in the Terms of Service or End User License Agreements

- Account creation
- Obligation of customer to pay for services
- Adherence to licensor policies
- Payment for purchases
- No hacking, no malware, or similar interference provisions
- No unauthorized use of the licensor's content or platform, including reverse engineering
- No violations of game play or in-world rules and obligations
- No use for illegal purpose, including money laundering, child pornography distribution, gambling, or other such activities

- Obligation to abide by privacy policies
- Obligation to also follow contract of app store, platform, and ISP contracts
- Ownership of user generated content (see other slides)
- Limitations or permissions on modding the platform
- Right to terminate at any time
- Right to monitor user accounts and communications
- No sublicensing or transferring of the account or sharing of passwords
- Indemnification against any actions by user
- Disclaimer of all warranties by licensor and limitations on liability

Risk Scenarios

Ginormaverse is an open, interoperable platform with social media, gaming, and fantasy features. Ginormaverse ToS waives all liability for third-party harms; reduces liability for own actions unless reckless; and caps damages to return of license fees:

1. Company using Ginormaverse is hacked when Russian ransomware attacker creates a false employee login on Ginormaverse.

   - Is Ginormaverse liable? Is the breach insurable? Can it be stopped?

2. Employer adopts an online optional office policy

   - Access is through Ginormaverse. Employee, who otherwise avoided Ginormaverse, creates an account for work and is then harassed.

   - To what extent is employer liable for harm? Which behavior created the liability?

3. Company publishes an online game using NFTs for in-game assets using Ginormaverse platform. An Iranian company sells clothes and equipment in the game.

   - Is it legal?

   - Does the answer change if it was operated by a DAO, but owners of the DAO included sanctioned individuals?

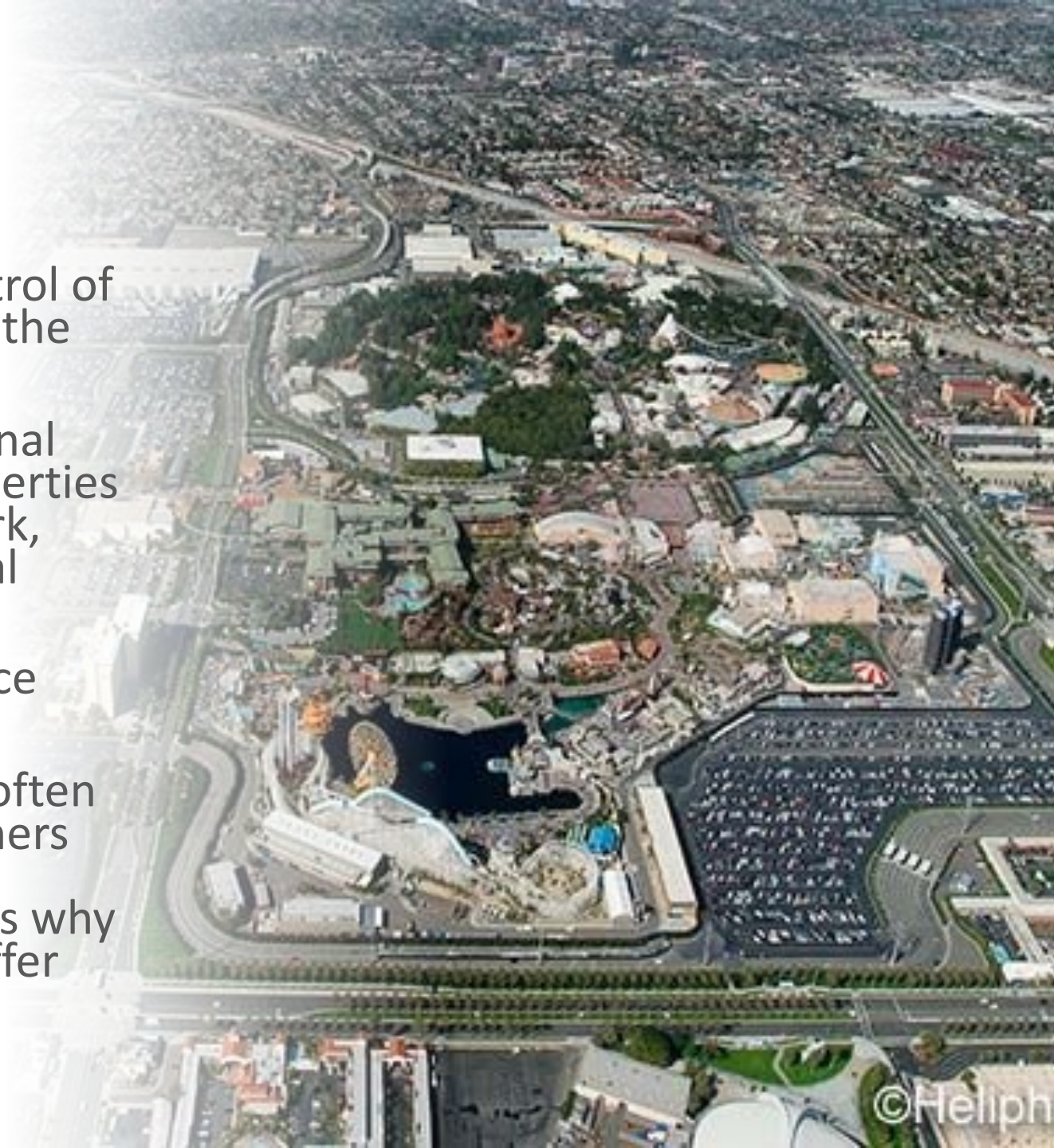# Working towards a Practical Enterprise Multiverse

- There will be many metaverses.
- Where interoperability leads to security risks or liability exposure, the risks will likely not outweigh the benefits.
- Among trusted companies using secure user identification, these will thrive.
  - Universities have great use cases and user sets
  - Large employers, who need a training platform
  - Financial institutions who wish to catch up to crypto and stay relevant
- DAOs create significant additional legal risks

Thoughts on Metaverse Development

- Identify the use case for the metaverse tools to build extensions of current best practices into the metaverse
  - Employment policies on compliance, privacy, security, workers' rights etc.
  - Customer policies
- Develop collaboration (cross-licensing) agreements with similarly-situated vendors
  - The metaverse is not the internet; it isn't a protocol
  - Identify companies with shared goals
- Offer tiered services

Manage the Metaverse like Disneyland

- Near absolute control of user experience in the park

- Legal and operational control of the properties adjacent to the park, including additional properties

- Regulatory influence over municipality

- Strategies to limit often predatory landowners adjacent to park properties (which is why company owns buffer businesses)

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IV International Congress on Legal Strategy (CIEL)

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