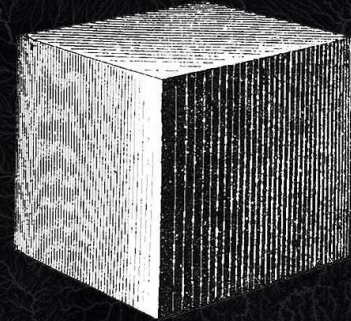
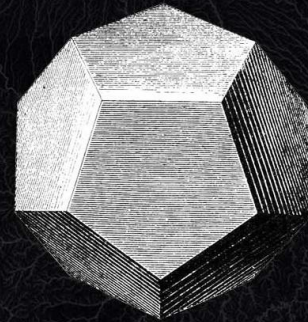
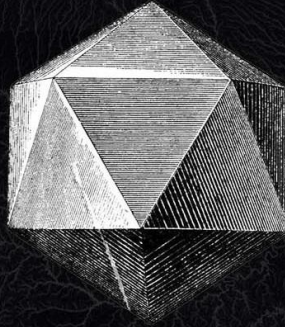


Landscape of XR Moral Dilemmas & Ethical Considerations





Voices of VR Podcast

Landscape of XR Ethical Contexts

Algorithmic Bias



Workplace Attention Monitoring



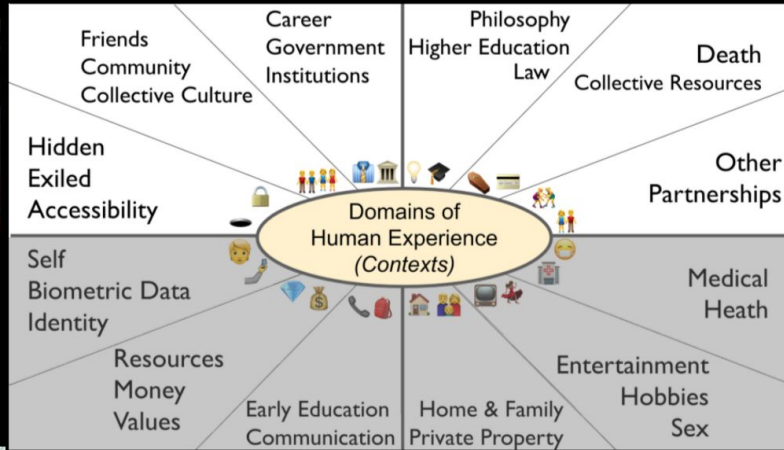
Human Rights, Laws, & Regulations



Virtual Violence



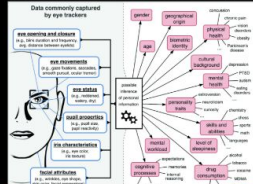
Accessibility



Virtual Harassment & Bullying



Threats to Mental Privacy



Being Aware of Triggers to Trauma



Access to XR Technology



VR Minimum Age of 13



Volumetric Privacy



Escapism & Addiction



Laval Virtual Visionaries Think Tank 2019

Brainstorm on XR Ethics

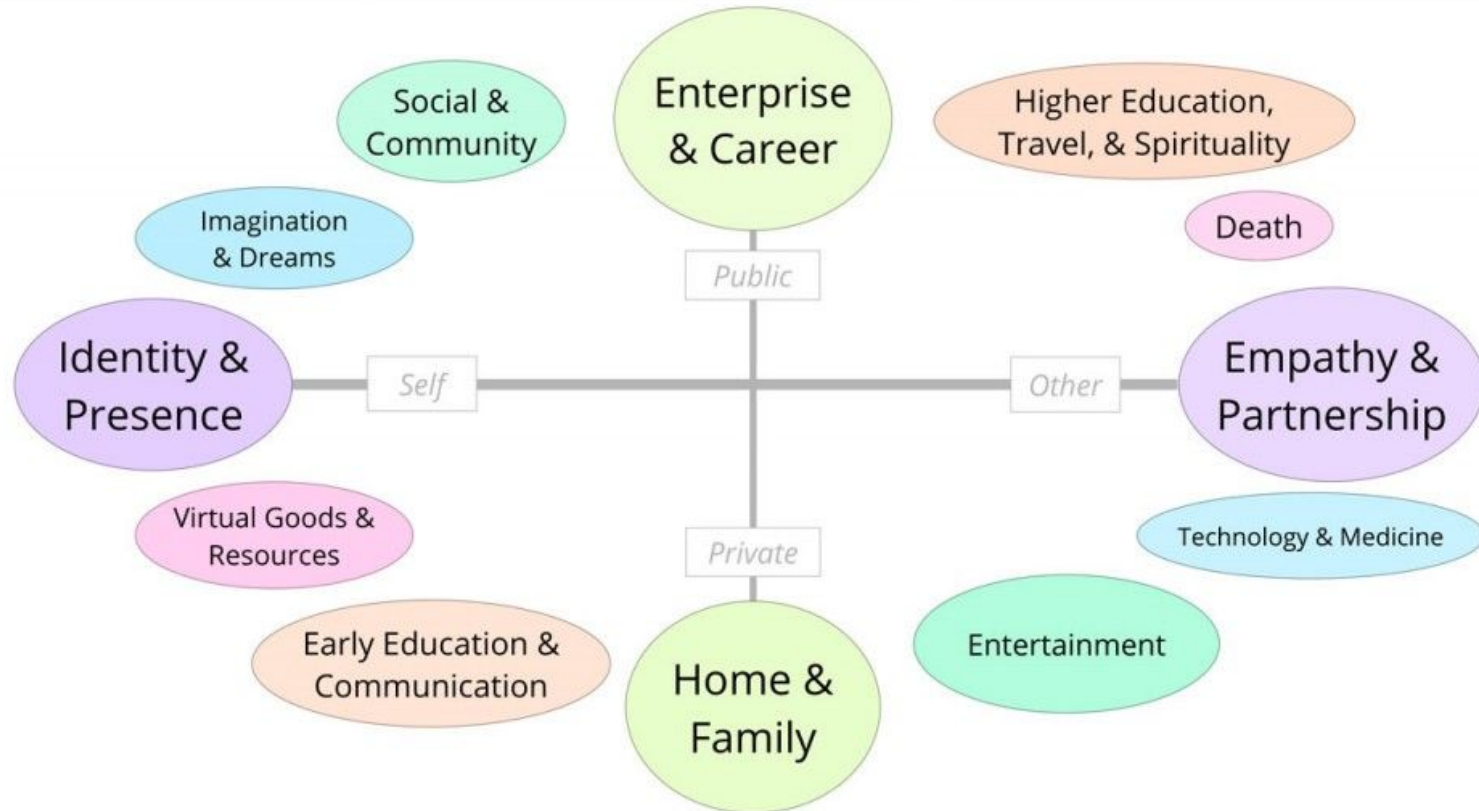


Bye, K. (2019, March 19). The @LavalVirtual Think Tank was [from Left-to-Right] Savannah Niles (@sannabh), Skip Rizzo (@SkipRizzoVR), Lara Ashmore (@laraashmorephd), Alexandra Bouchet (@Alex_BOUCH3T), Simon Richir (@simonrichir), Victor Luo (@victorrocks), Marie LeBlanc, Kent Bye (@kentbye), & Marc Pallot. Twitter. Retrieved April 2, 2023, from <https://twitter.com/kentbye/status/1108221948289581061>

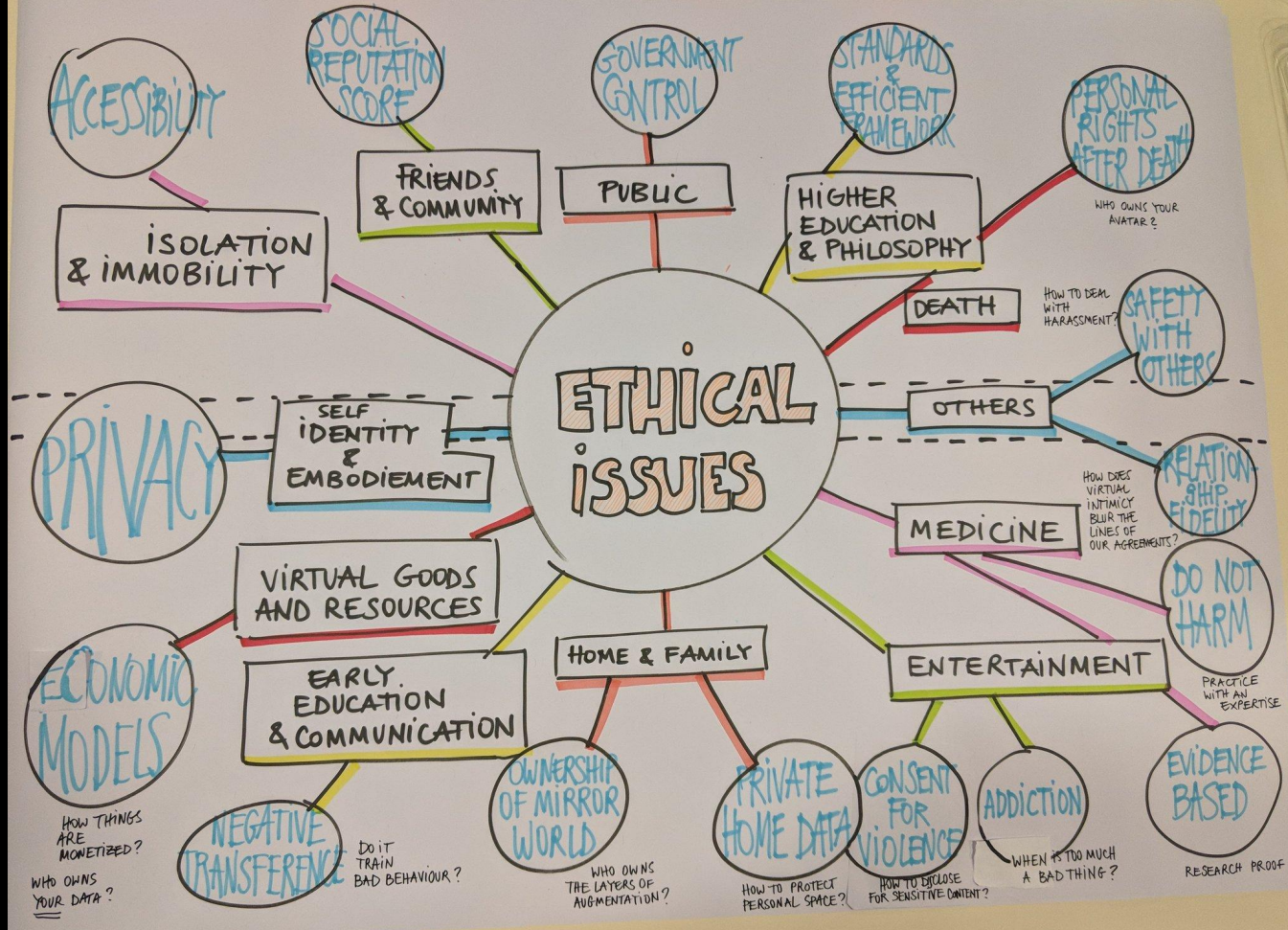


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The Human Experience of Virtual Reality - Voices of VR Podcast

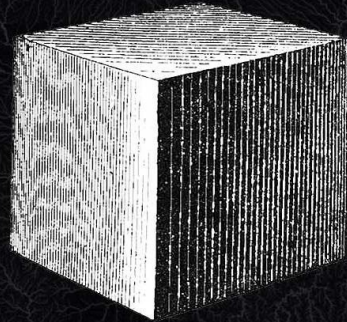
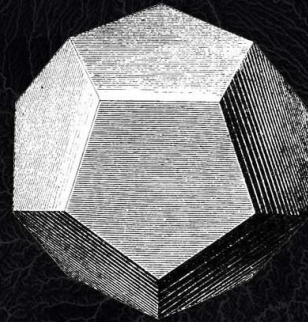
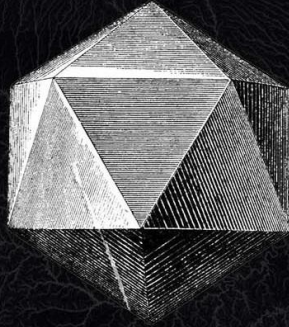


- Bye, K. (2016, April 28). *The Human Experience of Virtual Reality: A Model of the VR Landscape* [Presentation], Silicon Valley Virtual Reality Conference, San Jose, CA; San Jose McEnery Convention Center. Published on YouTube, May 3, 2016. Retrieved on November 10, 2021 from <https://www.youtube.com/watch?v=acp0UI0Qlml>.
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XR Ethics Manifesto



XI. Friends / Community / Culture

- Diversity & inclusion
- Cultural differences
- Cultural norm conflicts
- Algorithmic bias
- Code of Conduct
- Elements of culture
- Trust & safety social scores
- Harms to society
- Changing social norms
- Social hallucinations
- Weaken implicit racism
- Sustainable communities
- Reducing inequalities
- Social anxiety
- Augmenting other people
- Sharing public sphere
- Context-blind tech
- Stakeholder deliberations
- Data during humanitarian crises.
- Extremist indoctrination
- Japanese "hikikomori" & acute social withdrawal
- Sharing biometric data as part of identity expression

X. Career / Government / Institutions

- Enterprise XR Ethics
- Remote work
- Using XR for hiring decisions
- Automation & job displacement
- Conflicts of interest between academia & industry
- Governmental surveillance
- Fourth Amendment
 - Third-Party Doctrine
- Governmental loyalty tests
- Governmental nudging
- Governmental propaganda
- Future of online public space
- Right to augment public space

IX. Philosophy / Higher Education / Law

- Philosophical implications
 - What is reality?
 - What is truth?
 - The virtual vs the real
- Filter bubbles of reality
- Religious manipulation
- XR ethics & design
- Philosophy of privacy
- Neuroethics
- Ethics of human augmentation
- Workforce skills training
- XR's impact on law
- XR as judicial evidence
- What content is illegal?
- Future risks of XR tech
- Terms of conditions
- Algorithmic oversight
- Institutional Review Boards
- International Law
- Human Rights Law
- Longitudinal studies
- Beneficence vs autonomy
- Informed consent

VIII. Death

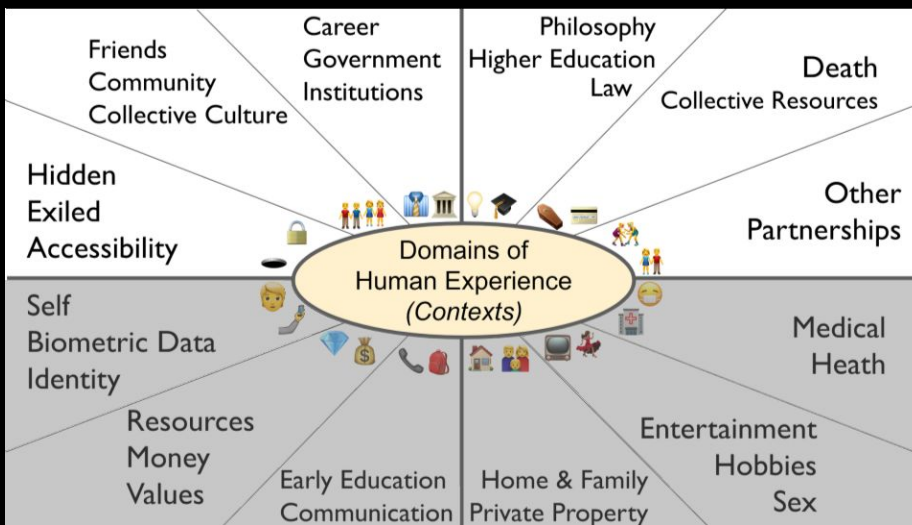
- Virtual resurrections
- Image rights after death
- Account blocks & permanent bans
- Right to be forgotten
 - Account/data erasure
- Violence & killing in VR
 - Humanoid vs non-humanoid NPCs
- Filtering violent or terrorist content
- Military dual use
- Using VR for torture
- Experiential Warfare
- Autonomous weapons systems & drones
 - Virtual suicide bombing
 - Virtually-mediated extrajudicial killings
- Life-threatening security vulnerabilities

XII. Hidden / Exiled / Accessibility

- Accessibility
 - Render content depending on ability
- Inclusive design
- Truly anonymized avatars
- Re-identifying de-identified PII data
- Combating social isolation
- Temporary & permanent exile of user suspensions
- Prisoner rehabilitation
- Addictive escapism
- Dark spatial web
- Closing technology gap for older generations

I. Self / Biometric Data / Identity

- Psychological Impacts
- Embodiment
- Avatar Representation
- Body Perception
- Identity
- Self-Model Changes
- Sensory Experience
- Long-Term Impacts
- Virtual Body Ownership
- Self-Determination
- Context Sensitivity
- Cybersickness
- Biometrically-Inferred Data
- Agency
- Suggested Memories
- Proteus Effect
- Planting Memories
- Modulating Memories
- Affective Computing
- Body Swap
- Mind Plasticity
- Epigenetic Traits



VII. Other / Partnerships

- Harassment Prevention
 - Personal Space Bubble
- Assault
- Hostile Conflict Zone
- Information Warfare
- Disinformation
- Deep Fakes
- Identity Theft
- Nudging Behaviors
- Deception
- Virtual Beings
 - Dangers of Anthropomorphic AI
 - Dangers of Synthetic Phenomenology
 - Relationships with AI
- Super Intelligence
- Empathy Machine & Technological Determinism
- Ethics Washing

VI. Medicine / Healing

- Do Not Harm
- Detecting Medical Conditions
- Triggering Seizures
- Harm to Mental Health
- Depersonalization / Derealization Disorder
- Out-of-Body Dissociation
- PTSD Treatment/triggering
- Biometrically-inferred info
- Telemedicine privacy
- Health Insurance Portability & Accountability Act
- Autonomy of Healing
- Public health
- Recovered memories of abuse
- XR as a medical device
- False hope of XR's promise
- Mandatory treatments
- Body dysmorphic disorder
- Virtual therapeutics
- Well-being applications
- VR rehabilitation
- VR exercise
- Physiological reactions to Sexual Assault

II. Resources / Money / Values

- Virtual Commerce
- Virtual Goods
- Virtual Economy
- Business Models
 - Surveillance Capitalism
 - Subscription Models
- Who owns data?
- Exporting data
- Pay for Privacy?
- Closed vs Open Ecosystem
- Anti-Money Laundering
- Cryptocurrency
- Blockchain
- Digital Divide
- Economic Disparities
- Neuromarketing
- Advertising as Behavioral Modification
- Attention Economy
- Homomorphic encryption
- Lobbyist Influence of Policy

III. Early Education / Communication / Local Travel

- Minimum Age for VR
- Negative Transference
- Personalized Education
- Family Educational Rights & Privacy Act
- Ability to Mute Others
- Mitigating & Moderating Hate/Dangerous Speech
- Telepresence Fidelity
- Broadcasting Biometrics
- Non-verbal comm norms
- Recording Conversations
- Automatic Audio Transcripts
- BCI Reading Thoughts
- End-to-End Encryption
- Geolocation Tracking
- Navigation Distractions

IV. Home & Family / Private Property / Earth

- Privacy of volumetric scans of your home
- Collective privacy of family in your home
- Spatial doxxing
- Fourth Amendment defines public vs private spaces
 - All of cyberspace is "public"
 - Third-Party Doctrine
- Who can augment?
 - Property rights
 - Context of places (e.g. Pokémon at Holocaust Museum)
- Control & modulate perception of environment
- Data security
- Ecological Impact

V. Entertainment / Content Creation / Sex

- Virtual Violence
- Addictive Entertainment
- Hijacking Attention
- The Dopamine Economy
- Escapism
- Game Ratings
- Content Warnings
- Content Moderation
- Children's Online Privacy Protection Rule (COPPA)
- Undermining User Agency
- Media Ethics
- Psychographic profiling of entertainment preferences
- Undermine User Agency
- XR Porn Implications
- Dystopia Narratives
- New forms of immersive storytelling

IEEE Global Initiative on the Ethics of Extended Reality

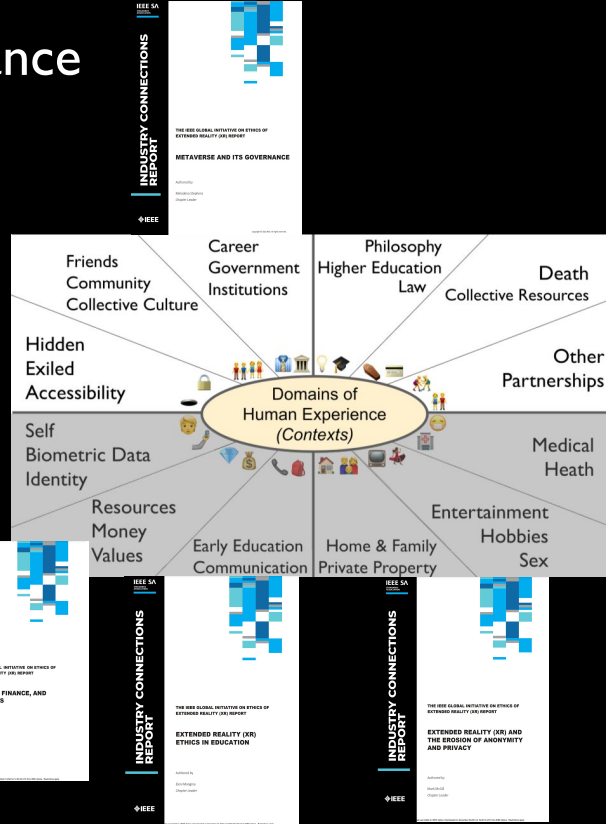
Metaverse Governance

Diversity,
Inclusion &
Accessibility

Virtual Clones
& Identity

Business, Finance,
& Economics

Education



Social Spaces:
Trolling,
Harassment,
& Online
Safety

Medicine

Erosion of Anonymity
& XR Privacy

- IEEE Standards Association (2022, June 6). *IEEE Global Initiative on the Ethics of Extended Reality*, Institute of Electrical and Electronics Engineers Standards Association. Retrieved on July 6, 2022 from <https://standards.ieee.org/industry-connections/ethics-extended-reality/>.
- Bye, K., Outlaw, J., & Cortese, M. (2022, June 4). #1089: *IEEE Global Initiative on the Ethics of Extended Reality: Trolling, Harassment, and Online Safety*. Voices of VR Podcast. Retrieved April 2, 2023 from <https://voicesofvr.com/1089-ieee-global-initiative-on-the-ethics-of-extended-reality-trolling-harassment-and-online-safety/>.

Algorithmic Bias



Workplace Attention Monitoring



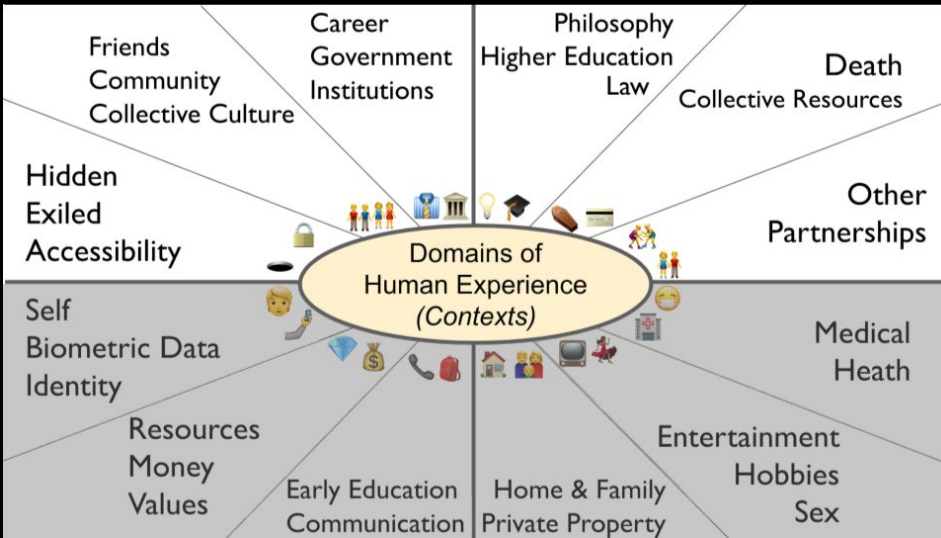
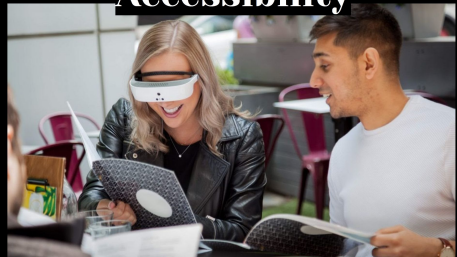
Human Rights, Laws, & Regulations



Virtual Violence



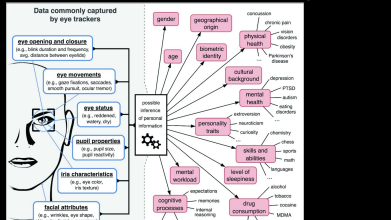
Accessibility



Virtual Harassment & Bullying



Threats to Mental Privacy



Being Aware of Triggers to Trauma



Access to XR Technology



VR Minimum Age of 13

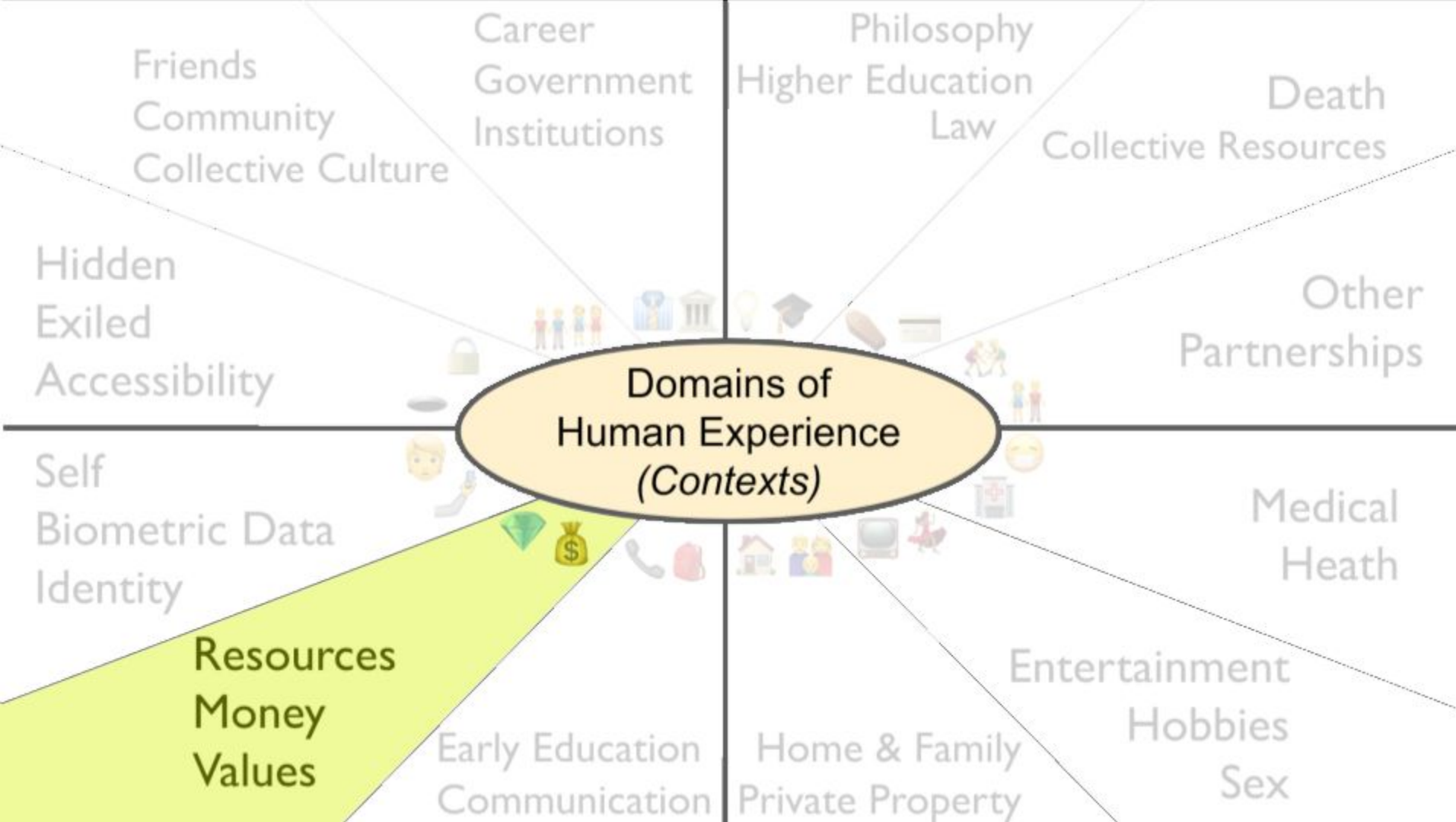


Volumetric Privacy



Escapism & Addiction





Access to XR Technology



30% Cut on App Stores



Meta's Hybrid Model of 30% Cut and Surveillance Capitalism

Meta's Quest 2 game store fees are turning it into the metaverse's first villain

News

By Hamish Hector last updated June 29, 2022

Developers don't like paying Meta 30% of every purchase



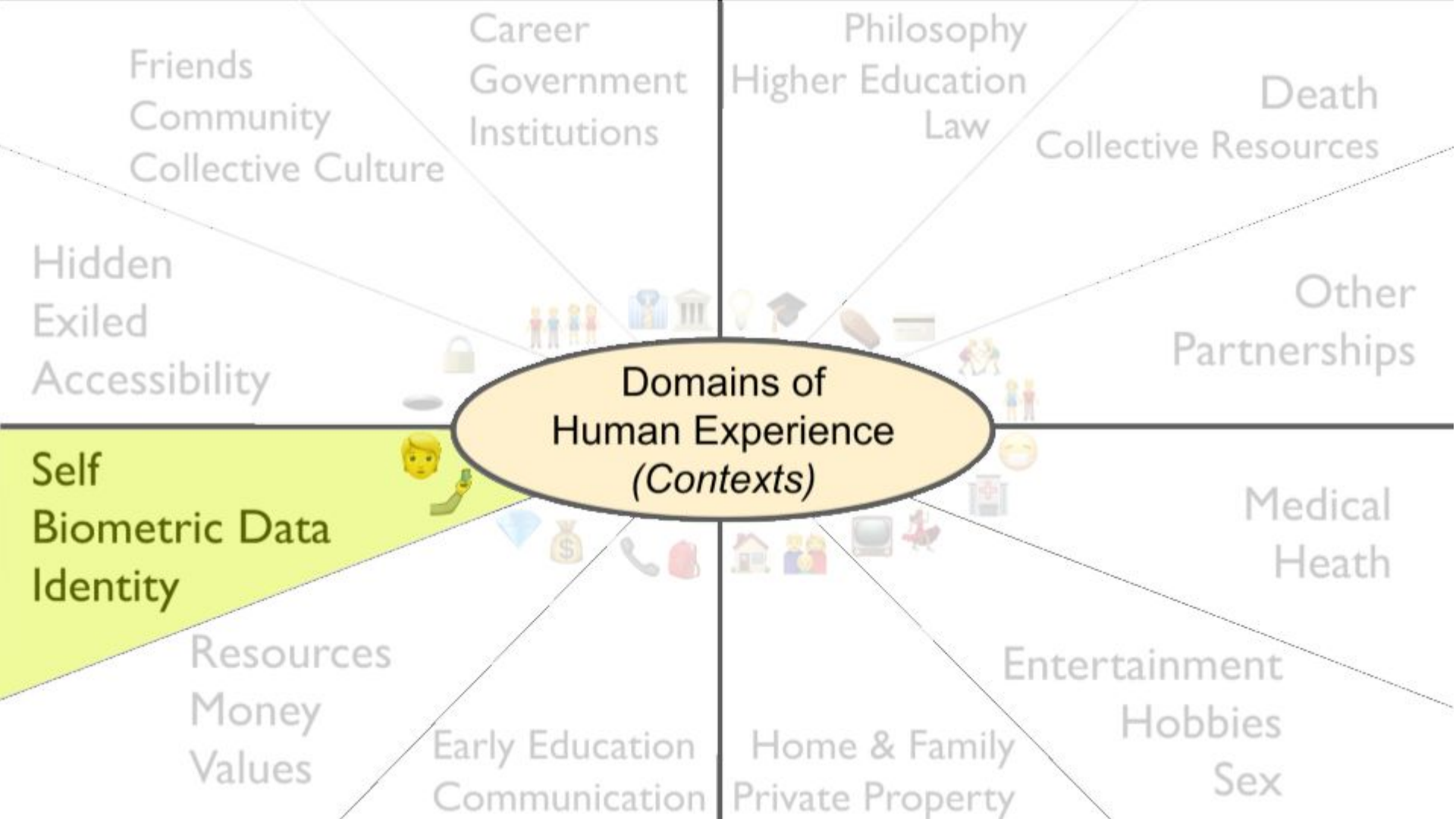
(Image credit: Shutterstock / rafapress)

THE AGE OF
SURVEILLANCE
CAPITALISM

THE FIGHT FOR A
HUMAN FUTURE
AT THE NEW
FRONTIER OF POWER

SHOSHANA
ZUBOFF

- Hector, H. (2022, June 29). *Meta's Quest 2 game store fees are turning it into the Metaverse's first villain: Developers don't like paying Meta 30% of every purchase.* TechRadar. <https://www.techradar.com/news/metas-quest-2-game-store-fees-are-turning-it-into-the-metaverses-first-villain>
- Zuboff, S. (2019). *The age of surveillance capitalism: The fight for the future at the New Frontier of Power.* Profile Books.



Domains of
Human Experience
(Contexts)

Friends
Community
Collective Culture

Career
Government
Institutions

Philosophy
Higher Education
Law

Death
Collective Resources

Other
Partnerships

Hidden
Exiled
Accessibility

Self
Biometric Data
Identity

Medical
Health

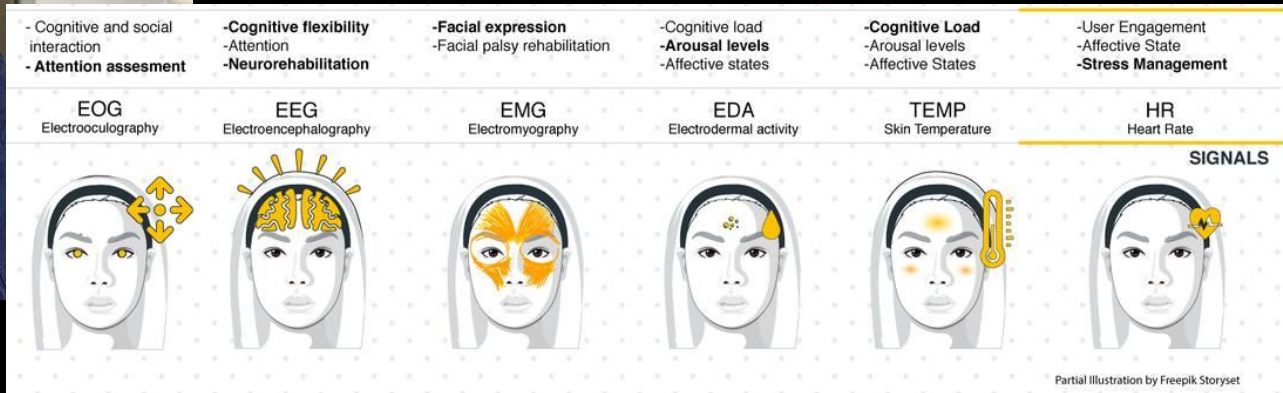
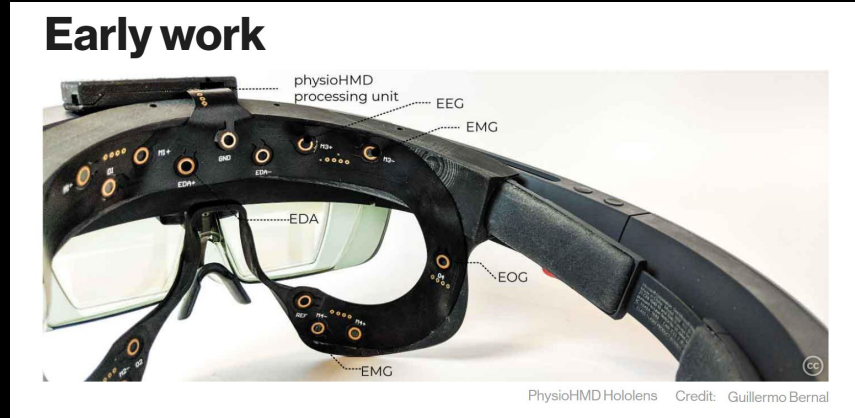
Resources
Money
Values

Early Education
Communication

Home & Family
Private Property

Entertainment
Hobbies
Sex

Combining NeuroTech with VR



Bye, K., Russomanno, C., & Artuso, J. (2022, July 7). #1112: *OpenBCI's project galea hands-on & fusion of biometric & physiological data in VR*. Voices of VR. Retrieved March 10, 2023, from <https://voicesofvr.com/1112-openbcis-project-galea-hands-on-fusion-of-biometric-physiological-data-in-vr/>

Bernal, G. (2021, April 15). *Developing Galea: An open source tool at the intersection of VR and neuroscience*. MIT Media Lab. <https://www.media.mit.edu/posts/galea/>.

XR Presents an Existential Threat to Privacy



- Image via <https://www.istockphoto.com/photo/biometric-facial-recognition-on-a-smartphone-gm855246344-140671755>
- Bye, K, & McGill, M. (2022, June 7). #1091: *IEEE XR Ethics: The Erosion of Privacy & Anonymity*. Voices of VR Podcast. Retrieved on April 2, 2023 from <https://voicesofvr.com/1091-ieee-xr-ethics-the-erosion-of-privacy-anonymity/>.
- Bye, K. & Jerome, J. (2020, October 7). #951: *Privacy Primer: A History of U.S. Consumer Privacy, U.S. Federal Privacy Debates, & XR Privacy Implications with Joseph Jerome*. Voices of VR Podcast. Retrieved on May 31, 2021 from <https://voicesofvr.com/951-privacy-primer-a-history-of-u-s-consumer-privacy-u-s-federal-privacy-debates-xr-privacy-implications-with-joseph-jerome>

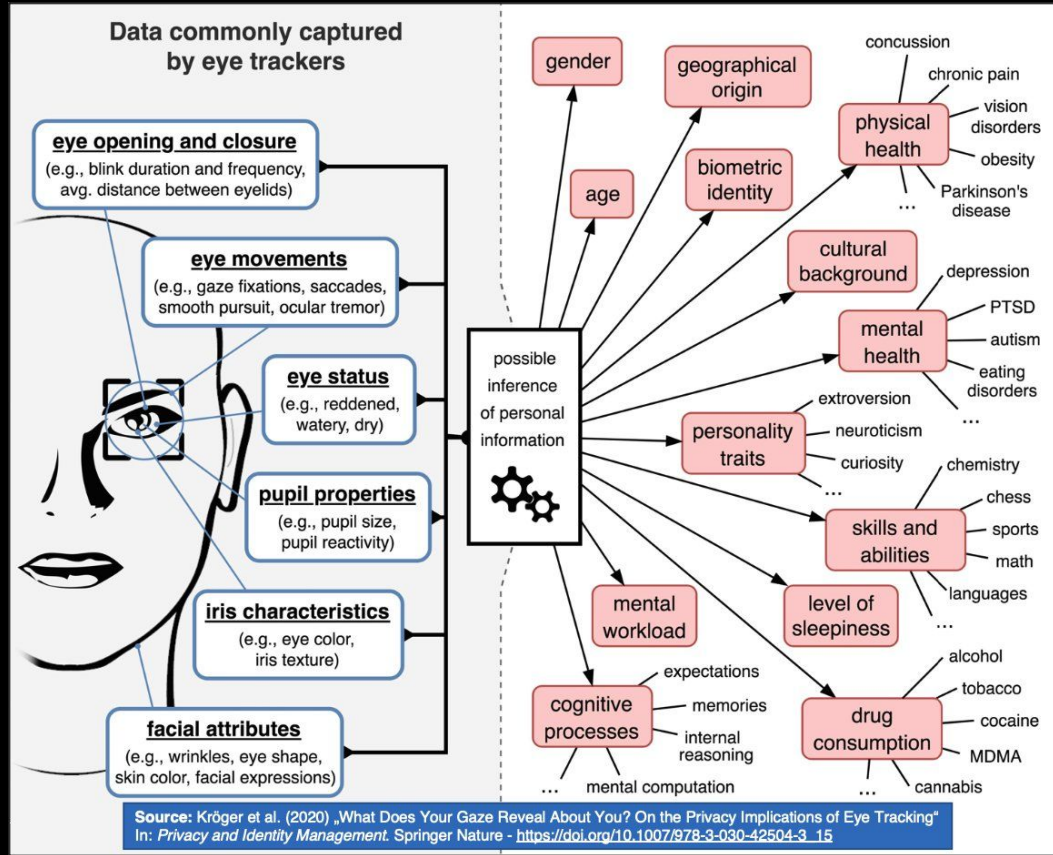
Heller's "Biometric Psychography" Goes Beyond Defining Privacy as Identifiable Info

A. Introducing "Biometric Psychography"

Biometric psychography is a new concept for a novel type of bodily-centered information that can reveal intimate details about users' likes, dislikes, preferences, and interests. Immersive technology must capture this data to function, meaning that while biometric psychography may be relevant beyond immersive tech, it will become increasingly inescapable as immersive tech spreads. This is important because current thinking around biometrics is focused primarily on identity, but biometric psychography is the practice of using biometric data to instead identify a person's interests.¹⁶⁹

- Heller, B. (2020) *Watching Androids Dream of Electric Sheep: Immersive Technology, Biometric Psychography, and the Law*, 23 Vanderbilt Journal of Entertainment and Technology Law 1. Available at: <https://scholarship.law.vanderbilt.edu/jetlaw/vol23/iss1/1>
- Bye, K. & Heller, B. (2021, April 8). #988: *Defining "Biometric Psychography" to Fill Gaps in Privacy Law to Cover XR Data: Brittan Heller's Human Rights Perspectives*. Voices of VR Podcast. Retrieved on May 31, 2021 from <https://voicesofvr.com/988-defining-biometric-psychography-to-fill-gaps-in-privacy-law-to-cover-xr-data-brittan-hellers-human-rights-perspectives>

Psychographic Inferences from Eye Gaze Data



Active Presence

Behaviors
Intention
Actions
Movement

Mental & Social Presence

Mental Thoughts
Cognitive Processes
Cognitive Load
Social Presence

Embodied & Environmental Presence

Stress / Arousal
Physiological Reactions
Eye Gaze / Attention
Body Language
Muscle Fatigue

Emotional Presence

Affective State
Emotional Sentiment
Facial Expression
Microexpressions



Self-Determination



Freedom of Thought

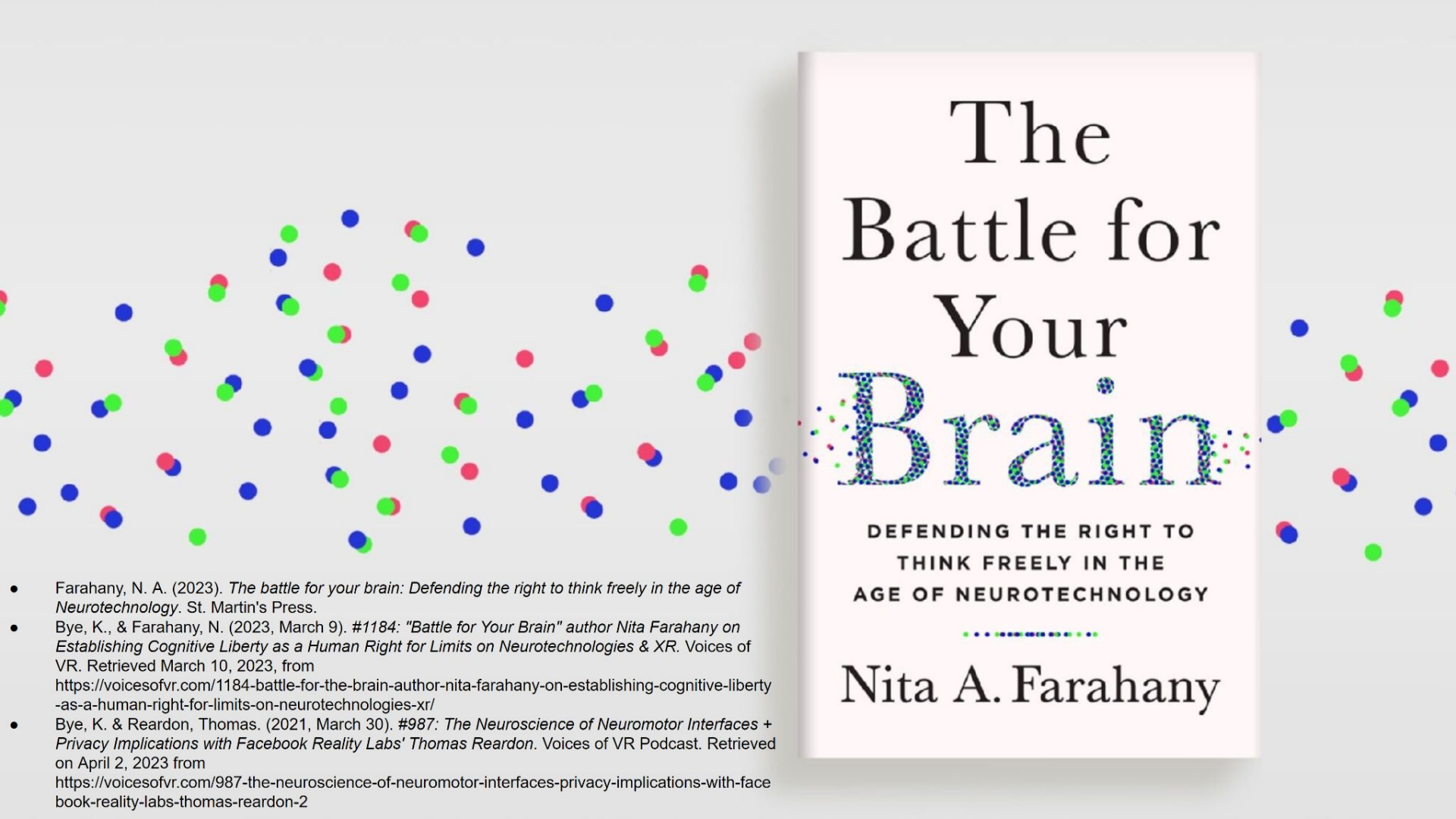


Mental Privacy

Physiological Reactions

Affective Reactions

- Farahany, N. A. (2023). The battle for your brain: Defending the right to think freely in the age of Neurotechnology. St. Martin's Press.
- Bye, K., & Farahany, N. (2023, March 9). #1184: "Battle for Your Brain" author Nita Farahany on Establishing Cognitive Liberty as a Human Right for Limits on Neurotechnologies & XR. Voices of VR. Retrieved March 10, 2023, from <https://voicesofvr.com/1184-battle-for-the-brain-author-nita-farahany-on-establishing-cognitive-liberty-as-a-human-right-for-limits-on-neurotechnologies-xr/>



The Battle for Your Brain

DEFENDING THE RIGHT TO
THINK FREELY IN THE
AGE OF NEUROTECHNOLOGY



Nita A. Farahany

- Farahany, N. A. (2023). *The battle for your brain: Defending the right to think freely in the age of Neurotechnology*. St. Martin's Press.
- Bye, K., & Farahany, N. (2023, March 9). #1184: "Battle for Your Brain" author Nita Farahany on *Establishing Cognitive Liberty as a Human Right for Limits on Neurotechnologies & XR*. Voices of VR. Retrieved March 10, 2023, from <https://voicesofvr.com/1184-battle-for-the-brain-author-nita-farahany-on-establishing-cognitive-liberty-as-a-human-right-for-limits-on-neurotechnologies-xr/>
- Bye, K. & Reardon, Thomas. (2021, March 30). #987: *The Neuroscience of Neuromotor Interfaces + Privacy Implications with Facebook Reality Labs' Thomas Reardon*. Voices of VR Podcast. Retrieved on April 2, 2023 from <https://voicesofvr.com/987-the-neuroscience-of-neuromotor-interfaces-privacy-implications-with-face-book-reality-labs-thomas-reardon-2>

Farahany's Proposed "Cognitive Liberty" As A Novel Human Right



Self-Determination

Freedom of Thought

Mental Privacy

Physiological Reactions

Affective Reactions

• Farahany, N. A. (2023). *The battle for your brain: Defending the right to think freely in the age of Neurotechnology*. St. Martin's Press.

• Bye, K., & Farahany, N. (2023, March 9). #1184: "Battle for Your Brain" author Nita Farahany on Establishing Cognitive Liberty as a Human Right for Limits on Neurotechnologies & XR. Voices of VR. Retrieved March 10, 2023, from <https://voicesofvr.com/1184-battle-for-the-brain-author-nita-farahany-on-establishing-cognitive-liberty-as-a-human-right-for-limits-on-neurotechnologies-xr/>

Proposed Neuro-Rights

- (1) The right to **mental privacy**
- (2) The right to **identity**
- (3) The right to **agency**
- (4) The right to **fair access to mental augmentation**
- (5) The right to **protection from algorithmic bias**

HORIZONS

IT'S TIME FOR NEURO-RIGHTS

NEW HUMAN RIGHTS FOR THE AGE
OF NEUROTECHNOLOGY

Rafael Yuste, Jared Genser, and Stephanie Herrmann

- Yuste, R., Genser, J. & Herrmann, S. "It's Time for Neuro-Rights." Horizons: Journal of International Relations and Sustainable Development, no. 18, 2021. pp 154-164. JSTOR, <https://www.cirsd.org/en/horizons/horizons-winter-2021-issue-no-18/its-time-for-neuro--rights>. Accessed 31 Mar. 2021.
- Bye, K., & Yuste, R (2021, June 4). #994: Neuro-Rights Initiative: A Human Rights Approach to Preserving Mental Privacy with Rafael Yuste. Voices of VR Podcast. Retrieved April 2, 2023 from <https://voicesofvr.com/994-neuro-rights-initiative-a-human-rights-approach-to-preserving-mental-privacy-with-rafael-yuste/>

Human Rights, Laws, & Regulations



- Bye, K. & Leufer, D. (2023, March 7). #1177: *How the EU's AI Act Could Impact Biometric Data Definitions & XR Privacy*. Voices of VR Podcast. Retrieved April 2, 2023 from <https://voicesofvr.com/1177-how-the-eus-ai-act-could-impact-biometric-data-definitions-xr-privacy/>.
- Bye, K. & G'sell, F. (2023, March 7). #1178: *How the EU's Metaverse Initiative May Bring XR Privacy Amendments for the AI Act, GDPR, or Digital Markets Act*. Voices of VR Podcast. Retrieved April 2, 2023 from <https://voicesofvr.com/1178-how-the-eus-metaverse-initiative-may-bring-xr-privacy-amendments-for-the-ai-act-gdpr-or-digital-markets-act/>.

Diverse Selection of Avatars



Deep Fakes & AI Voice to Spoof Identity

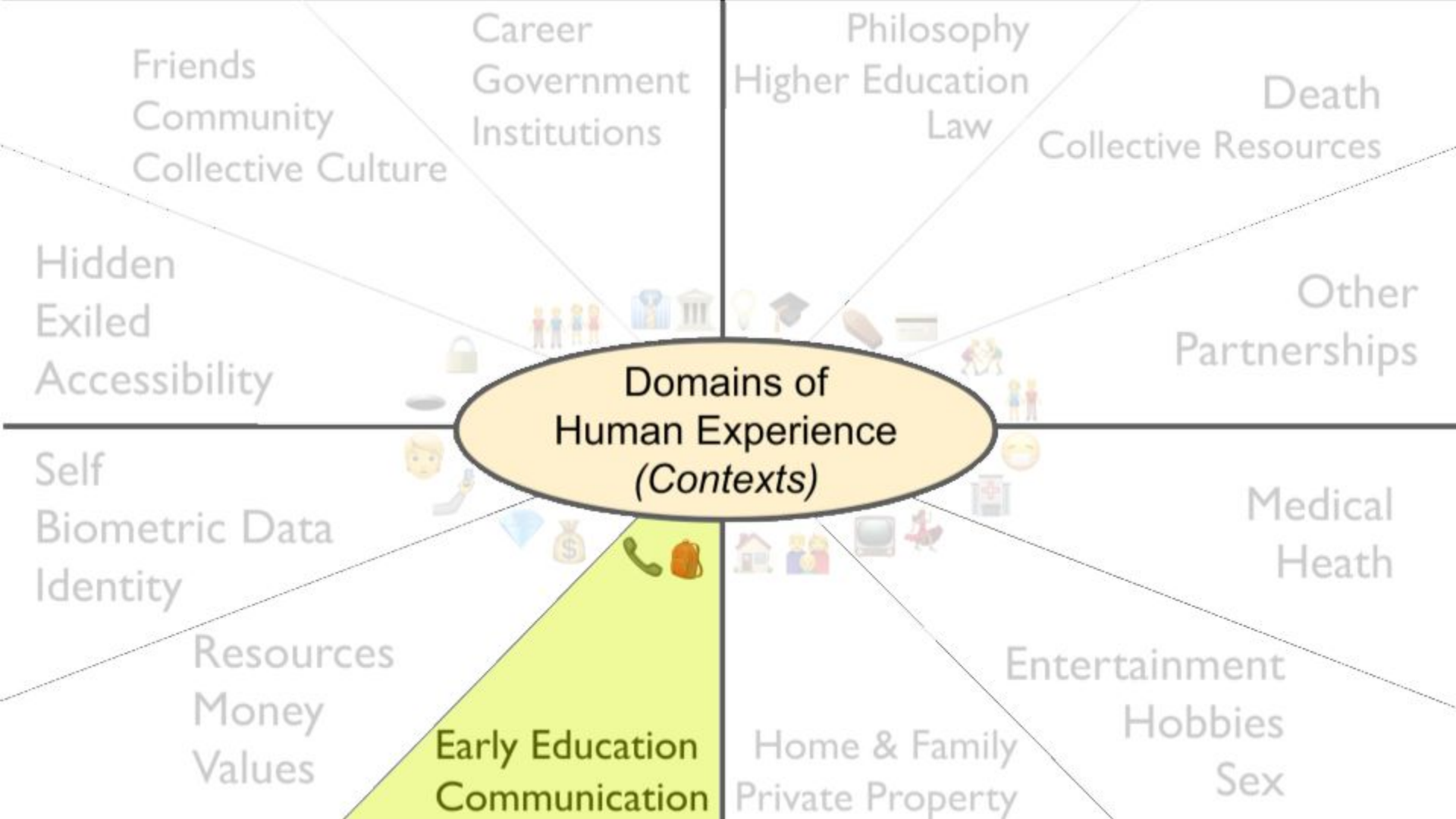


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Snapchat Dysmorphia from Facial Filters



Migala, J. (2018, October 16). *What is 'snapchat dysmorphia'? A detailed look at the trend.* EverydayHealth.com. Retrieved March 10, 2023, from <https://www.everydayhealth.com/wellness/united-states-of-stress/what-snapchat-dysmorphia-detailed-look-trend/>



Early Education



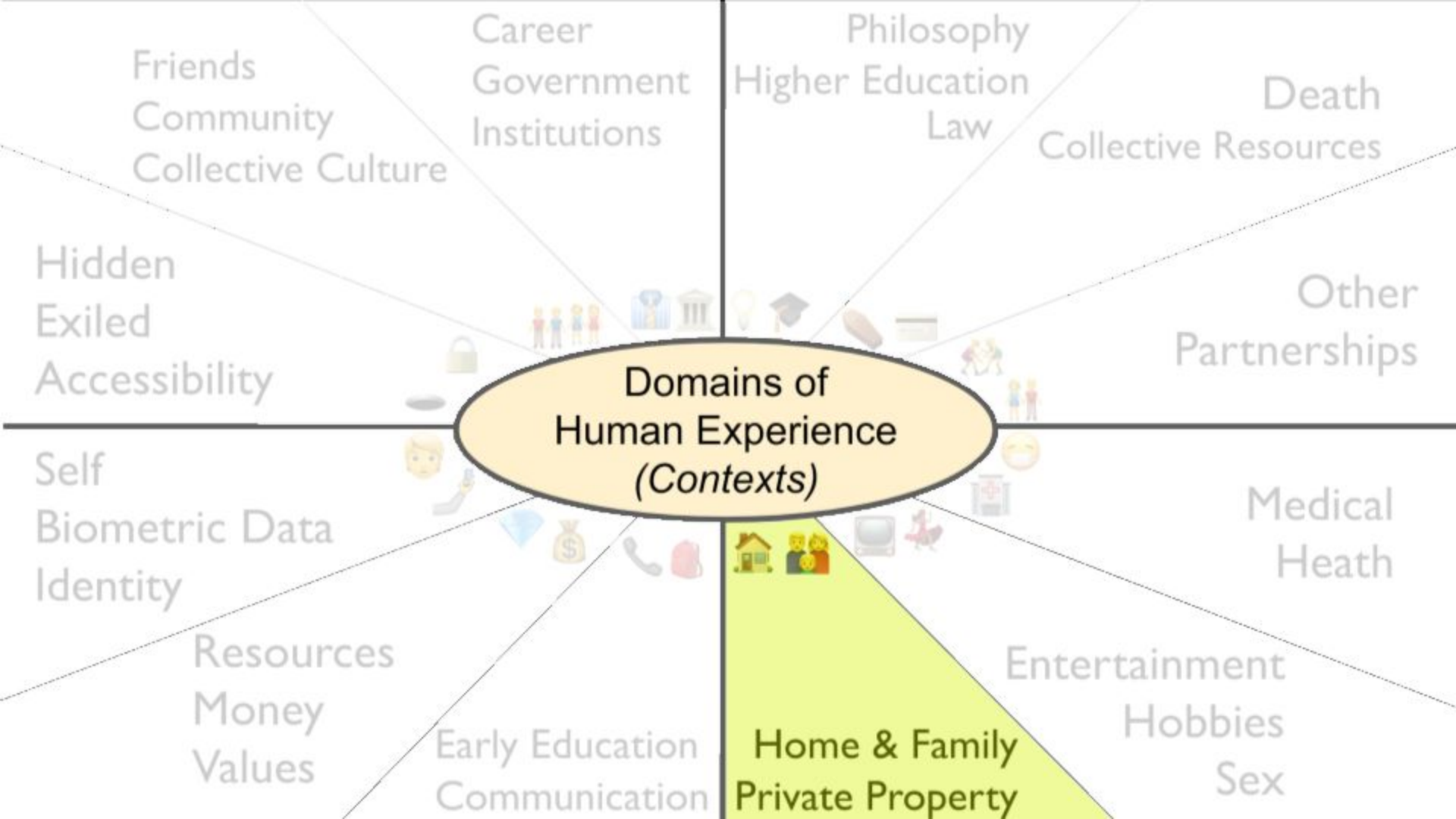
- Bye, K., & Frazier, K. (2020, January 24). *#882 VR for good: Kai XR's inclusive & Accessible Education Kits*. Voices of VR. Retrieved March 10, 2023, from <https://voicesofvr.com/882-vr-for-good-kai-xrs-inclusive-accessible-education-kits/>
- Bye, K., & Mangina, E. (2022, June 20). *#1096: IEEE XR8 Ethics: Education*. Voices of VR Podcast. Retrieved on April 2, 2023 from <https://voicesofvr.com/1096-ieee-xr-ethics-education/>.

VR Minimum Age of 13



Image via <https://pixeid.com/image/a-child-wearing-a-virtual-reality-headset-co8tjkoa>

- Bye, K., Pearlman, K., & Podnar, K. (2022, January 7). #1030: XR Safety Initiative on Children in VR, Privacy, Tech Policy, & Recap of XR Safety Week. *Voices of VR Podcast*. Retrieved April 2, 2023 from <https://voicesofvr.com/1030-xr-safety-initiative-on-children-in-vr-privacy-tech-policy-recap-of-xr-safety-week/>.
- Bye, K., & Powell, L. G., Jr. (2022, February 26). #1057: What Parents Should Know about Social VR, Understanding Social VR Harassment, & Parental Guidance for the Metaverse with Lance G. Powell, Jr. *Voices of VR Podcast*. Retrieved April 2, 2023 from <https://voicesofvr.com/1057-what-parents-should-know-about-social-vr-understanding-social-vr-harassment-parental-guidance-for-the-metaverse-with-lance-g-powell-jr/>



Domains of Human Experience
(Contexts)

Friends
Community
Collective Culture

Career
Government
Institutions

Philosophy
Higher Education
Law

Death
Collective Resources

Other Partnerships

Medical Health

Entertainment
Hobbies
Sex

Home & Family
Private Property

Early Education
Communication

Resources
Money
Values

Self
Biometric Data
Identity

Hidden
Exiled
Accessibility

Volumetric Privacy



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- Bye, K., & McGill, M. (2022, June 7). #1091: *IEEE XR Ethics: The Erosion of Privacy & Anonymity*. *Voices of VR Podcast*. Retrieved on April 2, 2023 from <https://voicesofvr.com/1091-ieee-xr-ethics-the-erosion-of-privacy-anonymity/>.

Meta is Working Towards “Contextually-Aware AI” in AR



Not actual product images. Images are for illustration purposes only.

THE ABC OF

CONTEXTUAL

INTEGRITY

[HTTPS://PRIVACY.INFO](https://privacy.info)

A **Privacy** = appropriate flow of information

B **Appropriateness** = informational norms in a given context

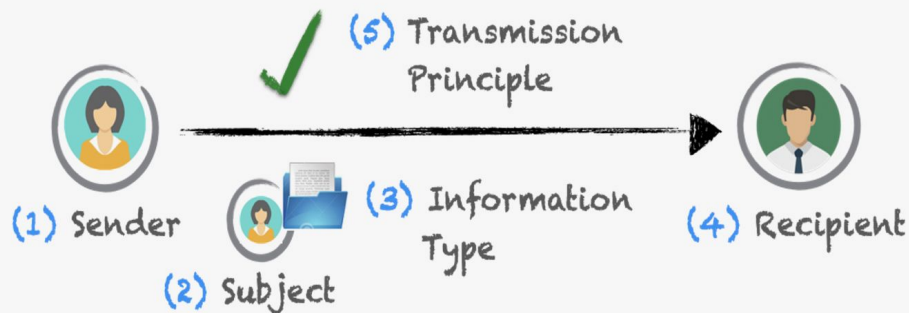
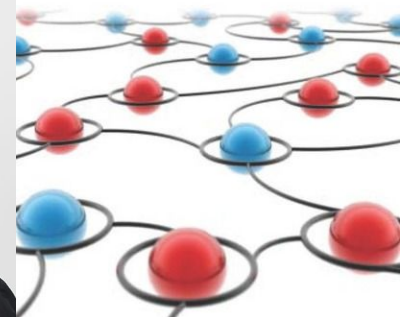
C **Information Norms** = 5 key parameters



PRIVACY IN CONTEXT

Technology, Policy, and the Integrity of Social Life

HELEN NISSENBAUM



- Image via Yan Shvartzshnaider (April 15, 2020) <https://twitter.com/ynotez/status/1250578500588879873>
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“Where did I put grandma’s watch?”

Meta’s Speculative Example of AR + Episodic Memory AI



Meta AI. (2021, October 14). *Teaching AI to perceive the World Through Your Eyes*. Meta AI. Retrieved January 4, 2023, from <https://ai.facebook.com/blog/teaching-ai-to-perceive-the-world-through-your-eyes/>

Meta's Ego4D Challenges Push the Limits of What Egocentric POV, Contextually-Aware AI Might Be Able to Do



Episodic Memory

What happened when?



Forecasting

What will I do next?



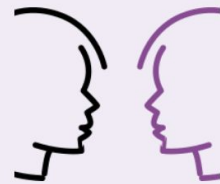
Hand-Object Interactions

What am I doing & how?



AV Diarization

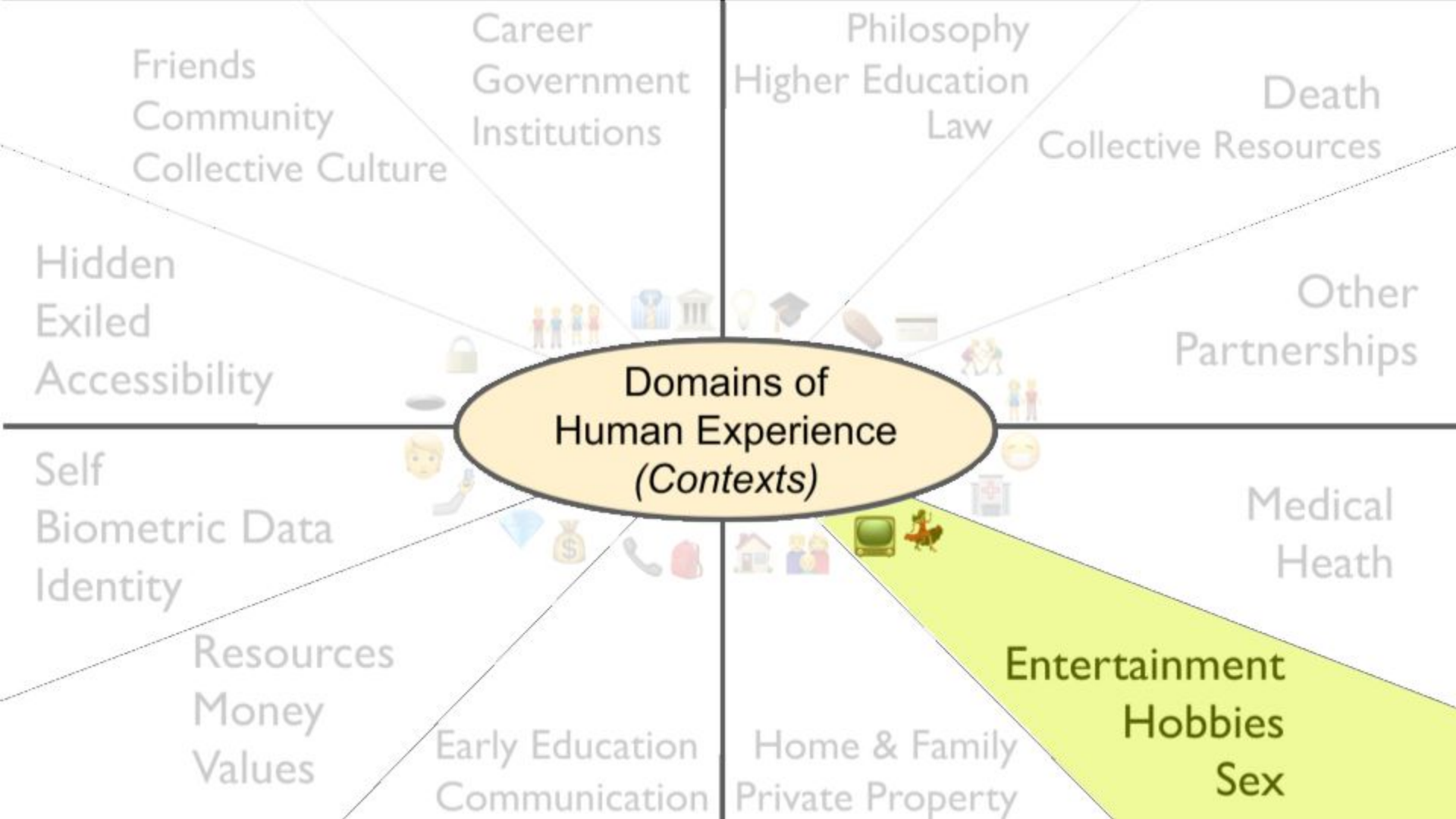
Who said what when?



Social

How are we interacting?

- Egocentric 4D perception (EGO4D). (2021, October 14). Retrieved January 5, 2023, from <https://ego4d-data.org/#challenges>
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Escapism & Addiction



- Fowler, E. (2005, November 28). *Reality 1024x768* by EranFowler on DeviantArt. DeviantArt. Retrieved March 10, 2023, from <https://www.deviantart.com/eranfowler/art/Reality-1024x768-25788560>
- Bye, K. & Krantz, Karl. (2016, March 2). #311: *Karl Krantz on VR Startups, SVVRCon, & Time Dilation*. Voices of VR Podcast. Retrieved on April 2, 2023 from <https://voicesofvr.com/311-karl-krantz-on-vr-startups-svvrcon-time-dilation>

Adult Content & No Age Verification



YTMINI. (2021, March 2). *Going to the strip club in VRChat*. YouTube. Retrieved March 10, 2023, from <https://www.youtube.com/watch?v=il2hSbECokU>
Bye, K., & Darling, E. (2018, March 19). #634: *VR Porn Livestreaming & emotional intimacy with CAM4VR*. Voices of VR. Retrieved March 10, 2023, from <https://voicesofvr.com/634-vr-porn-livestreaming-emotional-intimacy-with-cam4vr/>

Domains of Human Experience
(Contexts)

Friends
Community
Collective Culture

Career
Government
Institutions

Philosophy
Higher Education
Law

Death
Collective Resources

Other
Partnerships

Hidden
Exiled
Accessibility

Self
Biometric Data
Identity

Resources
Money
Values

Early Education
Communication

Home & Family
Private Property


Entertainment
Hobbies
Sex













Medical
Health

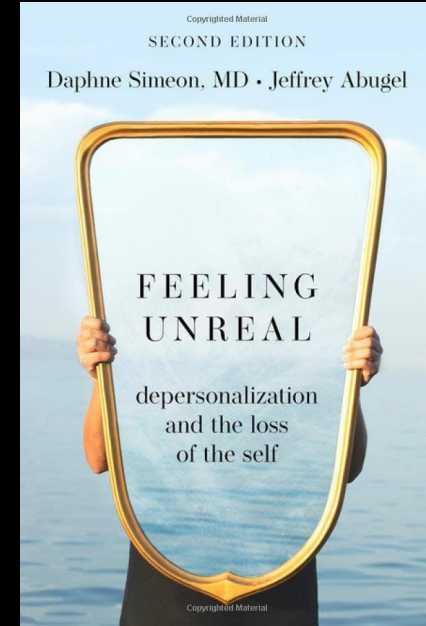

Triggers for VR Motion Sickness, Epilepsy, Derealization & Depersonalization



Epilepsy Triggers and Signs



Triggers	Signs
 Lack of sleep	 Confusion
 Illness	 Staring spell
 Stress	 Uncontrollable movements
 Bright lights	 Loss of consciousness
 Caffeine, alcohol	 Fear, anxiety, déjà vu
 Medicines, drugs	
 Specific foods	

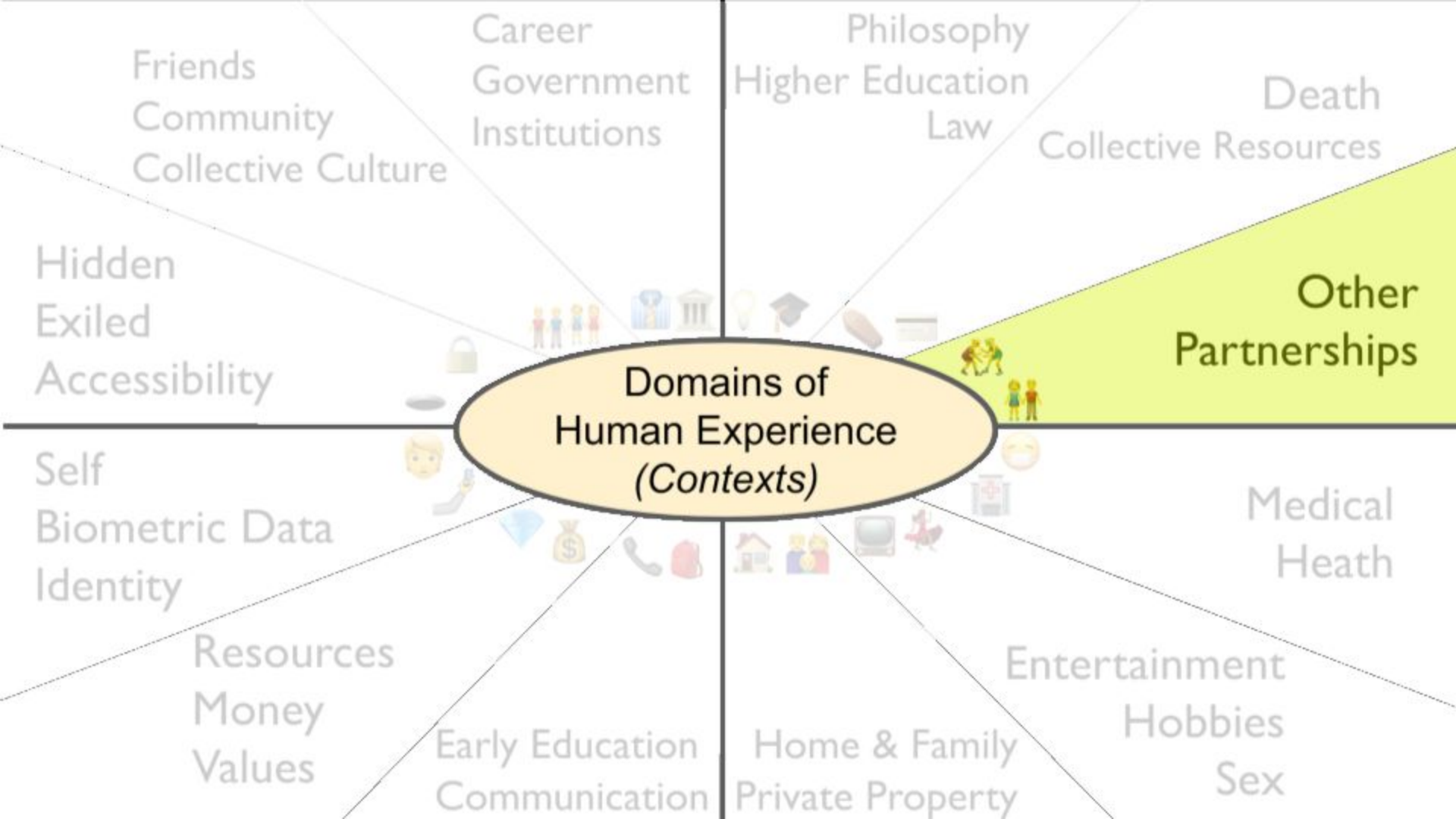


- Image via <https://technabob.com/blog/2014/10/31/halloween-awesome-pumpkins/>
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- Simeon, D., & Abugel, J. (2023). *Feeling unreal: Depersonalization and the loss of the self*. Oxford University Press.
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Being Aware of Triggers to Trauma



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- Bye, K., Evans, J., Patel, P., & Livieri, G. (2022, June 8). #1094: IEEE XR Ethics: Medical XR. Voices of VR Podcast. Retrieved on April, 2, 2023 from <https://voicesofvr.com/1094-ieee-xr-ethics-medical-xr/>
- Madary, M., & Metzinger, T. K. (2016). *Real Virtuality: A Code of Ethical Conduct. Recommendations for Good Scientific Practice and the Consumers of VR-Technology*. *Frontiers in Robotics and AI*, 3. <https://doi.org/10.3389/frobt.2016.00003>



VR as Empathy Machine?



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- Bye, K. & Ramirez, E. J. (2023, March 9) #1181: *VR Renaissance in Moral Psychology, Perspectival Thought Experiments in Philosophy, & Bounds of Empathy*. Voices of VR Podcast. Retrieved on April 2, 2023 from <https://voicesofvr.com/1181-vr-renaissance-in-moral-psychology-perspectival-thought-experiments-in-philosophy-bounds-of-empathy/>
- Bye, K. & Messeri, L. (2023, December 14). #1359: *Landmark Anthropological Field Study of VR with "In the Land of the Unreal" author Lisa Messeri*. Voices of VR Podcast. Retrieved on April 24, 2024 from <https://voicesofvr.com/1359-landmark-anthropological-field-study-of-vr-with-land-of-the-unreal-author-lisa-messeri/>

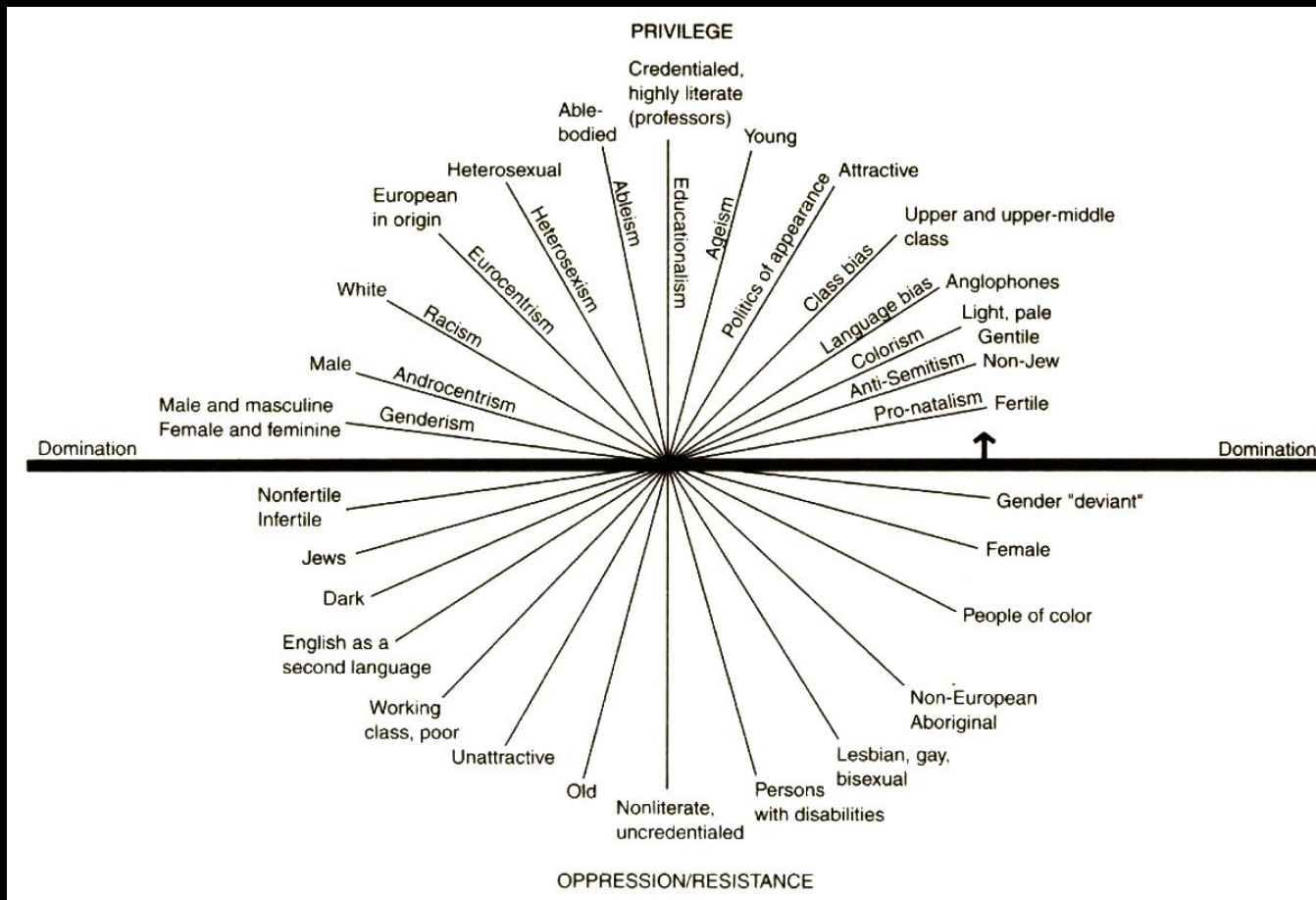
Virtual Harassment & Bullying

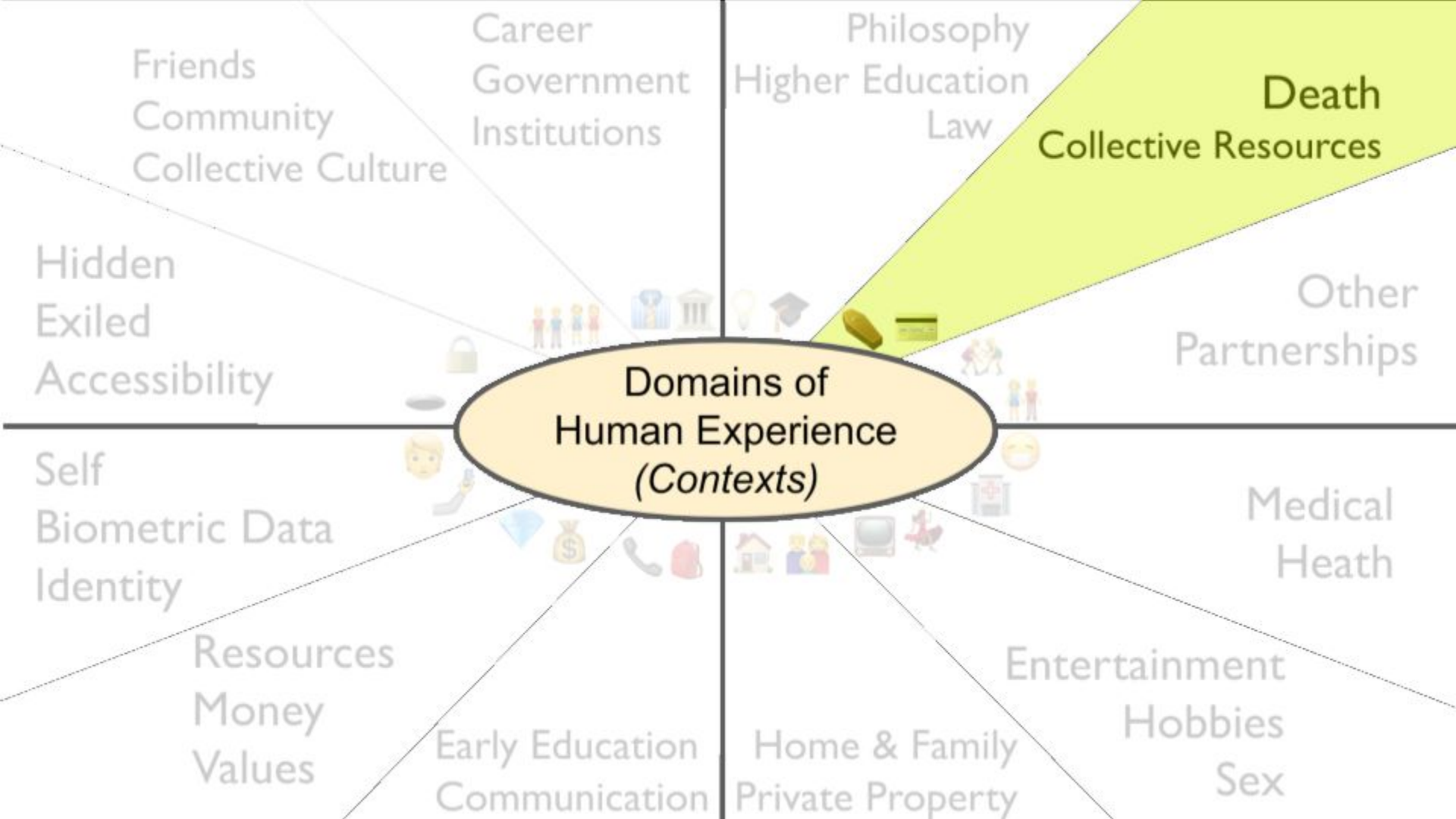


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Intersectional Axes of Privilege, Domination, & Oppression

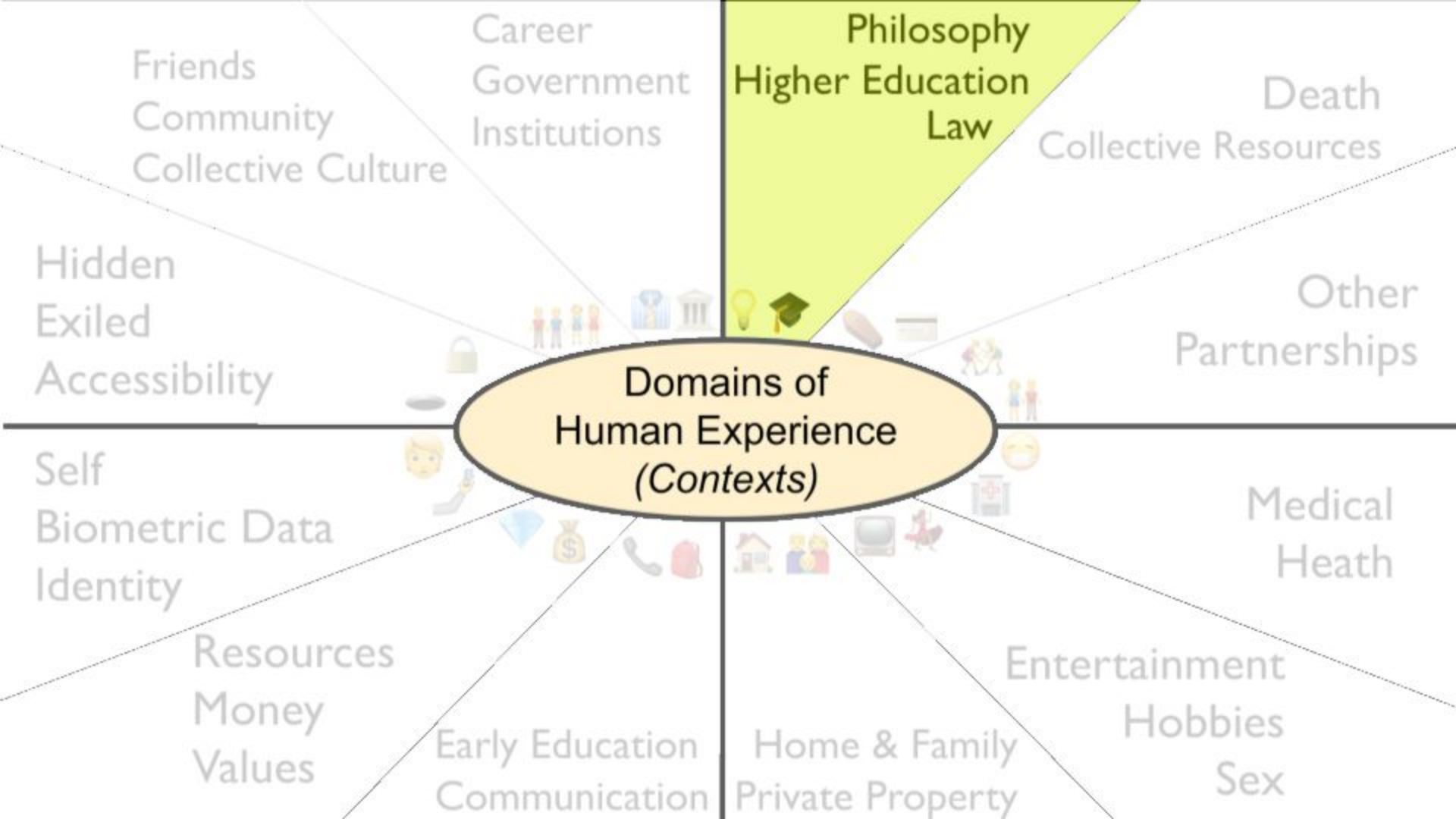




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Human Rights, Laws, & Regulations



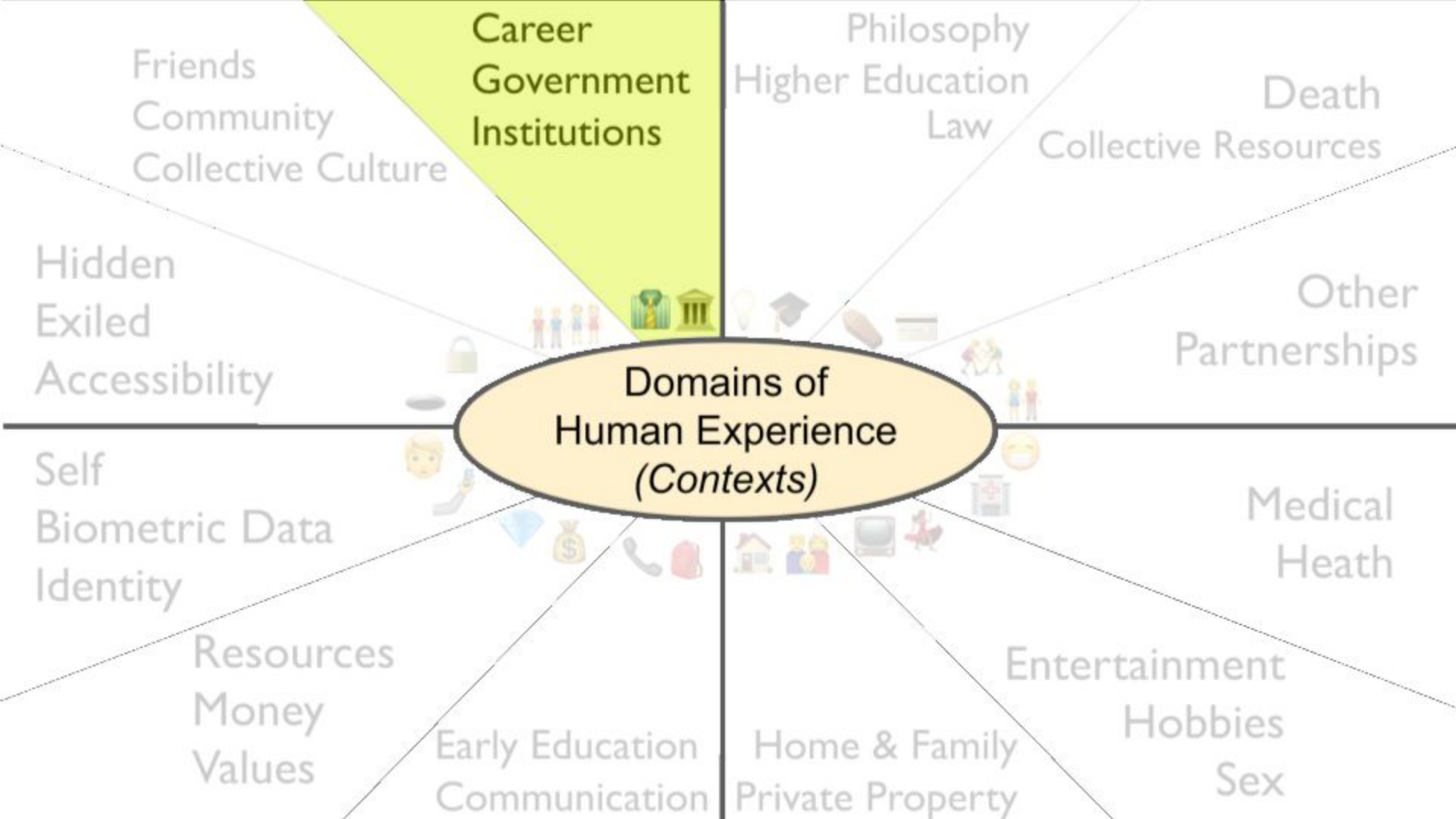
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- Bye, K. & G'sell, F. (2023, March 7). #1178: *How the EU's Metaverse Initiative May Bring XR Privacy Amendments for the AI Act, GDPR, or Digital Markets Act*. Voices of VR Podcast. Retrieved April 2, 2023 from <https://voicesofvr.com/1178-how-the-eus-metaverse-initiative-may-bring-xr-privacy-amendments-for-the-ai-act-gdpr-or-digital-markets-act/>.
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Existing Law and Extended Reality

a Research Symposium



Stanford
Cyber Policy Center
Freeman Spogli Institute
Stanford Law School



Workplace Attention Monitoring



The Battle for Your Brain

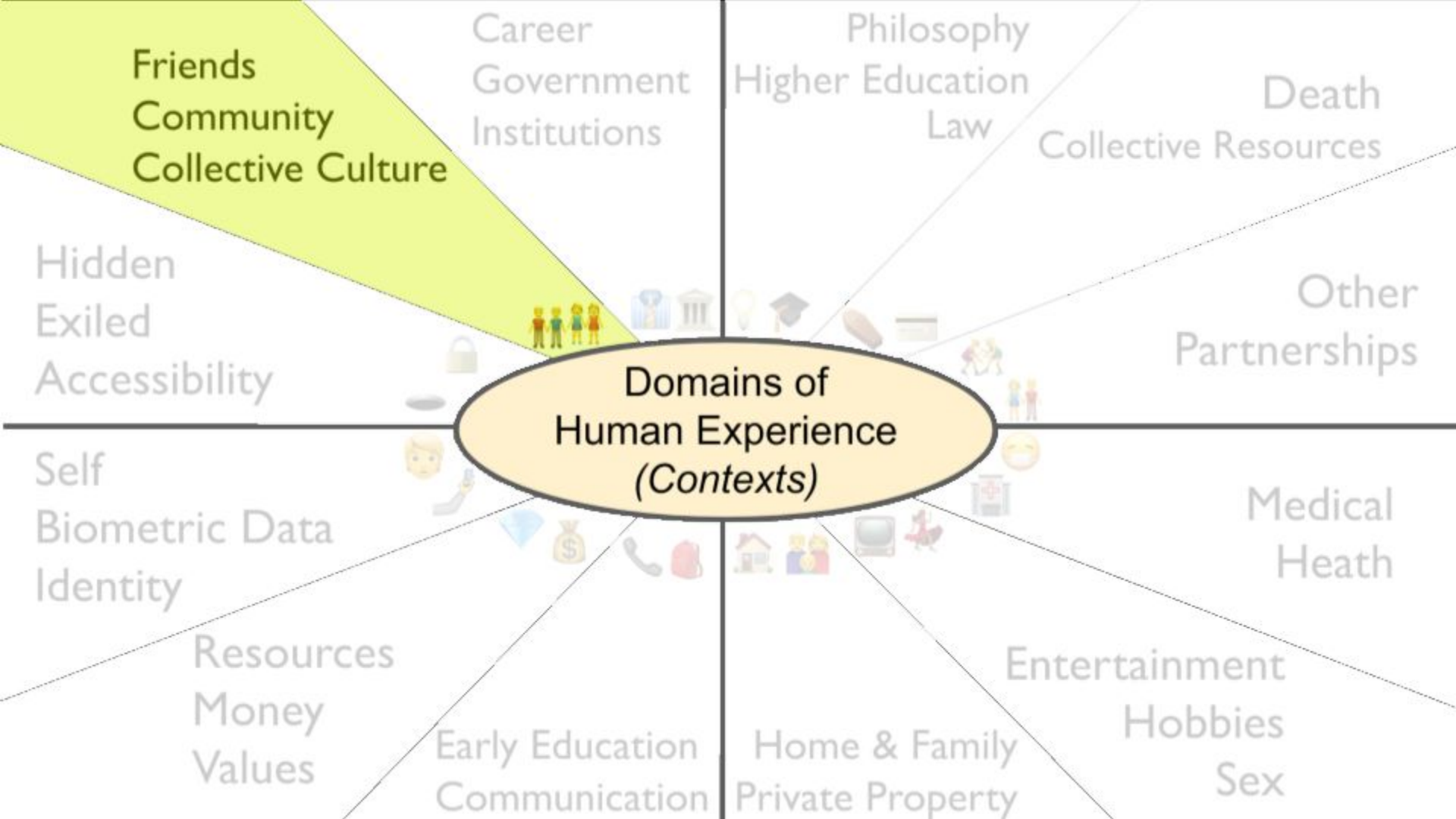
DEFENDING THE RIGHT TO
THINK FREELY IN THE
AGE OF NEUROTECHNOLOGY

Nita A. Farahany

Governmental Mass Surveillance



Data Leviathan: China's burgeoning Surveillance State. Human Rights Watch. (2020, October 28). Retrieved March 10, 2023, from <https://www.hrw.org/news/2019/08/16/data-leviathan-chinas-burgeoning-surveillance-state>

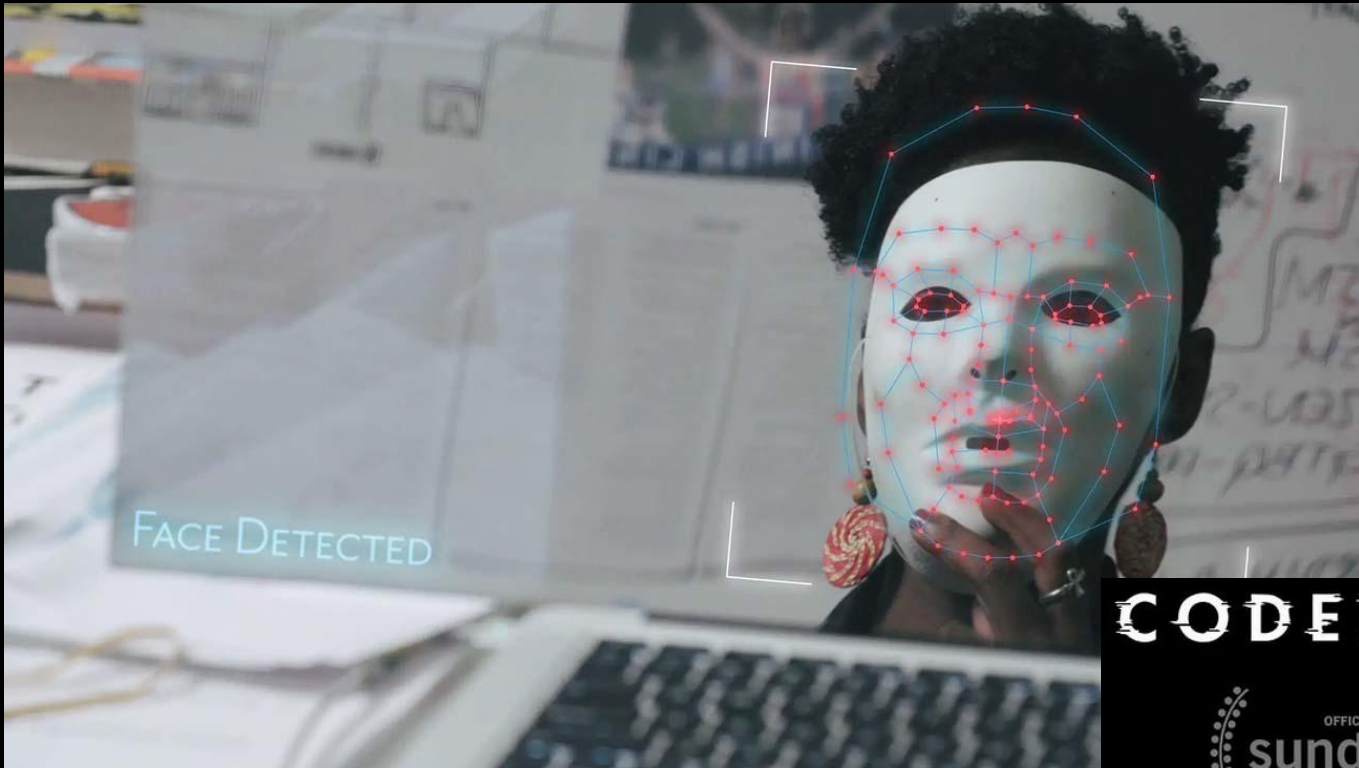


Diversity, Equity, & Inclusion



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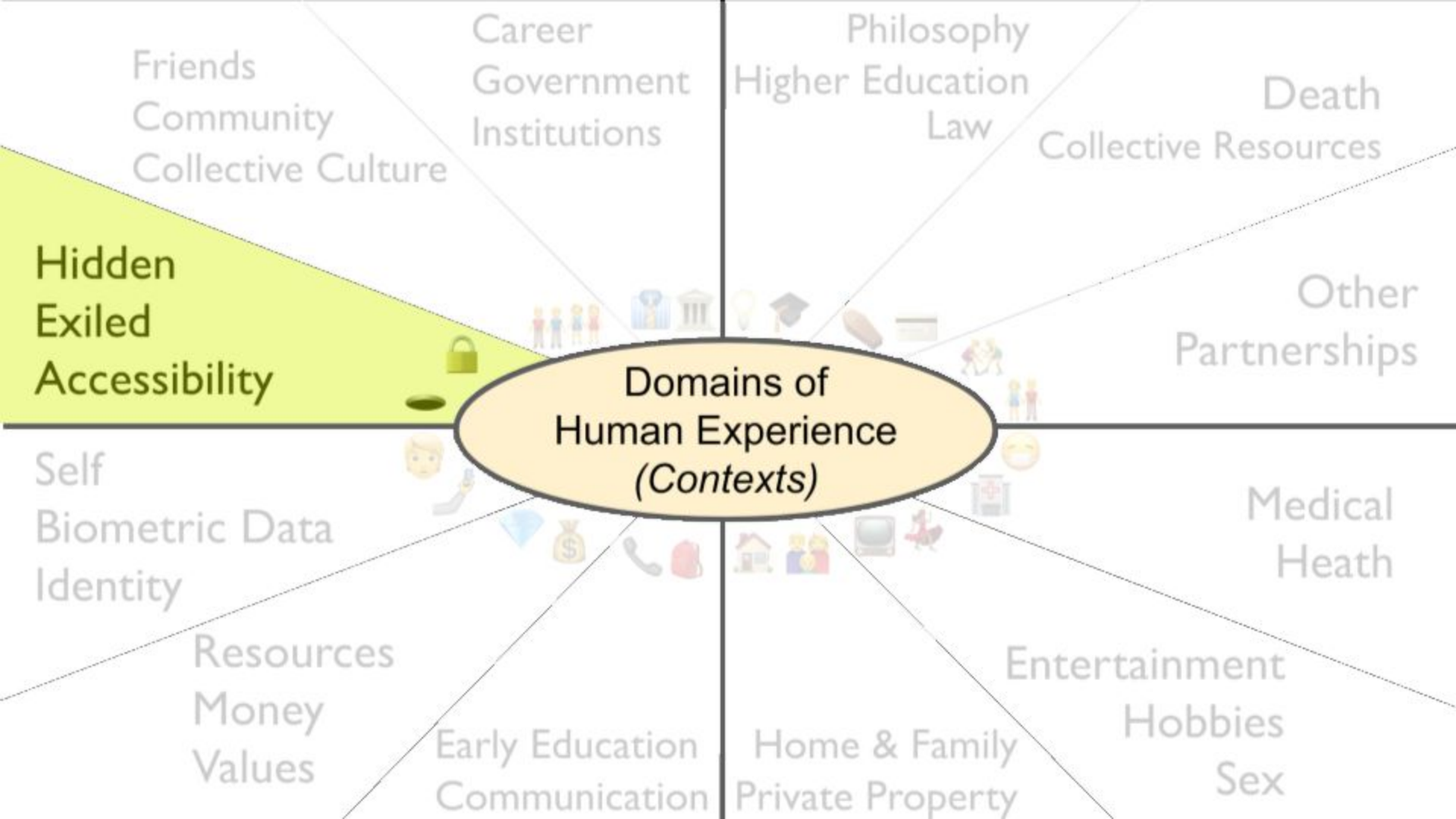
Algorithmic Bias



CODED BIAS



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Accessibility

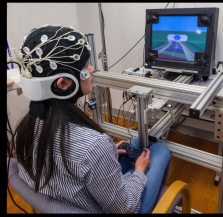


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Algorithmic Bias



Workplace Attention Monitoring



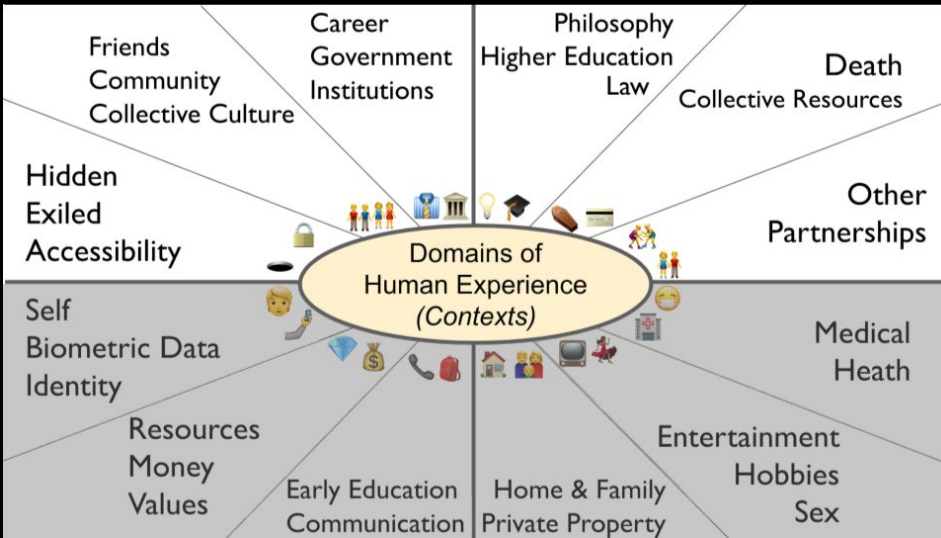
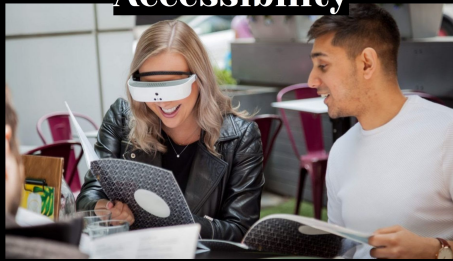
Human Rights, Laws, & Regulations



Virtual Violence



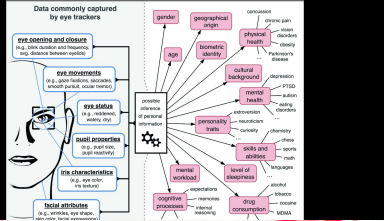
Accessibility



Virtual Harassment & Bullying



Threats to Mental Privacy



Being Aware of Triggers to Trauma



Access to XR Technology



VR Minimum Age of 13



Volumetric Privacy



Escapism & Addiction





Voices of VR Podcast