# Understanding Digital and New Media Art

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**Dr. Ashley Lee Wong**
*Artistic Director*
MetaObjects

# About Me: Dr. Ashley Lee Wong

- *Artistic Director*, MetaObjects (www.metaobjects.org), a studio facilitating digital production with artists and cultural institutions.
- Part-time lecturer in Cultural Management at CUHK
- Completed PhD at the School of Creative Media, City University of Hong Kong and MA Goldsmiths University of London.
- Former Head of Programmes and Operations of Seditionart.com an online platform for distributing digital limited editions based in London.

# Content

1. Introduction to Digital and New Media Art
2. Digital Aesthetics

- Break -

3. Tools and Techniques
4. Media Arts Education Beyond Technology
5. Q & A

# Introduction to Digital and New Media Art

# Digital and New Media Art

**New Media Art:**

- Computer graphics, animation, digital art, interactive art, video art, sound art, software art, generative art, internet art, games, robotics, 3D printing, AI, VR/AR, kinetic art, bioart etc.
- Performance, installation, sculpture, socially engaged art etc.

**Digital Art**:

- Art created using digital tools and techniques
- Digital vs. analogue

# Digital Art as Visual Art

Use of digital tools to create visual art

- Digital painting / illustration
- Graphic arts / graphic design
- Audiovisual / video  art / digital music
- 3D modelling (games, VR/AR, animation, 3D printing / sculpture)

# A Brief History of Media Art

## Mechanical Reproduction

- Prints: etchings, woodcuts, printmaking
- Photography

## Moving Image and Sound

- Film / cinema - time-based art, immersive shared experience
- Video - tape to digital video
- Sound - phonograph, tape recorder, to digital audio

# A Brief History of Media Art

**Computers**

- Computational art, algorithmic art, software art
- Graphics, animation, games, interactive art

**Mass Media/Communication**

- Printing press, telephone, radio, television, internet, smartphones, social media
- Telematic art to internet art

# Industrial Revolutions

# Early forms of Media Art

- 20s - Early forms of media art - interactive, kinetic art etc.
- 50s - Early computer art, scientists and engineers
- 60s - Fluxus - performance art, early video art, sound art, conceptual art
- 70s - Telematic art - Roy Ascott
- 80s / 90s - video art, net art, interactive art, electronic art
- 00s - post-internet art
- 10s - creative AI, VR/AR, 3D printing, post-digital art

# Beyond New Media

- **Post-Medium Condition** (Krauss, 1974): Conceptual Art, art as **ideas**
- When is “new” no longer “new” media?
- **Post-Digital Age**: Digital technologies always already a part of our everyday lives. Art necessarily reflects the digital reality in which we live.
- **Post-Internet Art**: the first generation of artists to grow up with the internet, millennials

# Media Art as Contemporary Art

- Both inside and outside of contemporary art
- Digital divide (Claire Bishop)
- Art is about the ideas not the technology or medium itself
- Importance of conceptual development as much if not more important than technical skills
- How to reflect critically on the digital age and mobilise digital tools in new ways
- Technology is not an end in-itself but another means of creative expression

# Media Art as Creative Industries

- Design, Software and Games, Film and Video
- Art vs. Entertainment / Mass Media / Popular Culture
- Art vs. Design
- Is it “art”?

# Cultural Creative Industries (CCI) in HK

- Art, antiques and crafts;
- Cultural education and library, archive and museum services;
- Performing arts;
- Film, video and music;
- Publishing;
- Software, computer games and interactive media;
- Design;
- Architecture;
- Advertising;
- Amusement services (entertainment)

Census and Statistics: The Government of the HKSAR: https://www.censtatd.gov.hk/hkstat/sub/sp80.jsp?productCode=FA100120
https://www.censtatd.gov.hk/en/data/stat_report/product/FA100120/att/B72006FA2020XXXXB0100.pdf

# Hong Kong Arts Tech Policy

- Chief Executive 2021 Policy Address
- Greater Bay Area
- A new Culture, Sports and Tourism Bureau
- Arts Innovation Policy, Strategy for Future Cultural Creative Industries, Our Hong Kong Foundation, 2022
  https://www.ourhkfoundation.org.hk/en/report/34/arts-innovation/arts-innovation-policy-research-series

# Cultural Policies

- Competition and soft power
- Intellectual property, cultural export
- Cultural economy
- Tourism
- East meets West

# City Branding

# Digital Technologies for Artistic Creation

- AR / VR / XR, games, digital storytelling
- 3D printing
- Web and software, apps
- Motion-capture
- AI, robotics, physical computing
- Video and animations
- Audiovisual performances, music technology
- Interactive installations
- Blockchain

# Digital Heritage

Digital Interfaces, HCI (Human Computer Interaction), Digital Humanities, digital education, digital museology

https://www.cityu.edu.hk/media/news/2021/07/15/new-exhibition-spotlights-diffusion-buddhism-along-maritime-silk-road

# Post-Pandemic Digital Content

- Digital economy
- E-commerce
- Virtual exhibitions
- Live stream events, talks, performances

# Digital Art Market / NFTs

- Ethereum

NFT platforms:

- Tezos
- Foundation
- OpenSea

# Digital Aesthetics

Pipilotti Rist

# Video Art

- Time-based
- Idea is more important than technology

Bill Viola

Tony Oursler

Nam June Paik

# Interactive Installations

Interface design, gestural interfaces
Interaction design / HCI
Relational aesthetics  / participatory art

Christa Sommerer &
Laurent  Mignonneau

# Immersive Experience

**challenge  the boundaries between art and entertainment**

teamLab

# Interactive: Game Art and VR

Cao Fei

Feng Mengbo

Lu Yang

Casey Reas

# Digital Abstraction

- Computational art
- Software art
- Algorithmic art
- Generative art

Manfred Mohr

LIA

https://www.clotmag.com/interviews/lia-the-software-art-pioneer-and-the-fluidity-of-code

Quayola

# Audiovisual

- Sound / electronic music
- DJ / VJ Performance

Nonotak

# Nonotak

Video: https://youtu.be/TvdC4_yzgUU

# Live Coding

Video: https://youtu.be/-QY2x6aZzqc

**- use language of text**
**- element of improvising and collaborate with different people on the Internet**

LoVid

# Glitch / Lofi Aesthetics

Casey Reas

- Aesthetics of error
- Datamoshing
- Nostalgia for analogue
- Circuit bending

Francis Lam

# 8-bit / Pixel Art / Chiptune

**images and sound of low resolution**

Lau Wai

# Bit Shifter

Video: https://youtu.be/oun-ASBlR3s

Chris Watson

# Sound Art

- Field recordings
- Noise / experimental music
- Electronic music

# Claire Tolan

Video: https://youtu.be/Tpj0Lv71ER0

# Making and Tinkering

- DIY
- Experimentation and collaboration
- Peer-to-peer learning
- Physical computing
- Maker movement

Xin Liu

# Art & Science

- Bio art
- Data visualisations
- Space art

Laura Splan

Aaron Koblin

# Robotics

Elena Knox

Sun Yuan and Peng Yu

Patrick Tresset

Sougwen Chung

Memo Akten

# AI Aesthetics

Anna Ridler

Refik Anadol

Amalia Ulman

# Internet Aesthetics

- Netart
- Post-internet art

Aaajiao

Miao Ying

Rafael Rozebdaal

Paolo Cirio & Alessandro Ludovico

# Hacktivism / Tactical Media

- Socially engaged art, activism
- Wikileaks, anonymous

**The Hacker Ethic:**
1. Access to computers
2. All information should be free.
3. Mistrust authority—promote decentralization.
4. Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race or position.
5. You can create art and beauty on a computer.
6. Computers can change your life for the better.

Trevor Paglen

# Networked Collaboration

- Open source / Copyleft
- Online communities
- Network culture

# New Possibilities

- What new aesthetics and forms of art can we explore?
- What new communities can we form?
- What is digital and media art in Hong Kong and East Asia?

# Break

# Tools and Techniques

# Art in the Digital Age

- Wider access to technology
- Consumer / prosumer software and hardware
- Proprietary vs. open source
- Participation, everyone is an artist
- Anyone can share work online  on social media, be part of an artistic community and engage with followers/clients

# 2D Image

- Adobe Photoshop (bitmap images,  photography, collage)
- Adobe Illustrator (vector, illustration, drawing)
- GIMP (bitmap images, free)
- Inkscape (vector, free)

# Video and Audio

Video editing and motion graphics:

- Adobe Premiere (editing)
- Adobe After Effects (motion graphics)
- Final Cut Pro (editing)

Audio editing:

- Audacity (free)
- Adobe Audition

\+ Other music technology

# 360 Video and Audio

Hardware:

Video:

- Insta360 Titan
- GoPro Max360

Audio:

- Ambisonic recorder
- Binaural microphone

# 3D Modelling and Animation

- Blender (free)
- Maya
- Cinema 4D
- 3D Max

CAD modelling (Computer-Aided Design):

- SketchUp (freemium)
- AutoCAD

# 3D Printing & Scanning

Printers:

- Makerbot
- FormLabs
- FlashForge

Scanning:

- Lidar
- Photogrammetry
- iPad scanners like Structure

# Real-time VR and Games

Software:

- Unity (free for personal use)
- Unreal (free for personal use)

VR hardware:

- Oculus Rift / Quest
- HTC Vive
- Valve Index
- PiMax

# Motion Capture

Hardware:

- Kinect
- Perception Neuron
- Rokoko
- OptiTrack

AI Software:

- RADiCAL
- DeepMotion

# AR

AR Mobile Apps:

- ARCore (Google/Android)
- ARKit (Apple/iOS)
- Unity / Unreal

Web AR:

- A-Frame

AR Filters:

- Spark AR (Facebook + Instagram)

# Web Development

- HTML / CSS / Javascript
- Adobe Dreamweaver
- Visual Studio Code (free)
- Eclipse (free)
- Sublime Text (trialware)

# Software Art

- Processing (free)
- Pure Data (free)
- MaxMSP
- Touchdesigner
- vvvv (free)
- Scratch (free)

# Deep Learning / AI

Text to Image (image generating AI):

- Dall-e
- Midjourney
- Stable Diffusion (open source)

Text:

- GPT-3

# Physical Computing

- Raspberry Pi
- Arduino
- Scratch (with RPi)

# Media Arts Education Beyond Technology

# STEM vs. STEAM

S-T-E-M: **S**cience, **T**echnology, **E**ngineering, and **M**athematics

S-T-E-**A**-M: **A**rts – dance, drama, music, visual arts, design and new media

# Media Literacy

- Surveillance and privacy, big data, advertising, spyware
- Risks of sharing work and personal information online
- Proprietary platforms, who owns the data?
- Online predators / scams

# Intellectual Property

- Accreditation
- Use of online assets and images
- Copyright / Creative Commons
- Ethics of use and fair use

# Form & Content

- Emphasize the meaning of the work in society
- Art as a reflection of society to bring new perspectives on the world we live
- Using diverse medias to express ideas
- Questioning the use of technologies and using/misusing technology.
- Experiment with new aesthetics and artistic forms

# Challenges

- Technologies are constantly changing
- Finding skilled teachers / technicians
- Deciding what tools and techniques to teach
- How to move beyond technofetishism?

# Opportunities

- **Self-learning**: Teach students **how to teach themselves** - Online resources and tutorials, free and open source tools, peer-to-peer learning
- **Community-building:** networked collaboration. Fostering a spirit of collaboration and experimentation
- **Conceptual development:** As important as technical skills development. Technology is not an ends in itself.
- **Media literacy:** Teach how to think and critically engage with technology
- **Arts:** What can we learn from artists?

# Questions?

# Contact

**Dr. Ashley Lee Wong**, *Artistic Director*

Email: ashley@metaobjects.org

Web: www.metaobjects.org
IG: @metaobjects
TW: @metaobjectsorg
FB: www.facebook.com/metaobjects.org

# Questionnaire