

The 4'th industrial revolution, is it for real? 정말 4차산업혁명인가?



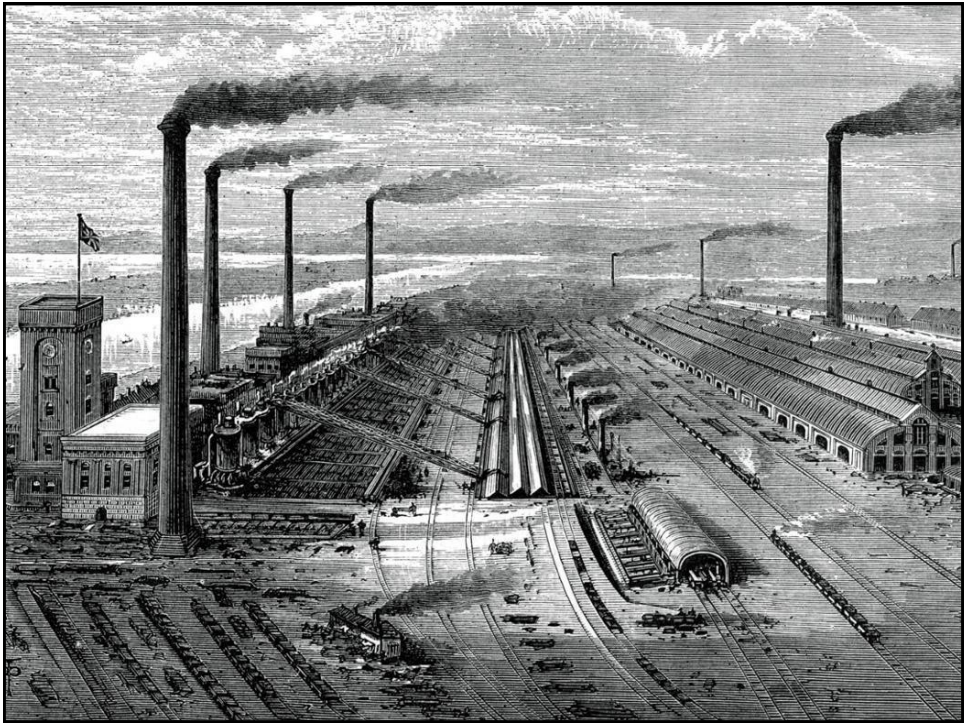
Klaus Schwab @ Dabos Forum, 2016



Industrial Revolutions

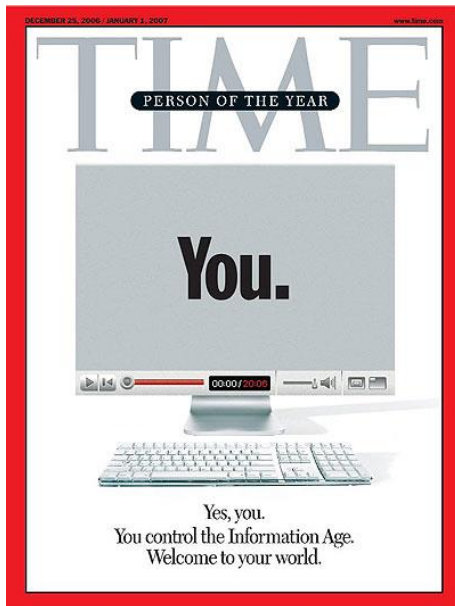
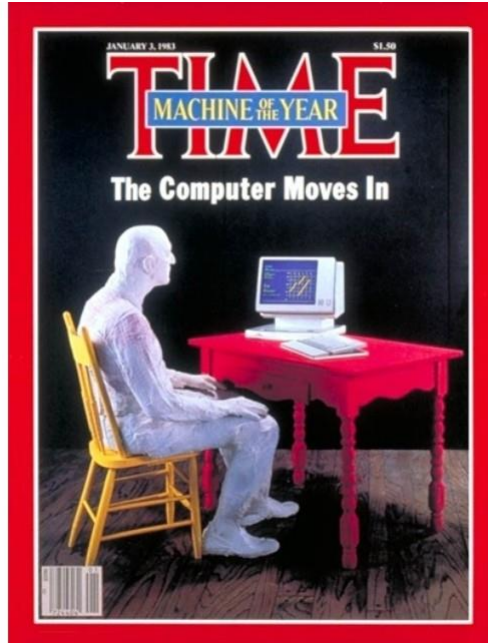
- Agricultural revolution
- (1'st) Industrial revolution
- 2'nd Industrial revolution
- 3'rd Industrial revolution (in general)
 - Computer, Internet
- 3'rd Industrial revolution by Jeremy Rifkin (2011)
 - Digital power → Distributed capitalism
- 3'rd Industrial revolution by Chris Anderson (2010)
 - Digital power → Distributed manufacturing

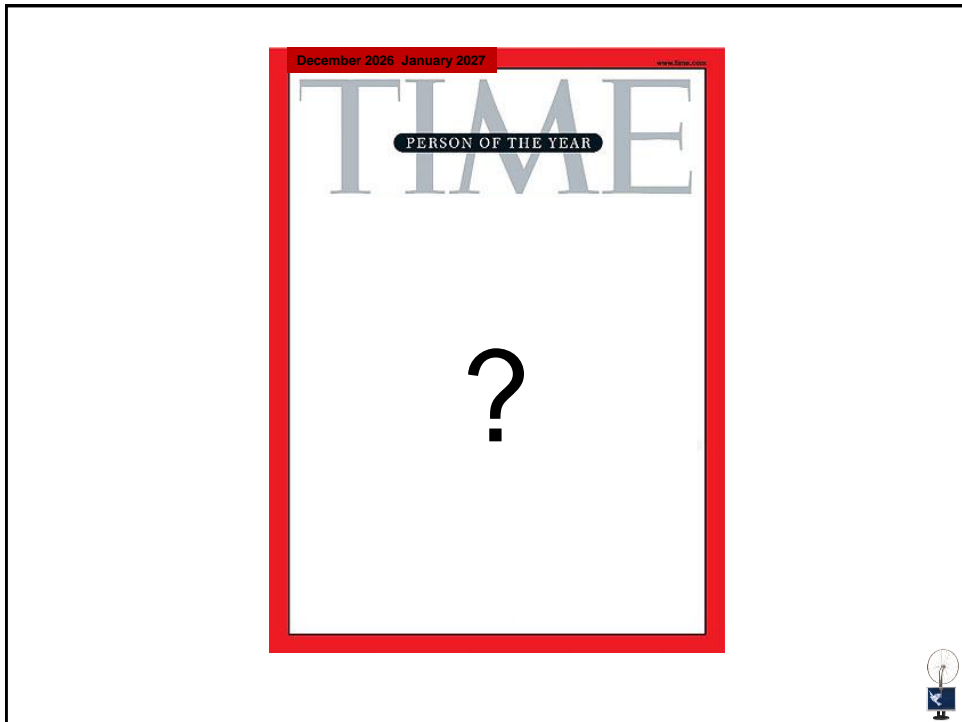




<The Electricity Fairy>, Raoul Dufy, for Pavilion of Light & Electricity, World Expo (1937)







Technological Essence of the 4'th Industrial Revolution

- Digital power (Hardware-based)
 - Digital power (Software-based) **정보의 재평가**
AI, Big Data, Analytics, Nano, Bio, ...
- Digitalization
 - Physicalization **물질의 반격**
3D Printers, Robots, Drones, Autonomous Vehicles, ...
- Networks of computers
 - Networks of (almost) everything **주객의 전도**
Human, Life forms, Things, Abstract concepts(?)



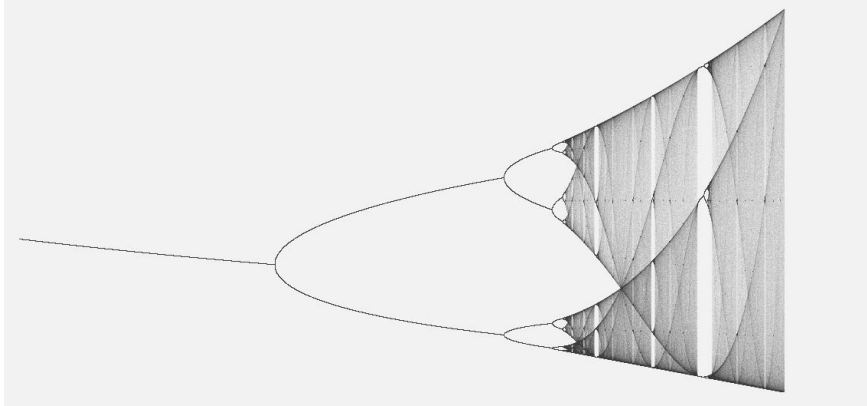
Kinds of Mankind

1. Those who own the machine
2. Those who can do what the machines cannot do

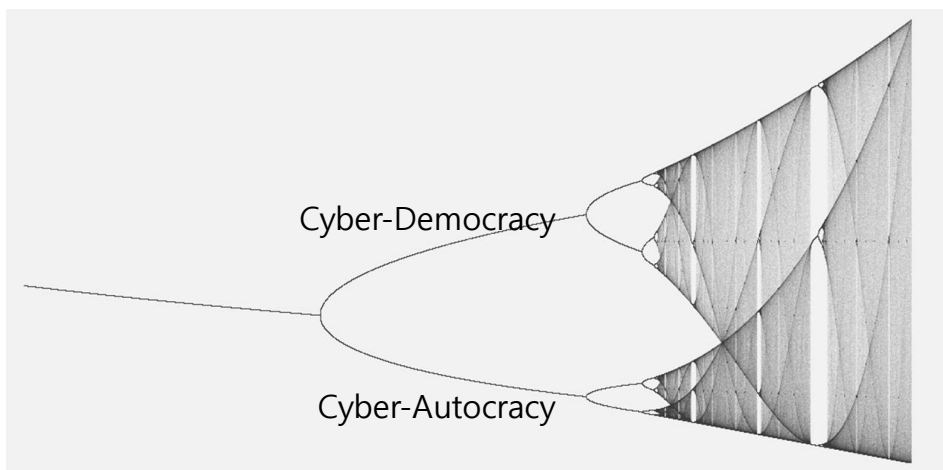
3. Those who can do what the machine do not want to do
4. Those who do not belong to 1, 2, and 3.



Modern Society as a Non-Linear System



- Chaos phenomena (Unpredictable)
- Sensitive to the initial condition
- Bi-furcation



산업혁명 vs. 미디어혁명

- 1차 Mechanical power • Printed media 신문, 잡지
- 2차 Electrical power • Electronic Media Radio, TV
- 3차 Digital power • Digital media Web, Mobile



산업혁명 vs. 미디어혁명

- 1차 Mechanical power • Printed media
- 2차 Electrical power • Electronic media
- 3차 Digital power • Digital media
- 4차 ?

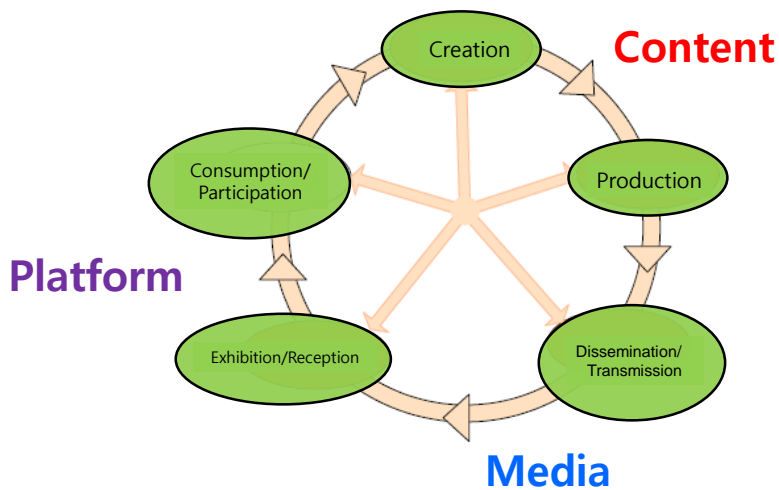


Hybrid 접근, Hybrid 현상

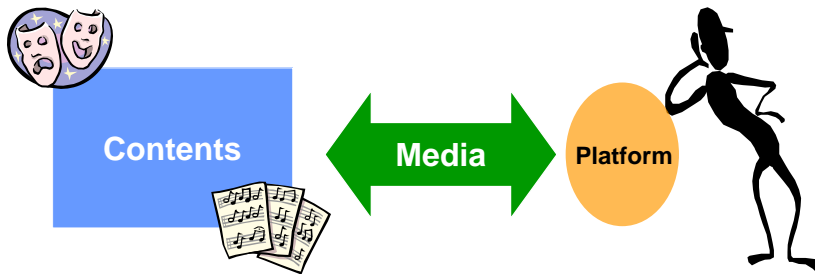
1. Analog + Digital
2. Hardware + Software
3. Algorithm + Data
4. Physical + Cyber
5. **Content + Media + Platform**



UNESCO Cultural Cycle



Content, Media, and Platform



Hybrid media vs. Multi-media ?



Hybrid 접근, Hybrid 현상

1. Analog + Digital
2. Hardware + Software
3. Algorithm + Data
4. Physical + Cyber
5. Content + Media + Platform
6. Producer + Distributer + Consumer = Prosumer
7. Artist + Curator + Audience = Artience



Ten Unsolved Problems in CT (원광연 2012)

1. Game of the Future
 - Console games, MMORPG, ... → ?
2. Movies of the Future
 - 3D Stereo, IMAX, 4D → ?
3. Social media of the Future
 - Cyworld, Twitter, Facebook, → ?
4. Metaverse/Cyberspace of the future
 - Dada world, Second Life → ?
5. Giga/5G Contents, Giga/5G Services



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-
-

6. Future of 'Smart'

- Smarter TV, Smarter phone, Smarter home
- Smarter school, Smarter health, Smarter city, Smarter society

7. Information overload, abuse, misuse, privacy, publicity

8. Content-Media-Platform Democracy

- Beyond UCC
- Empowering personal creativity

9. Embedding culture to manufacturing goods

10. Soft sustainability



Towards Content-Media-Platform Democracy

1. Content creation tools
2. Open access to the public (Big) Data
3. Free/low-cost access to media (including cloud)
4. Curation tools
5. Free/low-cost/Public platforms
6. Healthy eco-system
7. Content creating ability 창작능력
8. Content appreciation ability 감상능력



Towards Content-Media-Platform Democracy

1. Content creation tools
2. Open access to the public (*Big*) *Data*
3. Free/Low-cost access to media (including *cloud*)
4. Curation tools
5. Free/Low-cost public platforms
6. Healthy eco-system, including *copy-right/copy-left*
7. Content creating ability 창작능력
8. Content appreciation ability 감상능력



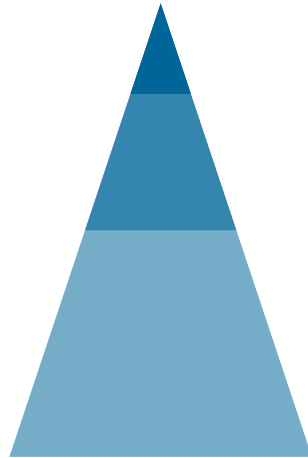
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정보 민주화



Human Resources



창안자 (Creator)

생산자 (Producer)

대중 (Prosumer, Artience)



Towards Content-Media-Platform Democracy

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산업혁명 vs. 세계관

- 1차 Mechanical power • Time
- 2차 Electrical power • Space (Physical)
- 3차 Digital power • Space (Cyber)
- 4차 Hybrid power • Hybrid space (Cyber-Physical)

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산업혁명 vs. 테스트베드

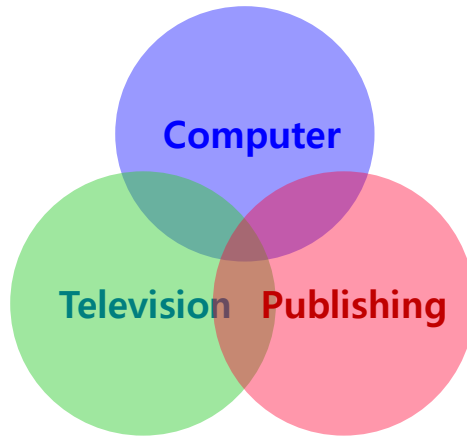
- 1차 Mechanical power • Factories, Transportations
- 2차 Electrical power • World Wars I & II, Cold War
- 3차 Digital power • Capitalism
- 4차 Hybrid power • Democracy

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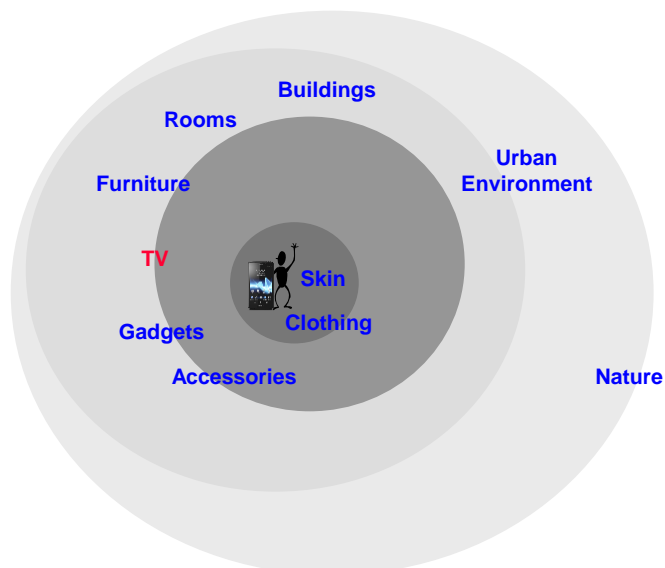


Media of the Future

Nicholas Negroponte (~1985)



Hybrid Environment

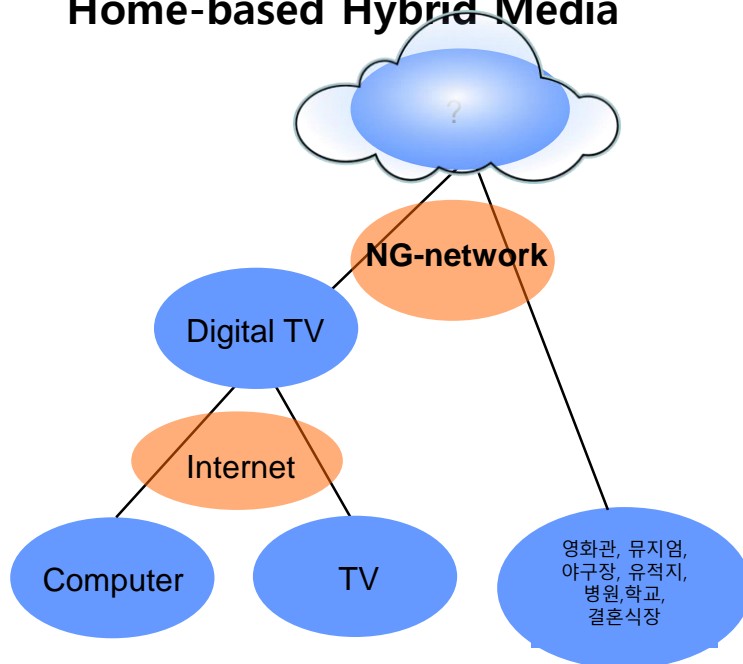


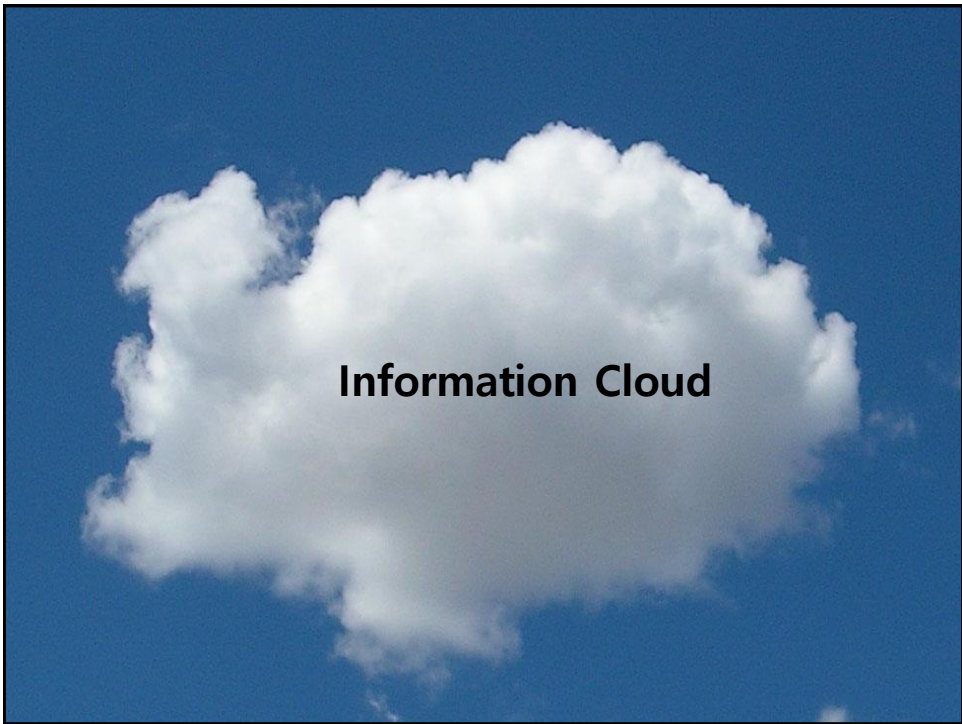
Future Trends

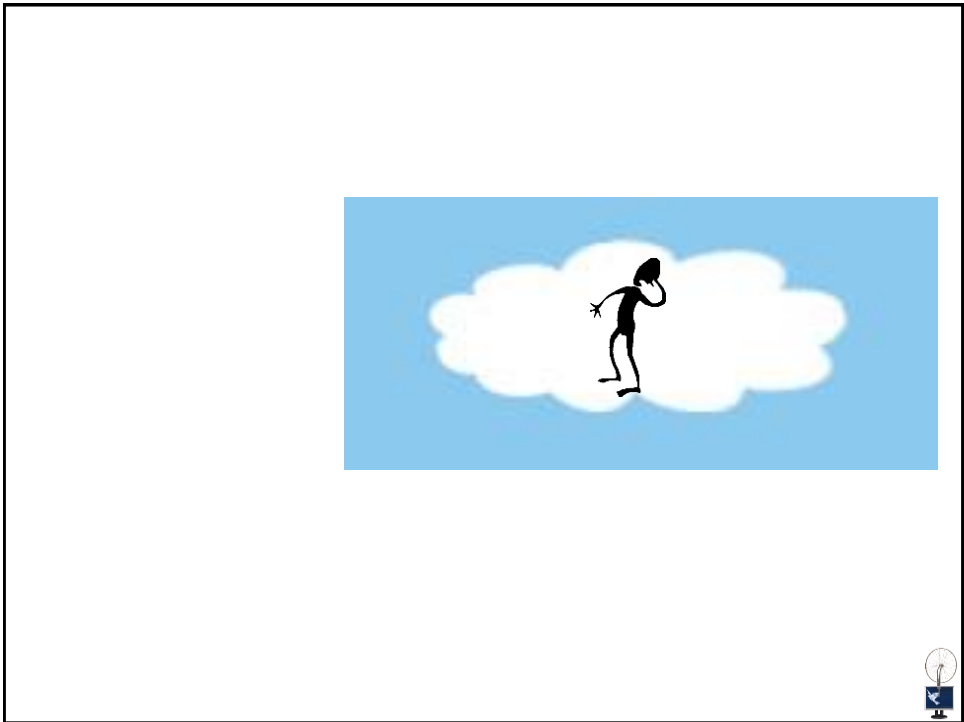
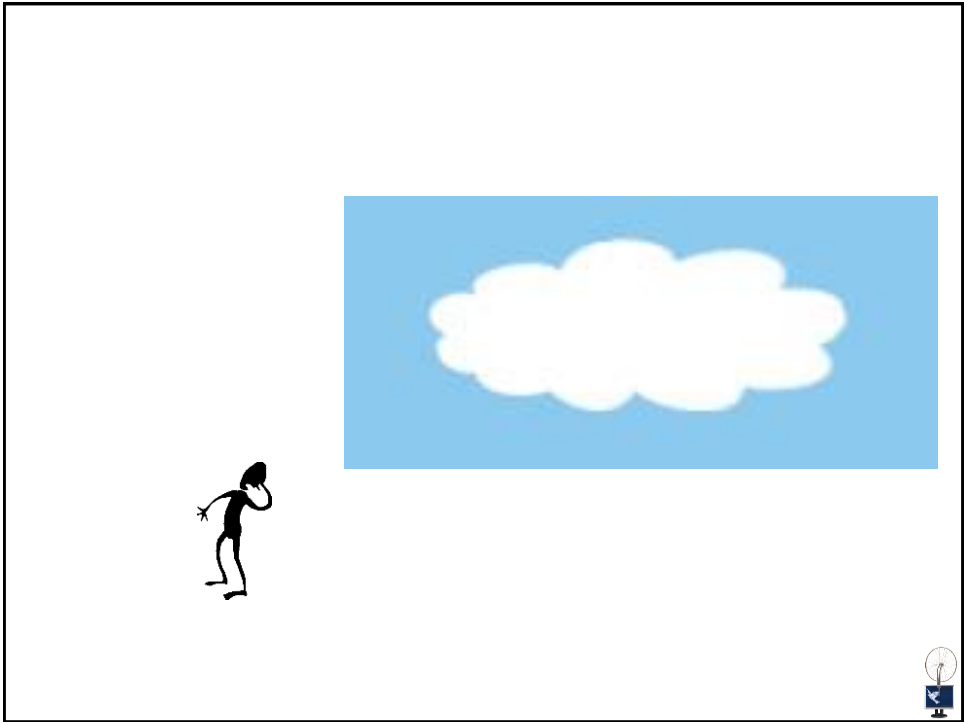
- Tele-Vision → Tele-Presence
- Box → Window → Wall → Portal
- Single-Func. → Multi-Func. → Universal
- Uni-Directional → Bi-Directional → Multi-directional
- Fovea → Peripheral



Home-based Hybrid Media









“Medium is the message.”

- Marshall McLuhan -

“Media is the life.”

