Corso di

Dinamiche dei Gruppi Virtuali e dei Social Networks

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Topic 014

From the "Echo Chamber" effect to the Fake News Dynamics

Module 1
On-line Fake News Dynamics

Theoretical Key Concept

Filter Bubble Effect

A **filter bubble** is the intellectual isolation that can occur when websites make use of algorithms to selectively assume the information a user would want to see, and then give information to the user according to this assumption.

https://www.techopedia.com/definition/28556/filter-bubble

Filter Bubbles result from personalized searches when a website algorithm selectively guesses what information a user would like to see based on information about the user (such as location, past click-behavior and search history). As a result, users become separated from information that disagrees with their viewpoints, effectively isolating them in their own cultural or ideological bubbles.
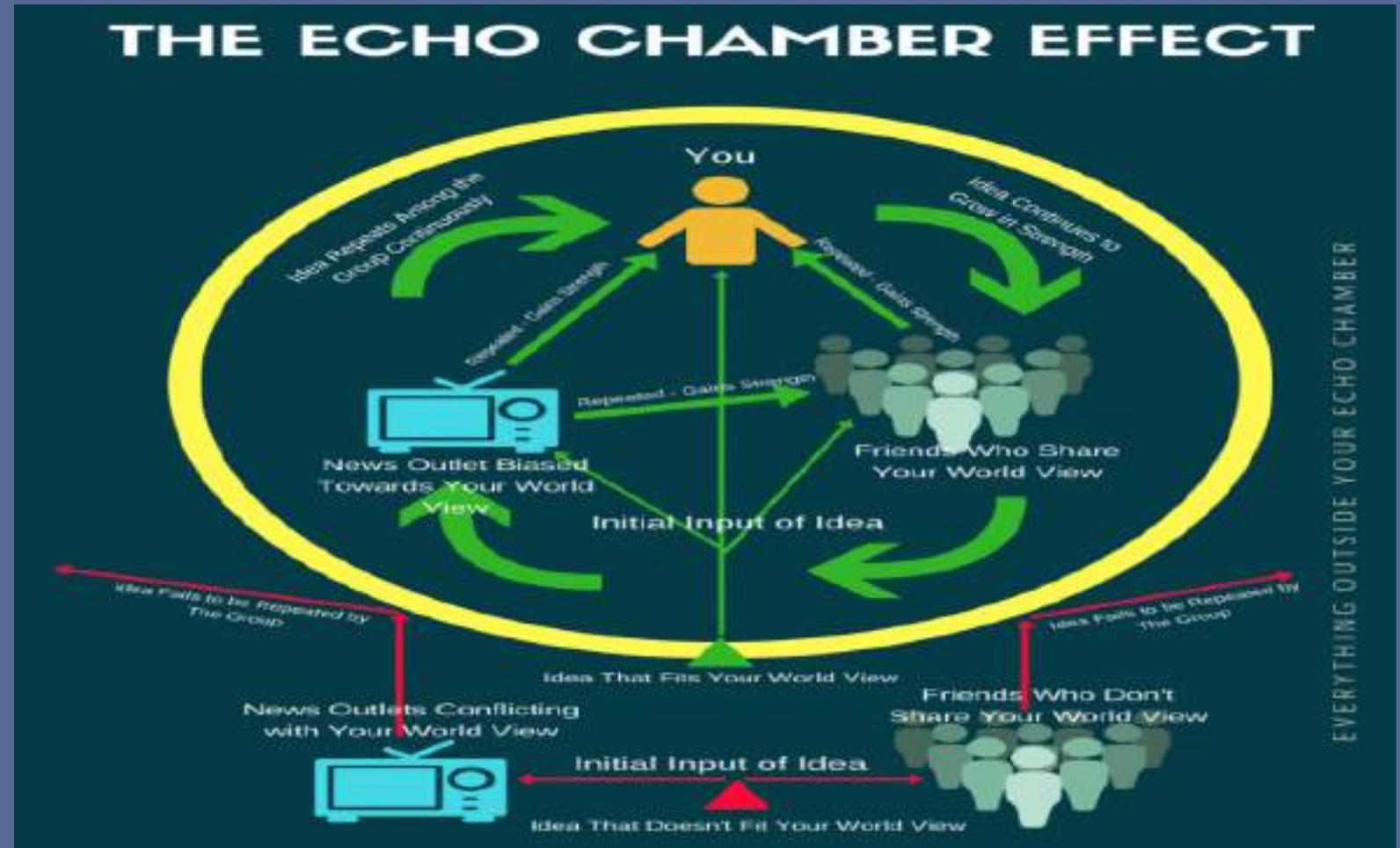
Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you*. Penguin UK; Flaxman, S., Goel, S., & Rao, J. M. (2016). Filter bubbles, echo chambers, and online news consumption. *Public Opinion Quarterly*, *80*(S1), 298-320.

Echo Chamber Effect

An *Echo Chamber* is a metaphorical description of a situation in which information, ideas, or beliefs are amplified or reinforced by communication and repetition inside a defined system.

Theoretical Key Concept

Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you.* Penguin UK; Flaxman, S., Goel, S., & Rao, J. M. (2016). Filter bubbles, echo chambers, and online news consumption. *Public Opinion Quarterly, 80*(S1), 298-320.

Fake News Definitions

"We define "fake news" to be news articles that are intentionally and verifiably false, and could mislead readers."
(Allcott & Gentzkow, 2017)
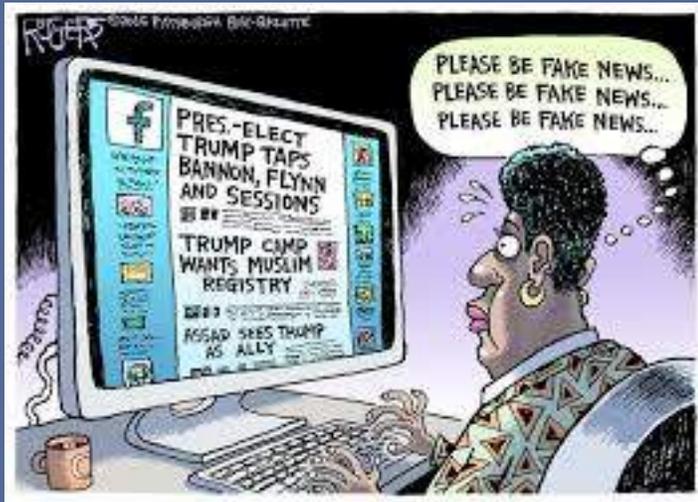
"We define "fake news" to be fabricated information that mimics news media content in form but not in organizational process or intent."
(Lazer et al., 2018)

Ego-centered component of a future "Fake News Model"

Sociodemographic dimension

- Gender
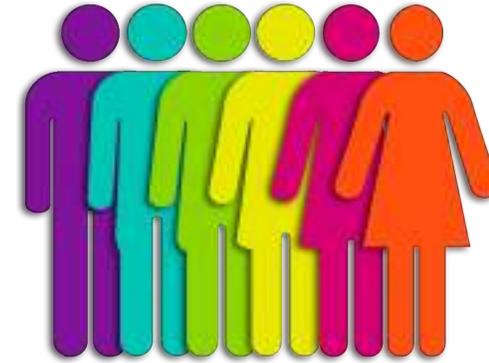- Study-level

Psychological dimension

- Personality traits
- Need for closure
- Social media self efficacy
- Information literacy
- Critical thinking

Ego-centered component of a future "Fake News Model"

Experimental Results

Gender and Fake News Resilience

- **More women than men share (and intend to share) misinformation.**
- **Women**, *when compared to men,* **may not be fully perceiving their information/misinformation sharing as an informational activity.** *(Chen et al., 2015)*

Experimental Results

Study-level

Undergraduate students share *(and intend to share)* **misinformation more frequently than graduate students**. *This may be attributed in part to undergraduates' higher social media usage. (Chen et al., 2015)*

GRADUATE VS UNDERGRADUATE

VIRTHULAB

Ego-centered component of a future "Fake News Model"

Psychological dimension
Personality traits (Big 5)

Experimental Results

Extraversion
Extroverts were more prone to share misinformation for socializing purpose. (Chen & Sin, 2013)

Openness
Open people share more misinformation to explore its novel ideas even if it contradicts scientific views. (Chen, 2016)

Experimental Results

Conscientiousness
Respondents with high conscientiousness were less likely to share misinformation for self-expression and status seeking motivations. (Chen & Sin, 2013)

Neuroticism
For more neurotic people, sharing doubtful information on social media may lead to negative social consequences. (Chen, 2016)

Ego-centered component of a future "Fake News Model"

Psychological dimension

Experimental Results

Need for Closure

High need for cognitive closure (NFCC) leads to less scrutiny of evidence and a desire to reach a decision quickly, whereas a low NFCC leads to more scrutiny. (Leman & Cinnirella, 2013)

Experimental Results

### *Social Media Self Efficacy*

Social media self-efficacy is based upon a person's level of social media content production and consumption, perceived social media skill and confidence in his or her ability to successfully find information online. Users with higher social media self-efficacy find information shared via social media to be more trustworthy than do those lower in social media self-efficacy. (Hocevar, Flanagin & Metzger, 2014)

Ego-centered component of a future "Fake News Model"

Information literacy and critical thinking

Information literacy
Ability to define problems in terms of their information needs, and to apply a systematic approach to search, locate, apply, and synthesize the information and evaluate the entire process in terms of effectiveness and efficiency.
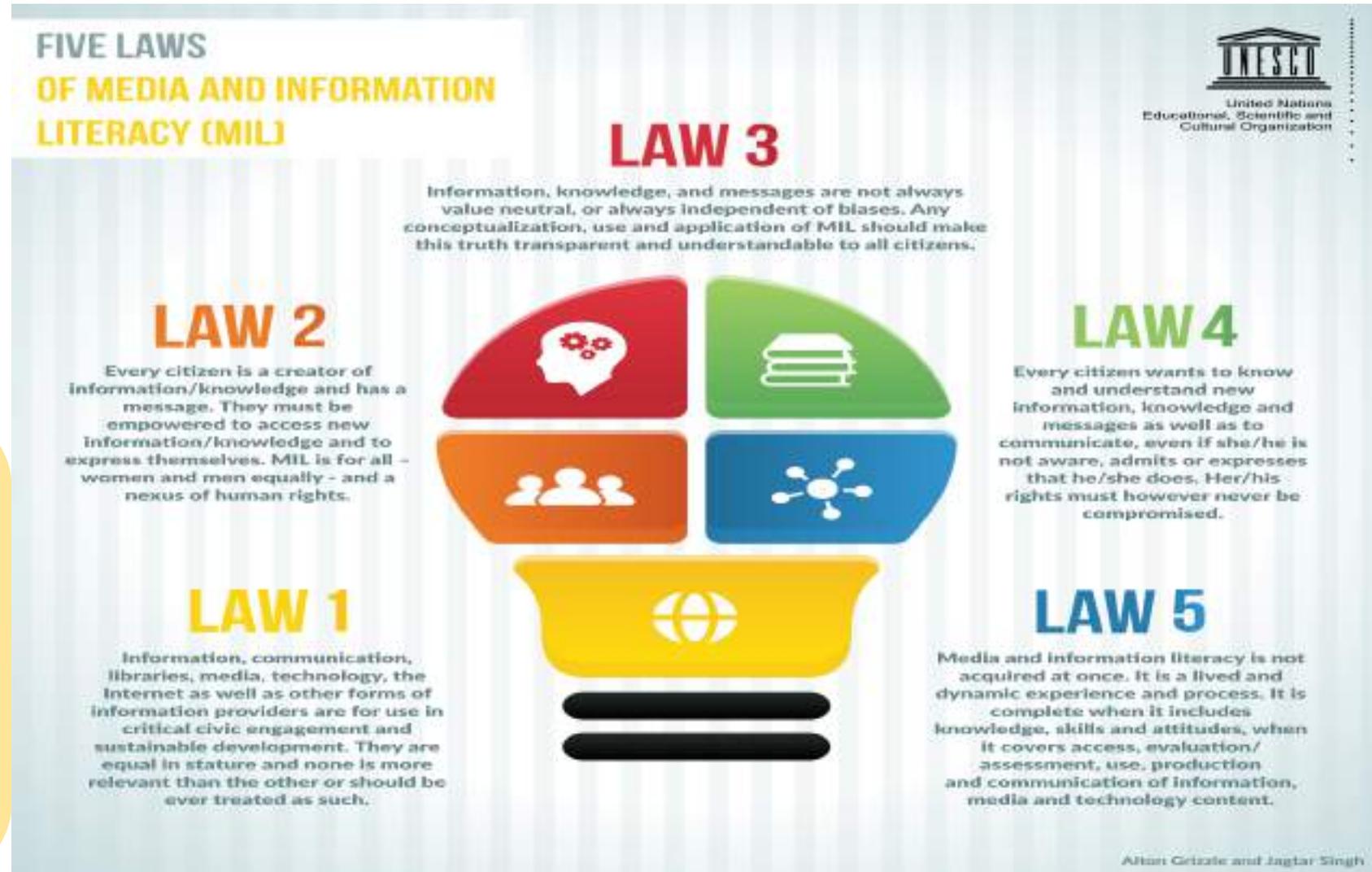
FIVE LAWS OF MEDIA AND INFORMATION LITERACY (MIL)

LAW 3
Information, knowledge, and messages are not always value neutral, or always independent of biases. Any conceptualization, use and application of MIL should make this truth transparent and understandable to all citizens.

LAW 2
Every citizen is a creator of information/knowledge and has a message. They must be empowered to access new information/knowledge and to express themselves. MIL is for all – women and men equally – and a nexus of human rights.

LAW 4
Every citizen wants to know and understand new information, knowledge and messages as well as to communicate, even if she/he is not aware, admits or expresses that he/she does. Her/his rights must however never be compromised.

LAW 1
Information, communication, libraries, media, technology, the Internet as well as other forms of information providers are for use in critical civic engagement and sustainable development. They are equal in stature and none is more relevant than the other or should be ever treated as such.

LAW 5
Media and information literacy is not acquired at once. It is a lived and dynamic experience and process. It is complete when it includes knowledge, skills and attitudes, when it covers access, evaluation/assessment, use, production and communication of information, media and technology content.

Alton Grizzle and Jagtar Singh

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Main Questions from the Module 014.1

Id	Question
014.1.1	What's the Filter Bubble Effect?
014.1.2	What's the Echo Chamber Effect?
014.1.3	Report some definitons of Fake News?
014.1.4	What's the relation between Gender and Fake News Resilience?
014.1.5	What's the relation between Study-level and Fake News Resilience?
014.1.6	What's the relation between Personality Traits and Fake News Resilience?
014.1.7	What's the relation between Social Media Self Efficacy and Fake News Resilience?
014.1.8	What's the definition of Information Literacy?

Topic 014 – From the "Echo Chamber" effect to the Fake News Dynamics

Module 1 – On-line Fake News Dynamics

Main Questions from the Module 014.1

Id	Answers
014.1.1	A filter bubble is the intellectual isolation that can occur when websites make use of algorithms to selectively assume the information a user would want to see, and then give information to the user according to this assumption. Filter Bubbles result from personalized searches when a website algorithm selectively guesses what information a user would like to see based on information about the user (such as location, past click-behavior and search history). As a result, users become separated from information that disagrees with their viewpoints, effectively isolating them in their own cultural or ideological bubbles.
014.1.2	An Echo Chamber is a metaphorical description of a situation in which information, ideas, or beliefs are amplified or reinforced by communication and repetition inside a defined system.
014.1.3	"We define "fake news" to be news articles that are intentionally and verifiably false, and could mislead readers." (Allcott & Gentzkow, 2017). "We define "fake news" to be fabricated information that mimics news media content in form but not in organizational process or intent." (Lazer et al., 2018)
014.1.4	Gender and Fake News Resilience – (I) More women than men share (and intend to share) misinformation. (II) Women, when compared to men, may not be fully perceiving their information/misinformation sharing as an informational activity. (Chen et al., 2015)
014.1.5	Study-level - Undergraduate students share (and intend to share) misinformation more frequently than graduate students. This may be attributed in part to undergraduates' higher social media usage. (Chen et al., 2015)
014.1.6	Extraversion - Extroverts were more prone to share misinformation for socializing purpose. (Chen & Sin, 2013) Openness - Open people share more misinformation to explore its novel ideas even if it contradicts scientific

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