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CS349

NATIONAL SECURITY

WHAT IS NATIONAL SECURITY?

- ▶ “The preservation of the norms, rules, institutions and values of society. This definition includes the preservation of the society of states and the structures, principles and institutions which are associated with it. It also covers the protection of people from military and non-military threats, and the guarantee of basic needs and fundamental freedoms” – Samuel Makinda

WHAT THEN ARE THREATS TO NATIONAL SECURITY?

AREAS OF SECURITY

- ▶ UN Office for the Coordination of Humanitarian Affairs defines key areas of security:
 1. Economic: creation of employment and measures against poverty
 2. Food: measures against hunger and famine
 3. Health: measures against disease, unsafe food, malnutrition and lack of access to basic health care
 4. Environmental: measures against environmental degradation, resource depletion, natural disasters and pollution
 5. Personal: measures against physical violence, crime, terrorism, domestic violence and child labour
 6. Community: measures against inter-ethnic, religious and other identity tensions
 7. Political: measures against political repression and human rights abuses

DEMOCRATIC PROCESS

- ▶ What are the prerequisites for successful democracy?
 - ▶ Free media
 - ▶ Multiple political parties
 - ▶ Free and fair elections
 - ▶ Educated population

FREE AND FAIR ELECTIONS

- ▶ Free means:

- ▶ All citizens entitled to vote have the ability to register and vote
- ▶ All citizens can make their own choice of whether or not to vote, and who to vote for without fear of intimidation
- ▶ Who citizens vote for remains secret

- ▶ Fair means:

- ▶ All political parties have an equal right to contest elections, campaign for voters, and hold meetings and rallies
- ▶ The election outcome reflects the actual votes cast

ELECTRONIC VOTING MACHINES

- ▶ Voting machines must be tamper-proof to assure election fairness
- ▶ Multiple exploits revealed during 2017 DEF CON to access and modify votes:
 - ▶ Some machines still running Windows XP with known Wi-Fi vulnerabilities for gaining remote access
 - ▶ Easily accessible USB ports
 - ▶ Vulnerabilities to peripherals such as mouse and keyboard
 - ▶ Shared common, hard-coded password
- ▶ Why?

SECURITY THROUGH OBSCURITY

- ▶ Voting software and hardware not available for third-party quality assurance or verification
- ▶ Some discussion about using open source methodology and end-to-end verification
 - ▶ Flaws in voting machine creation and distribution have been known for over a decade, though, and manufacturers still resistant to changing



“These new-fangled
electronic voting
machines are swell!”

**IT COUNTS YOUR VOTE BEFORE
YOU EVEN PULL THE LEVER!**

FREE MEDIA

- ▶ 2016 analysis suggests media freedom, Internet access, and governmental online service delivery significantly reduce corruption at country level
- ▶ Media freedom:
 - ▶ Helps ensure that political leaders are held accountable for their actions
 - ▶ Provides civic platform to give voice to people
 - ▶ Contributes to a transparent society
 - ▶ Guides society to an anti-corruption culture that does not accept corrupt leaders
- ▶ Internet access:
 - ▶ Allows circumvention of restricted traditional media
 - ▶ Aids investigative journalism
 - ▶ Gives access to independent, diverse, and foreign media sources, increasing a corrupt political actors' risk of detection

WHAT ABOUT FAKE NEWS?

FIRSTDRAFT

7 TYPES OF MIS- AND DISINFORMATION



SATIRE OR PARODY

No intention to cause harm but has potential to fool



MISLEADING CONTENT

Misleading use of information to frame an issue or individual



IMPOSTER CONTENT

When genuine sources are impersonated



FABRICATED CONTENT

New content is 100% false, designed to deceive and do harm



FALSE CONNECTION

When headlines, visuals or captions don't support the content



FALSE CONTEXT

When genuine content is shared with false contextual information



MANIPULATED CONTENT

When genuine information or imagery is manipulated to deceive

RUSSIA AND ELECTION

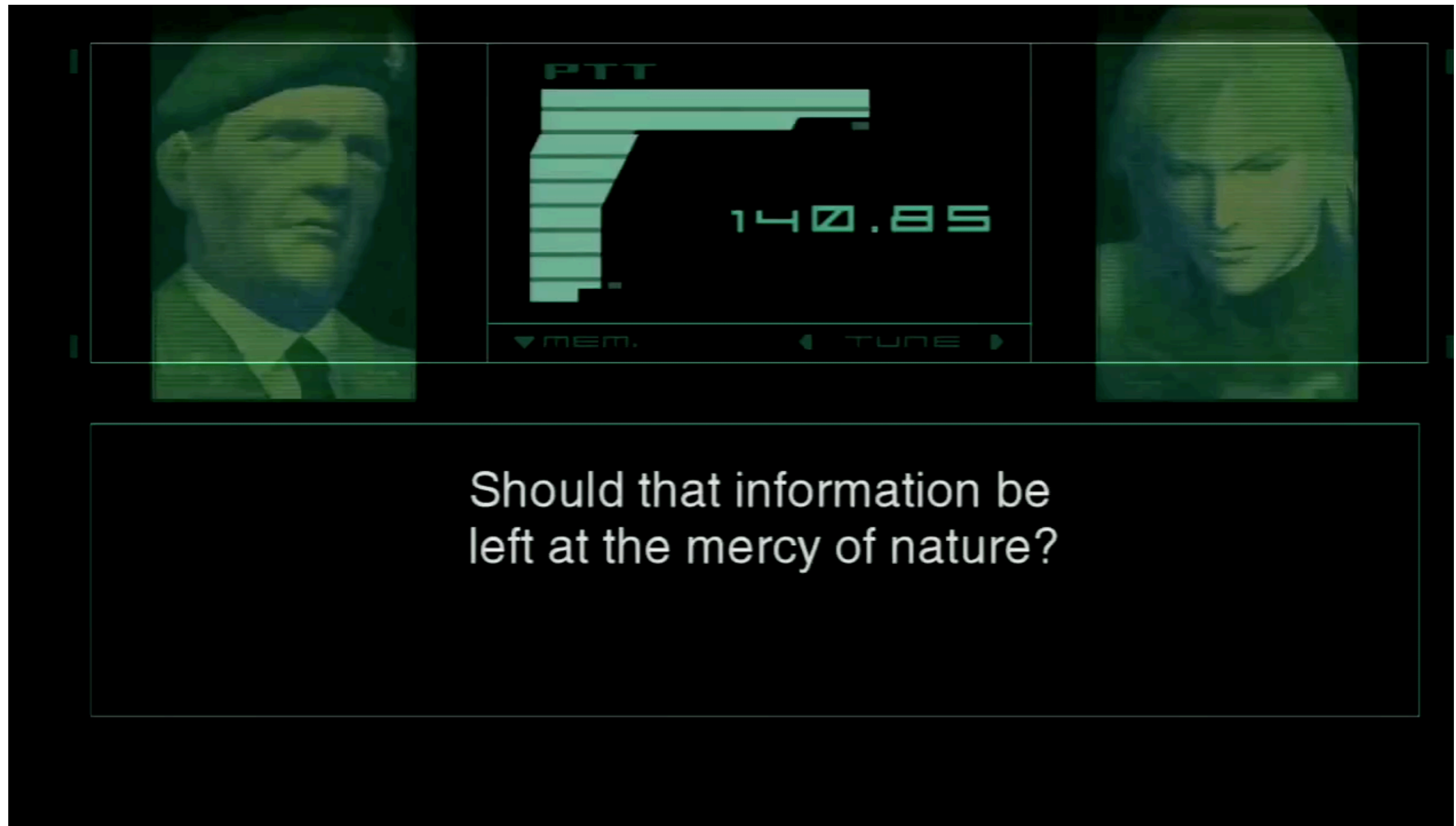
- ▶ Voter registration systems or websites in at least seven states were compromised by Russian-backed operatives in 2016 election
 - ▶ No evidence of vote changes or voter removal
- ▶ 13 Russians and 3 companies indicted, including “troll factory” company, Internet Research Agency
- ▶ Also created hundreds of fake accounts on Facebook, Instagram, and Twitter to disseminate fake news and misleading content
 - ▶ Intended to divide American citizens and disrupt democratic process
- ▶ Evidence suggests Russia has engaged, and is currently engaging, in such election tampering world wide

SOCIAL MEDIA AND ECHO CHAMBERS

- ▶ Social media allows information to propagate along user networks without fact-checking, peer-review, etc
- ▶ As of 2016:
 - ▶ 62% of US adults get their news on social media
 - ▶ The most popular fake news stories were more widely shared on Facebook than the most popular mainstream news stories
 - ▶ Many people who see fake news stories believe them
- ▶ But why do people believe in fake news?

WHERE'S THE LINE BETWEEN LYING AND ADVERTISING?

LIFE IMITATES ART...



(Metal Gear Solid 2, 2001)

QANON AND THE RISE OF CONSPIRACIES

- ▶ QAnon is a subculture that believes in “deep state” conspiracies related to politics, particularly Trump’s presidency
- ▶ Fringe group with reasonably high visibility in general media
 - ▶ Origins in 4chan and 8chan
 - ▶ QDrops was a top 10 most downloaded paid app
 - ▶ QAnon.pub has over 7M views a month
- ▶ Online theories resulted in several altercations in real life
 - ▶ Pizzagate, stalking incident, Hoover Dam incident

DAESH AND CONTENT WARS

- ▶ Daesh media “branding” highly successful for both recruitment and legitimizing organization



وانتابني قليلاً من الحزن لتأخري

ISM

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