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1 Cyber-crime

- Cyber-piracy
- Cyber-trespass
- Cyber-vandalism

True Cyber-crime can be carried out **only through** the use of cyber-technology and it **can take place only in** the cyberspace.

2 Cyber-related Crime

- Cyber-*exacerbated*: cyberstalking, cyber-pornography, cyberbullying, etc.
- Cyber-assisted: cyber tax fraud, physical assault assisted by the use of computing services, property damage, etc.

2.1 Cyber-crime examples

- Trojan Horse
- Virus
- Worm
- Logic Bomb
- Password Sniffer
- IP Spoofing
- DoS Attack (Denial of Service)
- Phishing
- Cyber-fraud
- Cyber-bullying
- Cyber-stalking

2.2 Trojan Horse

A Trojan Horse or Trojan is any malicious computer program which is used to hack into a computer **by misleading users** of its true intent. Many act as a backdoor; contact a controller to **attain unauthorized access** to the affected computer and personal information (banking information, passwords, or personal identity). o It **does not attempt** to inject themselves into other files or otherwise propagate themselves.

2.2.1 Bots and Botnets

- A bot is a **backdoor Trojan** that responds to commands sent by a command-and-control program located on an external computer. They are frequently used to support illegal activities.
- Legitimate bots: Internet Relay Chat channels and multiplayer Internet games
- Botnet is a collection of bot-infected computers. Person who controls a botnet is called a bot herder. Botnets can range in size from a few thousands computers to over a million computers.

2.3 Virus

A Virus is a piece of **self-replicating** code embedded within another program-the host. When the user executes the host program, the virus code executes first, finds another executable program and **replaces it** with a virus-infected program. After doing this, the virus allows the host program to execute, and if done fast, the user would not notice that virus is present on the computer.

2.3.1 Melissa virus

Fast-spreading macro virus distributed as an e-mail attachment that; when opened, disables a number of safeguards in Word 97 or Word 2000. If the user has the Microsoft Outlook e-mail program, the virus is resent to the first 50 people in each of the user's address books.

2.4 Worm

A Worm is a **self-contained** program that spreads through a computer network by exploiting security holes in the computer connected to the network.

2.4.1 Love Bug 2000 ILOVEYOU worm

Spread around the world in a few hours: 10 millions of computers and caused \$10B in damage .Infected major corporations: Ford and Siemens, and 80% of US federal agencies, including State Department, Pentagon, US Congress. Destroyed image and music files, modified OS and Internet browser and collected passwords.

2.5 Logic bomb

A Logic Bomb is a piece of code intentionally inserted into a software system that will set off a malicious function when specified conditions are met.

3 Cyber-behaviour and the Self-concept

The **self-concept** defines perceptions in relation to ourselves, to others and to social systems. Computing technologies, particularly the Internet, are transforming the sense of identity, behaviour, personal relationships, etc. Dissocial Personality Disorder arises more in the cyberspace

4 Person vs Persona

Multiple personas are considered **harmful** from the ethical point of view: may require maintaining two or more mutually incompatible value systems. Risk of becoming a **hypocrite**, a person who claims to follow a particular moral code but then acts contrary to that code.

5 Sociopathic behaviour

Sociopath is a person who suffers from a dissocial personality disorder.

disregard for social obligations, and callous **unconcern** for the feelings of others There is a **low tolerance to frustration** and a low threshold for discharge of aggression, including violence; there is a **tendency to blame others**

Computer technologies have been considered a contributor to the development of sociopathic tendencies such as cyber bullying and related behaviours.

5.1 Types of sociopathic behaviours

- **Griefer** an online version of the spoilsport, a person **who takes pleasure in hassling others**. Most enjoy making online games unenjoyable for others. **New trends**: organized griefing, grounded in online message-board communities and thick with in-jokes, code words, taboos, and increasingly articulate sense of purpose.
- **Troll**: an individual who posts in a public forums or chat room, to subvert the conversation or **provoke an emotional response**.
- **Cyberbully or cyberstalker**: an individual who uses the Internet to **harass a particular target**, using fake identities or public web sites that enable the harassment. Tend to target people who they know from everyday life.

6 Virtual and online addiction

- Behavioural addiction refers to addiction **to certain online behaviour** like gambling, video games, internet surfing, extreme sports, etc.
- Until recently, addiction linked only to the **abuse of substances**, like alcohol or drugs.
- Research have found that gamblers experience symptoms similar to alcoholism or nicotine addiction.
- Dealing with addictions from Internet-enabled behaviours is difficult:
 - Internet activities do not require **face-to-face** interaction
 - Internet makes it easy to engage in an addictive behaviour **at any time** and from any place

7 Homophily

Homophily is the tendency for people to have close friendships with people **similar to themselves**. We are more likely to become friends with someone who **agrees with us** and has similar life experiences. For example: facebook: Based on the likes of our friends, marketers can expect that we will like similar merchandise.

8 Cybernetics

Cybernetics explores regulatory systems, their structures, constraints, and possibilities-self regulating and **self controlling systems**. Applicable when a system incorporates a closed signalling loop, a "circular causal" relationship. Generally, **a feedback loop means** that a system generates/affects a change in its environment and that change is reflected in the system. Applied in learning, cognition, adaptation, social control, emergence, convergence, communication, efficiency, efficacy, and connectivity.

8.1 Cybernetic augmentation - vision

Cybernetic augmentation gives the user abilities that normal humans beings do not have. Augmented vision by implanting a chip in the retina to allow a direct interface between the brain and the computer.

8.2 Cybernetic augmentation Auditory brainstem

Auditory brainstem implant has an external part, the **processor**, worn on the ear, and the surgically implanted internal part. Helps people with hearing problems

Reference section

exacerbate

make (a problem, bad situation, or negative feeling) worse.