New, Emergent, and Interactive Media

Manny Mirabite, Jr.

New Emergent and Interactive Media

By Manny Mirabite, Jr.

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Introduction

When the first encounter with some object surprises us, and we judge it to be new, or very different from what we formerly knew, or from what we supposed that it ought to be, that causes us to wonder and be surprised; and because that may happen before we in any way know whether this object is agreeable to us or is not so, it appears to me that wonder is the first of all the passions; and it has no opposites, because if the object which presents itself has nothing in it that surprises us, we are in nowise moved regarding it, and we consider it without passion.

—Rene Descartes, The Passions of the Soul, article 53

A lot of us in our houses, offices, and classrooms are surrounded by media. When we walk in the streets, there are gadgets everywhere. Cellphones, chargers, earphones, gadget plugs, earphone, and etc. All of those are available everywhere due to the demand. By means of demands, I'm referring about how a product were being sold depending on their quantities that is also dependent on how many humans want accumulate such things. Things that we use in our daily lives. One of such is the cellphone, where we browse, text, share, and entertain to ourselves. Also, its functions aren't only limited onto such. They can be used in a more integral manner where we could complicate works. All of it, are again due to another reason which is by far, connected or is close to media, the applications. These modern applications helped us to overcome challenges, the simple ones like how to crop, reader application, or how to convert a file into another type of file. We will dwell on that topic in a different division but now we will be focusing on the general concept idea of media.

Part One - Media Today

Media scopes are very large. It contains a function of internet-which is a network that connects us all virtually by a general idea. Most of you might have thought that media is evident to our daily lives with examples such as television, radio, and cellphones. Those examples are the ones that are abundant from the last decade where internet and computer are primarily limited.

In general, "media" refers to various means of communication. For example, television, radio, and newspaper are different types of media. The term can also be used as a collective noun for the press or news reporting agencies. In the computer world, "media" is also used as a collective noun, but refers to different types of data storage options.

Computer media can be hard drives, removable drives (such as Zip disks), CD-ROM or CD-R discs, DVDs, flash memory, USB drives, and yes, floppy disks. For example, if you want to bring your pictures from your digital camera into a photo processing store, they might ask you what kind of media your pictures are stored on. Are they on the flash memory card inside your camera or are they on a CD or USB drive? For this and many other reasons, it is helpful to have a basic understanding of what the different types of media are.

Windows

Windows 1.0 is a graphical personal computer operating environment developed by Microsoft. Microsoft had worked with Apple Computer to develop applications for Apple's January 1984 original Macintosh, the first mass-produced personal computer with a graphical user interface (GUI) that enabled users to see user-friendly icons on the screen. It provides an environment which can run graphical programs designed for Windows, as well as existing MS-DOS software.

Windows 1.0 runs a shell program known as the MS-DOS Executive, which is little more than a mouse-able output of the DIR command that

does not support icons and is not Y2K-compliant. Other supplied programs are Calculator, Calendar, Clipboard Viewer, Clock, Notepad, Paint, Reversi, Cardfile, Terminal and Write. Windows 1.0 does not allow overlapping windows. Instead, all windows are tiled. Only dialog boxes can appear over other windows, but cannot be minimized.

Windows 8.1

Windows 8.1 aimed to address complaints of Windows 8 users and reviewers on launch. Visible enhancements include an improved Start screen, additional snap views, additional bundled apps, tighter OneDrive (formerly SkyDrive) integration, Internet Explorer 11, a Bing-powered unified search system, restoration of a visible Start button on the taskbar, and the ability to restore the previous behavior of opening the user's desktop on login instead of the Start screen. Windows 8.1 also added support for such emerging technologies as high-resolution displays, 3D printing, Wi-Fi Direct, and Miracast streaming, as well as the ReFS file system.

Windows 8.1 received better positive reception than Windows 8, with critics praising the expanded functionality available to apps in comparison to 8, its OneDrive integration, along with its user interface tweaks and the addition of expanded tutorials for operating the Windows 8 interface. Despite these improvements, Windows 8.1 was still criticized for not addressing all digressions of Windows 8 (such as a poor level of integration between Metro-style apps and the desktop interface), and the potential privacy implications of the expanded use of online services. As of February 2019, 6.55% of Windows computers are running Windows 8.1.

Windows 8.1 adds tighter integration with several Microsoft-owned services. OneDrive (formerly SkyDrive) is integrated at the system level to sync user settings and files. Files are automatically downloaded in the background when they are accessed from the user's OneDrive folder unless they are marked to be available offline. By default, only file metadata and thumbnails are stored locally, and reparse points are used to give the appearance of a normal directory structure to provide

backward compatibility. The OneDrive app was updated to include a local file manager. OneDrive use on Windows 8.1 requires that a user's Windows account be linked to a Microsoft account; the previous SkyDrive desktop client (which did not have this requirement) is not supported on Windows 8.1.

A Bing-based unified search system was added; it can analyze a user's search habits to return results featuring relevant local and online content. Full-screen "hero" displays aggregate news articles, Wikipedia entries, multimedia, and other content related to a search query; for instance, searching for a music performer would return photos of the performer, a biography, and their available songs and albums on Xbox Music. The messaging app from Windows 8 has been replaced by Skype, which also allows users to accept calls directly from the lock screen. Windows 8.1 also includes Internet Explorer 11, which adds support for SPDY and WebGL, and expanded developer tools.

Windows 10

Windows 10 receives new builds on an ongoing basis, which are available at no additional cost to users, in addition to additional test builds of Windows 10 which are available to Windows Insiders. Devices in enterprise environments can receive these updates at a slower pace, or use long-term support milestones that only receive critical updates, such as security patches, over their ten-year lifespan of extended support.

Microsoft aimed to have Windows 10 installed on at least one billion devices in the two to three years following its release. Up to August 2016, Windows 10 usage was increasing, with it then plateauing, while eventually in 2018, it became more popular than Windows 7 (though Windows 7 is still more used in most countries in Asia and Africa) and thus the single most used Windows version overall (at 48.18%, thus the other more used overall), though not on some continents as measured by web traffic. As of March 2019, the operating system is running on more than 800 million devices and has an estimated usage share of 32% on traditional PCs, making it the most popular version of Windows and

the largest usage share of an OS overall, and 15% across all platforms (PC, mobile, tablet, and console).

Those are the changes and improvements from the last decades in terms of the computer's functionality. It's not only the computers that improved, but a lot of inventions was also made in accordance with the rise of computers. By that, social media and internet also began to different kinds of media. The importance of computers and other similar gadgets was that they made it easier as the device used for the internet and other networks. Before the internet, there were also other way and process but it'll be discussed to the following topics. Today, the information gathering became faster and the definition of media itself became pronounced. Communication itself the major role of media. As a medium for the distribution of ideologies, concepts, opinion, belief, data, and etc. It could be a one-way process or a two-process depending on the communication model.

Models of Communication

Models of communication are conceptual models used to explain the human communication process. The first major model for communication was developed in 1948 by Claude Elwood Shannon and published with an introduction by Warren Weaver for Bell Laboratories. Following the basic concept, communication is the process of sending and receiving messages or transferring information from one part (sender) to another (receiver).

In 1960, David Berlo expanded the linear transmission model with the Sender-Message-Channel-Receiver(SMCR) Model of Communication. Later, Wilbur Schramm introduced a model that identified multiple variables in communication which includes the transmitter, encoding, media, decoding, and receiver.

Shannon-Weaver Model

Elwood Shannon and Warren Weaver were engineers that worked for Bell Telephone Labs in the United States. Their goal was to make sure that

the telephone cables and radio waves were working at maximum efficiency. Therefore, they developed the Shannon-Weaver model which had an intention to expand a mathematical theory of communication. The Shannon–Weaver model was developed in 1949 which is referred to as the 'mother of all models'. The model is well accepted as a main initial model for Communication Studies which has grown since then.

As well, the Shannon-Weaver model was designed to mirror the functioning of radio and telephone technology. Their initial model consisted of four primary parts: sender, message, channel, and receiver. The sender was the part of a telephone a person speaks into, the channel was the telephone itself, and the receiver was the part of the phone through which one can hear the person on the other end of the line. Shannon and Weaver also recognized that there may often be static or background sounds that interfere with the process of the other partner in a telephone conversation; they referred to this as noise. Certain types of background sounds can also indicate the absence of a signal.

The original model of Shannon and Weaver has five elements: information source, transmitter, channel, receiver, and destination. To illustrate the process of the communication the first step is the information source where the information is stored. Next, in order to send the information, the message is encoded into signals, so it can travel to its destination. After the message is encoded, it goes through the channel which the signals are adapted for the transmission. In addition, the channel carried the noise course which is any interference that might happen to lead to the signal to receive different information from the source. After the channel, the message arrives in the receiver step where the message reconstructs (decode) from the signal. Finally, the message arrives at the destination.

Berlo

In 1960, David Berlo expanded Shannon and Weaver's 1949 linear model of communication and created the Sender-Message-Channel-Receiver (SMCR) Model of Communication. The SMCR Model of Communication

separated the model into clear parts and has been expanded upon by other scholars.

The Berlo's communication process is a simple application for person-to-person communication, which includes communication source, encoder, message, channel, decoder, and communication receiver. In addition, David Berlo presented some factors that influence the communication process between two people. The factors include communication skills, awareness level, social system, cultural system, and attitude.

Berlo's Model of Communication process starts at the source. This is the part which determines the communication skills, attitude, knowledge, social system, and culture of the people involved in the communication. After the message is developed, which are elements in a set of symbols, the encoder step begins. The encoder process is where the motor skills take place by speaking or writing. The message goes through the channel which carries the message by hearing, seeing, touching, smelling, or tasting. Then the decoding process takes place. In this process, the receiver interprets the message with her or his sensory skills. Finally, the communication receiver gets the whole message understood.

Schramm

Communication is usually described along a few major dimensions: Message (what type of things are communicated), source / emission / sender / encoder (by whom), form (in which form), channel (through which medium), destination / receiver / target / decoder (to whom), and Receiver. Wilbur Schramm (1954) also indicated that we should also examine the impact that a message has (both desired and undesired) on the target of the message. Between parties, communication includes acts that confer knowledge and experiences, give advice and commands, and ask questions. These acts may take many forms, in one of the various manners of communication. The form depends on the abilities of the group communicating. Together, communication content and form make messages that are sent towards a destination. The target can be oneself, another person or being, another entity (such as a corporation or group of beings).

Communication can be seen as processes of information transmission governed by three levels of semiotic rules:

- Syntactic (formal properties of signs and symbols),
- Pragmatic (concerned with the relations between signs/expressions and their users) and
- Semantic (the study of relationships between signs and symbols and what they represent).

Therefore, communication is social interaction where at least two interacting agents share a common set of signs and a common set of semiotic rules. This commonly held rule in some sense ignores autocommunication, including intrapersonal communication via diaries or self-talk, both secondary phenomena that followed the primary acquisition of communicative competences within social interactions.

Barnlund

In light of these weaknesses, Barnlund (1970) proposed a transactional model of communication. The basic premise of the transactional model of communication is that individuals are simultaneously engaging in the sending and receiving of messages.

In a slightly more complex form, a sender and a receiver are linked reciprocally. This second attitude of communication, referred to as the constitutive model or constructionist view, focuses on how an individual communicates as the determining factor of the way the message will be interpreted. Communication is viewed as a conduit; a passage in which information travels from one individual to another and this information becomes separate from the communication itself. A particular instance of communication is called a speech act. The sender's personal filters and the receiver's personal filters may vary depending upon different regional traditions, cultures, or gender; which may alter the intended meaning of message contents. In the presence of "noise" on the transmission channel (air, in this case), reception and decoding of content may be faulty, and thus the speech act may not achieve the desired effect. One problem with this encode-transmit-receive-decode model is that the

processes of encoding and decoding imply that the sender and receiver each possess something that functions as a [code-book], and that these two code books are, at the very least, similar if not identical. Although something like code books is implied by the model, they are nowhere represented in the model, which creates many conceptual difficulties.

Theories of co-regulation describe communication as a creative and dynamic continuous process, rather than a discrete exchange of information. Canadian media scholar Harold Innis had the theory that people use different types of media to communicate and which one they choose to use will offer different possibilities for the shape and durability of society. His famous example of this is using ancient Egypt and looking at the ways they built themselves out of media with very different properties stone and papyrus. Papyrus is what he called 'Space Binding'. it made possible the transmission of written orders across space, empires and enables the waging of distant military campaigns and colonial administration. The other is stone and 'Time Binding', through the construction of temples and the pyramids can sustain their authority generation to generation, through this media they can change and shape communication in their society.

Present Media

Today, we are sharing our thoughts to Facebook, our pictures to Instagram, our opinions to twitter. There are many similar sites that also have corresponding software and applications that respond to the needs of individuals.

Expressionism

It is the idea from the twenty-first century where a majority of individuals had an increased sense of expression through different platforms. The ideas could be in a variety of concept and format. It is the free, open, and outward expression that became a trend, parallel to the growth and access of social media and communication technology.

Communication Technology

Any technology on which it has the functionality to communicate, either by interpersonal, intrapersonal communication, one-way or two-way communication.

Intrapersonal communication is a 's internal use of or. It can be useful to envision intrapersonal communication occurring in the mind of the individual in a model which contains a sender, receiver, and feedback loop.

In Communication: The Social Matrix of Psychiatry, Jurgen Ruesch and Gregory Bateson argue that intrapersonal communication is indeed a special case of interpersonal communication.

Intrapersonal communication can encompass:

Speaking aloud as in reading aloud, repeating what one hears, the additional activities of speaking and hearing (in the third case of hearing again) what one thinks, reads or hears. This is considered normal although this does not exactly refer to intrapersonal communication as reading aloud may be a form of rhetorical exercise although expected in the relevant young age.

Our ability to talk to ourselves and think in words is a major part of the human experience of consciousness. From an early age, individuals are encouraged by society to introspect carefully, but also to communicate the results of that introspection. Simon Jones and Charles Fernyhough cite research suggesting that our ability to talk to ourselves is very similar to regular speech. This theory originates with the developmental psychologist Lev Vygotsky, who observed that children will often narrate their actions out loud before eventually replacing the habit with the adult equivalent: sub-vocal articulation. During sub-vocal articulation, no sound is made but the mouth still moves. Eventually, adults may learn to inhibit their mouth movements, although they still experience the words as "inner speech".

Jones and Fernyhough cite other evidence for this hypothesis that inner speech is essentially like any other action. They mention that schizophrenics suffering auditory verbal hallucinations (AVH) need only open their mouths in order to disrupt the voices in their heads. To try and explain more about how inner speech works, but also what goes wrong with AVH patients, Jones and Fernyhough adapt what is known as the "forward model" of motor control, which uses the idea of "efferent copies".

A forward model of motor control. Notice that a prediction of the future state is made just before the movement occurs. Presumably, that efference copy is used to establish the agency.

In a forward model of motor control, the mind generates movement unconsciously. While information is sent to the necessary body parts, the mind basically faxes a copy of that same information to other areas of the brain. This "efferent" copy could then be used to make predictions about upcoming movements. If the actual sensations match predictions, we experience the feeling of agency. If there is a mismatch between the body and its predicted position, perhaps due to obstructions or other cognitive disruption, no feeling of agency occurs.

Jones and Fernyhough believe that the forward model might explain AVH and inner speech. Perhaps, if inner speech is a normal action, then the malfunction in schizophrenic patients is not the fact that actions (i.e. voices) are occurring at all. Instead, it may be that they are experiencing normal, inner speech, but the generation of the predictive efferent copy is malfunctioning. Without an efferent copy, motor commands are judged as an alien (i.e. one does not feel like they caused the action). This could also explain why an open mouth stops the experience of alien voices: When the patient opens their mouth, the inner speech motor movements are not planned in the first place.

Interpersonal communication is the process by which people exchange information, feelings, and meaning through verbal and non-verbal messages: it is face-to-face communication.

Interpersonal communication is not just about what is actually said - the language used - but how it is said and the non-verbal messages sent through tone of voice, facial expressions, gestures, and body language.

When two or more people are in the same place and are aware of each other's presence, then communication is taking place, no matter how subtle or unintentional.

Without speech, an observer may be using cues of posture, facial expression, and dress to form an impression of the other's role, emotional state, personality and/or intentions. Although no communication may be intended, people receive messages through such forms of non-verbal behavior.

Electronics and how it Works

Electron flow is what we think of an electrical current. We are familiar with two types of electron flow, Direct Current, or DC, and Alternating Current, or AC. Direct Current is the kind of electrical flow we get from batteries and solar cells when electrons travel in only one direction. On the other hand, AC is the kind of electrical flow we get from a typical electrical outlet in a home. AC is when the electrons flow in two directions, from the positive to the negative terminal and from the negative to the positive terminal, 'alternating' between the two directions. (Your lights will light up regardless of the direction of the electron flow.)

A lot of people think of electron flow as electrons moving along a wire freely as cars go down a highway. Actually, it works a little differently. Any conductor (the thing that electricity can go through) is made of atoms. Each atom has electrons in it. If you put new electrons in a conductor, they will join atoms, and each atom will spit out an electron to the next atom. This next atom takes in the electron and spits out another one on the other side.

Digital Technology

Digital describes electronic technology that generates, stores, and processes data in terms of two states: positive and non-positive. Positive is expressed or represented by the number 1 and non-positive by number 0. Thus, data transmitted or stored with digital technology is expressed as a string of 0's and 1's. Each of these state digits is referred to as a bit (and a string of bits that a computer can address individually as a group is a byte).

Prior to digital technology, electronic transmission was limited to analog technology, which conveys data as electronic signals of varying frequency or amplitude that are added to carrier waves of a given frequency. Broadcast and phone transmission have conventionally used analog technology.

Digital technology is primarily used with new physical communications media, such as satellite and fiber optic transmission. A modem is used to convert the digital information in your computer to analog signals for your phone line and to convert analog phone signals to digital information for your computer.

The first things that come from our minds when we heard digital is the front of our cellphone, computer, or anything that is relevant to both technology and the internet. It is within the touch of our fingers on our cellphones. It makes users connect and chat with each other and that is where the other general concept of the Digital world comes from.

Digital World

Unlike the virtual world, the digital world is by far the closest. The term world covers an idealistic artificial word that our minds only focus for hours and minutes. It is when we are chatting to someone that we are really interested in that almost everything outside our concentration is irrelevant. It is not a practical warping of physical entities nor it has anything to do with science but it is a simulation using artificial means

that is controllable and uncontrollable to our presence of minds from our focus to something digital.

The concept of virtual word and its scopes will be discussed to the following topics.

Virtual

In computing, virtual is a digitally replicated version of something real. The replication, which is created with software, may not be an exact copy of the actual item, but it is similar enough, in essence, to be described as a digital rendition.

Virtual reality (VR) is an interactive computer-generated experience taking place within a simulated environment. It incorporates mainly auditory and visual feedback, but may also allow other types of sensory feedback. This immersive environment can be similar to the real world or it can be fantastical.

Current VR technology most commonly uses virtual reality headsets or multi-projected environments, sometimes in combination with physical environments or props, to generate realistic images, sounds and other sensations that simulate a user's physical presence in a virtual or imaginary environment. A person using virtual reality equipment is able to "look around" the artificial world, move around in it, and interact with virtual features or items. The effect is commonly created by VR headsets consisting of a head-mounted display with a small screen in front of the eyes, but can also be created through specially designed rooms with multiple large screens. Other forms of VR include augmented reality and mixed reality systems.

VR systems that include transmission of vibrations and other sensations to the user through a controller or other devices are known as haptic systems. This tactile information is generally known as force feedback in medical, video gaming, and military training applications.

Virtual refers to anything that is within artificial sensations. It's not practically changing the feelings nor blocking the senses but it changes

things that our brain perceive. In other terms, it the general tool and concept, primarily by the use of technology to alter realism. We have to explain first the definition of realism by these contexts.

Realism

Despite the similarity to the term given to art history and art contemporary discussions, realism by means of virtual representation and media topic, is by means of recreating or created realm that builds a connection to a user. That connection can change into different aspects as long as the user interprets it or interpreted it as an alternate representation of the natural-physical world.

An example of virtual is the recreational representations that could be a game. Here are the following examples of virtual and how they change the current decade.

After 30 years of stutters and stops, virtual reality is finally a reality, thanks to an influx of billions of dollars of investment in hardware from top technology companies. Facebook has its $600 Oculus Rift Opens a New Window. — add an extra $200 for Oculus Touch Opens a New Window. controllers — and HTC has its $800 Vive Opens a New Window. and its included hand controllers, for those who either have a turbo-charged PC or are willing to invest another $800 or more in that hardware. Sony makes things a bit easier for the 50 million gamers who own a PlayStation Opens a New Window. 4, offering either a $400 PlayStation VR Opens a New Window. or a $500 bundle Opens a New Window. that includes the camera and PlayStation Move controllers you'll need to play games. And just about anyone can pick up a mobile VR device like Google Cardboard, Daydream View, or Samsung Gear VR for under $100. Here are 10 great VR games for these platforms today.

The Climb

The Climb is one game that will either cure your fear of heights or send you into a frenzy. It's one thing to watch a movie like Everest on a big screen, it's quite another to be high above a valley floor clinging for your life to rocks. To truly experience virtual extreme solo rock climbing, you

need to have the Oculus Touch or HTC Vive controllers for full control of your hands as you scale cliffs and mountains. (The Xbox One controller just doesn't immerse you at the moment.) Real mountain ranges across North America, Europe, and Asia were used to bring this photorealistic game world to life. You can hone your skills in training mode before attempting to climb in Tourist mode, eventually ascending to the Bouldering mode, which requires perfect technique and fast scaling.

Werewolves Within

This is one of the few VR games that enables cross-platform play, which is especially important given the limited audience of gamers out there who own a headset. Werewolves Within is a VR interpretation of a classic party game usually called Mafia or Werewolf. Five to seven players can gather together around a virtual campfire in the medieval town of Gallowston and play. The game automatically assigns each player one of 11 roles like Drifter, Saint, Villager, Tracker, Gossip, or Werewolf. The idea is to hunt out the werewolf in the allotted time. It's a game of deception, conversation, and gestures (which come alive via hand controls) that brilliantly transports you to another place and time and ensures no two games will be the same. It's also a preview of what social VR can become in the future, as the technology evolves and more people make the virtual plunge.

Minecraft VR

Since 2009, Minecraft has been captivating kids of all ages with its unique take on building with virtual bricks and sharing those elaborate creations with the world. After conquering every other platform and selling over 106 million copies, developer Mojang (which Microsoft bought for $2.5 billion in 2014), has brought Minecraft to Oculus Rift with the help of Doom mastermind John Carmack. As long as you're willing to overlook that this is essentially still the same "old" game, but in VR, the experience is one of the most enjoyable out there — as long as you're not playing for hours and hours. Unlike the PC, console, or mobile versions, spending an excessive amount of time in VR can still tire your eyes. Mojang has fixed one problem, by allowing you to pull out from a first-person perspective

and into a large-screen 2D perspective when needing to turn left and right a lot, or when your eyes are tired. What makes Minecraft such a simple but addictive game on other platforms works brilliantly in VR.

Virtual games didn't only start from our current years but it's already been here before.

Panoramic paintings

Virtual games didn't only start from our current years but it's already been here before.

If we focus more strictly on the scope of virtual reality as a means of creating the illusion that we are present somewhere we are not, then the earliest attempt at virtual reality is surely the 360-degree murals (or panoramic paintings) from the nineteenth century. These paintings were intended to fill the viewer's entire field of vision, making them feel present at some historical event or scene.

1838 – Stereoscopic photos & viewers

In 1838 Charles Wheatstone's research demonstrated that the brain processes the different two-dimensional images from each eye into a single object of three dimensions. Viewing two side by side stereoscopic images or photos through a stereoscope gave the user a sense of depth and immersion. The later development of the popular View-Master stereoscope (patented 1939), was used for "virtual tourism". The design principles of the Stereoscope are used today for the popular Google Cardboard and low budget VR head-mounted displays for mobile phones.

Over time mankind has been slowly but surely creating ever richer ways to stimulate our senses. Things really began to take off in the 20th century, with the advent of electronics and computer technology.

1929 – Link Trainer the First Flight Simulator

In 1929 Edward Link created the "Link trainer" (patented 1931) probably the first example of a commercial flight simulator, which was entirely electromechanical. It was controlled by motors that linked to the rudder

and steering column to modify the pitch and roll. A small motor-driven device mimicked turbulence and disturbances. Such was the need for safer ways to train pilots that the US military bought six of these devices for $3500. In 2015 money this was just shy of $50 000. During World War II over 10,000 "blue box" Link Trainers were used by over 500,000 pilots for initial training and improving their skills.

The 1930s – Science fiction story predicted VR

In the 1930s a story by science fiction writer Stanley G. Weinbaum (Pygmalion's Spectacles) contains the idea of a pair of goggles that let the wearer experience a fictional world through holographic, smell, taste, and touch. In hindsight, the experience Weinbaum describes for those wearing the goggles is uncannily like the modern and emerging experience of virtual reality, making him a true visionary of the field.

1960 – The first VR Head Mounted Display

Morton Heilig's next invention was the Telesphere Mask (patented 1960) and was the first example of a head-mounted display (HMD), albeit for the non-interactive film medium without any motion tracking. The headset provided stereoscopic 3D and wide vision with stereo sound.

1965 – The Ultimate display by Ivan Sutherland

Ivan Sutherland described the "Ultimate Display" concept that could simulate reality to the point where one could not tell the difference from actual reality. His concept included:

A virtual world viewed through an HMD and appeared realistic through augmented 3D sound and tactile feedback. Computer hardware to create the virtual word and maintain it in real time. The ability users to interact with objects in the virtual world in a realistic way

"The ultimate display would, of course, be a room within which the computer can control the existence of matter. A chair displayed in such a room would be good enough to sit in. Handcuffs displayed in such a room would be confining, and a bullet displayed in such a room would be fatal.

With appropriate programming, such a display could literally be the Wonderland into which Alice walked." – Ivan Sutherland

1968 – Sword of Damocles

In 1968 Ivan Sutherland and his student Bob Sproull created the first VR / AR head mounted display (Sword of Damocles) that was connected to a computer and not a camera. It was a large and scary looking contraption that was too heavy for any user to comfortably wear and was suspended from the ceiling (hence its name). The user would also need to be strapped into the device. The computer-generated graphics were very primitive wireframe rooms and objects.

1987 – Virtual reality the name was born

Even after all of this development in virtual reality, there still wasn't an all-encompassing term to describe the field. This all changed in 1987 when Jaron Lanier, founder of the visual programming lab (VPL), coined (or according to some popularized) the term "virtual reality". The research area now had a name. Through his company, VPL research Jaron developed a range of virtual reality gear including the Dataglove (along with Tom Zimmerman) and the EyePhone head-mounted display. They were the first company to sell Virtual Reality goggles (EyePhone 1 $9400; EyePhone HRX $49,000) and gloves ($9000). A major development in the area of.

1991 – Virtuality Group Arcade Machines

We began to see virtual reality devices to which the public had access, although household ownership of cutting-edge virtual reality was still far out of reach. The Virtuality Group launched a range of arcade games and machines. Players would wear a set of VR goggles and play on gaming machines with real-time (less than 50ms latency) immersive stereoscopic 3D visuals. Some units were also networked together for a multi-player gaming experience.

1992 – The Lawnmower Man

The Lawnmower Man movie introduced the concept of virtual reality to a wider audience. It was in part based on the founder of Virtual Reality Jaron Lanier and his early laboratory days. Jaron was played by Pierce Brosnan, a scientist who used virtual reality therapy on a mentally disabled patient. Real virtual reality equipment from VPL research labs was used in the film and the director Brett Leonard, admitted to drawing inspiration from companies like VPL.

1993 – SEGA announce new VR glasses

Sega announced the Sega VR headset for the Sega Genesis console in 1993 at the Consumer Electronics Show in 1993. The wrap-around prototype glasses had head tracking, stereo sound and LCD screens in the visor. Sega fully intended to release the product at a price point of about $200 at the time, or about $322 in 2015 money. However, technical development difficulties meant that the device would forever remain in the prototype phase despite having developed 4 games for this product. This was a huge flop for Sega.

1999 – The Matrix

In 1999 the Wachowski siblings' film The Matrix hits theatres. The film features characters that are living in a fully simulated world, with many completely unaware that they do not live in the real world. Although some previous films had dabbled in depicting virtual reality, such as Tron in 1982 and Lawnmower Man in 1992, The Matrix has a major cultural impact and brought the topic of simulated reality into the mainstream.

Virtual reality in the 21st century

The first fifteen years of the 21st century has seen major, rapid advancement in the development of virtual reality. Computer technology, especially small and powerful mobile technologies, have exploded while prices are constantly driven down. The rise of smartphones with high-density displays and 3D graphics capabilities has enabled a generation of lightweight and practical virtual reality devices.

The video game industry has continued to drive the development of consumer virtual reality unabated. Depth sensing cameras sensor suites, motion controllers and natural human interfaces are already a part of daily human computing tasks.

Recently companies like Google have released interim virtual reality products such as Google Cardboard, a DIY headset that uses a smartphone to drive it. Companies like Samsung have taken this concept further with products such as the Galaxy Gear, which is mass produced and contains "smart" features such as gesture control.

Developer versions of final consumer products have also been available for a few years, so there has been a steady stream of software projects creating content for the immanent market entrance of modern virtual reality.

It seems clear that 2016 will be a key year in the virtual reality industry. Multiple consumer devices that seem to finally answer the unfulfilled promises made by virtual reality in the 1990s will come to market at that time. These include the pioneering Oculus Rift, which was purchased by social media giant Facebook in 2014 for the staggering sum of $2BN. An incredible vote of confidence in where the industry is set to go. When the Oculus Rift releases in 2016 it will be competing with products from Valve Corporation and HTC, Microsoft as well as Sony Computer Entertainment. These heavyweights are sure to be followed by many other enterprises, should the market take off as expected.

Virtual Reality on support and medicine

Virtual reality is used in many areas of healthcare which range from diagnosis, treatment, e.g. surgery, rehab and counseling. It is also used to train the next generation of doctors, paramedics, and other medical personnel and has shown a range of benefits from doing so.

So, what are the advantages of virtual reality in healthcare? There are several which are related to medical/surgical training, preventative medicine, counseling and architectural design of new hospitals.

Virtual reality medical training

Let's start with virtual reality as a means of training healthcare professionals. It is used in medical schools and other similar settings as a means of education and instruction. It enables medical students to acquire knowledge and understanding of the human body by means of interaction within a virtual environment.

Medical students can perform 'hands-on' procedures but in a safe and controlled setting. They are able to make mistakes – and learn from them but in an environment where there is no risk to the patient. They interact with a virtual patient and as a result of this, learn skills which they can then apply in the real world.

Doctors in China have used virtual reality technology and 3D imaging to allow a surgeon to help in an operation taking place thousands of kilometers away, according to a newspaper report.

Doctors performed the surgery on a bone fracture at a hospital in Bortala in the Xinjiang region of northwest China on Monday, the Xinjiang Morning Post reported.

The chief doctor Ye Zhewei was, however, in a hospital in Wuhan in central Hubei province, about 3,700km (2,300 miles) away.

Ye was able to follow the procedure on a virtual reality technology headset and marked on a 3D image instruction for his colleagues to follow.

Needle phobia is one of the most common fears among children who receive vaccines and they are exposed to needles on numerous occasions throughout their childhood. This causes many children to fear, anxiety and pain. In some cases, needle phobia and needle anxiety may even cause parents to delay scheduled visits with the doctor.

A pediatrician has come up with an innovative solution to distract children from their fear, anxiety, and pain using a virtual reality headset. He is the first to conduct a pilot study, published in the journal Pain Management, using this technique in a pediatric setting.

Chad Rudnick, M.D., an affiliate professor at Florida Atlantic University's Charles E. Schmidt College of Medicine and founder of Boca VIPediatrics, got the idea for the study from an 8-year-old patient who came to his office with a virtual reality headset. The child placed the goggles on his head as Rudnick proceeded to give him an injection. Much to Rudnick's delight, the child didn't even flinch. Even his mother said, "Did this really happen?"

"That's when the lightbulb went off in my head. It got me thinking whether this outcome was just a one-time incident or whether it would work again," said Rudnick.

Prior research has theorized that humans have a limited capacity for attention and therefore if a person is attending to another stimulus away from a noxious stimulus, they will perceive the painful stimulus as less severe.

To date, no studies have looked at virtual reality distraction during pediatric immunizations, so Rudnick decided to put his theory to the test working with two pre-med students and co-authors of the study, Emaan Sulaiman and Jillian Orden, in FAU's Charles E. Schmidt College of Science.

The objective of this study was to test the feasibility, efficiency, and usefulness of using virtual reality headsets as a means to decrease fear and pain associated with immunizations in pediatric patients. The study focused on fear and pain, both anticipated and actual as reported by the child and their caregiver.

For the study, Rudnick used a 3D virtual reality headset and a smartphone app that was inserted into the goggles giving the children the choice of a roller coaster ride, a helicopter ride or a hot-air balloon ride. Once the virtual reality headset was in place, Rudnick administered a single injection with the headset on until after the immunization was completed in about 30 seconds.

Study participants ages 6 to 17 completed a pre- and post-questionnaire evaluating fear using the McMurty Children's Fear Scale and the Wong-

Baker pain scale. Parents or guardians also completed a pre- and post-questionnaire assessing their parental perception of fear and pain using the same scales.

Results of the study showed that anticipated versus actual pain and fear were reduced in 94.1 percent of the pediatric study subjects. In addition, 94.1 percent of the pediatric study subjects reported that they would like to use virtual reality headsets again for their next immunization. Parents of the study subjects also reported a lower perception of pain and fear in their child following the use of virtual reality headsets.

Most virtual reality headsets cost about $50 and smartphone apps cost less than $1 for unlimited use, which provides an inexpensive and easy-to-implement non-pharmacologic method to pleasantly district children.

"I hope this distraction technique catches on in other pediatric offices because any method that increases the percentage of children vaccinated on-time and on schedule is critical in primary care pediatrics," said Rudnick. "With many children crying, kicking and fighting in the exam room to avoid getting an injection, it is well worth pursuing further studies on the benefits of using virtual reality headsets. Moreover, this method could potentially reduce mortality and morbidity from vaccine-preventable illnesses because children will receive their scheduled vaccinations", by Fabian Bimmer

The 59-year-old woman patient, whose full name was not given, told the newspaper: "All the bones, muscle and nerves in my body became a 3D image. The position of the fracture became obvious and it also helped me to understand my condition."

Ye was quoted as saying that the technology saved the expense of flying staff to help with operations far away and was more sophisticated than using simple webcams.

Ye added that technology would be applied to many more kinds of operation in the future.

Virtual reality dentistry

But virtual reality isn't only confined to medical schools. Dentistry is another area in which it plays a part. For example, there is a system known as 'HapTEL' which is based upon haptics (Greek for touch) in order to train new dentists. This virtual dental chair includes a training scenario in which the student is shown a 3D set of teeth that they work on.

They perform a range of procedures, e.g. a filling using a virtual drill which replicates the movement and pressure of a real drill by means of force feedback. This feedback takes the form of subtle changes of pressure which enables the student to adjust their technique accordingly.

This is discussed further in our virtual reality in dentistry article.

Virtual reality and paramedic training

It is also used to train paramedics and other similar personnel who need to learn life-saving skills but without placing themselves and their patients at risk. They are able to do this by interaction with a simulated accident or emergency in a virtual environment but with minimal risk. These scenarios are realistic and enable them to experience a high-pressure situation and respond accordingly.

Virtual reality preventative medicine

Virtual reality is used to educate patients about positive lifestyle choices, such as stopping smoking, moderate alcohol intake, healthy eating, and exercise. There is an emphasis on educating people to make positive changes about their health which will reduce the risk of illnesses, many of which are preventative.

Both desktop and fully immersive CAVE systems can be used to demonstrate the effects of negative lifestyle choices, e.g. smoking on health with the aim of changing people's behavior.

Virtual reality counseling

Counseling is another area where virtual reality has been utilized. A classic example is phobia treatment, for example, a fear of public

speaking where the sufferer is able to learn skills and build up their confidence in a virtual environment.

This is discussed in greater detail in our virtual reality in phobia treatment article.

It also used to treat people who have developed post-traumatic stress disorder (PTSD) as a result of a life-threatening situation. One example is that of soldiers who have served on the front line in Afghanistan and have become traumatized as a result. They are taught a range of techniques for dealing with the symptoms of their condition using virtual reality. This takes the form of a pair of virtual reality glasses or head-mounted display (HMD), data glove and input device, e.g. joystick.

Virtual reality architectural design

Virtual reality is used by architects and the construction industry to design and test new buildings. It enables them to walk through a virtual model in order to evaluate this which saves both time and money.

One example of this is the design and build of a new clinic which can be explored using a virtual reality headset, data glove, and input device. The user moves around the building, in the same way, they would in the real world and are able to assess various aspects whilst they do so. This is a safe and controlled way of doing so which is also cost effective.

The Boundary of Virtual Reality

Although it covers a big deal and potential as the next step to every possible industry, its requirements as for 2019 can't still reach the majority of the public. The lack of reach of this device and concept was because of its properties that affect its demand. Before discussing the negatives on why fewer people participate on this growing community, that will be further discussed in the future topics, different companies began to nurture the idea by establishing different brands for the virtual reality.

Dozens of hardware and software companies are spending hundreds of millions on R&D into the virtual reality that is realistic and doesn't make you nauseous when you use it, a common side effect of VR headsets.

Consumer interest in VR is increasing. VR hardware sales alone are expected to grow from $1.4 billion in 2016 to $2.4 billion in 2017, according to virtual reality consulting firm KZero. For VR software, which is mostly video games right now, the company estimates sales of $2.8 billion by 2018.

Facebook/Oculus VR

Facebook shelled out $2 billion for Oculus even before the device shipped, which should indicate its potential. Unfortunately, it's been a rough ride for Oculus, with lawsuits over contributions made by John Carmack, the highly respected gaming developer who left his game company to join Oculus. The game company's parent company alleged his contributions were made while still an employee of his former employer. Plus, a plan to sell headsets in Best Buy fizzled, there were problems with early shipments of headsets and the company was dinged for locking games behind exclusive deals. But at the recent E3 gaming conference there were many new games announced for Oculus, indicating the leaders still have momentum.

Google

Google started out in VR with a $15 headset made of cardboard called, what else, Google Cardboard. Cardboard is designed specifically for using VR apps on Android smartphones. It has since come out with a sturdier headset called Google Daydream View, which is similar to Google Cardboard in concept and will run you $79. You still put your phone in the headset and it functions as your display. The headset is primarily a pair of lenses that separate the screen into two images.

Microsoft HoloLens

Microsoft's virtual reality headset is still in development but already expanding to include mixed reality, or augmented reality, where virtual

images are superimposed over real-world objects. While HoloLens is still in development, Microsoft is showcasing an increasing number of both games and practical applications for the headset, such as architectural engineering and CAD design.

Magic Leap

Magic Leap is a very secretive startup that has raised over $1.5 billion in funding, so it has a lot to deliver. Its head-mounted virtual retinal display superimposes 3D computer-generated imagery over real-world objects by projecting a digital light field into the user's eye. This allows for placing 3D objects in the user's field of vision of the real world instead of a 100% virtual vision like other headsets. It still has yet to ship its product as of June 2017.

HTC Vive

Currently selling for a hefty $799, Vive is a complex system of a headset, two hand-held devices and sensors you place around your room so it can track your movements. HTC partnered with Valve to create "room-scale" games, so you don't just sit on the couch to play the game, you get up and move around. The box comes with 16 different components, making setup a little daunting.

Samsung Gear VR

Samsung's Gear VR was designed with Oculus as a consumer device for $199, and it works just with the newest generation of Samsung phones. In fact, you slide a Samsung phone into the headset holder and it acts as the computing device. The headset is meant for consumers and the only apps on it so far are games from third-tier developers.

Social

Our social life today is different than the ones in the Renaissance period. While also, the process of interaction or their social life are different from the primitive human. Every decade, our lifestyle changes depending on trend, things that are popular, and information. The information does play a major role in the progress of humankind. For instance, a girl was

walking in the streets when she remembered she wanted to remind her classmate about their meeting. The girl picks up her phone and messaged via SMS to her friend. Now, her classmate picked up her cellphone when it rang and answered her. They communicated with each other in a fast and convenient way but that example was abundant when the cellphone industry was progressing. It was a different procedure when cellphone advances into its progress that it was connected to the internet. The network of internet proposed a lot of alternatives since then. The SMS that the girl used may not be used in a far future because you have to pay for its load. The load may have also come into limitations like expiration. Every instance of information is limited and that where the theory of Data-Limited Information will come from to support the argument.

Preference Divide

This states that the feed of information from user/s can have an almost solid distinction which creates a boundary of choices on which the user/s can choose from. An example of this is when a user of YouTube sends information to YouTube itself through his/her search preference for a long period of time, therefore, creating the suggestions to appear based on his recent searches, limiting the variety of other contents and creating a manifestation of a boundary.

How does YouTube algorithm work?

YouTube tells us that" the goals of YouTube's search and discovery system are twofold: to help viewers find the videos they want to watch, and to maximize long-term viewer engagement and satisfaction."

The algorithm affects the six different places your video can surface on YouTube:

- In search results
- In the recommended streams
- On the YouTube homepage
- In trending streams
- In channel subscriptions

- In notifications

As a result of this filtering, users will be entrapped in an enclosed space of proximity on which they can satisfy themselves. They will no longer be able to discover newer distant subjects but instead, will cling within their boundary. This could affect the information dissemination which will undoubtedly affect the popularity levels on content producers and receivers e.g. a bigger gap between big producers and small producers.

Theory of Data-Limited Information

This theory proposes the generalized concept that any data that is available into reality is limited. There are stages that this theory proposes but before that, there is a type of Data dispersion. The first one is the data dispersion through amount boundary. This type refers to the ones that we have limited access depending on how much data or power was given to us by a source. Data and power are the terms used to explain information from the net, any value equivalents that express message or value, anything that works to input and output. Input and output are the ones in the system e.g. a program where a series of code may change the input directly or the process of a transaction between input and output. By source, it's the data that the telecommunication companies control to distribute different values into different users. A company or any data distributor that has the authority to manipulate the given amount of data depending on the contract between a client and a source. The data that will be given and will be used and end at a specific length of usage. The second type of data dispersion is deletion. It could come in two ways on how it will be executed. First is when a person that has the right to the data's amount could delete the amount of data on his own will. The second is when the source deletes it without any indicators beforehand e.g. source deleting a data from the server that affects the users. The third is the outside interference which comes from intervention of foreign entity. Foreign entities by these concepts of data dispersion are when an entity had the control to manipulate data between the source and the client. It could be a foreign entity that manipulates the flow of

data between two parties. These instances happen in our current decade and it seems that these attacks will not stop even after a few decades.

In computers and computer networks an attack is an attempt to expose, alter, disable, destroy, steal or gain unauthorized access to or make unauthorized use of an asset. A cyber-attack is any type of offensive maneuver that targets computer information systems, infrastructures, computer networks, or personal computer devices. An attacker is a person or process that attempts to access data, functions or other restricted areas of the system without authorization, potentially with malicious intent. Depending on the context, cyber-attacks can be part of cyberwarfare or cyberterrorism. A cyber-attack can be employed by nation-states, individuals, groups, society or organizations. A cyber-attack may originate from an anonymous source.

A cyber-attack may steal, alter, or destroy a specified target by hacking into a susceptible system. Cyber-attacks can range from installing spyware on a personal computer to attempting to destroy the infrastructure of entire nations. Legal experts are seeking to limit the use of the term to incidents causing physical damage, distinguishing it from the more routine data breaches and broader hacking activities.

Cyberwarfare utilizes techniques of defending and attacking information and computer networks that inhabit cyberspace, often through a prolonged cyber campaign or series of related campaigns. It denies an opponent's ability to do the same while employing technological instruments of war to attack an opponent's critical computer systems. Cyberterrorism, on the other hand, is "the use of computer network tools to shut down critical national infrastructures (such as energy, transportation, government operations) or to coerce or intimidate a government or civilian population". That means the end result of both cyberwarfare and cyberterrorism is the same, to damage critical infrastructures and computer systems linked together within the confines of cyberspace.

The flow of information is vast, and so is knowledge. Knowledge is power and as we seek on answers, some of us develop certain abilities that we

can wield to take advantage of the others. One such example is the hackers of today's era. During the earlier periods of humanity, they are the equivalent of snatchers and as we move on to the futuristic ideal of our society, such thieves will also exist. There are reasons why they exist. It could be because of financial problems. As any other or every individual's problems, the problem with money is common and cyber-attacks and scams are now a usual problem of today's environment.

It is by the concept and relation of environment-problem crisis. Wherein it simply the relation of trouble makers in parallel to the community. Earlier times didn't have much security and so any complicated networks that we know of today so most of humanity relies and moves depending on physical movements. Thieves steal merchandises, tools, and money by grabbing and snatching with the awareness of its environment. Today, people or society are protected both by the physical and digital world. There are hidden cameras, CCTV's outside the streets to serve as evidence to physical problems. There's also the security on the internet. There are I.T. investigators. The ones who have the authority to catch people who do illegal activities via a network. This topic about security will be discussed more deeply on the following topics.

Those are the types of data deletion. There are stages that we consider life. In philosophy, you could say that there are no permanent things on this Universe. Everything will decompose and be transmitted or it will be a part of something new again. A new entity. Since we are talking about things, information is no different. This theory also proposes the idea that information is a thing.

Information is comprised of tiny bits. It could be a code, a series of smaller values that have representations that are being processed by a program which is also compromised of tiny bits or values. Just like we analyze every definition of an entity in this universe, every smaller case has its own representation and it will depend on the receiver whether it is complicated or basic. Like atoms on things, information is like the flow of energy, the power, and mechanism that lights up a smaller scale from a representation of zero. As some of us may know of, ones and zeros are

basic that is like defining whether something is on or off. Same things apply to information. The energy has its weight and the flow itself has an effect on the scale. It could be an effect on displacement, weight, and scale.

Elements of Information by Theory of Limited Information

Displacement - It is the changes on position of a particular particle or smaller division of energy or physical, the thermodynamic form that is being used into the formation of value in codes or any representational division for a larger value. To define the flow or the output whether it is on or off has value or no value.

Weight - the quality of an object that is a measure of the force by which the earth attracts it, or an object considered as having this quality of energy or a particle.

Scale - the size or level of something in comparison to what is average to the division of smaller value up to an understandable value.

Stages of Limitation by the Theory of Limited Information

The first stage of information limitation: Artificial Limitation

Artificial Limitation refers to the process of manipulating information as a stage by this theorem from the types of data dispersion wherein there are different ways on how the information is limited. It is commanded by the presence of a limit by a company. This stage refers to the start of contract from the client that can access information up-to-the set time; the start of contract from the client that can access information up-to the end where an interference occurred; the start of contract from the client that can access information up-to-the client wanted to end it.

The second stage of information limitation: Physical Bound Expiration

It is when information isn't considered as information with a series of ordered representing values and is according to the creator's goal. It also when a data is a loss due to its own expiration because of either of its

own limited capacity or surrounding foundation. Surrounding foundation commonly refers to the hardware that stores data. If the hardware couldn't contain due to its ineligibility to do so because of many reasons and if the data is in an order that expresses an inaccuracy or in conflict to the creator's goals.

The third stage of information limitation: Time expiration

Time expiration is the data limitation wherein a data within a particular considered source cease to exist. It is when the elements that compromise the particular data didn't define the data as it is. It proposes that energy which composes the tiniest definable element of any data has a natural expiration which is the length of time. By the means of expiration, the energy wasn't able to be intact and starts to disperse which broke the foundation element of information. The element of scale as per definition of elements within the scopes of this theorem which only covered the scale as a measure to classify an information up to the smallest doesn't have anything to do with time as this element only serves as an element used into classifying the needed variables for any information. The weight which is comprised of energy itself, the mechanisms, the movement and any process related to the information is only parallel to the classified effects of any changes-outbound or inbound e.g. physical deterioration of mechanical, electrical parts, and energy transmission.

Social and How it Affects Us

We humans as biological being are more advanced and complex in our way of living. In every generation, our base knowledge seemed to improve every time. It is to be expected that the humans of the future will be more intelligent a sophisticated. As we walk closer to our sophistication of ourselves, an evolutionary mammal, we change things that are different from any living organisms that we know of. It could be that in the far future, we would discover different life forms that could be in either incomprehensible or basic organisms but now humans had their special lineage among the livings in the Earth. We communicate

more than any other mammals to one another. Our thoughts could reach thousands of miles across the Pacific and influence another life. We develop standards that are unique but sometimes the same as another every individual. We reply to conversations, messages, reaction with deep analysis within what we already know of. Those things happen even before the rise of the technology but we tend to be deeper in our analysis prior to the addition of contemporary media. We criticize pictures more often.

The average American spends more than 3 hours on a smartphone per day, and most users is dedicated to messaging and social media, as well as navigation. Research conducted a few years ago discovered that a decade ago, the average person spent approximately 90 minutes a day using their phone. More recent research, however, found that the average American adult spends nearly 3 hours on a mobile device, showcasing a significant increase in daily usage.

This increase is supported by yet another study, which indicated that the average American adult spent just 46 minutes on a phone per day in 2011. Six years later, that number was replaced with 3 hours and 8 minutes.

While this may seem problematic, it's important to remember that smartphones now serve multiple purposes, offering an easy opportunity not only to communicate, but to conduct research, read books, and much more.

There's a whole lot more to today's smartphone than run-of-the-mill phone features, and there's no better proof than the plethora of research that's been conducted to figure out how people use their mobile devices. As it turns out, those hours we spend with the phone in hand let us accomplish a surprisingly wide variety of tasks.

One universal driver of phone usage is communication. Rather than dialing a friend or sending a text, that communication is often conducted through social media. In 2016 alone, messaging and social media app use skyrocketed, growing four times over.

But there are other motivators, too. Navigation is one of them – whether you're strolling through town or driving, there's a good chance you're using your smartphone to find your destination. Other popular time-killers include reading articles, viewing video content, and shopping.

Tracking your usage

Wondering how your numbers stack up against the general populace? There are plenty of convenient apps that make it simple to track your own usage. Here are a few favorites.

Social Fever (Android) – This versatile app provides in-depth usage reports and several other handy features, including the ability to set usage goals, as well as alerts that let you know when you've used an app for a certain amount of time.

Moment (iOS) – Much like Social Fever, Moment lets you track your usage both in general and with specific apps. It also adds the benefit of multi-device capability, which may come in handy for parents aiming to limit children's screen time.

Forest (Android, iOS) – While Forest does offer tracking features, it focuses less on gauging screen time and more on helping you avoid it. It accomplishes this by granting you your own virtual garden, where you can grow trees and shrubs that get bigger and more complex as you spend more time away from your phone.

There are good effects of this shared strings of the network, there are bad, and there are also ones that are neutral. Neutral effects where we sometimes wonder whether something has made something good or bad. The whole idea of technology advancement itself is questionable whether it has a good or bad effect.

Humans will learn more during this era of modern technology than the previous. We will be able to store knowledge because of the faster way that the internet may give us. References, sources will change over the course of decades until everything is almost stored on the internet. All of this is happening and we might not even be aware of it.

Our social life has impacted our technology or technology impacted our social life? A question that is similar to which comes first but the answer that I propose on this one was that it come to both ways. However, two branches of ways couldn't just timely clash onto one another influencing something. There is an outside interference like a majority opinion, a magazine, a trend that influence what we may know today. Our standard on what beauty is and which pictures should we post. Each decision is based on the judgment from our previous experiences on how many like we got or how many views it had. Morals, ethics, and even religion are affected by it. We are living in today's world on how we think is good for the taste of the majority.

Internet

Techopedia explains internet as a computing advanced, peer-to-peer (P2P) communication was gradually delivered and enhanced. Since the 1990s, the internet has greatly influenced and upgraded networking to global standards. Billions of internet users rely on multiple application and networking technologies, including:

Internet Protocol (IP): The internet's primary component and communications backbone. Because the internet is comprised of hardware and software layers, the IP communication standard is used to address schemes and identify unique connected devices. Prominent IP versions used for communications include Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6).

Communications: The internet is the most cost-effective communications method in the world, in which the following services are instantly available:

- Email
- Web-enabled audio/video conferencing services
- Online movies and gaming
- Data transfer/file-sharing, often through File Transfer Protocol (FTP)
- Instant messaging

- Internet forums
- Social networking
- Online shopping
- Financial services

Origin of Internet

The internet originated with the U.S. government, which began building a computer network in the 1960s known as ARPANET. In 1985, the U.S. National Science Foundation (NSF) commissioned the development of a university network backbone called NSFNET. The system was replaced by new networks operated by commercial internet service providers in 1995. The internet was brought to the public on a larger scale at around this time.

The Internet undoubtedly changed our lives and put everything there is to know to the thing we already know into perspective. There are information and news that are spreading even though its unproven and will drive most of us into falsehood. Information that is within our hands that we can easily share. Different platforms that made our life easier in every ideal way. We used for communication and find individuals that we share the same hobbies. It helped us to find comfort, to connect and have a particular group that shares the same ideals. It will be the future that we couldn't even begin to contemplate. It could be the key to doing the goals so solving the world's crisis. We've never been connected before than ever. It could also be the way to generate conflicts but on the other side, we can make everyone to think at the same time and solve our problems. Two of the known sites for asking personal questions are Quora and Reddit. It gives everyone the opportunity to ask the question that Google can't answer. As we know, Google is a search engine that gives sites that answers our questions. It could be by an article, a blog post, a news site, government site, dictionary, and etc. Although there is a lot of information, and recommendations, most of the sites that are at the top page didn't have answers to our questions so we could use a specific site that is made for answering questions wherein answers also came from other users. From a lot of information that is stored on the

internet, there are answers to what you're seeking for, however, specific answers are harder to find since there are a lot of sites. Most of us will not continue all the way long into finding their desired answers into up to the third page of google page because that's too much stress to click each site and look for answers. Most of us chose to change what's written on the search box depending on what we think is more precise to find the result that we wanted.

Recent sites that are created improved into something that is more ideal for their customers or target audience and all of it are thanks to business. Almost all of us are familiar with how the industry on how the concept of supply and demand works. Even by a simple and glimpse on how a business or corporation lasts than the other, we have an idea of why a business fails or become a success. It could be because of their marketing, the quality of products, and how much it costs. By that, creators of these websites became more idealistic on what they would sell or not. The competition of these sites becomes more complicated which also includes the designs of the website, what color does it use, the psychology on what colors and designs are needed for a food site. Although it's been a tradition even not by online marketers the different strategies on how to sell a thing, it improves depending on the availability of information that they would get to improve their sales. Each day, different studies are being published and by that, given that there is a piece of information that has something to do, a marketing specialist or even a starting businessman would consider this information. Such studies claim a lot of things, it could come from a branch of psychology that tells what the customers would tend to buy at this time of the month or statistics of customers who prefer specific things.

Emergence

A lot of people began to have needs that have something to do with the internet. It could be a need for pornographic materials from the internet instead of buying magazines, buying an eBook rather than going to the local library. There are a lot of reasons why the internet will always be on the upper hand of everything in this century or future centuries. Humans

tend to find where there is more available. They wouldn't be contented with limited resources nor options. There is a difference between a store that sells things on local from a store or retailer in the central regions where there is a high density of population. Are we are going to compare the internet as a population, it'll be massive? A lot of people are always online despite the time since almost all countries have access to the internet. By that, a lot of retailers and companies already saw the opportunity to gain a place where there is the greatest number of people and potential customers.

From the last decade, a lot of sites started to emerge and one by one have taken over the spots for companies in terms of sales.

Amazon

Amazon, also known as Amazon.com is an e-commerce company. With over $107 billion in sales in 2015, Amazon is the largest online retail company in the world. Founded in 1994 by Jeff Bezos, currently, its headquarters is in Seattle, Washington. Amazon has a global footprint with affiliate websites worldwide. This made it surpass Wal-Mart in market capitalization of $329.7 billion in 2015. Amazon boasts of being the biggest employer of all the internet companies and a workforce 268,908 people in 2015 and generated revenues of $70 billion.

Google

Google is perhaps the most well-known internet companies. Its main activity is the internet search engine operation. However, it has interests in other fields such as in social media (Google Plus) and Cloud data storage (Google Drive). It is headquartered in Mountain View, California, USA. Google was founded by two university students, Larry Page and Sergey Brin from Stanford University in 1996. The idea was a modification of existing search engines at the time which was initially known as PageRank. In its early stages, it was run from a friend's garage. Google now has around 61,814 employees and annual revenue of $74.98 billion. It has a market capitalization of $493.2 billion.

eBay

eBay is an e-commerce company which was founded in 1995 by a computer programmer named Pierre Omidyar. Located in San Jose, California, it has seen its revenue reach $8.59 billion and a labor force consisting of 34,600 people. eBay has its revenue streams diversified through numerous acquisitions in other fields. PayPal, an online money processing company is a notable example which constituted 44% of its revenue before it went public. The market capitalization of eBay in 2015 was $26.98 billion.

Facebook

Facebook is the largest social media company in the world. With over one billion users, Facebook has seen its revenue reach $17.93 billion. Mark Zuckerberg founded it while a student at Harvard University. Located in Menlo Park, California Facebook has employed more than 12,641 people into its labor force. In 2012, Facebook had its IPO which made its value grow tremendously to reach a market capitalization of more than $25 billion. In 2014, Facebook acquired Whatsapp, a mobile message company for about $19 billion.

Alibaba

Alibaba is the biggest e-commerce company in Asia and has more than a billion users worldwide. Alibaba was founded by Jack Ma in 1999 and has its headquarters in Hangzhou, China. Alibaba has two major portals that run under it, Alibaba and Aliexpress. Alibaba is majorly for wholesale transactions while Aliexpress handles retail transactions. In 2015 Alibaba was valued at $202 billion with over $500 billion in sales. With over 26,000 employees, Alibaba has seen unprecedented sales in China including November 2015 Singles Day when more than $17.7 billion in sales was realized.

The Foundation of all

Internet will be or is already considered as the founding of something that will be big in the future. Something that will be considered not just as a platform but a multi-purpose virtual place for everyone. It could be a substitute for facilities, sources, fan base, organization, and etc. Now, the internet could develop something that challenges our sense of Physical reality. Humans could develop the internet into something that is treatable like a substitute reality. Even when the internet began to rise, the communication that is used in our cellphones to text and call someone already made most of us that are working to talk to someone by phone while walking on the streets. At that time, many people already had a cellphone because of its revolutionizing feature and that is to call and text. As months pass by, the demand increases and so the opportunity for the businesses to invest for researches while asking the general question, " What can we add to sell more". By having that goal in their minds, a lot of people think about how the cellphone could be something that will mesmerize and will leave a mark on their clients. Mark as a product like Apple or Samsung. The products became more complex in terms of engineering, planning, materials, and integration. All this resulted in a more accessible, precise, and less space on hardware products. Machines and gadgets used to be bigger than a cabinet, then they remove components one by one while not neglecting its use. From tubes and big batteries, it became smaller in a scale that even our eyes are hard to catch up. Transistors, compact disks, and tinier versions of each product are being launched each year.

Now, we are having phones that can call, text, search, connect, entertain, and etc. Humans will never reach the peak as long as there's a difference to one can attain. As long as there's the concept of money or different form of valuing in the future, we will always push to boundary even to the things that are unexpected.

The Security

Internet and media helped us to protect ourselves. There are cameras outsides the streets that helped us to gather new evidence in case there are accidents. The cameras are one of the physical representations of security that has something to do with media. The camera records video through its lens then sends it to the operator. The dash cam that helps drivers to record while they're driving. Aside from our cameras, there is also a security measure that being applied through programs. Software to stop security breaches, different protocols by security agencies depending on illegal crimes done via the use of the internet.

Internet law refers to how legal principles and legislation govern the use of the internet in all its forms. Another term for internet law is cyberlaw. Unlike other areas of the law, internet law cannot be identified as one solid, stable, and specific field of practice. Rather, it incorporates and applies principles from several traditional fields, such as privacy law or contract law, that predate the internet.

Since the internet is relatively new and constantly evolving, laws surrounding its use cannot be informed solely by precedent or common law. there is a great amount of uncertainty regarding what is permitted according to internet law, and there is still a great deal to discover and to decide. Often, judges must apply other systems of law as best as they can in order to resolve cases.

Given the breadth and complexity of the internet and all of its potential liabilities, internet laws must be flexible enough to cover countless real and theoretical possibilities. Additionally, because the internet is a global interface, it cannot be entirely bound by the laws of any one geographical authority, such as a single country's government. While there certainly are some regulations that communities abide by internationally, some believe that the internet should be operated as if it were a land all its own, independent of national policy.

Alternating Data - A Case

An investigation of the firm's products finds no evidence of tampering as its CEO hits back at the initial reports

Hardware manufacturer Supermicro has released the findings of an audit showing no evidence that malicious chips have been inserted into its widely-used motherboards.

Concerns were sparked after a Bloomberg report in October alleged Chinese operatives had been conducting covert surveillance on major firms such as Apple and Amazon by inserting 'spy chips' onto Supermicro's motherboards.

But the firm has now shared the results of a "thorough investigation" of its hardware conducted via a third-party investigations firm and has concluded its chips have not been infiltrated by any threat actors.

"After a thorough examination and a range of functional tests, the investigations firm found absolutely no evidence of malicious hardware on our motherboards," Supermicro's president and CEO Charles Liang said in a letter to customers.

"These findings were no surprise to us. As we have stated repeatedly, our process is designed to protect the integrity and reliability of our products."

After the allegations first emerged, both the US Department for Homeland Security (DHS) and the UK's National Cyber Security Centre (NCSC) backed up Supermicro's statements, each suggesting there were no reasons to doubt the denials.

But the statements came after no official investigation had taken place, with the findings of the newly published security audit, conducted by a third-party company, the only examination of Supermicro's hardware since the reports emerged.

"As we have stated repeatedly since these allegations were reported, no government agency has ever informed us that it has found malicious hardware on our products," Laing continued.

"No customer has ever informed us that it found malicious hardware on our products, and we have never seen any evidence of malicious hardware on our products.

"Today's announcement should lay to rest the unwarranted accusations made about Supermicro's motherboards. We know that many of you are also addressing these issues with your own customers."

The investigations firm tested a representative sample of Supermicro's motherboards, including the specific motherboard Bloomerberg referenced in its initial report, motherboards bought by companies referenced in the article, and more recently manufactured hardware.

Supermicro has also said there is a range of safeguards in place to ensure it's difficult as possible to release motherboards that have been tampered with or infiltrated by threat actors, Chinese or otherwise.

Russian spies have been accused of involvement in a series of cyber-plots across the globe

The UK, US, and the Netherlands have accused Russia of being responsible for a spate of global cyber-attacks, with seven people being charged by the US.

The charges against the seven include conspiracy to commit computer fraud, conspiracy to commit wire fraud, aggravated identity theft and conspiracy to commit money laundering.

Four the seven were the men expelled from the Netherlands having after being caught attempting a cyber-attack on the headquarters of the international chemical weapons watchdog, which was disrupted by Dutch military intelligence.

The hack was thwarted with the aid of British intelligence officials and on Thursday the UK government accused the Kremlin of violating international laws with "indiscriminate and reckless cyber-attacks".

The NCSC said it has assessed with high confidence that the GRU has almost certainly been conducting attacks under various aliases, such as Fancy Bear, Sednit and APT 28.

The NCSC has blamed the GRU for attacks such as the 2017 WADA email leak, which saw the identities of 28 football players who had received a Therapeutic Use Exemptions (TUEs) released online.

The Kremlin has also been accused of the 2017 'Bad Rabbit' ransomware that encrypted hard drives and rendered IT inoperable, resulting in mass disruption to services including the Kyiv metro, Odessa airport, Russia's central bank, and two Russian media outlets.

The NCSC also said, with high confidence, that the Kremlin was also responsible for hacking the Democratic National Committee (DNC) in 2016, which also affected the US presidential election of the same year.

Now, Seven Russian government operatives have been charged by the FBI with hacking into the computer networks. According to the indictment, starting in 2014, the defendants, who worked in for the GRU, engaged in "persistent and sophisticated criminal cyber intrusions".

It's hard to keep track of what's happening to the internet every day. It is important to have an awareness about the topic that is sometimes only available online. There are some sites that are faster in accumulating information and delivering to its audience than a fixed schedule of the news show. There are an instance and case where some sites are accused of selling private information to its transactors.

Facebook Didn't Sell Your Data; It Gave It Away

In exchange for even more data about you from Amazon, Netflix, Spotify, Microsoft, and others

Alexis C. Madrigal

Dec 19, 2018

The New York Times has once again gotten its hands on a cache of documents from inside Facebook, this time detailing data-sharing arrangements between the company and other corporations, which had "more intrusive access to users' personal data than [Facebook] has disclosed" for most of the past decade, the article revealed.

Microsoft's search engine, Bing, got Facebook users' friends, whether or not the users agreed to grant that access. Netflix and Spotify got access to users' messages. Amazon got names and contact information. And, of course, Facebook got things in return. The Times states that Facebook used data from other companies, including Amazon, in its "People You May Know" feature, which has long attracted attention for its mysterious suggestions.

But while the story recalls the explosive Cambridge Analytica episode, it's much more mundane. These were not bad actors, but merely actors playing exactly the role that Facebook wanted them to play. The goals of these integrations were not nefarious, at least from what we currently know, even if the idea that Spotify's engineers would have access to your Facebook message data is probably not intuitive to most people.

Facebook responded to the story with a long blog post in which the company argued that the data-sharing "work was about helping people" do things on the internet "like seeing recommendations from their Facebook friends—on other popular apps and websites, like Netflix, The New York Times, Pandora, and Spotify."

Which, sure: That was one thing that these data-sharing partnerships allowed. But they also allowed Facebook to grow, and grow, and grow. To entrench itself everywhere in the social media ecosystem. Facebook

was happy to trade user data to expand its business operations and to pretend that this was all about users defies reality. Users got a small "improvement" that they didn't ask for. Facebook got permits to build the pipes underlying its data empire.

Back when the data-sharing partnerships began, in 2010, the vision Facebook had of itself could be called Everything-but-With-Facebook. The service would be the social spine for all other services on the web. You'd log in with it, share through it, integrate your Facebook friends into all online experiences. This vision had an arc that began with integrating Facebook with also-ran phone makers and ended in the failure of the concept, overall. But in between, as The Verge's Casey Newton points out, it gave away more and more data until it overreached with what it called "instant personalization," which customized results in Bing with Facebook data.

The company has been pulling back on this kind of arrangement for years now. It admits in the Times story, however, that the change was not primarily because of privacy concerns. Most of the deals that Facebook cut simply didn't work for either party, despite the data transport going back and forth. As Android and iOS took over from the wider world of mobile phones and computers, Facebook's vision of what it should be evolved. It would no longer be the social spine, but the suite of apps you cannot escape. For years now, the model has been: everything inside Facebook. Apps that threatened that hegemony were purchased (WhatsApp, Instagram) or battled tooth and nail (Twitter, Snapchat).

What's fascinating is that, as with Cambridge Analytica, we're mostly talking about the sins of Facebook past, remnants of a different idea of how the internet was going to work. Except that the Times' reporting indicates that data access for many companies continued long after it should nominally have been cut off. Other companies purported to be surprised that they had the depth of access that they had. The sloppiness—basically up to the present day—remains the most incomprehensible part. For a company that is user data, Facebook sure has made a lot of mistakes spreading it around.

By the looks of it, other tech players have been happy to let Facebook get beaten up while their practices went unexamined. And then, in this one story, the radioactivity of Facebook's data hoard spread basically across the industry. There is a data-industrial complex, and this is what it looked like.

Such cases will rise more in the near future due to the advanced tactics that companies used to maintain their sales. For marketing, it is common to promote a product by sharing it to the masses however, it is more effective to share an advertisement in an online platform or commonly used platform than to post it on the street.

There's also a different case wherein information isn't controlled by corporations itself but rather individuals or group of people who uses their skills to find information. They are what commonly known as hackers.

These cyber-attacks are all manifested by the same principle as the value of information has its corresponding amount of money.

Part Two - Social Media and Us

Our lives revolve with our social media and our daily lives. Before, it was just us, with our stones and ax, hunting while gathering resources to survive. Then, the value of wealth comes to us, we make thing attached to our bodies for our gain of self-esteem.

The process of nurturing our self-esteem depends on our surroundings and a particular set of individuals. The set of individuals must be part of your community which then sets the trend, status, and symbols. No representational thing for the ego will help you to nurture your ego unless there are others who also benefit or part of it. Such social classes are determined by a specific set of individuals which then promotes and continuously use such items. Items such as a bone accessory, dress, tattoo, style, and even physical properties. Once the set of individuals have set the standard, there is a chance that it'll be passed down through generations. Every generation there is a change to what they think is more ideal. This process continues to overcome the biological deficit from the lack of natural statuses. In a particular group or community, there will always be three basic roles that must be executed knowingly or unknowingly if the concept of status and authority is present. This is the Borough hypothesis wherein it helped us to conceptualize what really is us and what does it relate to our current social standards by means of technology.

The Borough Hypothesis

Hypothesize that every set of individuals that is under an absolute boundary or semi-boundary are under the practice of identifying themselves under these three proposed roles whether they are aware or unaware of it.

Absolute Boundary - is when a set of individuals are inclined particularly on one set of roles on their specific agreement without any manifestation of any outside roles or bigger roles even if they are either aware or unaware of their roles. An example of an absolute boundary is us in a specific division of Earth; no outside roles interfere into our roles and no bigger division is present as for now.

Semi-Boundary - is when a set of individuals are not inclined into only one set of roles but rather under multiple roles in a specific set depending on the coverage of a boundary. An example of semi-boundary is the classroom where students have their own corresponding role in the classroom that they are aware or unaware of but outside their boundary, is a larger boundary which is the division of humans where there are roles present.

The two roles from Borough Hypothesis

Superior - representing the upper class at a specific field of interest or status of expertise. Individuals who have increased self-esteem due to their status or role.

Inferior - representing the lower class at a specific field of interest or status of expertise. In individuals who have decreased self-esteem due to their status.

Roles by these contexts are the division of status into two basic classes.

Hypothesis

This additionally hypothesizes that when a group of individuals is in a set, they will be naturally divided into two categories the individuals with superior authority that are inclined to have higher self-esteem and the inferior that are inclined to have lower self-esteem. Given that inset of fifty individuals in a classroom, thirty among them are under the role of Superior and twenty of them are under the role of Inferior. At a semester, the individuals under the Superior role have boosted their academic performance while the Inferior role decreased their academic performance. Given that by the second semester, the Individuals under

the Inferior role are removed and the ones under the Superior role continued to study for the second semester. During the classes of the second semester, the individuals with Superior role began to change their behavior. They naturally adapted the selection from the standards of imaginary basis which then resulted in twenty of them continuously boosted their academic performance while the ten of them lowered their academic performance. The individuals who boosted at their academic performance had the role of Superior under the Borough hypothesis while individuals who decreased their performance had the role of Inferior under the Borough hypothesis. This hypothesis also proposes the philosophical concept that our standards on what we think we are and our position in a specific set is what shapes us.

Standards of Imaginary Basis

The imaginary and hypothetical standard under the Borough Hypothesis that individuals under a set assess themselves onto which role they are in. Standards of Imaginary Basis is the line that defines between the two classifying roles which are Superior and Inferior.

Social Media

Social media is in every platform that helps us to socialize. Communication has led us to create bonds whether it is intimate or for the sole purpose of friendship. Social Media has contributed to the advancements of technology and re-assuring ourselves. The basis for our decisions has also impacted by our way of lives that are also defined in other people's judgments. Our standards on the things that are in trend or the things that will help us to gain popularity have become one of the norms of our current civilization.

Growing community

The emergence of the internet has undoubtedly led most of us to linger more on the internet. Internet on its early years of distribution is only for those who had the capacity to afford a computer. If you are lucky, you will be connected to an internet that will allow you to thrive in the growing community. Topics and sharing of ideas are also available at that

time. If one asks questions, it's more likely that it'll take a longer time than it is today to answer your questions.

A Look Back at the Earliest Websites

By Chandra Steele

March 12, 2014

For most of us, accessing the World Wide Web is a daily event, but 25 years ago, it was just a "vague but exciting" idea from Tim Berners-Lee.

Today marks the 25th anniversary of when Berners-Lee first proposed the Web, though it took some time to become a reality. The first successful build emerged on Christmas Day in 1990, and by June 1993 there were 130 websites. Considering that today there are about 650 million active websites, Berners-Lee might want to reconsider his unofficial "father of the World Wide Web" title; the child-support payments must be astronomical.

Today, Berners-Lee is a strong advocate for the open Web. He told The Guardian that he'd like for there to be a Magna Carta for the Web to protect its independence and the rights of those who use it, like former NSA contractor Edward Snowden, for whom Berners-Lee has been a vocal supporter.

While the Web is now many things to many people - an independent state, a platform for expression, a habitable universe - it started out so very simply. Early websites were nothing to write home about, but they are funny to peruse 25 years later. Take a trip down memory lane with a few of the pioneer sites that started it all.

CERN

At CERN, researchers are trying to recreate the start of the universe, but CERN already has the distinction of being home to the first website, which is recreated in all its pure-text glory.

Additional Info on CERN: The European Organization for Nuclear Research is a European research organization that operates the largest particle physics laboratory in the world. Established in 1954, the organization is based in a northwest suburb of Geneva on the Franco-Swiss border and has 23 member states. Israel is the only non-European country granted full membership. CERN is an official United Nations Observer.

The acronym CERN is also used to refer to the laboratory, which is 2016 had 2,500 scientific, technical, and administrative staff members, and hosted about 12,000 users. In the same year, CERN generated 49 petabytes of data.

CERN's main function is to provide the particle accelerators and other infrastructure needed for high-energy physics research – as a result, numerous experiments have been constructed at CERN through international collaborations. The main site at Meyrin hosts a large computing facility, which is primarily used to store and analyze data from experiments, as well as simulate events. Researchers need remote access to these facilities, so the lab has historically been a major wide area network hub. CERN is also the birthplace of the World Wide Web.

These sites help to converge people with the same interest but most of them are only in for technology, education, and connection.

Acme Laboratories

Everyone loves free stuff, and one of the first websites trafficked in gratis software. Acme Laboratories has been up and running at Acme.com since 1991, and has all sorts of software (and fun) for free, including a chocolate registry.

World Wide Web Worm

How did you Google before Google? Well, it was a little slower. The World Wide Web Worm crawled around in 1993, out of the lab of Oliver McBryan of the University of Colorado.

Additional Info: The World Wide Web Worm (WWWW) was one of the earliest search engines for the World Wide Web (WWW). It is claimed by some to be the first search engine, though it was not released until March 1994, by which time a number of other search engines had been made publicly available. It was developed in September 1993 by Oliver McBryan at the University of Colorado as a research project.

The worm created a database of 300,000 multimedia objects which could be obtained or searched for keywords via the WWW. It indexed about 110,000 webpages as of 1994. In contrast to present-day search engines, the WWWW featured support for Perl regular expressions.

Justin's Links from the Underground

Before there was the word "blog" there were Justin's Links from the Underground. Justin Hall realized that he could talk about just about anything in his life, and people would read it.

Additional Info: Justin Hall (born December 16, 1974, in Chicago, Illinois) is an American journalist and entrepreneur, best known as a pioneer blogger.

Doctor Fun

Though it didn't have much content in 1993, the Web was fun, but was it funny? It's a question the first webcomic took seriously. Doctor Fun was one panel of absurdity and levity. The fun didn't end until 2006 and an entire archive gets the last laugh.

Additional Info: Doctor Fun was a webcomic by David Farley, which ran from September 24, 1993 to June 9, 2006. It may have been the first popular episodic World Wide Web comic strip. Doctor Fun was part of United Media's website from 1995 until 2003, and it eventually concluded in 2006. The webcomic is often compared to The Far Side, being a series of one-panel gags. Most often compared to, Doctor Fun was a series of bizarre one-panel gags. Topics ranged from the mundane to the obscure. Farley reported that, based on the email he received, most readers were of a similar age to him and worked with

computers, but that there were also a "disproportionate number" of nurses. Doctor Fun made various references to and was described by to have a "universal appeal" compared to the coeval webcomic.

IMDB

You know that thing that tells us who was in what movie? What is it again? Can you IMDB it? Oh, right it is IMDB. The second-screen favorite started out as a Usenet group cataloging actress by their beautiful eyes. (Maybe we should have called it EyeMDB?) It then got more user-friendly with a move to the Web, hosted by Wale's Cardiff University in 1993.

The Tech

At PCMag, we have a soft spot for the first online newspaper, even more so because it was called The Tech and from MIT. The campus newspaper didn't know it would be heralding the death of print.

Trojan Room Coffee Machine

In November 1993 the first webcam was a bit of a tempest in a coffee pot. From a lowly office in a computer lab at the University of Cambridge, a stream of a coffee pot went online. It was intended to alert those in the building of whether they should bother making the trek for caffeine but there was so little else going on the Web that it became a hit around the world.

Additional Info: The Trojan Room coffee pot was a coffee machine located next to the so-called Trojan Room in the old Computer Laboratory of the University of Cambridge, England, which in 1991 provided the inspiration for the world's first webcam.

To save people working in the building the disappointment of finding the coffee machine empty after making the trip to the room, a camera was set up providing a live picture of the coffee pot to all desktop computers on the office network. After the camera was connected to the Internet a few years later, the coffee pot gained international notoriety as a feature of the fledgling World Wide Web, until it was retired in 2001.

Bianca's Smut Shack

Before Reddit, there was Bianca's Smut Shack for all things raucous and raunchy, where anything and everything went as far as chat.

Additional Info: bianca.com, informally known as Bianca's Smut Shack, was an online community created on February 14, 1994, by a group of dot-com software developers. Originally based in Chicago, the group later moved to San Francisco, and included David Thau and Chris Form Miller. bianca was one of the web's first 500 content creations and was the world's first web-based chat room. It later also became a popular theme camp at Burning Man.

The site has long been infamous for its extreme free speech and raucous discourse, and its sociological effect on the Internet and elsewhere has been extensively detailed in a thesis by "Freeform" (Miller), who studies Bianca-style chat rooms as a sort of petri dish for incubating deviant behavior:

In 1997 Radio Shack sought to prevent bianca's "Smut Shack" from using that name, citing their previous use of the word "shack" and claiming exclusive use. They later backed down from their legal action.

In 1999 the site was purchased by Nerve.com, but by 2001 they had given up on the venture due to excessive bandwidth costs. Nerve announced bianca's impending closure, though they vowed to find a way to preserve at least part of the site.

Chabad.org

If you felt guilty for whatever went down at Bianca's, you could always ask a rabbi for some advice. Chabad.org launched in 1994 to provide a few choice words to the chosen people.

Additional Info: Chabad.org is the flagship website of the Chabad-Lubavitch Hasidic movement. It serves its own members and Jews worldwide. It was one of the first Jewish internet sites and the first and largest virtual congregation. Chabad.org has a comprehensive Jewish knowledge base which includes over 100,000 articles of information

ranging from basic Judaism to Hasidic philosophy taught from the Chabad point of view. The major categories are the human being, God and man, concepts and ideas, the Torah, the physical world, the Jewish calendar, science and technology, people and events.

There are comprehensive sections on Shabbat, Kosher, Tefillin, Mezuzah, the Jewish way in death and mourning and a synagogue companion.

Chabad.org was the pioneer of "Ask the rabbi" sites. Rabbi Yosef Yitzchak Kazen reached out to thousands of people on Fidonet, an online discussion network, as far back as 1988.

In 1994, Kazen launched the first version of Chabad's "Ask the Rabbi" website. Today's version, in which 40 rabbis and educators field questions via e-mail, has answered more than 500,000 questions between 2001–2006, averaging about 270 a day. Many people take advantage of the Web's anonymity to impart experiences and ask for advice from chabad.org. Chabad.org also operates TheJewishWoman.org's "Dear Rachel", a similar service which is run by women for women.

More than 2,000 questions and answers have been posted online.

Chabad.org provides daily, date-specific information relevant to each day from Jewish history, daily Torah study, candle-lighting times, and forthcoming Jewish holidays.

Chabad.org maintains a number of sub-sites, including

- Weekly Magazine email on Torah and contemporary life.
- A search feature that enables the user to quickly find a Chabad House in any part of the world.
- An online Jewish library that contains some 100,000 articles.
- An "Ask the Rabbi" feature.
- A multimedia portal, Jewish.tv, where users can stream Jewish audio and video.
- A children's section.
- A section featuring reports in the media on the activities of Chabad Lubavitch Shluchim ("emissaries").

Sex.com

What would the Web be without sex? Gary Kremen, the founder of Match.com, was the first registrant of sex.com and let the domain lie there undeveloped. An enterprising pornographer Stephen Cohen swiped the domain name from him in 1995 when the Web was still the Wild West, and forged fax could pave the way to profit. Kremen eventually got his site back and sold it in 2006 for $14 million.

Replacing the tradition

During the early times, before the internet and social media has become a norm, people have more physical interaction. It is usual to invite someone during parties, watch movies in the theater, play in the playground together with your kids, and hang out with your friends. Some of these are still happening in our current years, but we can't also remove the effects of social media on it. Instead of going to a place of a friend, you will just dial or contact via different platforms, if children wanted to play, they will just download an app. It had good effects on us because people can be always in contact but the time that our current society having physical contact is lessening. It replaces the tradition that most of the people that couldn't cope up especially the older ones had a new problem to deal with. On their case, it's harder to introduce a new and advanced concept if they haven't known about it.

Social Media Justice

CCTV's or surveillance cameras are our way of securing public places but cameras are also available in our palm of our hands. Almost every cellphone that is being released in our current years, must have a camera. It's not just a simple camera but more integrated. Lots of people buy newer and more updated versions of cellphones, making them have a clearer and upgraded camera. Surveillance camera footages are being used as evidence from our last decade and before the surveillance, there were witnesses. Witnesses are still common in courthouse these days, but the cameras have helped to add an additional precision of judgment since footage are sometimes more reliable. It's not just videos, that are

being used in evidence but also different mediums. It could be audio of an alleged,sex tape, or a recording during a conversation talking about a contract. It helped us to reassert ourselves in times when it is possibly needed as an additional coat of protection. However, there are reported cases of video or surveillance cameras that are being tampered.

Burglars steal CCTV camera in victim's home - but footage of them caught in the act has already been backed up

By Telegraph Reporters (2018)

Burglars who stole a CCTV camera inadvertently captured themselves in the act of ransacking an elderly woman's home.

The two raiders were filmed on cameras that had been set up in the 83-year-old victim's home.

They tried to cover their tracks by stealing the equipment, but police were able to download the footage from a central database.

Detectives have now released images of two men being sought over the raid that saw thieves break in by smashing open a key box at the front of the property before letting themselves in. They had told the woman they were from a gas company.

One of the intruders was filmed in the kitchen of the property in Sheldon, Birmingham, at 11am on Monday.

When they spotted the HD cameras, the raiders tried to cover their tracks by stealing them but the footage was already backed up to a central database.

One of the burglars also tried to hide his face behind a black folder but was clearly visible as he grabbed the camera.

Baltimore Police officer who turned off body camera charged with tampering with evidence; others cleared

By Justin Fenton (2018)

A grand jury has indicted a Baltimore Police officer on charges of misconduct and fabricating evidence in connection with a body camera video that surfaced last year that the public defender's office said showed him planting drugs.

Officer Richard A. Pinheiro Jr., 29, was charged Tuesday, the Baltimore State's Attorney's Office said.

Prosecutors said the indictment "stems from alleged questionable evidence gathering acts captured on body worn camera footage on January 24, 2017."

"As State's Attorney, I've made a pledge to apply one standard of justice for all. It's critical we remain transparent throughout the process to the extent the law allows as we continue to rebuild community trust," State's Attorney Marilyn Mosby said in a statement. "Yesterday's indictment is another example of our office applying justice fairly and equally."

Pinheiro's attorney, Michael Davey, said he just learned of the indictment Wednesday afternoon and was working to gather more information. He did not immediately comment on the case.

The video was one of the three that surfaced in the summer of 2017 that defense attorneys said depicted questionable activity. In announcing Pinheiro's indictment, prosecutors also said they had cleared three officers involved in a second video. Former Commissioner Kevin Davis had forcefully defended those officers at the time, publicly clashing with Mosby.

"The State has concluded after a thorough investigation there is insufficient evidence to support the notion that [those officers] wrongfully tried to create fraudulent BWC video," prosecutors said.

Pinheiro's video, which garnered national attention after it was released by the public defender's office in July, shows the officer placing a soup can into a trash-strewn lot.

That portion of the footage was recorded automatically before the officer activated the camera. Police body cameras have a feature that saves the 30 seconds of video before activation, but without audio.

After placing the can down, the officer walks to the street and flips his camera on.

"I'm gonna go check here," the officer says. He returns to the lot and picks up the soup can, removing a plastic bag filled with white capsules.

The public defender's office flagged the video for prosecutors, prompting them to drop the heroin possession charge against the man arrested. He had been held for more than six months, unable to post $50,000 bail.

Officers are supposed to start recording "at the initiation of a call for service or other activity or encounter that is investigative or enforcement-related in nature," and during any other confrontational encounters, according to the police department's body camera policy. They can also stop recording under certain circumstances, such as when civilians request to not be recorded in encounters with officers and during exchanges with confidential informants.

Davis said last year that officers had been "reluctant" to properly use cameras, a program the city invested millions of dollars into foster accountability, but improvements were being made.

Police and prosecutors clashed over the second video, which showed an officer finding drugs in a cigarillo bag with his body camera not activated. The officer can be seen in the footage putting down the bag, turning on his camera, and picking the bag up again — a sequence that spans about 20 seconds. Davis said another officer's camera had documented what the first officer's camera did not.

That footage, from a June 2017 arrest, came to light when one of the officers involved — aware of the recent controversies regarding body cameras — notified the department himself.

In a report released along with the announcement of charges against Pinheiro, prosecutors said in the June incident "there was no actual fabrication or tampering with evidence in this case" and said, "the overwhelming weight of the evidence is more consistent with an error of judgment by the involved officers."

Mosby said last year the fact that the officer flagged the video "doesn't negate the fact that he re-created what he actually found. That goes directly to his credibility and had it not been for that 30 seconds of pre-recording, we might not have known."

"This cannot be the face of policing in Baltimore City," Mosby said. "It undermines public trust and creates indefensible doubts in the minds of the general public, judges, and jurors."

But Davis responded at the time there was "nothing questionable" about that incident.

"The officers did exactly what I and the community expect of them: to go out and make legal arrests based on sound probable cause," Davis said. "I will not be a bystander when my police officers are doing what I and my commanders expect them to do in this crime fight."

Police said at the time that they would not pull the officers involved from the streets, while Mosby said her office was considering reinstating a "do not call" list of officers with credibility issues whose cases won't be taken by prosecutors, a flash point between former administrators that was done away within 2011.

A third video remains under investigation, prosecutors said.

Viewed on their own, all three BWC videos from the involved officers show the entire sequence of relevant events from when Officer #1 first discovered the package of litter containing the drugs, so when he put it

back, turned on his BWC, and then picked it up a second time," prosecutors said. "This confirms that the acts on the video were just the recovery of drugs and there is nothing false or fraudulent in the BWC videos that would deceive or mislead a reasonable person. Therefore, the police officer's actions, in this case, did not rise to a level of criminal culpability. Moreover, Officer #1 self-reported his conduct to a superior officer."

AI Can Now Manipulate People's Movements in Fake Videos

There are already fake videos on the internet, manipulated to make it look like people said things (or appeared in porn) that they never did. And now they're about to get way better, thanks to some new tools powered by artificial intelligence.

Instead of just moving a source video's lips and face, an artificial intelligence-powered system can create photorealistic videos in which people can sway, turn their heads, blink their eyes, and emote. Basically, everything that an actor does and says in an input video will be translated into the video being altered.

According to the research, which will be presented at the VR filmmaking conference SIGGRAPH in August, the team ran a number of tests comparing its new algorithm to existing means of manipulating lifelike videos and images, many of which have been at least partially developed by Facebook and Google. Their system outperformed all the others, and participants in an experiment struggled to determine whether or not the resulting videos were real.

The researchers, who received some funding from Google, hope that their work will be used to improve virtual reality technology. And because the AI system only needs to train on a few minutes of source video to work, the team feels that its new tools will help make high-end video editing software more accessible.

The researchers also know their work might, uh, worry some folks.

"I'm aware of the ethical implications of those reenactment projects," researcher Justus Thies told The Register. "That is also a reason why we published our results. I think it is important that the people get to know the possibilities of manipulation techniques."

But at what point do we get tired of people "raising awareness" by further developing the problem? In the paper itself, there is just one sentence dedicated to ethical concerns — the researchers suggest that someone ought to look into better watermarking technologies or other ways to spot fake videos.

Not them, though. They're too busy making it easier than ever to create flawless manipulated videos.

Aside from fake news, these cases of tampering are also present before the internet has been a trend to some of us. The availability of something to gain also proposes a possibility to deduct.

People had the capacity nowadays to record their experiences so that they can share it through online sites and community like Facebook. it is connected to their relatives and friends so that they can know each other's posts or stream. The use of these videos changes or added a new option to their client by using the application of their cellphones to record events or controversial things around them. It is by far the effective way that a user can notify their friends, relatives, and strangers to share the footage that they caught to notify other people. It depends on the story or post that was shared on how fast it will spread throughout the social media. It depends on the user's decision whether they will share it or not. It depends on their reasoning. It could be that the post is entertaining or it is informative, others just shared because of its controversy like a scandal. There is Borough Information Proliferation Theory will come from.

Borough Information Proliferation Theory

This theory suggests that humans are naturally driven to share a piece of information depending on the intensity of what is being shared. Humans are naturally but can oppose themselves depending on their own morals and ethics to their choice of sharing information. Humans tend to share information with an intensity that is higher of what they expected or known that they think is relevant to a specific clause or set of influence. There are three main reasons why humans share specific information; first is the reason to find empathy or to find set of people that could relate and have the same opinion prior to what they've shared; second is that they consciously or unconsciously wanted the owner or someone that has related to the video to downgrade themselves that results to a lowered self-esteem and share it to his or her scope of influence so that they will gain a higher self-esteem. The second reason from this theory also proposes that humans tend to be above in terms of social standards which is parallel to their self-esteem that's why they tend to lower other's morality, respect, and dignity which is then parallel to their self-esteem. Additionally, humans always re-evaluate themselves and decide their standard on a community. This both biological and psychological ways that our bodies created so that humans continually seek to improve to any field that they think they're good at. The third reason is to inform others from their scope of influence to be aware or to clear misinformation.

The evidence that supports the claim of this theory is visible and sometimes on trend. Scandals, controversies, and recorded conflicts are now on the rise and each individual who has shared have their own corresponding reasons that this theory supports.

Inspiring Stranger Stops Street Fight Filmed by Teens on Cellphones, Schools Kids

By Mia Hall, Rima Abdelkader, and Becky Bratu

Yet another video of a street fight has captured the internet's attention. This time, however, it wasn't the flying fists, but the bravery and wisdom

shown by a bystander who stepped in to mediate the situation that made the video take off online beginning Monday night. In the, two young men are seen brawling in the middle of a street in Atlantic City, N.J., as their peers hit record on their phones and egg on the action.

But before things get too rough, a man approaches and shames the group. "Everybody on your phones though, all y' all, y' all the real cowards. Record that too," the man says. On his way home after running errands for his mother, it was Ibn Ali Miller who was the man who pulled over from driving after seeing the group watch the two boys quarrel. He recognized the boys and girls from the neighborhood, and he says they recognized him.

"All these kids in Atlantic City, they're my kids," Miller, 26, told NBC News. "I take it personally," he said over the phone from Atlantic City.

Miller spoke to the two teens and the gaggle of kids standing around them in a powerful exchange and diffused the situation. And here's a recap of how it unfolded:

Miller stops the action and the young men explain why they're fighting — an apparent misunderstanding between the two.

"The only reason I'm saying this to all of y' all is because y' all are almost men," Miller says.

As the onlookers continue to laugh, Miller brings his attention back to the crowd. He says if the teens lived in the area where they were fighting, they were living good and they shouldn't make their parents look bad.

Recognizing one of the teens, he reminds them of the hard work their parents endured to get to where they are. To another, he notes that the young man's father is serving a life sentence in prison. Though hesitant at first, both young men eventually shake hands and walk away without any bruises.

Miller who's studying at Masjid Muhammad of Atlantic City Inc. says it was a hadith, a Quranic saying from the Prophet Mohammad, which

propelled him to step out and speak up: "The strong is not the one who overcomes the people by his strength, but the strong is the one who controls himself while in anger."

He didn't anticipate the two boys deciding not to fight and shake hands, but was glad they did.

"There's a butterfly effect," he reasoned. "If you have a fight and lose the lesson -- that condemns you for life."

"When you're in your adolescence, whoever is on the losing end of that fight, and the video gets widespread, then that can hurt someone's confidence in life," he told NBC News.

One of the teens in the fight, Jamar Mobley, told NBC Philadelphia, "The one thing he said that got through to me was that he explained to all my friends, who I thought were my friends, all of them just wanted to see a fight."

With more than 28 million views on Facebook at the time of this article, Miller's words resonated well beyond the Atlantic City street corner.

A creepy viral video is now being investigated for links to a 2009 missing persons case

A YouTube video which has gone viral is being investigated by the FBI after claims it may shed light on the missing person case of 15-year-old Kayla Berg. The teenager from Antigo in the USA was reported missing after having been dropped off at her boyfriend's house back in August 2009, and nothing has been seen of her since.

The video in question, which was removed from YouTube this week, is called Hi Walter! I got a new gf today, and was uploaded by YouTube channel 'Hi Walter! It’s me Patrick!'. In the clip, sections of which can still be seen in the below video, 'Patrick' talks in a video-diary format to his friend Walter.

He describes having gone to the shopping mall where he met this new 'girlfriend', who he later says "hates cameras", before the camera follows

him opening a cupboard door to reveal a young woman with bound wrists, screaming for help. It's chilling to watch.

Although the video was uploaded on October 11th, 2009, a couple of months after Kayla went missing, it's only recently gained popularity online after it was featured in a round-up of scariest YouTube videos collated by a popular vlogger. It went from having had only 7,000 or so views to around half a million, bringing it to the attention of viewers worldwide... and the police.

Speculation has stated that the girl who features in this video might actually have been held against her will. And more specifically, that it might be missing Kayla Berg.

Even Kayla's mother, Hope Sprenger, believes the girl in the video could be her daughter. "[It] sounded like her, looked like her, it gave me chills," she told WAOW-TV. "Disturbing. It made me sick to my stomach." Sprenger also noted that her daughter had been wearing similar clothing to the jeans and a dark top the girl in the video is wearing.

However, after the Antigo Police Department carried out an investigation into the eerie video, thinking it may have potential to solve the case, they have ruled that it's a complete fake, and has no association with Kayla Berg's disappearance. Kayla's mum has since confirmed this on the Facebook group for her daughter's disappearance, as has the Antigo Police Department. Apparently, the film was made by amateur actors who have since removed the video from YouTube. So, it looks like the hunt for Kayla is back to the drawing board.

Most of these issues and trending videos or information that are being shared takes up to the authorities or news. The positive effect of this continuous sharing was that the information that was being shared is it's being a part of solving an issue. For instance, if a local man harasses a girl and someone with cellphone took a video of it then shared it onto social media platforms, a lot of individuals are willing to share it so that their sharing will reach the news or authority and the harasser will be given a corresponding penalty. That's the cases where most of the footages

where alleges racism, harassing, and other conflicts were taken into consideration.

Our world is vast, and news departments where there are news gatherers can't fully know what was happening on every corner of the street but because of the introduction of both social media and technology, we are able to caught and share what we see. At early times, if there was no one among the witnesses to report a conflict or harassment and if the assaulted isn't also willing to report what was done, there will no information that will go to the police. Today, even if there's just a commotion because of verbal conflict, people began to record it. Most likely, they will share on media. a lot of people today have phones that could record and at the same time connect to the internet. Humans of today express their judgment and help by simply taking part and willing to express it.

According to from a study by statistica.com in 2016, The number of mobile phone users in the world is expected to pass the five billion mark by 2019. In 2016, an estimated 62.9 percent of the population worldwide already owned a mobile phone. The mobile phone penetration is forecasted to continue to grow, rounding up to 67 percent by 2019. China was predicted to have just over 1.4 billion mobile connections in 2017, while India was forecast to reach over one billion. By 2019, China is expected to reach almost 1.5 billion mobile connections and India almost 1.1 billion.

Most of the mobile market growth can be attributed to the increasing popularity of smartphones. By 2014, around 38 percent of all mobile users were smartphone users. By 2018, this number is expected to reach over 50 percent. The number of smartphone users worldwide is expected to grow by one billion in a time span of five years, which means the number of smartphone users in the world is expected to reach 2.7 billion by 2019. Samsung and Apple are leading smartphone vendors, with about 18 percent of the market share each.

The number of individuals that will have cellphone will continue to rise and more of these instances will be shared. There are pages of Facebook

that specializes in things including trending videos. Although the person who records the footage isn't directly helping, he/she will be able to share it for a broader perspective. If a one person shared a video and it kept on being shared until the views are numbered to a million, it is similar to showing a video to a concert with lots of people on it. People have connections and most of them have jobs, the presence of a single policeman or news reporter among the thousands or millions of views are plausible.

Scopes and Power

At some point, as we drive ourselves into our ideal future where there are limitless possibilities and good kind of power, we are also leading our civilization into a good world. A society where everyone could easily connect more than today. Products will be sold on the internet. advertisements will shift on your browser. If the advertisement and informative communication today is vast, then it's going to be larger than you anticipated. The people of earlier times might not even think of the futuristic idea that we are enveloping today. It might not be seen today but our community is positively thriving and we are at the peak of information of every era. If all the information from our first history humankind will be made a graph together with the amount of information that we have today, the difference will be overwhelming. It improved the overall foundation of electronics, media, and us.

Social media with the strength of technology combined wasn't all just about recording and information. There is also a building of different kind of things and studies. Online courses are available online and medium for it to happen was all possible because of the internet and the technology. kids could learn programming and build robots because of the digital information that they could receive. It'll be astounding if each and every one of us will not just be literate but be more advanced that is comparable to that of the greatest minds ever lived.

The Scope of social media has no ends. Some might say that it could only be contained in a specific list of the digital platform but if we are going to

consider the span of time and the possibility of its accelerating community, social media could even conquer our sense of reality. It may not be the physical world that we're living but the things that we consider as a place in our minds. Media will be shared; demands will become higher and information will overflow. Easier and faster access is needed to support all the development and a lot of companies are improving their products up to the point of discovering a new branch of Physics-the quantum.

Power is dependent on effective and scope. By means of social media, its ability to share and contain is large. It could be spread throughout the entire world, change the culture, correct the mistakes, and even spark a war. Its potential is something to be feared of but some of us are not aware of it. The conflict of power of social media is its a reversal. It has the power to share and gain knowledge but it could also supply falsehood. Starting conflicts and even offending certain individuals. We are the ones who define this power depending on how we will be sensitive and respect others.

The Justice Mass Decision

Justice has a process that is being done by judges to decide which one is wrong but today, because of the emergence of media together with the internet, people are allowed to speak more freely and be heard. Most of the sites and platform offer a way for its audience and receivers to react and comment. People are more confident without their identities on the line so they harshly speak up to what they stand for. It is a good thing that everyone has a say but not all everyone is speaking to help; some are just speaking to hurt. On media sites, for a user to access, information is needed but those process can easily be done repetitively by the same person. Individuals can lie about their identities and by thinking that they aren't known and cannot be sued, they will speak in varied ways with sometimes uncertain goals. It could be the true nature of humans, to express whatever there is to say without thinking of other's feelings.

Aside from the positive effects of the recording and posting of videos via a network, there are also negative implications. There is cyber-bullying, scams, cat-fishing, and etc.

Cyberbullying or cyberharassment is a form of bullying or harassment using electronic means. Cyberbullying and cyberharassment are also known as online bullying. It has become increasingly common, especially among teenagers. Cyberbullying is when someone, typically teens, bullies or harass others on social media sites. Harmful bullying behavior can include posting rumors, threats, sexual remarks, victims' personal information, or pejorative labels (i.e., hate speech). Bullying or harassment can be identified by repeated behavior and an intent to harm. Victims may have lower self-esteem, increased suicidal ideation, and a variety of emotional responses, including being scared, frustrated, angry, and depressed.

Awareness in the United States has risen in the 2010s, due in part to high-profile cases. Several US states and other countries have laws specific to cyberbullying. Some are designed to specifically target teen cyberbullying, while others use laws extending from the scope of physical harassment. In cases of adult cyberharassment, these reports are usually filed beginning with local police.

Research has demonstrated a number of serious consequences of cyberbullying victimization.

Internet trolling is a common form of bullying over the Internet in an online community (such as in online gaming or social media) in order to elicit a reaction, disruption, or for someone's own personal amusement. Cyberstalking is another form of bullying or harassment that uses electronic communications to stalk a victim; this may pose a credible threat to the victim.

Not all negative interaction online or on social media can be attributed to cyberbullying. Research suggests that there are also interactions online that result in peer pressure, which can have a negative, positive, or neutral impact on those involved.

Catfishing is when someone uses images and information (often taken from other people's social media accounts) to create a new identity online – sometimes using an individual's entire identity as their own. Newly created social media accounts can then be used to damage the reputation of the true owner of the identity, or alternatively, any fictional identities that are created using other people's images and information can be used to form dishonest relationships online. Although catfishing used to be seen more among adults using online dating platforms, it has now become a more widespread problem among adults and teenagers. Some people who catfish go to extreme lengths to create fake identities – having multiple social media accounts with the purpose of building up and validating their catfishing profiles.

Although the practice of catfishing has been around almost as long as the internet, catfishing only gained its name in 2010 after a documentary titled "Catfish" was released. Catfishing then went on to became a recognized term in 2012 after the MTV series "Catfish" premiered.

Insecurities – Someone might choose to catfish another person due to their own personal insecurities. They might consider themselves 'ugly' or 'not good enough' and feel more comfortable using the images or identity of another person that they consider 'attractive enough' or 'worthy'.

Mental illness – Somebody suffering from some forms of mental illness might feel too anxious to reveal their true or authentic self. Someone suffering from depression might have very low self-esteem and feel like they are not 'good enough'. There are many different conditions that can make people feel that the only way they can communicate with people effectively or with confidence is by pretending to be somebody else.

Hide their identity – Somebody who wants to hide their identity when using social media might use another person's images and/or information. They might want to hide who they are to troll others, talk to people outside of an existing relationship or in some cases, they might catfish with the intention of trying to extort money from the person they have targeted.

Revenge – Some people use catfishing as a tool of seeking revenge on previous partners or people they consider 'deserving'. Those seeking revenge often create social media accounts, which use the victim's images and information in order to humiliate them or damage their reputation. They can also use fabricated identities to lure the person into a fake relationship to hurt them emotionally.

Harassment – Some people set up multiple catfishing accounts to maximize the emotional impact when harassing someone online. They might set up several social media accounts because the recipient of the harassment has blocked their initial catfishing account or they might do it to create the impression that there are growing numbers of people participating in the abuse, in an attempt to overwhelm the victim.

Exploring sexual preference – When someone is confused or curious about their sexuality, they might create false profiles so they can confidently explore their curiosity without having to reveal the true identity.

The most common reason people will catfish others is a lack of confidence. If people aren't happy with themselves, they feel that by being someone more attractive, they are fully able to express themselves freely without their insecurities holding them back.

Internet fraud is a type of fraud or deception which makes use of the Internet and could involve hiding of information or providing incorrect information for the purpose tricking victims out of money, property, and inheritance. Internet fraud is not considered a single, distinctive crime but covers a range of illegal and illicit actions that are committed in cyberspace. It is, however, differentiated from theft since, in this case, the victim voluntarily and knowingly provides the information, money or property to the perpetrator. It is also distinguished by the way it involves temporally and spatially separated offenders.

According to the FBI's 2017 Internet Crime Report, the Internet Crime Complaint Center (IC3) received about 300,000 complaints victims lost over $1.4 billion in online fraud in 2017. According to a study conducted

by the Center for Strategic and International Studies (CSIS) and McAfee, cybercrime costs the global economy as much as $600 billion, which translates into 0.8% of global GDP. Online fraud appears in many forms. It ranges from email spam to online scams. Internet fraud can occur even if partly based on the use of Internet services and is mostly or completely based on the use of the Internet.

Online gift card fraud

As retailers and other businesses have growing concerns about what they can do about preventing the use of gift cards purchased with stolen credit card numbers, cybercriminals have more recently been focusing on taking advantage of fraudulent gift cards. More specifically, malicious hackers have been trying to get their hands-on gift card information that have been issued but have not been spent. Some of the methods for stealing gift card data include automated bots that launch brute force attacks on retailer systems which store them. First, hackers will steal gift card data, check the existing balance through a retailer's online service, and then attempt to use those funds to purchase goods or to resell on a third-party website. In cases where gift cards are resold, the attackers will take the remaining balance in cash, which can also be used as a method of money laundering. This harms the customer gift card experience, the retailer's brand perception, and can cost the retailer thousands in revenue. Another way gift card fraud is committed is by stealing a person's credit card information to purchase brand new gift cards.

Gambling fraud

Internet gambling has become a $15 million industry. Every online casino needs an operation license to conduct their business, and the operators may lose their license or even face imprisonment if they do not follow the regulations. Online casinos have become extremely lucrative as well as competitive industry, with operators introducing new promotions on a daily basis. Promotional activities include attractive bonuses, prize money, jackpots and other offers aimed at making patrons' online casino experience as memorable as possible. Having a secure software like a 128-bit SSL (Secure Socket Layer) encryption is important.

Social Media and Fraud

People tend to disclose more personal information about themselves (e.g. birthday, e-mail, address, hometown and relationship status) in their social networking profiles (Hew 2011). This personally identifiable information could be used by fraudsters to steal users' identities, and posting this information on social media makes it a lot easier for fraudsters to take control of it.

The problem of authenticity in online reviews is a long-standing and stubborn one. In one famous incident back in 2004, Amazon's Canadian site accidentally revealed the true identities of thousands of its previously anonymous U.S. book reviewers. One insight the mistake revealed was that many authors were using fake names in order to give their own books favorable reviews. A recent study done by BrightLocal (http://selnd.com/1xzy0Xb) states that 88% of U.S. consumers read online reviews "to determine whether a local business is a good business" at least occasionally—39% do so regularly. Also, 72% say positive reviews lead them to trust a business more, while 88% say that in "the right circumstances", they trust online reviews as much as personal recommendations. While scammers are increasingly taking advantage of the power of social media to conduct criminal activity, astute risk managers and their insurance companies are also finding ways to leverage social media information as a tool to combat insurance fraud. For example, an injured worker was out of work on a worker's compensation claim but could not resist playing a contact sport on a local semi-professional sports team. Through social media and internet searches, investigators discovered that the worker was listed on the team roster and was playing very well.

Online automotive fraud

The following is an example of online automotive fraud. A fraudster posts a nonexistent vehicle for sale to a website on the World Wide Web, typically a luxury or sports car, advertised for well below its market value. The details of the vehicle, including photos and description, are typically

lifted from sites such as Craigslist, AutoTrader.com, and Cars.com. An interested buyer, hopeful for a bargain, emails the fraudster, who responds saying the car is still available but is located overseas. Or, the scammer will say that they are out of the country but the car is at a shipping company. The scam artist then instructs the victim to send a deposit or full payment via wire transfer to initiate the "shipping" process. To make the transaction appear more legitimate, the fraudster will ask the buyer to send money to a fake agent of a third party that claims to provide purchase protection. The victims wire the funds and subsequently discover they have been scammed. In response, auto sales websites often post warnings to buyers, for example, those on Craigslist which warn not to accept offers in which vehicles are shipped, where funds are paid using Western Union or wire, etcetera, requesting those postings to be flagged as abuse.

Charity fraud

The scammer poses as a charitable organization soliciting donations to help the victims of a natural disaster, terrorist attack (such as the 9/11 attacks), regional conflict, or epidemic. Hurricane Katrina and the 2004 tsunami were popular targets of scammers perpetrating charity scams; other more timeless scam charities purport to be raising money for cancer, AIDS or Ebola virus research, children's orphanages (the scammer pretends to work for the orphanage or a non-profit associated with it), or impersonates charities such as the Red Cross or United Way. The scammer asks for donations, often linking to online news articles to strengthen their story of a funds drive. The scammer's victims are charitable people who believe they are helping a worthy cause and expect nothing in return. Once sent, the money is gone and the scammer often disappears, though many attempts to keep the scam going by asking for a series of payments. The victim may sometimes find themselves in legal trouble after deducting their supposed donations from their income taxes. United States tax law states that charitable donations are only deductible if made to a qualified non-profit organization. The scammer may tell the victim their donation is deductible and provide all necessary proof of donation, but the

information provided by the scammer is fictional, and if audited, the victim faces stiff penalties as a result of the fraud. Though these scams have some of the highest success rates especially following a major disaster and are employed by scammers all over the world, the average loss per victim is less than other fraud schemes. This is because, unlike scams involving a largely expected payoff, the victim is far less likely to borrow money to donate or donate more than they can spare.

Internet ticket fraud

A variation of Internet marketing fraud offers tickets to sought-after events such as concerts, shows, and sports events. The tickets are fake or are never delivered. The proliferation of online ticket agencies and the existence of experienced and dishonest ticket resellers has fueled this kind of fraud. Many such scams are run by British ticket touts, though they may base their operations in other countries.

A prime example was the global 2008 Beijing Olympic Games ticket fraud run by US-registered Xclusive Leisure and Hospitality, sold through a professionally designed website, www.beijingticketing.com, with the name "Beijing 2008 Ticketing". On 4 August it was reported that more than A$50 million worth of fake tickets had been sold through the website. On 6 August it was reported that the person behind the scam, which was wholly based outside China, was a British ticket tout, Terance Shepherd.

One of the positive effects that social media applies to us is the awareness that we can gain. By it, people are able to argue on what is right and wrong from a specific video. they could argue about moral ethics or about their personal opinions. Most of these conflicts have a majority where most of the people that take part or watch a video will side. The majority decision will have the most likes support from among the viewers. Although it isn't sure whether it will have a direct influence on a particular conflict or a case, it has an effect on the people who read about it. Some people might reflect, think, and question their own moral and judgment. Humans take reasons and sometimes act as a social chameleon wherein they will decide or based their decisions from the

people around them. Most of the humans have their own integrity and sense of justice from what they've learned and most of them are the ones who persevere and have the support of others.

Media feedback and how it will change the future

Media feedback concerns our understanding of how we react and judge information from any social media platform. It could be a video, audio, a news article, and an opinion. It is the feedback from information that is created by us. Any data or feedback that concerns a real person without any relation on its quantities on specific information that is being criticized. It could be viewed and criticized by only one person up to any finite number of criticisms. Media feedback is all about critiquing information that allows one or more persons to share their ideas. Companies and other entities absorb this feedback from real clients so that they could improve their work. It could be a game development company that releases a beta version of the game. This isn't the official product but it helps in marketing strategy on the things that are being sold by sometimes having the version to be downloaded and played for free. If we are going to compare it into physical marketing, it is the free-taste where a product can be distributed to a certain or random sampling but first, it is important to what really beta means.

Beta version

A pre-release of software that is given out to a large group of users to try under real conditions. Beta versions have gone through alpha testing inhouse and are generally fairly close in look, feel and function to the final product; however, design changes often occur as a result.

Beta testing is imperative when writing software because developers are too close to their products, and fresh eyes are essential. In addition, for Windows developers especially, it is impossible to duplicate the myriad configurations of PC hardware/software that exist, and beta versions test for potential conflicts as much as usability. In more closed environments such as the Mac and mobile phone platforms, beta testing is less about

coexistence with other software and more about functionality and ease of use, the latter a long-standing joke in this industry (see user interface).

Beta software refers to computer software that is undergoing testing and has not yet been officially released. The beta phase follows the alpha phase, but precedes the final version. Some beta software is only made available to a select number of users, while other beta programs are released to the general public.

Software developers release beta versions of software in order to garner useful feedback before releasing the final version of a program. They often provide web forums that allow beta testers to post their feedback and discuss their experience using the software. Some beta software programs even have a built-in feedback feature that allows users to submit feature requests or bugs directly to the developer.

In most cases, a software developer will release multiple "beta" versions of a program during the beta phase. Each version includes updates and bug fixes that have been made in response to user feedback. The beta phase may last anywhere from a few weeks for a small program to several months for a large program.

Each beta version is typically labeled with the final version number followed by a beta version identifier. For example, the fifth beta release of the second version of a software program may have the version number "2.0b5." If a developer prefers not to list the specific version of a beta program, the version number may simply have the term "(beta)" after the program name, e.g. "My New App (beta)." This naming convention is commonly used for beta versions of websites or web applications.

Since beta software is a pre-release version of the final application, it may be unstable or lack features that will be included in the final release. Therefore, beta software often comes with a disclaimer that testers should use the software at their own risk. If you choose to beta test a program, be aware that it may not function as expected.

Beta products or primarily programs aren't only for the game or game-related applications. It is also for software like editing products like Adobe where they released an earlier version of a product. These earlier products do have some flaws and bugs and if we are going to compare official and updated versions of a program to their older beta counterparts, beta versions seem to be more basic and simpler. It is because of the effects of the feedback. In any business, it is important to know the niche audience and responding to the needs of that particular audience. In business, it is hard to or not preferably to target everyone in your niche audience and it is also hard to target a too specific niche audience. The target is preferably in the middle where a quantity of audience is more likely to buy the product. Those audiences will then filter on their minds what is good and bad about a product. It is important to know what they like and what they didn't. Since there is a possibility that there are conflicting ideas and feedback from the stream of your clients, the business should handle well e.g. applying the re-works of your product based on what the majority wanted. However, there are instances where the feedback and quantity of clients that opposes and agrees into a current development are so close to each other's quantities. There are ways that companies use to deal on these instances e.g. developing a re-work that could cover both of the client's needs. However, there are situations that are hard to cover if the feedback of the clients is opposing and too specific e.g. a certain number of clients wanted the theme to be black while an also a certain number of clients wanted the theme to be white. It still depends on the marketing specialists and suggestions of a company if they wanted almost all of the clients to be satisfied with their products.

The common reasons that beta versions exist are to introduce it to the audience where the game is free of charge. It will serve as a teaser trailer so that they could gather a foundation of clients that will use their product. It is also released so that the creators could remove the unnecessary and flaws to fix their mistakes before the release of an official version.

Any feedback is important to the creators or authorities. It often contains suggestions that could help the way of understanding of the creators for its future development. Such feedback was sometimes compiled if it has something to with numbers then listed down and compares by analysts. This data is arguably can predict the future changes in demand, supply, and needs of a company in relation to its clients who participated in the feedback. Such results sometimes determine whether the strategy and contents of a product will last. It is important for any creators to hear the suggestions of every user since a user can also influence in the community.

Almost every product of today that can be purchased and accessed by the internet, has a corresponding community. There are sites creators that would help and ensure that they will have the client's information. Information is a very essential part of today's era as it sometimes defines the number of the ones who patronize the product. By means of patronizing, it means that individual shares buys, and participate to every relation there is to a product like registering your personal accounts like banks, email, and etc. that are received by the creators of the product. It is a system that slowly develops from the early ages of the internet to ensure the protection, and to have a fair representation of how many demands that a media or any product have. The system considered ensuring that the users are credible by asking for their personal identities. The users have their own right and could withdraw from giving their information. This type of security and is classified by the term Social Filtering.

Social Filtering if the main classification for all entities and processes that filters and identifies information for a larger goal that is in relation to the internet. It means that if a process isn't technically within the scopes of the internet, then it out on the boundaries of this social filtering. Social Filtering has a basic purpose that could vary in different ways and that is to ensure that every user that register in any platforms associated on the internet are humans.

A CAPTCHA is a short online typing test that is easy for humans to pass but difficult for robotic software programs to complete—hence the test's actual name, Completely Automated Public Turing test to tell Computers and Humans Apart. The purpose of a CAPTCHA is to discourage hackers and spammers from using auto-filling software programs on websites.

Necessities

CAPTCHAs deter hackers from abusing online services. Hackers and spammers attempt unethical online activities, including:

- Swaying an online poll by robotically submitting hundreds of false responses.
- Brute-force opening someone's online account by repeatedly attempting different passwords.
- Signing up for hundreds of free email accounts.
- Spamming blogs and news stories with dozens of bogus comments and search-engine links.
- Scraping (copying) people's email addresses from websites, to use them later in spam attacks.
- Falsifying torrent seed counts and positive feedback in order to lure people into downloading a trojan payload.

CAPTCHA tests can stop many common, automated attacks by blocking the robot software from submitting online requests. They're deployed most frequently when website owners would rather use technology to block spammy information in the first place than to have to clean up that content after it's been added. Some website operators, for example, avoid CAPTCHAs to reduce user friction and instead employ algorithms to scan and quarantine suspect comments or accounts after they've been created.

Function

CAPTCHAs work by asking you to type a phrase that a robot would be hard-pressed to read. Commonly, these CAPTCHA phrases are pictures of scrambled words, but for visually impaired people they also could be voice recordings. These pictures and recordings are hard for conventional

software programs to understand, and hence, robots are usually unable to type the phrase in response to the picture or recording. As artificial intelligence capabilities increase, the spam bots grow more sophisticated, so the CAPTCHAs generally evolve in complexity as a response.

CAPTCHA tests effectively block most unsophisticated automated attacks, which is why they're so prevalent. They're not without their flaws, however, including a tendency to irritate people who have to answer them.

Google's Re-CAPTCHA software—the next evolution of CAPTCHA technology—uses a different approach. It tries to guess whether a session was initiated by a human or a bot by examining the behavior when the page loads. If it can't tell a human is behind the keyboard, it offers a different kind of test, either the "click here to prove you're human" box or a visual puzzle based on a Google Images photo or a phrase scanned from Google Books. In the photo test, you click all the parts of an image that contains some sort of object, like a street sign or an automobile. Answer correctly, and you continue; answer incorrectly, and you're presented with another image puzzle to solve.

Some vendors offer technology that removes the "test" part of the CAPTCHA by granting or denying website access solely on some criteria related to the pattern of interaction of a Web session. If the security software suspects there's no human driving the session, it silently denies a connection. Otherwise, it grants access to the requested page without any intermediary test or quiz.

This test could be varied and it is not the only kind of process that is available in our context of social filtering. Many of them are present that have so far, the goal of determining the number of users in a specific platform. It could be before registering on a community page, a website, gaming group, and etc. Marketing and businesses use this opportunity of defined statistics to know where and when to advertise their products. It depends on the population type within a specific platform e.g. audience with interests on gaming, an audience with interest in fashion,and etc.

At a hypothetical future, we can assume that these current ways of our communication and security will be more complex yet easy to understand for the sake of us.

Rights, Opinions, and Beliefs

There is a possibility that the right that we have today in our physical world could be developed to have its counterpart on the virtual world that is connected to social media. Many cases of cyberbullying are surfacing and many of our current attention is focused on the digital world.

Here's How Many Internet Users There Are

By Jacob Davidson (2015)

More than 3 billion people are now using the Internet, according to the United Nations agency that oversees international communications.

The number of Internet users has increased from 738 million in 2000 to 3.2 billion in 2015, according to a new report from the International Telecommunication Union. That's a seven-fold increase that brought Internet penetration up from 7% to 43% of the global population. Of all connected individuals, the ITU says most of them — some 2 billion — live in developing countries.

Much of the growth in web connectivity has come from mobile. Mobile broadband penetration has gone up 12-fold since 2007, and this year 69% of people on earth will be covered by 3G broadband. Meanwhile, growth in fixed-broadband connectivity has slowed, with just 7% annual growth over the last three years. That's likely because access to it is 1.7 times more expensive than the average comparable mobile broadband plan.

One reason Internet access has taken off over the past 15 years is rising affordability. The ITU reports broadband is currently affordable in 111 countries, with a basic fixed or mobile plan costing less than 5% of Gross National Income (GNI) per capita.

Our ideas, research, culture, tradition, ethics, and experiences are sometimes being shared on the internet. It contributed a lot in propagating our community into a more globalized world. Although some of the cultures wanted theirs to be preserved, due to the inflicting values and beliefs that are being shared, it is possible that their culture will be mixed throughout the whole process of sharing. Here are the rights in our current world in relation to the occurrence of media and internet.

The Mass Influence Information Theory

This theory proposes that the psychological, social, and lingual, characteristics, pattern, an idea that is dependent to its quantities being compared in a particular platform that is relevant to media and information, directly affects an individual to his/her decision, criteria, and judgment. It is a common conception among the strands and studies of psychology that humans do have distinctive trait whether natural or developmental as an unconscious coping to its environment's standards. By means of environment, it is also referring to the individuals living within it. Humans re-ascertain themselves into doing something for the sake of others. Most of the individuals present to a particular activity within a platform of social media, participate and sway depending on the course of the majority. Mass Influence Theory explains the common manipulation in our current society in this digital age.

The evidence of this theory is present at different platform wherein users mostly can freely interact and base their conception depending on other's suggestions, recommendations, and critic. Different platforms use the function that allows its users to grade. Grading is when a user interacts in a particular way e.g. likes or dislikes, upvote or downvote, share or to block. Any common expression that most of us were experiencing in the media today is under this theory.

Communication Influence from Socialization

It's such a been a long time since we humans start identifying ourselves as exemplary than other beings on this planet. We treated highly of ourselves that we kept on improving regardless of how it may affect us

nature and other species-alike. We consume better and faster than it was before. By all means of improvement, it is also common that we improved on our daily lives and activities.

We learn to adapt astronomically where we exert less than what our biological body can do. Every time, we continue to change ourselves, gaining more knowledge and abilities. It is common to assume that the humans of the future will be more knowledgeable and educated as it is. As we go on our high journey, communication is also part of it. We so more than actual conversation because humans added efficiency on their work combined by different fields of knowledge e.g. engineering, technological advancements, science. We learned to create waves and make things smaller for efficiency and casual use. Now, we can talk by a far stretch of distance without any interruption. All of was due to our social needs.

There's a lot of animals who use the same communication strategy to connect, interact, survive, and even announce. They've used distinct noises which is a simpler version of our language but its use is still effective at least for animals. Language develops its way into more intricate designs and styles so that we could easily connect to others. It introduces another way of survival which is socializing. Beings are always driven by their urge to survive for unknown causes and to do so, we continuously seek for the betterment of ourselves. Some of use may choose to improve physically and mentally. For improvement, they have to be aware so they have to interact with other people. To adapt, improve and apply. Although every learning adds up the pressure to oneself, stress is an indicator of improvement.

Legitimacy and Credibility

It is hard to know which information is true and which one is perpetuated by trolls. There's a lot of information lurking around in different platforms of social media and trusting a source of an article is a hard thing to do. Some may argue that common logic must be effective enough to identify which one is right and wrong but there are instances where there are

seemingly crafted works that are made of trolls. For instance, a famous YouTube Channel decided to put a prank on a new company and it became successful. They've fooled the information gatherers and here's how they did it:

Justin Bieber's scandalous eating methods baffled people last week after a photo of the long-haired vagrant biting into the middle of a burrito went viral.

The bizarre Justin Bieber burrito incident reminds us not to believe everything online

By Julia Alexander (2018)

Even a casual burrito connoisseur can tell you burritos are eaten from top to bottom, using the tin foil to guide you're eating path. Bieber's supposed decision to bite directly into the middle — resulting in beans, cheese, meat, and lettuce spilling all over the ground — is absurd. Multiple news organizations picked up on the photo, blogging about Bieber's latest mishap, with Vice even going so far as to re-create the experiment. Everyone came to the same conclusion: either Bieber has never eaten a burrito or someone's pulling a fast one on the world.

The latter is true.

Yes Theory, a popular YouTube channel that recently made headlines by joining Will Smith for a bungee-jumping session into the Grand Canyon, orchestrated the entire burrito-eating incident. Everything about the photo is fake, including numerous reports suggesting Bieber was the one in the photo.

Yes Theory brought Bieber's Instagram influencer doppelgänger, Brad Sousa, to Los Angeles to pose in the shot. They spent the day driving around LA and staging different events that could make for a viral story, but the team put their bets on the weird burrito shot. To make sure it was seen by absolutely everyone on the internet — or at least, by people who would turn it from a random photo into a conversation-starter — they

uploaded the photo to Reddit's r/pics and r/mildlyinfuriating subreddits to boost circulation.

"Not a single person is questioning whether it's actually Justin Bieber," one of the team members says in the video.

Although Yes Theory's prank is nothing more than that — a harmless joke done time and time again in the past on shows like JFL Gags and Jackass — it does signal a growing issue on the internet. Misinformation spreads all the time, especially on sites like Reddit and Twitter, where photos are shared and retweeted thousands of times by people who are responding to whether something amuses or intrigues them, rather than whether it's true. These photos or stories eventually become big enough that news organizations respond to growing pandemonium online.

The Yes Theory team addresses the idea toward the beginning of the video, as they discuss how to ensure their prank is successful.

"The thing is, to get this to go viral, we have to have people in the news think it's real," one member says. "Those are the people that are going to spread it, right?"

Conor, a Yes Theory member who posted the photo to Reddit, told Vanity Fair he was convinced it was Justin Bieber. Vanity Fair ran the story as such. Paper Mag, Vice, Cosmopolitan, and even the BBC all picked up on the story. Yes Theory's plan to spread a hoax went exactly as planned. Just about everyone fell for it.

Still, it's heartening to see that as quickly as the story went viral, debunkers appeared on Twitter, Facebook, and Reddit almost as quickly asking for proof that it actually was Bieber in the photo. In a world where photos and even video posted online are often manufactured for nefarious ends, that kind of response is a sign of new-age media literacy. Publications like Vanity Fair tried getting to the bottom of the story by seeking out the original Reddit poster and digging for more information. Celebrity gossip is fun, but spending more time investigating a viral photo or story, even when it's tabloid nonsense, goes a long way.

Fake Bieber eating a burrito sideways is a harmless prank — and a pretty good one. It's also a reminder to question everything on the internet. Especially Reddit.

The problem of seeking out the truth could lie elsewhere. Researchers find and gather data which are then filtered by different editors. It's hard to decipher the truth especially if the ones who are creating false information are dedicated. The members of Yes Theory channel are interviewed but the questions are not enough to know the truth. News televisions, information sites that produced printed companies can also spread misinformation so even if they are known to announcing correct news, by this age of digital media, they could also be just used as a tool for future pranks and misinformation. This is where the stages of credible information will come from but it is important to know first the definition of credible and legible.

As adjectives, the difference between credible and legitimate is that credit is credible while legitimate is in accordance with the law or established legal forms and requirements; lawful.

As a verb legitimate is to make legitimate, lawful, or valid; especially, to put in the position or state of a legitimate person before the law, by legal means.

Stages of Credibility by Maximus Borough

Traditional News Companies - The traditional base of distribution of news via the use of printed materials before the emergence of the internet. Most of these companies cope up by the modern distribution of information by creating a website version of the different platform of distributing information. The examples of these social platforms are Facebook Pages, Twitter, and etc. They are more credible because of their built reputation throughout the years of televised information and printed copies. Telecommunication companies are also part of these stage as they distribute information with interviews, illustrations, and footage to show on the television. Among the stages, they have the least mistakes in terms of distributing news in a long period of time. Also,

traditional news companies have a series of editing before making in front of the television. Some of the new sites and Facebook pages that distributes information that emerges had mistaken where some of the viewers identify and thus the reputation of some of these community are downgraded. The income of a company is mostly parallel to its popularity that creates demand and clients.

MSNBC

MSNBC debuted in 1996, as a partnership between NBC News and Microsoft (Microsoft's stake in the channel was gradually bought out by NBC until the latter's parent NBCUniversal bought out the remaining minority stake held by Microsoft in 2011). When the network was launched, its leading hosts included Jodi Applegate, John Gibson, Tim Russert, and Brian Williams. For over a decade, the network's ratings were consistently in the last place among the cable news channels.

After Phil Griffin became president of MSNBC in mid-2008, the channel began shifting towards an increasingly politically liberal ideology in its analysis programming, particularly in its prime-time lineup. MSNBC launched a high definition simulcast feed on June 29, 2009.

Notable personalities on the network include Morning Joe co-hosts Joe Scarborough and Mika Brzezinski, daytime anchors Chuck Todd and Andrea Mitchell, and evening commentators Chris Matthews and Rachel Maddow. The network was noted in the mid-2000s for its harsh criticism of then-President George W. Bush, most notably the 'special comment' segment of former anchor Keith Olbermann's show, Countdown. This, combined with accusations of support for then-President Barack Obama, has led to MSNBC being criticized for liberal bias, a reputation it has increasingly embraced with its "Lean Forward" slogan (which it adopted in 2011) and open promotion of progressive and liberal ideas.

The channel had a spin-off called Shift. Established in 2014, it was an online-only channel through its website MSNBC.com. The programming schedule was less focused on politics than the main channel, built to be

a divergence from it and is more tailored to a younger audience. The channel ceased operations without notice sometime before 2018.

BBC World News

BBC World News is the BBC's international news and current affairs television channel. While the channel does not specifically target the U.S., the BBC has a bureau in Washington, D.C., and produces two programs that cover U.S. news and politics: BBC World News America and Beyond 100 Days. These shows are also broadcast on public television stations, as well as a half-hour BBC World News bulletins. BBC World News has covered both U.S. presidential and midterm elections results. The BBC produces weather forecasts for the U.S. and Canada and runs advertisements on the U.S. feed, as foreign broadcasts are not covered by the United Kingdom television license. The channel is carried on Cablevision, Comcast, Spectrum, Verizon FiOS and AT&T U-Verse, as well as internet TV providers YouTube TV and Sling TV.

Houston Chronicle

chron.com

The Houston Chronicle was founded in 1901 and was acquired by Hearst in 1987. In addition to delivering in-depth coverage of local issues, the Houston Chronicle is committed to covering state, national and international news. In addition to the Houston Chronicle's 825,000 daily readers and 1.4 million readers on Sunday, Chron.com, is widely regarded as one of the top newspaper websites and averages nearly 95 million page views and 15 million unique visitors each month.

Website News Companies - Perhaps this the first step of news companies to adapt to changing sources and demands. These new website companies that don't distribute printed news via newspapers or in any medium aside from websites and pages itself. These companies gather news on different methods and some of the information came from traditional news companies. Sometimes, they alter the articles and content of the information based on what they think suits the best. These alterations can either improve any flaws that they observed but

alterations can also produce information tampering. Information tampering is the process wherein an entity, intentional or intentional changing the content of news resulting in misinformation or false news. The subscribers of these website or online news companies have increasing clients due to the changing time of spent time of an individual to the internet.

The New York Times

nytimes.com

The New York Times Company (NYSE:NYT) is a global media organization dedicated to enhancing society by creating, collecting and distributing high-quality news and information. For more than 150 years, Times readers have expected their newspaper to provide the most thorough and uncompromising coverage in the world. The Times has won more Pulitzer prizes than any other news organization and remains No. 1 in overall reach of U.S. opinion leaders. The company includes The New York Times, International New York Times, NYTimes.com, INYT.com, and related properties.

Washington Post

washingtonpost.com

The Washington Post provides award-winning news and understanding about the politics, policies, personalities, and institutions that make Washington, D.C. the world's seat of power, and is a critical tool and information source for those who call Washington, D.C. home. In digital form, The Washington Post combines its world-class journalism with the latest technology and tools and encourages participation and customization across all platforms so readers can engage with The Washington Post anytime, anywhere.

USA Today

usatoday.com

USA TODAY and USATODAY.com reach a combined seven million readers daily. USA TODAY is a leader in mobile applications with more than 21 million downloads on mobile devices. USA TODAY is owned by Gannett Co., Inc

Independent News - Independent News is commonly an organization that distributes information or news by varying methods without any representing company. These Independent News examples are the Facebook pages that create simple information distribution by mostly using simple editing of content with slides of information. This information is verified by their creators but since its popularity doesn't much up to the company-based or traditional news companies, it is expected that there is less filtering of information. The Income of a company of news or information distribution companies is dependent on its popularity. More popularity means that there are more companies willing to pay for their advertisements.

Individual Sharing - Individual sharing is when an individual or a group of people shares and informs other individuals while having no background in news agency, fact-checkers, and news companies. These distributors are commonly the medium for distribution of information from the above stages.

Fact Checking

Fact-checking is now the common process that is being taught to identify which information must be trusted, which source have the indicators of credible information, and which context are more likely to be true. It is about which process must be done in order to identify the correct information.

Fact checking is the process of attempting to verify or disprove assertions made in speech, print media or online content. The practice is essential

for integrity in any area where claims are made, including government, journalism, and business.

Inaccurate statements can take a number of different forms. A vendor may, for example, make false claims about their own product or attempt to undermine confidence in a competing technology by spreading fear, uncertainty, and doubt (FUD) about it. The misinformation could be an exaggeration of the benefits offered by the vendor's own product or unfounded speculation about risks associated with the competitor's product. Fact checking, in this context, involves seeking support or guarantees to back up any claims before making a decision.

In the context of human resources management (HRM), scrupulously fact-checking claims on applicants' resumes can help to ensure that only qualified individuals are hired. That, in turn, can help prevent future problems and protect the business' profitability.

Misinformation may be intentional or simply a matter of lax fact-checking or other human errors. Anyone who presents the material as factual should ensure that it does not contain any false statements. Failing to do so can result in damage to a business' reputation and in more extreme cases can result in compliance issues and/or legal action. To ensure that documents and other content are free of misinformation, it's important to avoid making any unsupported claims in the first place and to provide support for any that are made. Before disseminating any content, a writer should read it over carefully, attempting to identify any statements that could be open to question and deal with them appropriately. It's advisable to have any sensitive or important content reviewed by a qualified second person. (See: four eyes principle)

Disinformation is a more aggressive version of misinformation, which is intended to deceive. Fake news sites, for example, are created as distribution channels for disinformation that serves the creator's agenda. Because disinformation is intentional, the onus is on the receiver to evaluate the material presented.

Fact checkers often work in the research departments of magazines or for television news shows. They go over each story meticulously to confirm all the facts contained within it. This might mean confirming a subject's age or what the subject is reported to have said.

Fact checkers are the second line of defense to ensure that mistakes don't happen. Should someone get angry and threaten to sue over the content of a news or feature story, the publication or program has multiple people who can back up the veracity of the information.

Fact Checker Duties & Responsibilities

A fact checker's duties begin with good research skills and an instinct for knowing when a fact has actually been confirmed. These duties include:

Confirming details: A fact checker must be able to confirm details with a source without watering down or altering, the story itself.

Correcting copy: This can include spelling, grammar, and punctuation errors.

Confirm historical information: The dates of events that happened decades ago are as important as those of current events.

Confirm data: This might include the quoted results of studies and surveys.

Confirm identities: The names, addresses, and identities of quoted sources must be confirmed, including ascertaining that they really said or implied information that's being attributed to them without alarming them, potentially making them retract their quotes.

How to Make Sure Information on the Web Is Accurate

by Cee Jay

In 2010, 79 percent of the population used the Internet in the United States. The Internet is often utilized for convenience and ease of use. This convenience comes with a price because it's not easy to determine the accuracy of the data collected. No matter how reliable the site, there's

always the possibility of a mistake having been made since sources are often more obscure on the Internet than in other media.

Consider the source. The credibility of a website means a lot in determining the accuracy of the information provided. For example, data received from an unknown website created by the average Joe should be considered less reliable than data received from a government-maintained site. Credibility shouldn't be the only factor, however, as it is possible for inaccuracies to be posted anywhere on the World Wide Web.

Look up the info in offline sources, if possible, and contact the site operator. Facts in offline sources are sometimes checked by more than one person for accuracy and tend to be more reliable than online resources. See if the site offers links to references that back up its info and a way to contact a real person through email or telephone.

Avoid user-created websites, such as Wikipedia, unofficial YouTube videos, blogs, forums, and other nontraditional sources. These sites can be edited by anyone, at any time, making them unreliable. No one verifies this info besides other users, who sometimes introduce more errors when attempting to correct the original data.

Examine the level of professionalism of the entire site. Organization and general accuracy should be evident throughout. If minor misspellings and grammatical errors are evident, it is probable that fact-checking is not a priority. Also, stay away from sites with an abundance of pop-up windows. This implies advertising is the main priority, and the site may be more interested in selling a product than offering factual information.

Bias cognitive

Bias cognitive is the general term to express the unequal method of individuals uses to choose something because of irrelevant properties rather than relevant properties.

Stanford scholars observe 'experts' see how they evaluate the credibility of information online

A new report from the Stanford History Education Group finds that fact checkers read less but learn more – far outpacing historians and top college students.

By Carrie Spector

How do expert researchers go about assessing the credibility of information on the internet? Not as skillfully as you might guess – and those who are most effective use a tactic that others tend to overlook, according to scholars at Stanford Graduate School of Education.

A new report released recently by the Stanford History Education Group (SHEG) shows how three different groups of "expert" readers – fact checkers, historians, and Stanford undergraduates – fared when tasked with evaluating information online.

The fact checkers proved to be the fastest and most accurate, while historians and students were easily deceived by unreliable sources.

"Historians sleuth for a living," said Professor Sam Wineburg, founder of SHEG, who co-authored the report with doctoral student Sarah McGrew. "Evaluating sources is absolutely essential to their professional practice. And Stanford students are our digital future. We expected them to be experts."

The report's authors identify an approach to online scrutiny that fact checkers used consistently but historians and college students did not: The fact checkers read laterally, meaning they would quickly scan a website in question but then open a series of additional browser tabs, seeking context and perspective from other sites.

In contrast, the authors write, historians and students read vertically, meaning they would stay within the original website in question to evaluate its reliability. These readers were often taken in by unreliable indicators such as a professional-looking name and logo, an array of scholarly references or a nonprofit URL.

When it comes to judging the credibility of information on the internet, Wineburg said, skepticism may be more useful than knowledge or old-

fashioned research skills. "Very intelligent people were bamboozled by the ruses that are part of the toolkit of digital deception today," he said.

Testing experts, not typical users

The new report builds on research that SHEG released last year, which found that students from middle school through college were easily duped by information online. In that study, SHEG scholars administered age-appropriate tests to 7,804 students from diverse economic and geographic backgrounds.

For the new report, the authors set out to identify the tactics of "skilled" – rather than typical – users. They recruited participants they expected to be skilled at evaluating information: professional fact checkers at highly regarded news outlets, Ph.D. historians with full-time faculty positions at universities in California and Washington state, and Stanford undergraduates.

"It's the opposite of a random sample," Wineburg said. "We purposely sought out people who are experts, and we assumed that all three categories would be proficient."

The study sample consisted of 10 historians, 10 fact checkers, and 25 students. Each participant engaged in a variety of online searches while SHEG researchers observed and recorded what they did on-screen.

In one test, participants were asked to assess the reliability of information about bullying from the websites of two different groups: the American Academy of Pediatrics (AAP), the largest professional organization of pediatricians in the world, and the American College of Pediatricians (ACPeds), a much smaller advocacy group that characterizes homosexuality as a harmful lifestyle choice.

"It was extremely easy to see what [ACPeds] stood for," Wineburg said – noting, for example, a blog post on the group's site that called for adding the letter P for pedophile to the acronym LGBT. Study participants were asked to evaluate an article on the ACPeds website indicating that programs designed to reduce bullying against LGBT youth "amount to

special treatment" and may "validat[e] individuals displaying temporary behaviors or orientations."

Fact checkers easily identified the group's position. Historians, however, largely expressed the belief that both pediatricians' sites were reliable sources of information. Students overwhelmingly judged ACPeds' site the more reliable one.

In another task, participants were asked to perform an open web search to determine who paid the legal fees on behalf of a group of students who sued the state of California over teacher tenure policies in Vergara v. California, a case that cost more than $1 million to prosecute. (A Silicon Valley entrepreneur financed the legal team, a fact not always mentioned in news reports about the lawsuit.) Again, the fact checkers came out well ahead of the historians and students, searching online sources more selectively and thoroughly than the others.

The tasks transcended partisan politics, Wineburg said, pointing out that advocates across the political spectrum promulgate questionable information online.

"These are tasks of modern citizenship," he said. "If we're interested in the future of democracy in our country, we have to be aware of who's behind the information we're consuming."

It is clear that even by having a limited number of participants, the study shows that even the participants with high honors and scholars couldn't identify which content must be trusted. They tend to choose the website with good designs and not the actual content. The reasons for their mistakes could be their unawareness about the topic or influence of an irrelevant property which is the design rather than the context.

Introduction to Getting the Belief

Belief is one of the fundamental natures of our existence. We ask for certainty and confirmation to relinquish our stress or to know something. According to Tao de Haas, a belief is something that you believe or accept as true. You might believe something based on a fact, an opinion or an

assumption. When you believe something, you might not have immediate personal knowledge but you are satisfied that something is the way it is.

Beliefs molds our perception into everything that we may know of. However, belief is also something that we can catch up based on what other's see. It is the simple criteria that we judge upon ourselves whether something is convincing or not and by that, we use reasons from basic logic up to complicated intricate details. This process of the belief that our minds will encounter quite a bit often due to the varying access and supply of information has something to do with our deductions to what is to believe in and what is not. Deducing by logic and reasons has been a common way for us humans and even animals to know the things that will be beneficial for us. At most likely-hood, animals seek for what is not right but actually, that they will receive pleasure or help them to withstand the harshest of nature. Biologically, humans are no different than animals except our vast knowledge and complex way of expressing ourselves.

Belief is caused by a reason and statements from such causes are information. Every information that we will perceive may affect us on what we think we are or what we believe in. When information is believed by someone by any ways of having that information, it'll be embedded in one's ego. Knowledge is power and so is pride. Information makes us sophisticated and practically, the more information you have, the more control you will be able to access. Control is a power that sips in our pride therefore, knowledge is power and it is protected by pride.

Humans tend to reject anything that may hurt their pride or egos thus, making them too strongly hold to what they believe in. In a belief, there are many roots that branch out and by classifying those branches, it is hard to ascertain whether these branches of information are correct, false, or undetermined. These information's ideas will seek out more wondering individuals. Some may disregard or oppose it but others will cling onto it.

Flat-Earthers Explain Why We Don't Fall Off the Edge of Our Planet, and It Involves Pac-Man

By Jeanna Bryner

More than 200 descended on West Midlands, England, this past weekend to "engage freely in deep and meaningful discussions," according to the Flat Earth Convention UK.

The Earth's glorious globular-ness was proved more than 2,000 years ago by the ancient Greeks, but there's a small subset of people who think the planet is a disk despite enjoying the downward pull of gravity that could.

At this conference, they were presenting their scientific evidence for such a disk. One of the more interesting pieces of evidence came from speaker Darren Nesbit, who referred to the "Pac-Man effect" as the reason why planes don't fall off the edge of a flat Earth, according to the science news website. When a plane or other object reaches the edge of the horizon, such as when Pac-Man reaches the end of the screen, that object will teleport from one side of the planet to the other, a la Pac-Man entering from the other side of the screen.

According to the group that put on the convention, the gathering also included some "alternative viewpoints." (You think)

"In conjunction with a select number of well-known flat-earth speakers, we have also provided some alternative viewpoints. We truly hope that new friendships are forged, ideas and experiments are brainstormed and future actions are set in motion".

Among the nine speakers were Nesbit, a musician who became interested in flat-Earth beliefs in 2014; Dave Marsh, a manager with England's National Health Service; and Gary John, an independent flat-Earther who put on the convention.

Marsh was one of four speakers who is associated with the flat-Earth research group called FEcore. His research focuses on the moon, "as he believes it is the key to unlocking the globe earth deception," according to the convention website.

He studies the speed of the moon across the night sky. (Flat-Earthers believe the moon and sun orbit around Earth's North Pole.) "My research destroys big bang cosmology," he said, according to Physics-Astronomy.org. "It supports the idea that gravity doesn't exist and the only true force in nature is electromagnetism."

Another speaker, Martin Kenny, purports to have broader views of a flat Earth than other believers. "It is my innerstanding that there are other lands, dimensions and civilizations yet to be discovered across and within the plane of our Earth. The whole earth consists of 4 concentric rings of land, each ring having its own sun and moon, which would be our wandering stars," he says on the convention website.

Flat-Earthers like Kenny agree that a planet is a flat plane, though they have varied ideas for the disk's particular layout. Many seem to think the Earth is a disk surrounded by an ice wall and that those who show evidence to the contrary — including NASA, with its many satellite pics beamed down of our blue marble — are fakes. These conspiracy theorists believe NASA and others are trying to keep this secret from the public.

As for how many people buy into this clearly mistaken belief, that is unknown. However, the oldest flat-Earth organization, the Flat Earth Society, as of August 2016. According to the society's website, the group was founded by an English inventor named Samuel Birley Rowbotham in the 1800s.

In addition to the Q&A's with the nine speakers at the three-day convention, there was apparently a talk entitled "Heliocentric v Geocentric experts Debate." The convention's site doesn't indicate who was debating these two views, one proved ages ago, and the other suggesting Earth is fixed in space with the universe revolving around it.

This isn't the first flat-Earth convening. In November 2017, in Raleigh, North Carolina. That convention hosted some big-name (in flat-Earth circles, at least) speakers, such as the founder of the Flat Earth Clues series on YouTube, Mark Sargent, who thinks we are all locked inside a

"Truman Show"-like dome structure. The next FEIC is scheduled for Nov. 15 -16 in Denver.

It's more than a case of misinformation in order to have a community that believes inaccurate misinformation. As it may oppose to the concepts of philosophy wherein facts are just mere representation of falsehood because no one can ascertain the truth, we establish experimentation and techniques that continuously let us humans to build a ground wherein we can establish calculations wherein we can make sense on what we perceive. The moral and general concept of realizing that there is no certainty to anything is good but the reason that such techniques and equations exist was that our drive to help ourselves into a more efficient living. It all points out to the reason on why it's important to do fact-checking and to disprove the communities who promote a disproved belief where the Earth is flat or inside a dome.

Individuals seek answers and cling into a belief for different reasons. Some wanted to learn while others do it for a different cause. However, it's not only the specific community that was being affected by misinformation but also the information seekers who wanted to learn, share, and know the truth. It is important for us to watch and get updated to news and so the same process applies when someone browses on the internet and gathers information.

Propaganda

Propaganda is information that is not objective and is used primarily to influence an audience and further an agenda, often by presenting facts selectively to encourage a particular synthesis or perception or using loaded language to produce an emotional rather than a rational response to the information that is presented. Propaganda is often associated with material prepared by governments, but activist groups, companies, religious organizations, and the media can also produce propaganda.

In the twentieth century, the term propaganda has often been associated with a manipulative approach, but propaganda historically was a neutral descriptive term.

A wide range of materials and media are used for conveying propaganda messages, which changed as new technologies were invented, including paintings, cartoons, posters, pamphlets, films, radio shows, TV shows, and websites. More recently, the digital age has given rise to new ways of disseminating propaganda, for example, through the use of bots and algorithms to create computational propaganda and spread fake or biased news using social media.

In a 1929 literary debate with Edward Bernays, Everett Dean Martin argues that "Propaganda is making puppets of us. We are moved by hidden strings which the propagandist manipulates."

It is commonly used by politicians to promote themselves, help their goals, intimidate their opponents, and divert the issue. It's been a part of tactics since politicians knew that individuals are easily maneuvered by advertisements, stories, and information. In terms of psyche, where decision making that could make individuals to vote them-the language is the medium of manipulation. Humans are wiser and more aware of their environment because of the different platforms that are all around them but even though modern humans are good at filtering, liars also learn how to battle the logic and confuse most of us on which is really right. It's a mind game that is seemingly in a loop where the decision that you would come up depends on which part of the loop you're going to stop. Most of the propaganda are present at the start of a political campaign or during the years of service of a politician. They have different goals on why they use such things in order to maintain stability and to make the crowd at calm. At a politician’s part, it is hard to have a perfect administration and some decisions of the government might oppose the minority or the majority.

Primitive forms of propaganda have been a human activity as far back as reliable recorded evidence exists. The Behistun Inscription (c. 515 BC) detailing the rise of Darius I to the Persian throne is viewed by most historians as an early example of propaganda. Another striking example of propaganda during Ancient History is the last Roman civil wars (44-30 BC) during which Octavian and Mark Antony blame each other for

obscure and degrading origins, cruelty, cowardice, oratorical and literary incompetence, debaucheries, luxury, drunkenness, and other slanders. This defamation took the form of uituperatio (a Roman rhetorical genre of the invective) which was decisive for shaping the Roman public opinion at this time.

Propaganda during the Reformation, helped by the spread of the printing press throughout Europe, and in particular within Germany, caused new ideas, thoughts, and doctrine to be made available to the public in ways that had never been seen before the 16th century. During the era of the American Revolution, the American colonies had a flourishing network of newspapers and printers who specialized in the topic on behalf of the Patriots (and to a lesser extent on behalf of the Loyalists).

The first large-scale and organized propagation of government propaganda was occasioned by the outbreak of war in 1914. After the defeat of Germany in the First World War, military officials such as Erich Ludendorff suggested that British propaganda had been instrumental in their defeat. Adolf Hitler came to echo this view, believing that it had been a primary cause of the collapse of morale and the revolts in the German home front and Navy in 1918 (see also: Dolchstoßlegende). In Mein Kampf (1925) Hitler expounded his theory of propaganda, which provided a powerful base for his rise to power in 1933. Historian Robert Ensor explains that "Hitler...puts no limit on what can be done by propaganda; people will believe anything, provided they are told it often enough and emphatically enough, and that contradicters are either silenced or smothered in calumny." Most propaganda in Nazi Germany was produced by the Ministry of Public Enlightenment and Propaganda under Joseph Goebbels. World War II saw continued use of propaganda as a weapon of war, building on the experience of WWI, by Goebbels and the British Political Warfare Executive, as well as the United States Office of War Information.

In the early 20th century, the invention of motion pictures gave propaganda-creators a powerful tool for advancing political and military interests when it came to reaching a broad segment of the population

and creating consent or encouraging rejection of the real or imagined enemy. In the years following the October Revolution of 1917, the Soviet government sponsored the Russian film industry with the purpose of making propaganda films (e.g. the 1925 film The Battleship Potemkin glorifies Communist ideals.) In WWII, Nazi filmmakers produced highly emotional films to create popular support for occupying the Sudetenland and attacking Poland. The 1930s and 1940s, which saw the rise of totalitarian states and the Second World War, are arguably the "Golden Age of Propaganda". Leni Riefenstahl, a filmmaker working in Nazi Germany, created one of the best-known propaganda movies, Triumph of the Will. In the US, animation became popular, especially for winning over youthful audiences and aiding the U.S. war effort, e.g., Der Fuehrer's Face (1942), which ridicules Hitler and advocates the value of freedom. US war films in the early 1940s were designed to create a patriotic mindset and convince viewers that sacrifices needed to be made to defeat the Axis Powers. Polish filmmakers in Great Britain created anti- nazi color film Calling mr. Smith (1943) about current nazi crimes in occupied Europe and about lies of nazi propaganda.

The West and the Soviet Union both used propagandas extensively during the Cold War. Both sides used film, television, and radio programming to influence their own citizens, each other, and Third World nations. George Orwell's novels Animal Farm and Nineteen Eighty-Four are virtual textbooks on the use of propaganda. During the Cuban Revolution, Fidel Castro stressed the importance of propaganda. Propaganda was used extensively by Communist forces in the Vietnam War as a means of controlling people's opinions.

During the Yugoslav wars, propaganda was used as a military strategy by governments of the Federal Republic of Yugoslavia and Croatia. Propaganda was used to create fear and hatred, and particularly incite the Serb population against the other ethnicities (Bosniaks, Croats, Albanians and other non-Serbs). Serb media made a great effort in justifying, revising or denying mass war crimes committed by Serb forces during these wars.

State-sponsored internet sockpuppetry is a government's use of paid internet propagandists with the intention of swaying online opinion, undermining dissident communities, or changing the perception of what is the dominant view. It is a kind of astroturfing.

China: Internet Water Army, 50 Cent Party, in operation since October 2004

Myanmar: the Tatmadaw and the Burmese Government has sponsored propaganda through the Internet and dismiss its atrocities towards its minorities like the Rohingya, Shan, Kachin, and Karen people.

North Korea: the troll army of North Korea, which is known to be supportive of the Kim dynasty's rule, and anti-South Korean, anti-American and pro-North Korean regime. They first appeared in 2013.

Philippines: The Oxford University released a study claiming that hired "keyboard trolls" played a role in President Rodrigo Duterte's presidential campaign in 2016. The study said that the Duterte campaign team spent at least $200 thousand and hired 400 to 500 people to defend Duterte from online critics. It also added that the hired "trolls" remain to support Duterte and his administration after he was elected. Online trolls were allegedly used by the administration to silence critics through threats of violence and rape to people critical to Duterte's policies. Duterte, while admitted to paying people to support him online during the elections said he has followers referring to his staunch supporter, Mocha Uson who runs the support group Mocha Uson Blog but insists that Uson offers her services free.

Singapore:

1. Ruling party People's Action Party and its youth wing Young PAP have been officially reported to have organized teams to work both publicly and anonymously to counter criticism of party and government in cyberspace since 1995. As reported by the Straits Times, as of 2007, the group consists of two teams, led by members of parliament of People's

Action Party, where one team strategizes the campaign the other team executes the strategies.

2. There are also pro-party individuals known as 'Internet Brigade' who claim to be not affiliated with the party nor officially endorsed by the party, who setup elaborate social media and web page to 'defend' the ruling party of online chatters and to criticize social-political websites critical of the government and members of opposition parties. They have information about their party's endorsed candidate personal details and events not publicly known and MP elected as their members, often they have anonymous members, sometimes with fake or purchased identity, re-posting on Internet forums and social-media their published articles.

3. The Info-communications Media Development Authority (IMDA) frequently engages advertising agencies to promote civic campaigns and national day celebrations on traditional media, video-sharing websites and social media. Some of these nation-building efforts are seen as selective in choosing the historical narratives, often only focusing on the achievements of the ruling party.

Vietnam: Public opinion brigades. As of 2017, the military currently employs at least 10,000 members in a special force, named Force 47, to counter criticisms of the government in cyberspace and hacking into dissident anti-government websites and installing spyware to track visitors.

Aside from diverting a problem, politicians can also use propaganda to gain the trust of the people. They could connect to other people by using advertisements Facebook pages and other different sites in order to reach their audience. They could express their platforms, solutions, ideas and even defend themselves. Today isn't just like the other times where politicians need a to have a conference or a meeting to reach their audiences. They could have all the opportunity to convince and be part of a closer community.

Facebook and Twitter are being used to manipulate public opinion

Nine-country study finds widespread use of social media for promoting lies, misinformation, and propaganda by governments and individuals

By Alex Hern

Propaganda on social media is being used to manipulate public opinion around the world, a new set of studies from the University of Oxford has revealed.

From Russia, where around 45% of highly active Twitter accounts are bots, to Taiwan, where a campaign against President Tsai Ing-wen involved thousands of heavily coordinated – but not fully automated – accounts sharing Chinese mainland propaganda, the studies show that social media is an international battleground for dirty politics.

The reports, part of the Oxford Internet Institute's Computational Propaganda Research Project, cover nine nations also including Brazil, Canada, China, Germany, Poland, Ukraine, and the United States. They found "the lies, the junk, the misinformation" of traditional propaganda is widespread online and "supported by Facebook or Twitter's algorithms" according to Philip Howard, Professor of Internet Studies at Oxford.

At their simpler end, techniques used include automated accounts to like, share and post on the social networks. Such accounts can serve to game algorithms to push content on to curated social feeds. They can drown out real, the reasoned debate between humans in favor of a social network populated by argument and soundbites and they can simply make online measures of support, such as the number of likes, look larger – crucial in creating the illusion of popularity.

The researchers found that in the US this took the form of what Samuel Woolley, the project's director of research, calls "manufacturing consensus" – creating the illusion of popularity so that a political candidate can have viability where they might not have had it before.

The US report says: "The illusion of online support for a candidate can spur actual support through a bandwagon effect. Trump made Twitter center stage in this election, and voters paid attention."

While the report finds some evidence of institutional support for the use of bots, even if only in an "experimental" fashion by party campaign managers, Woolley emphasizes that it's just as powerful coming from individuals. "Bots massively multiply the ability of one person to attempt to manipulate people," he says. "Picture your annoying friend on Facebook, who's always picking political fights. If they had an army of 5,000 bots, that would be a lot worse, right?"

Russian propaganda on social media is well known in the west for its external-facing arm, including allegations of state involvement in the US and French presidential elections. But the nation's social media is also heavily infiltrated with digital propaganda domestically according to the report on that country.

It shows that Russia first developed its digital propaganda expertise for dealing with internal threats to stability and drowning out dissent to Putin's regime while providing the same illusion of overwhelming consensus that was used in the US election years later. "Political competition in Putin's Russia created the demand for online propaganda tools," the report's author, Sergey Sanovich, writes, "and ... market competition was allowed to efficiently meet this demand and create tools that were later deployed in foreign operations".

Woolley adds: "Russia is the case to look to see how a particularly powerful authoritarian regime uses social media to control people."

If Russia is the progenitor of many of the techniques seen worldwide, then Ukraine is an example of how the conflict might progress. There, says Woolley, "we're seeing how computational propaganda will be in five years because the country is a testing ground for current Russian tactics." As a result, however, civil society organizations dedicated to tackling the problem are similarly advanced.

The report on the country's efforts to tackle Russian misinformation highlights the StopFake project, a collaborative effort to tackle fake stories "produced mainly by the Russian media" It also mentions a Chrome extension that allowed automatic blocking of thousands of Russian websites, and even a straightforward ban from the government aimed at certain Russian social networks, including VKontakte and Yandex, as part of the country's sanctions against Russia.

Facebook and Twitter must act

The reports suggested an apparent disinterest from the social media firms in how their networks were being used. Facebook, for instance, leaves most of its anti-propaganda work to external organizations such as Snopes and the Associated Press, who operate semi-autonomous fact-checking teams aimed at marking viral news stories as true or false while Twitter's anti-bot systems are effective at fighting commercial activity on the site, but seem less able or willing to take down automated accounts engaging in political activity.

The researchers are presenting their findings to a group of "senior" representatives from the technology industry in Palo Alto. They say that social networks need to do more, and fast.

"For the most part, they leave it to the user community to police themselves, and flag accounts," Howard says. He points out while social networks tend to comply only with the minimum legal requirements, occasionally they'll be ahead of public opinion – as happened when the company decided to ban adverts for payday loans. "Of all the public policy issues, I don't know why they landed on that one. They clearly can have an impact, and between violent extremism and payday loans there's a span of issues."

The researchers did find one country to be significantly different to the others. In Germany, fear of online destabilization outpaced the actual arrival of automated political attacks and has led to the proposal and implementation of world-leading laws requiring social networks to take responsibility for what gets posted on their sites.

"Germany leads the way as a cautionary authority over computational propaganda, seeking to prevent online manipulation of opinion rather than addressing already present issues," the report says, although it adds that "many of those measures lack legitimacy and suitable enforcement, and some are disproportionate responses considering their implications for freedom of expression".

At a different perspective, aside from what we knew about the biases that some politicians have given us, the connection and opportunity that social media platform has given us can be used for the better. For example, propaganda isn't only about information that is used during elections but it could also be a medium for a good idea that can be shown to a vaster audience. Social media doesn't bind or is limited only to specific boundaries of audiences of a particular state but rather, these propositions of propaganda can reach to the whole world. An idea that is good enough can reach and inspire others-citizens or other politicians-alike. If an idea talks about a solution from a problem or an incoming situation, ideas could warn and convince people to do a solution and participate. Participation is what all government needs. Without participation, government or other city officials are just positions.

The Future of Media - Propaganda

Propaganda will continue to rise to its scopes of what it can reach. The Internet had given us a larger bound of community and it is to be expected that our physical affairs will have its counterparts in the future using the platform of the internet. We or future generations will spend more time on the internet. Our technology and so our ways of expression will be more convenient. There are two possible ways that our future of communications might become. First is the future of communication where there are more restrictions and the other is the future where we have free communication. In our present time, we have our freedom of expression in most countries and there are different organizations and community that continue to support it. It makes us be free on our opinion whether it if good or bad. The other is the restriction on our communication where it depends on the rights that a citizen have. Some

of us are experiencing a restriction on depending on the rule of their government.

Burma

Than Shwe, who took over as chairman of the military junta known as the State Peace and Development Council in 1992 after the resignation of 1988 coup leader General Saw Maung. The junta owns all daily newspapers and radio, along with the country's three television channels. Media dare not hint at, let alone report on, antigovernment sentiments. Burma's few privately owned publications must submit content to the Press Scrutiny Board for approval before publishing; censorship delays mean that none publishes on a daily basis. In 2005, the junta took control of Bagan Cybertech, Burma's main Internet service, and satellite-feed provider. Citizens have been arrested for listening to the BBC or Radio Free Asia in public. Entry visa requests by foreign journalists are usually turned down except when the government wants to showcase a political event.

An article in the June 4, 2005, edition of New Light of Myanmar (Burma) titled "Have a positive attitude in broadcasting news" explains the government's approach to media: "The Myanmar people do not wish to watch, read, or listen to corrupt and lopsided news reports and lies. The Myanmar people even feel loathsome to some local media that are imitating the practice of featuring corrupt and lopsided news and lies." The Voice, a Rangoon-based weekly, was suspended in May 2005 as punishment for an innocuous front-page story about Vietnam's withdrawal from Burma's New Year water festival, which the junta found embarrassing.

Turkmenistan

Saparmurat Atayevich Niyazov, elected 1991 and declared President for Life in 1999. Niyazov has isolated the country from the rest of the world and created a cult of personality declaring himself "Turkmenbashi," father of the Turkmen. The state owns all domestic media and Niyazov's administration controls them by appointing editors and censoring

content. Niyazov personally approves the front-page content of the major dailies, which always include a prominent picture of him. In 2005, the state closed all libraries except for one that houses the president's books and banned the importation of foreign publications. The state media heap fulsome praise on Niyazov as they ignore important stories on AIDS, prostitution, unemployment, poverty, crime, and drugs. A handful of local and foreign correspondents work for foreign--primarily Russian--news agencies, but their freedom to report is minimal.

State television displays a constant, golden profile of Niyazov at the bottom of the screen. Newscasters begin each broadcast with a pledge that their tongues will shrivel if their reports ever slander the country, the flag, or the president.

Equitorial Guinea

President Teodoro Obiang Nguema Mbasogo, in power since a coup in 1979. Criticism of Obiang's brutal regime is not tolerated in the only Spanish-speaking country in Africa. All broadcast media are state-owned, except for RTV-Asonga, the private radio and television network owned by the president's son, Teodorino Obiang Nguema. A handful of private newspapers officially exist but rarely publish due to financial and political pressure. An exiled press freedom group ASOLPEGE-Libre says the only publication that appears regularly is a pro-government magazine published in Spain and financed by advertising revenue from companies operating in Equatorial Guinea, "mainly North American oil companies." The group says the government has forced all private companies to pay for advertising spots on state broadcast media. It describes state broadcasters as "pure governmental instruments in the service of the dictatorship, dedicated uniquely and exclusively to political narcissism and the ideological propaganda of the regime in place." The U.S. State Department reported in 2005 that foreign celebrity and sports publications were available for sale but no newspapers and that there were no bookstores or newsstands. Foreign correspondents have been denied visas or expelled without official explanation. State-run Radio Malabo broadcasts songs warning citizens that they will be crushed if

they speak against the regime. During parliamentary elections in 2004, state media called opposition activists "enemies" of the state. State radio has described Obiang as "the country's God" who has all power over men and things.

North Korea

Censorship in North Korea ranks among some of the most extreme in the world, with the government able to take strict control over communications. North Korea is ranked at the bottom of Reporters Without Borders' annual Press Freedom Index, occupying the last place in 2017.

All media outlets are owned and controlled by the North Korean government. As such, all media in North Korea get their news from the Korean Central News Agency. The media dedicate a large portion of their resources toward political propaganda and promoting the personality cult of Kim Il-sung, Kim Jong-il, and Kim Jong-un. The government of Kim Jong-un still has absolute authority over and control of the press and information.

Radio or television sets which can be bought in North Korea are preset to receive only the government frequencies and sealed with a label to prevent tampering with the equipment. It is a serious criminal offense to manipulate the sets and receive radio or television broadcasts from outside North Korea. In a party campaign in 2003, the head of each party cell in neighborhoods and villages received instructions to verify the seals on all radio sets.

North Korea is ranked at the bottom of the Press Freedom Index rankings published annually by Reporters Without Borders. From 2002 through 2006, the country was listed as the worst in the world and from 2007 to 2016, it was listed second to last (behind Eritrea) of some 180 countries. In 2017, North Korea was ranked the worst again.

Internet access is restricted to regime elites and select university students. The state has created its own substitute "internet" – Kwangmyong, but even this network is restricted to certain elite grade

schools, select research institutions, universities, factories, and privileged individuals. Moreover, the intranet is filtered by the Korea Computer Center, which ensures that only information deemed acceptable by the government can be accessed through the network.

The North Korean Ullim, an Android-based tablet computer available since 2014, has a high level of inbuilt surveillance and controls. The tablet takes screenshots of apps opened by the user and saves browsing history.

It's not only the freedom of an individual to express but there is also current oppression to the media depending on the control of the government.

Media Censorship in China

by Beina Xu and Eleanor Albert

The Chinese government has long kept tight reins on both traditional and new media to avoid potential subversion of its authority. Its tactics often entail strict media controls using monitoring systems and firewalls, shuttering publications or websites, and jailing dissident journalists, bloggers, and activists. with the Chinese government over internet censorship and the Norwegian Nobel Committee's awarding of the 2010 Peace Prize to jailed Chinese activist Liu Xiaobo have also increased international attention to censorship issues. At the same time, the country's burgeoning economy relies on the web for growth, and experts say the growing need for internet freedom is testing the regime's control.

China's constitution affords its citizens freedom of speech and press, but the opacity of Chinese media regulations allows authorities to crack down on news stories by claiming that they expose state secrets and endanger the country. The definition of state secrets in China remains vague, facilitating censorship of any information that authorities deem harmful to their political or economic interests. CFR Senior Fellow Elizabeth C. Economy says the Chinese government is in a state of "schizophrenia" about media policy as it "goes back and forth, testing the line, knowing they need press freedom and the information it provides, but worried

about opening the door to the type of freedoms that could lead to the regime's downfall."

The government issued in May 2010 its first white paper on the internet that focused on the concept of "internet sovereignty," requiring all internet users in China, including foreign organizations and individuals, to abide by Chinese laws and regulations. Chinese internet companies are now required to sign the "Public Pledge on Self-Regulation and Professional Ethics for China Internet Industry," which entails even stricter rules than those in the white paper, according to Jason Q. Ng, a specialist on Chinese media censorship and author of Blocked on Weibo. Since Chinese President Xi Jinping came to power, censorship of all forms of media has tightened. In February 2016, Xi announced new media policy for party and state news outlines: "All the work by the party's media must reflect the party's will, safeguard the party's authority, and safeguard the party's unity," emphasizing that state media must align themselves with the "thought, politics, and actions" of the party leadership. A China Daily essay emphasized Xi's policy, noting that "the nation's media outlets are essential to political stability."

How Free Is Chinese Media?

In 2016, Freedom House ranked China last for the second consecutive year out of sixty-five countries that represent 88 percent of the world's internet users. The France-based watchdog group Reporters Without Borders ranked China 176 out of 180 countries in its 2016 worldwide index of press freedom. Experts say Chinese media outlets usually employ their own monitors to ensure political acceptability of their content. Censorship guidelines are circulated weekly from the Communist Party's propaganda department and the government's Bureau of Internet Affairs to prominent editors and media providers.

Certain websites that the government deems potentially dangerous—like Wikipedia, Facebook, Twitter, YouTube, and some Google services—are fully blocked or temporarily "blacked out" during periods of controversy, such as the June 4 anniversary of the Tiananmen Square massacre or Hong Kong's Umbrella Movement protests in the fall of 2014. Specific

material considered a threat to political stability is also banned, including controversial photos and video, as well as search terms. The government is particularly keen on blocking reports of issues that could incite social unrest, like official corruption, the economy, health and environmental scandals, certain religious groups, and ethnic strife. The websites of Bloomberg news service, the New York Times, and other major international publications have periodically been blacked out, their journalists harassed and threatened, and visa applications denied. In 2012, Bloomberg and the New York Times both ran reports on the private wealth of then Party Secretary Xi Jinping and Premier Wen Jiabao. Restrictions have been also placed on micro-blogging services, often in response to sensitive subjects like corruption, including 2012 rumors of an attempted coup in Beijing involving the disgraced former Chongqing party chief Bo Xilai. Censors are also swift to block any mention of violent incidents related to Tibet or China's Xinjiang Autonomous Region, home to the mostly Muslim Uighur minority group, and the Falun Gong spiritual movement.

More than a dozen government bodies review and enforce laws related to information flow within, into, and out of China. The most powerful monitoring body is the Communist Party's Central Propaganda Department (CPD), which coordinates with General Administration of Press and Publication and State Administration of Radio, Film, and Television to ensure content promotes party doctrine. Ng says that the various ministries once functioned as smaller fiefdoms of control, but have recently been more consolidated under the State Council Information Office, which has taken the lead on internet monitoring.

The Chinese government employs large numbers of people to monitor and censor China's media. Experts refer to an October 2013 report in a state-run paper, the Beijing News, which said more than two million workers are responsible for reviewing internet posts using keyword searches and compiling reports for "decision makers." These so-called "public opinion analysts" are hired both by the state and private companies to constantly monitor China's internet. Additionally, the CPD gives media outlets editorial guidelines as well as directives restricting

coverage of politically sensitive topics. In one high-profile incident involving the liberal Guangdong magazine Southern Weekly, government censors rewrote the paper's New Year's message from a call for reform to a tribute to the Communist Party. The move triggered mass demonstrations by the staff and the general public, who demanded the resignation of the local propaganda bureau chief. While staff and censors reached a compromise that theoretically intended to relax some controls, much of the censorship remained in place.

The Chinese government deploys a myriad way of censoring the internet. The Golden Shield Project, colloquially known as the Great Firewall, is the center of the government's online censorship and surveillance effort. Its methods include bandwidth throttling, keyword filtering, and blocking access to certain websites. According to Reporters Without Borders, the firewall makes large-scale use of Deep Packet Inspection technology to block access based on keyword detection. As Ng points out, the government also employs a diverse range of methods to induce journalists to censor themselves, including dismissals and demotions, libel lawsuits, fines, arrests, and forced televised confessions.

As of February 2017, thirty-eight journalists were imprisoned in China, according to the Committee to Protect Journalists, a U.S.-based watchdog on press freedom issues. In 2009, Chinese rights activist Liu Xiaobo was sentenced to eleven years in prison for advocating democratic reforms and freedom of speech in Charter 08, a 2008 statement signed by more than two thousand prominent Chinese citizens that called for political and human rights reforms and an end to one-party rule. When Liu won the Nobel Peace Prize, censors blocked the news in China. A year later, journalist Tan Zuoren was sentenced to five years in prison for drawing attention to government corruption and poor construction of school buildings that collapsed and killed thousands of children during the 2008 earthquake in Sichuan province. Early 2014 saw the government detain Gao Yu, a columnist who was jailed on accusations of leaking a Party communiqué titled Document 9.

The State Internet Information Office tightened content restrictions in 2013 and appointed a new director of a powerful internet committee led by President Xi Jinping, who assumed power in late 2012. A July 2014 directive on journalist press passes bars reporters from releasing information from interviews or press conferences on social media without permission of their employer media organizations. And in early 2015, the government cracked down on virtual private networks (VPNs), making it more difficult to access U.S. sites like Google and Facebook. "By blocking these tools, the authorities are leaving people with fewer options and are forcing most to give up on circumvention and switch to domestic services," writes Charlie Smith [pseudonym], a cofounder of FreeWeibo.com and activist website GreatFire.org. "If they can convince more internet users to use Chinese services—which they can readily censor and easily snoop on—then they have taken one further step towards cyber sovereignty." The restrictions mount on a regular basis, adds the New Yorker's Evan Osnos. "To the degree that China's connection to the outside world matters, the digital links are deteriorating," he wrote in an April 2015 article. "How many countries in 2015 have an internet connection to the world that is worse than it was a year ago?"

Foreign Media

China requires foreign correspondents to obtain permission before reporting in the country and has used this as an administrative roadblock to prevent journalists from reporting on potentially sensitive topics like corruption and, increasingly, economic and financial developments. Under Xi, the ability of foreign journalists and international news outlets to travel and access to sources have shrunk. "The hostile environment against foreign journalists is being fueled by efforts to publicly mark Western media outlets as not only biased but part of a coordinated international effort to damage China's reputation", according to PEN America's 2016 report on the constraints of foreign journalists reporting from China. Eighty percent of respondents in a 2014 survey conducted by the Foreign Correspondents' Club of China said their work conditions had

worsened or stayed the same compared to 2013. International journalists regularly face government intimidation, surveillance, and restrictions on their reporting write freelance China correspondent Paul Mooney, who was denied a visa in 2013.

Austin Ramzy, a China reporter for the New York Times, relocated to Taiwan in early 2014 after failing to receive his accreditation and visa. New York Times reporter Chris Buckley was reported to have been expelled in early January 2013—an incident China's foreign ministry said was a visa application suspension due to improper credentials. China observers were also notably shaken by the 2013 suspension of Bloomberg's former China correspondent, Michael Forsythe after Bloomberg journalists accused the news agency of withholding investigative articles for fear of reprisal from Chinese authorities.

The treatment of foreign reporters has become a diplomatic issue. In response to the Arab Spring protests in early 2011, then Secretary of State Hillary Clinton pledged to continue U.S. efforts to weaken censorship in countries with repressive governments like China and Iran. In response, Beijing warned Washington to not meddle in the internal affairs of other countries. On a December 2013 trip to Beijing, then Vice President Joe Biden pressed China publicly and privately about press freedom, directly raising the issue in talks with Chinese President Xi Jinping and meetings with U.S. journalists working in China.

U.S. Technology in China

In more recent years, China has made it exceedingly difficult for foreign technology firms to compete within the country. The websites of U.S. social media outlets like Facebook, Twitter, and Instagram are blocked. Google, after a protracted battle with Chinese authorities over the banning of search terms, quietly gave up its fight in early 2013 by turning off a notification that alerted Chinese users of potential censorship. In late 2014, China banned Google's email service Gmail, a move that triggered a concerned response from the U.S. State Department.

In January 2015, China issued new cybersecurity regulations that would force technology firms to submit source code, undergo rigorous inspections, and adopt Chinese encryption algorithms. The move triggered an outcry from European and U.S. companies, who lobbied governmental authorities for urgent aid in reversing the implementation of new regulations. CFR Senior Fellow Adam Segal writes that "the fact that the regulations come from the central leading group, and that they seem to reflect an ideologically driven effort to control cyberspace at all levels, making it less likely that Beijing will back down."

Circumventing the Censors

Despite the systematic control of news, the Chinese public has found numerous ways to circumvent censors. Ultrasurf, Psiphon, and Freegate are popular software programs that allow Chinese users to set up proxy servers to avoid controls. While VPNs are also popular, the government crackdown on the systems has led users to devise other methods, including the insertion of new IP addresses into host files, Tor—a free software program for anonymity—or SSH tunnels, which route all internet traffic through a remote server. According to Congress, between 1 and 8 percent of Chinese internet users use proxy servers and VPNs to get around firewalls.

Microblogging sites like Weibo have also become primary spaces for Chinese netizens to voice an opinion or discuss taboo subjects. "Over the years, in a series of cat-and-mouse games, Chinese internet users have developed an extensive series of puns—both visual and homophonous—slang, acronyms, memes, and images to skirt restrictions and censors," writes Ng.

Google's chairman, Eric Schmidt, said in early 2014 that encryption could help the company penetrate China. But such steps experienced a setback in March 2014 when authorities cracked down on social networking app WeChat (known as Weixin in China), deleting prominent, politically liberal accounts. Soon thereafter, the government announced new regulations on "instant messaging tools" aimed at mobile chat applications such as WeChat, which has more than 750 million users and was increasingly

seen as replacing Weibo as a platform for popular dissent that could skirt censors. CFR's Economy says that the internet has increasingly become a means for Chinese citizens to ensure official accountability and rule of law, noting the growing importance of social network sites as a political force inside China despite government restrictions.

China had roughly 731 million internet users in 2017. Although there have been vocal calls for total press freedom in China, some experts point to a more nuanced discussion of the ways in which the internet is revolutionizing the Chinese media landscape and a society that is demanding more information. "Some people in China don't look at freedom of speech as an abstract ideal, but more as a means to an end," writes author Emily Parker. Rather, the fight for free expression fits into a larger context of burgeoning citizen attention to other, more pertinent social campaigns like environmental degradation, social inequality, and corruption—issues for which they use the internet and media as a means of disseminating information, says Ng.

Censorship and Freedom of Speech

Freedom of information, speech, and the press are firmly rooted in the structures of modern western democratic thought. With limited restrictions, every capitalist democracy has legal provisions protecting these rights. Even the UN Declaration of Human Rights, adopted by the general assembly in 1948 declares "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers" (although as Article 19, it comes after the right to hold property, be married and hold a nationality, among others). As such, western ethics heavily favor the nearly unfettered rights to speech, press, and information. Such rights might be tailored to protect state security from a Lockesian social contract perspective, but a Kantian categorical outlook surely provides for a society in which everyone can speak freely is better to one in which no one can speak freely.

Communism, as a primarily economic system, is much quieter on the issue of individual human rights. Two conflicting positions on these freedoms arise with analysis of communist theory. The first is an argument against individual freedoms. In a communist society, the individual's best interests are indistinguishable from society's best interest. Thus, the idea of individual freedom is incompatible with a communist ideology. The only reason to hold individual speech and information rights would be to better the society, a condition which would likely be met only in certain instances rather than across time, making the default a lack of freedom.

On the other hand, the idea of perfect equality in communism argues for a right of expression and press. Since each individual is equally important, each should have an equally valid point of view. Indeed, Marx defended the right to freedom of the press, arguing in 1842 that restrictions, like censorship, were instituted by the bourgeois elite. He claimed censorship is a tool of the powerful to oppress the powerless.

Indeed, many implementations of communism favored a constitutional democracy, albeit usually with only one party. Before and at the creation of many communist countries, a desire for freedom from the oppression of the proletariat by the bourgeois translated into strongly voiced support for individual freedoms for speech, dissent, and information. Chairman Mao, in encouraging his countrymen to prepare for WWII more than a decade before he came to power, proclaimed "[the people] should subject ... the party in power, to severe criticism, and press and impel it to give up its one-party, one-class dictatorship and act according to the opinions of the people. The second matter concerns freedom of speech, assembly, and association for the people. Without such freedom, it will be impossible to carry out the democratic reconstruction of the political system." In 1945, closer yet to his assumption of power, Mao proclaimed, "Two principles must be observed: (1) say all you know and say it without reserve; (2) Don't blame the speaker but take his words as a warning. Unless the principle of 'Don't blame the speaker" is observed genuinely and not falsely, the result will not be 'Say all you know and say it without reserve." More striking still is the fact that this latter quote is recorded in

"Quotations from Chairman Mao Tse-Tung," more commonly known as the Little Red Book, a veritable bible of Chinese communism considered infallible during Mao's lifetime.

Thus, on the balance, it seems communist theory is compatible with freedoms of speech, information, and protest, but it is far from a fundamental right such as it is under democracy and individual-centered ethics systems like that of Kant and Locke. Freedom of information should only be granted when a communist society as a whole is likely to benefit. In this light, it makes much more sense that communist leaders, while still a persecuted opposition philosophy, would strongly support speech rights and later reject them when communism becomes the ruling system. At that point, access to oppositional speech and information is no longer beneficial to the communist state, and thus no longer needed in communist philosophy.

There is a possibility in the future that our current rights for free communication may not be possible in the future. A future where information is restricted, under surveillance, and control of the authority. There could be reasons that may come up from this revolutionary age of information that could be made an appeal on restricting our rights.

Economy and Media Services

The economy is being affected by our current inventions and drive of technology. The demand changes into what the people wanted e.g. cellphones, computers, and other gadgets. There are also changes in the rate of productivity since most of the made gadgets are broken due to its frequent use.

A decade of smartphones: We now spend an entire day every week online

By Charles Hymas

The average person in the UK spends more than a day a week online, according to a landmark report on the impact of the "decade of the smartphone".

People are on average online for 24 hours a week, twice as long as 10 years ago, with one in five of all adults spending as much as 40 hours a week on the web.

This is partly due to the rise in use by those aged 16 to 24, who average 34.3 hours a week on the internet. And for the first time, women are spending more time online than men, fueled by a rise in internet use by those aged 18 to 34 and the explosion in social media. They spend half an hour a week longer online than men of the same age.

Ofcom, which compiled the report, attributes a large part of the surge in time online to the rise of smartphones, which are now used by 78 percent of the population compared with just 17 percent in 2008, the year after the first iPhone was launched.

Britons are now so addicted to them that they check them every 12 minutes.

The report, A decade of Digital Dependency, says 40 percent of adults look at their phone within five minutes of waking up, rising to 65 percent of those aged under 35.

And 37 percent of adults checks their phones just before switching off the lights for bed, increasing to 60 percent of under 35s.

The younger generation is the most addicted. Those aged 15 to 24 on average spend four hours a day on the phone compared with 2 hours 49 minutes for all adults. The young also check their phones every 8.6 minutes, more frequently than any other age group.

While Ofcom highlights benefits such as keeping in touch with family, it cites stress and disruption to personal and family life.

"Some find themselves feeling overloaded when online or frustrated when they are not," said Ian MacRae, director of market intelligence.

Fifteen percent said smartphones made them feel they were always at work, 54 percent admitted they interrupted face-to-face conversations

with friends and family and 43 percent admitted spending too much time online.

More than a third felt stressed and "cut off" without their phone and 29 percent "lost without it" – while one in 10 said that giving it up was "liberating" or made them more productive.

But people treasure their smart phone more than any other device.

Almost half of adults said they would miss it more than TV (28 percent) and a desktop or laptop computer (10 percent) – a reversal of a decade ago, when 52 percent said the TV was more important than the mobile phone (13 percent). Among 16 to 24-year-olds, 72 percent now say the smartphone is the device they would miss most.

Yet we spend less time making phone calls on it than ever before. Total outgoing calls on mobiles dropped by 2.5 billion minutes (1.7 percent) in 2017 as people turned to WhatsApp and Messenger. Using it for phone calls is only considered important by

75 percent of smartphone users compared with 92 percent who say browsing the web is more important. It has, however, provoked a huge divide at mealtime, where using the phone was deemed inappropriate by 72 percent of 18-34s as against 90 percent of those aged over 55.

From the arising problems of these new demands, different companies also start to cope up to the changes. There are physical changes into the manufacturing a cellphone by making it more integrated, sturdy, and affordable by the masses. Cellphone became more complex and had additional functions every year. There are researchers among the top brands of manufacturing that studies the preferences of its customers, possible materials to be used in phones, patenting inventions that can be applied for a better the phone. The hardware became smaller that it might a pass a scientific discovery as the materials such as electric circuits continuously improves and scientists try to discover a new way of transmitting and storing information.

We reached the records that don't even look possible from a perspective of man a hundred years ago. It's an achievement for human kind to continuously develop in the fields of programming, engineering, and scientific studying. The largest of the companies in our current decade is involved in the internet. From the Coca Cola, it changes into an Amazon, on China, there's Alibaba. Those are the retailing companies that emerged on their profits and reached world-wide customers since the introduction of the internet.

Entertainment

Entertainment is also one of the industries that may arise in the future. More available content will be available via the internet. Websites and entertainment companies will continue to rise developing its way up to the top of the services. Entertainment plays the role of the distribution of advertisements from various merchandise. In our television, the same process applies to that of any websites. Television mostly has designated times where paid advertisements are being played. Televised advertisements cost a lot of money.

Cost of TV Advertising

For local television stations, advertisers can expect to pay anywhere from $200 to $1500 for a 30-second commercial. A 30-second spot broadcast nationally averaged around $123,000 as of 2016. The highest cost placements for Super Bowl Ads can go for upwards of $4 million.

Television advertising is priced on a Cost per Thousand (CPM) basis, which is the cost for your ad to be seen by 1,000 people. The CPM varies widely depending on a few different factors, a primary one being the city where you want your commercial to run.

To get ballpark costs for airing a 60 second TV commercial in different markets, we can look at estimates from the experts at Casual Precision, a media agency that specializes in offline advertising (TV and radio).

- City CPM (Adults 25-54)
- Los Angeles- $34.75

- New York City- $27.16
- Cleveland- $21.11
- Detroit- $18.36
- Kansas City- $14.36

Based on the estimates above, if you want to show your commercial in Los Angeles, and your local station tells you that 500,000 people will see your ad, then you can calculate a fair price by multiplying the CPM by the number of viewers (in thousands). In this example, the price for a 60-second ad in LA would be approximately 500 x $34.75 = $17,375.

In an advertisement, every second matters because it could cause large quantities of money. The cost of the advertisement on different platforms depends on the platform's reach. For example, the reason for the television's success since the popularity gain of it was because of its amount of audiences. Televisions are common in every household and television has access to different channels. Surveys rank the popularity of a channel and the channels have many audiences. Companies that sell appliances, tools, and etc. seek out for the method where they could reach their products. Since the television has by far the leading certain number of audiences, companies will make advertisements that will be played mostly on the channels where most of their target audience are watching.

However, the popularity of shows and channels on television might be outnumbered by online media. Online media producers are the competitors of the producers in television shows since audiences might start to slowly shift from television shows to the media. The reason that channels and local telecommunication channels gain popularity was that it's available. At the past, the reason where a channel from far countries couldn't reach the viewers of different countries was that there's a problem in the medium. Station and antennas that was common on every television can only be accessed if there's a good reception but now, the internet has offered us a new way of spreading shows. The television shows from the U.S. can now reach the viewers from the Philippines. Websites that are easily accessible that can also threaten local services.

Netflix

Netflix is one of the examples of a media platform and entertainment production that came up from the platform of the internet.

Netflix, Inc. is an American media-services provider headquartered in Los Gatos, California, founded in 1997 by Reed Hastings and Marc Randolph in Scotts Valley, California. The company's primary business is its subscription-based streaming OTT service which offers online streaming of a library of films and television programs, including those produced in-house. As of January 2019, Netflix had over 148 million paid subscriptions worldwide, including 60 million in the United States, and over 154 million subscriptions total including free trials. It is available almost worldwide except in mainland China (due to local restrictions) as well as Syria, North Korea, Iran, and Crimea (due to US sanctions). The company also has offices in the Netherlands, Brazil, India, Japan, and South Korea. Netflix is a member of the Motion Picture Association of America (MPAA).

Netflix's initial business model included DVD sales and rental by mail, but Hastings abandoned the sales about a year after the company's founding to focus on the DVD rental business. Netflix expanded its business in 2007 with the introduction of streaming media while retaining the DVD and Blu-ray rental service. The company expanded internationally in 2010 with streaming available in Canada, followed by Latin America and the Caribbean. Netflix entered the content-production industry in 2012, debuting its first series Lilyhammer.

Since 2012, Netflix has taken more of an active role as producer and distributor for both film and television series, and to that end, it offers a variety of "Netflix Original" content through its online library. By January 2016, Netflix services operated in more than 190 countries. Netflix released an estimated 126 original series and films in 2016, more than any other network or cable channel. Their efforts to produce new content, secure the rights for additional content, and diversity through 190 countries have resulted in the company racking up billions in debt: $21.9 billion as of September 2017, up from $16.8 billion from the previous year. $6.5 billion of this is long-term debt, while the remaining

is in long-term obligations. In October 2018, Netflix announced it would raise another $2 billion in debt to help fund new content.

Illegal sites

Illegal sites are the worst opponents of the legible company that produces and sells contents. Illegal sites come up in different ways by hiding through authorities and uploads movies, television series, and other media-related products where users can have it for free. It's a loss for creators since some people will choose to have their products by having it for free instead of buying it. People will prefer free products rather than buy them. However, illegal sites use tactics to gain money by not selling the product and letting the advertisers pay them so that their advertisements will appear on the website. These advertising cost cheaper as of 2019 compared to television advertisements. These advertisements could appear everywhere on any online platform. Programmers and other skillful I.T. experts use their knowledge to create ways so that the advertisement could go through. Blocking these sites isn't enough since they've come up in different strategies where they could insert an advertisement.

Since the method of how they commit these crimes is so complicated, law enforcement usually has to coordinate with government agencies, international partners, and private corporations. Oftentimes, cybercriminals use secure software to remain anonymous which are proxy servers that hide their location and route their communications through multiple countries in order to evade direct detection and commit the crimes in other countries where they cannot be prosecuted. In addition to these partnerships, they use a combination of traditional investigative and complicated digital forensics tactics.

Traditionally, cybercriminals have been lone wolves until recent years, where most cybercriminal activity is comprised of computer "gangs". The most popular types of attacks implemented by these gangs are phishing scams, ransomware, botnets and malware, such as Remote Access Trojans (RATs). Their motivation behind these attacks is often monetary and informational gain such as cyberespionage, identity fraud,

online extortion, credit card fraud and even international money laundering operations.

In 2013, the Internet Crime Complaint Center (IC3), which is a partnership between the Federal Bureau of Investigation (FBI) and National White-Collar Crime Center (NW3C), released their annual Internet Crime Report stating that the IC3 received 262,813 complaints of Internet crimes. Those crimes totaled $781,841,611 dollars in loss. This was a 48% increase in complaints since 2012, and surprisingly, the FBI estimates that the IC3 only receives complaints about 10% of all crimes on the Internet. The IC3 was founded in 2000 and houses the nation's largest archive of reported Internet crimes worldwide. Despite being a worldwide service, 90% of their complaints come from the United States.

The IC3 collects the data from these complaints and then forwards this data to the appropriate law enforcement agency. In addition to the NW3C working with the FBI to form the IC3, they offer a multitude of services to individual law enforcement agencies, including computer forensics, analytical research, and preparing materials and evidence for use in court. In addition to lending their investigative support to law enforcement cases, they also train thousands of officers yearly in computer forensics, cyber and financial crime investigations, and intelligence analysis. In 2013, the NW3C helped law enforcement gain 5.25 million dollars in criminal restitution, 4.81 million dollars in criminal fines and 452 months of sentences ordered.

In order to bring a case to a successful conclusion, it takes thousands of hours in research and cyber forensic analysis, which includes identifying, preserving, retrieving, analyzing and presenting data as a form of evidence. In order for this evidence to be admissible in court, the police need to obtain a warrant to seize the machines that are used in the crimes. In addition to all of this research, there are special technical skills that are needed when obtaining and analyzing the evidence, such as the ability to decrypt encrypted files, recover deleted files, crack passwords and more. For these more technically complicated tasks, specialized cybercrime units are assembled, which are groups of officers trained in

these skills. For law enforcement agencies alone, this would be an extremely tall order, even with the specialized task forces assisting, and that is where the efforts of the FBI and NW3C come into play.

If convicted, the sentencing and penalties vary. Hacking is considered a Federal offense since it is a form of fraud. The penalty can range anywhere from paying a small a fine to serving up to 20 years in prison, depending on the severity of the crime. Spam carries a minimum punishment of a fine up to $11,000. Additional fines can be added if the spammer violates policies and uses automated bots to collect email addresses. Jail time can even apply if the information collected is used to commit acts of fraud. Identity Theft can earn a sentence up to 5 years, and that time can be increased if the identities collected are used for acts of terrorism.

The Free Information Era

Internet is already a stockroom of information and it will continue to grow as the number of users are increasing. Many information is already free and some of this information that has indicators of their corresponding prices might become free in the future. Popular shows today will become just an ordinary show stacked on the compilation of other videos or there's a possibility that this information and media may cost more than it is today like a being on online bids as older works that are preserved tend to have a higher value. Some of the physical media that contain information like books are already having their digital copies online and some of these copies are free. Anyone that is computer literate that can access sites could find different records of digital copies of books. The same situation might happen to different media as they convert for digital copies.

According to Google's advanced algorithms, the answer is nearly 130 million books, or 129,864,880, to be exact. Google admits their definition is imperfect, but it's workable and similar to what ISBNs are supposed to represent. ISBN, or International Standard Book Numbers, are designed to be unique identifiers for books. Because they've only been around for

30-40 years and are used in most Western countries, they can't be used by themselves. That's why Google took data from the Library of Congress, WorldCat and others to find as many books as possible — one billion raw records by the company's count.

Here's where Google's engineering talent comes into play. The company used countless algorithms to determine and discard duplicates in an effort that required more than 150 pieces of metadata related to the world's books to evaluate whether each book record was unique or a duplicate of another. Analyzing these data resulted in 210 million unique books.

Next, Google subtracted the millions of microforms, audio recordings, maps, t-shirts, turkey probles (yes, turkey probes) and videos with IBSNs, arriving at a much more reasonable number of 146 million. Finally, the company removed 16 million government document volumes from their estimate, getting to the 129.8 million counts they announced today. Of course, publishers are issuing new books even as this post is being typed, so the company is constantly recalculating the book count.

While we don't have an army of software engineers and algorithms to back us up, my gut says this number is too low and the company has many more books to count from the annals of history. Still, this project to figure out the world's book supply is simply fascinating and could be useful for research and historical purposes for years to come.

500 Hours of Video Uploaded to YouTube Every Minute

By Mark Robertson

Predicting the future of online video is difficult, but that's not going to stop me from giving it a shot. What I do know is that Facebook, Twitter, Snapchat, and others are now proving to be formidable video platforms, despite YouTube's historic dominance in the space. On the heels of the Facebook Q3 earnings call, where Facebook announced they are generating 8 billion video views per day, Snapchat announced they are doing 6 billion views per day. Contrast that to the last reported numbers from YouTube when they announced in 2012 that the site gets 4 billion

views per day. YouTube has been somewhat vague about their current view numbers, choosing instead to focus on how much time people are spending and investing in the platform.

But there is one number YouTube has freely shared in the past 8 years: hours of video uploaded per minute. Almost exactly a year ago, YouTube announced that there were 300 hours of video content uploaded to the site each and every minute. And, at VidCon this past July, YouTube CEO Susan Wojcicki announced the newest figures – YouTube users now upload more than 400 hours of video to the site every minute. That's the equivalent of 1000 days' worth of video every hour. Good luck keeping up with your favorite creators.

It's no wonder users are finding it increasingly difficult to not only break into space but to hold on to the audience they have established in the first place. YouTube Red may alleviate some of that pressure temporarily, as users have the opportunity to spend more time watching videos and less on advertisements.

But how about today, 6 months from now, or a year from now. How much content might YouTubers be uploading by then? Using the numbers from the past 8 years + excel + some trendline forecasting, I'd like to make a bit of prediction.

Sometime during this month (November 2015), YouTube will likely realize around 500 hours of video content being uploaded to the site every minute. As of writing this post, the model above estimates 490 hours/minute. By YouTube's 11th birthday in May of next year, YouTube users will be nearing over 600 hours of video uploaded every minute and by this time next year, that number could top 700 hours of video uploaded every minute. Of course, Excel can't account for market indicators and if I were to model the numbers a different way, the site would be completely full of content and cease to allow uploads in March of 2017, so take these numbers with a grain of salt.

Ads

Advertising is a means of communication with the users of a product or service. Advertisements are messages paid for by those who send them and are intended to inform or influence people who receive them, as defined by the Advertising Association of the UK.

Advertising is always present, though people may not be aware of it. In today's world, advertising uses every possible media to get its message through. It does this via television, print (newspapers, magazines, journals, etc.), radio, press, internet, direct selling, hoardings, mailers, contests, sponsorships, posters, clothes, events, colors, sounds, visuals and even people (endorsements).

The advertising industry is made of companies that advertise, agencies that create the advertisements, media that carries the ads, and a host of people like copy editors, visualizers, brand managers, researchers, creative heads and designers who take it the last mile to the customer or receiver. A company that needs to advertise itself and/or its products hires an advertising agency. The company briefs the agency on the brand, its imagery, the ideals and values behind it, the target segments and so on. The agencies convert the ideas and concepts to create visuals, text, layouts, and themes to communicate with the user. After approval from the client, the ads go on air, as per the bookings are done by the agency's media buying unit.

Advertising plays a very important role in today's age of competition. Advertising is one thing which has become a necessity for everybody in today's day to day life, be it the producer, the traders, or the customer. Advertising is an important part. Let's have a look at how and where is advertising important.

Just imagine television or a newspaper or a radio channel without an advertisement! No, no one can any day imagine this. Advertising plays a very important role in customers life. Customers are the people who buy the product only after they are made aware of the products available in

the market. If the product is not advertised, no customer will come to know what products are available and will not buy the product even if the product was for their benefit. One more thing is that advertising helps people find the best products for themselves, their kids, and their family. When they come to know about the range of products, they are able to compare the products and buy so that they get what they desire after spending their valuable money. Thus, advertising is important for customers.

Why Is Advertising So Important to Business?

By Christina Hamlett; Reviewed by Michelle Seidel, B.Sc., LL.B., MBA; Updated February 05, 2019

Advertising serves a critical purpose by enabling sellers to effectively compete with each other for the attention of buyers. The primary objective of advertising is to get the word out that you have something exciting to offer, says George Felton, author of "Advertising: Concept and Copy." It can be anything from an upcoming entertainment event you're promoting, a new product line you're selling, a political campaign you're managing, the expansion of an existing platform of services or officially hanging out a shingle for your first business. Whether your promotion takes the form of print ads, commercials, billboards or handbills, the content adheres to the rules of journalism by identifying who, what, when, where and why.

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Promotion of Products and Services

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Creating Customer Awareness

Advertising helps to raise your target demographic's awareness of issues with which they may be unfamiliar as well as educate them on the related benefits of your product or service. A popular example of this is the health care industry. If, for instance, a consumer watches a television commercial in which someone describes aches and pains that are similar to those experienced by the viewer, the ad not only identifies a probable cause but suggests a potential remedy or treatment option to discuss with her doctor.

Comparisons with Competitors

Advertising invites your target audience to evaluate how your product or service measures up against your competitors, says Gerard Tellis, author of "Effective Advertising: Understanding When, How, and Why Advertising Works." Demonstrations of household cleaning products are a good example of this because they provide compelling visual evidence of which product does a faster and more effective job of tackling stubborn stains. Political ads are another example of how advertising serves up side-by-side comparisons of the candidates' qualifications and voting records for readers and viewers to make informed choices at the polls.

Retention of Existing Customers

An ongoing advertising campaign is essential in reminding your existing customers that you're still around, say, Kenneth Roman and Jane Maas, authors of "How to Advertise." In a troubled economy where so many shops, restaurants, and companies are going out of business, maintaining a strong presence through regular ads, fliers, postcards, events and a dynamic website is invaluable for long-term relationships. This also serves to attract new customers who may not have been in need of your

products or services when you first opened but are now pleased to have their memories jogged.

Boosting Employee Morale

When people ask your employees where they're working, the latter will likely feel better about their jobs if the reaction to their reply is, "Wow! I've heard a lot of great things about that store" instead of "Nope, never heard of it" or "Oh, are they still around?" Investing in an advertising plan keeps your business an active part of the conversational vocabulary and community buzz. This, in turn, gives your workers a sense of pride and emotional ownership in an enterprise that's generating positive feelings and name recognition.

Advertisement on channels

TV news: According to MediaPost, in 2015, Fox News averaged 16.52 minutes of commercials per hour. However, the other major networks' numbers were only slightly lower. In 2013, 30- and 15-second ads accounted for 53 percent and 44 percent respectively. This implies 48 ads per hour.

Drive-time radio: You likely listen. American commuters drive about 15 miles each way daily, for a total of about 46 minutes. A 2000 study referenced in a New York Times article indicated that after deregulation, commercials jumped from a dozen to about 20 per hour.

TV dramas/reality TV: According to Quora, programming runs 41 to 48 minutes on network TV. This translates to about 15 minutes of commercials per hour.

Advertising on the Internet

Surfing the internet: According to Menmood Hanif, quoted in a Huffington Post article, the average internet user gets 11,150 ads per month. There's an interesting logic involved in determining the number. It's based on how often certain software blocks a banner ad or pop-up ad from appearing.

Outlook: As above, you usually get an ad on the right-hand side of the screen when you access Outlook or every time you view a different e-mail.

Social media: How about 111 impressions per person per day? That's according to customerexperiencematrix addressing ad impressions from several different channels. That number might be low if the average Facebook user spends 50 minutes on the site daily, according to the New York Times.

Commuting to and from work: In a 2009 article, the British newspaper The Guardian indicated the average London commuter sees 130 ads during his or her 45-minute journey. The numbers would likely be similar for Americans taking public transportation in big cities.

Grocery shopping: According to Consumer Reports, between 1975 and 2008, the average number of products in a supermarket rose from 8,948 to almost 47,000. Do you see them all? Of course not, but you do see plenty as you hunt for the items you really want to buy.

Value of an advertisement

The promotional component of marketing includes your efforts to communicate your brand's value to targeted consumers. Since much of a typical company's marketing budget goes into advertising, it is especially important that you showcase the value of your company, products, and services through advertisements. Effective strategic planning and message tactics are critical.

You have no better tool at your disposal to show value than your product itself, assuming the quality is central to your brand. In a television commercial, a product demonstration is a great way to show value. With household cleaner, for instance, you can show someone using the product to emphasize ease-of-use and quality results. With a service-based solution, you can show someone providing the service to customers and incorporate positive customer testimonials.

Illustrations and imagery make up one of the two core elements of an ad. Your visuals serve to attract customer attention, project an image and communicate value. A particular color scheme helps consumers easily recognize your brand and its meaning. Other symbols, like the Coca-Cola polar bears, also contribute to brand reminders. Impacting pictures of your products in a print ad can also showcase distinct product features that impact the benefits the customer gets.

While visuals help, the copy in an advertisement really serves the purpose of explaining brand benefits. The words in print ads or dialogue or narrative in radio and television commercials are used to express brand benefits. You can explain why a particular vehicle drives better in the snow than competing models, for instance. You can also use your copy to identify your particular target consumers. You might say "For health-conscious consumers, our supermarkets offer the best combination of quality and wholesome foods." Value has components -- benefits and price. While your ad design and messages focus on the benefits side of the value equation, you can also introduce discounts and direct response copy to convey value in the form of a reduced price. "Save $10 with this coupon through November 30," for instance, may entice buyers on the fence to make a purchase while the deal is in effect.

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Advertisements adapt to the standards among other advertisements. For example, there is a different way of expression from the advertisements from the 1970s compared to advertisements in 2018. If a common advertisement from the 1970s will be shown today, it will not reach and not convince the viewer. On the other hand, it could even worsen the image of a product. Products like any other companies have their reputation. The reputation could depend on what kind of appeal it's

giving to audiences e.g. cheap, high quality, or social standards. The products could be identified by having any or none of those three indicators. Social standards are a product that has a symbol that affects the mindset of an individual by determining the social classes of the user. Two of those samples are Louis Vitton and Rolex. They've given an impact to the customers because of the portrayed social classes from their products. There are different reasons why some products are more known to contain and have value because of their impressions. From all the changes that happened in our civilization, the quality is always it's in competition as we try to become better, faster, and improve which is good way to surpass our achievements.

Louis Vuitton Company, commonly referred to as Loui Vuitton or shortened to LV, is a France fashion house and luxury retail company founded in 1854 by Loui Vuitton. The label's LV monogram appears on most of its products, ranging from luxury trunks and leather goods to ready-to-wear, shoes, watches, jewelry, accessories, sunglasses and books. Louis Vuitton is one of the world's leading international fashion houses; it sells its products through standalone boutiques, lease departments in high-end department stores, and through the e-commerce section of its website. For six consecutive years (2006–2012), Loui Vuitton was named the world's most valuable luxury brand. Its 2012 valuation was US$25.9 billion. The 2013 valuation of the brand was US$28.4 billion with revenue of US$9.4 billion. The company operates in 50 countries with more than 460 stores worldwide.

Since the 19th century, Louis Vuitton trunks have been made by hand. Contemporary Fashion gives a preview of the creation of the LV trunks: "The craftsmen line up the leather and canvas, tapping in the tiny nails one by one and securing the five-letter solid pick-proof brass locks with an individual handmade key, designed to allow the traveler to have only one key for all of his or her luggage. The wooden frames of each trunk are made of 30-year-old poplar that has been allowed to dry for at least four years. Each trunk has a serial number and can take up to 60 hours to make, and a suitcase as many as 15 hours."

Iconic bags of Louis Vuitton include the Speedy bag and Neverfull bags. Each season Louis Vuitton produces rare, limited edition bags that are generally only available by reservation through larger Louis Vuitton stores.

Many of the company's products utilize the brown Damier and Monogram Canvas materials, both of which were first used in the late 19th century. All of the company's products exhibit the eponymous LV initials. The company markets its product through its own stores located throughout the world, which allows it to control product quality and pricing. It also allows LV to prevent counterfeit products from entering its distribution channels. In addition, the company distributes its products through the company's own website, LouisVuitton.com.

Sponsorship

In tennis, Rolex is the official timekeeper of Wimbledon, the Australian Open, the US Open, and the French Open, all four Grand Slams. In golf, it is the official time keeper for two of the four majors, The Open Championship and the U.S. Open, as well as the PGA Tour and European Tour; the presenting sponsor for one of the five senior majors, The Senior Open Championship; and the official sponsor of the Women's World Golf Rankings.

Rolex is the title sponsor to the 24 Hours of Daytona, from which the Daytona model takes its name, along with the Rolex Sports Car Series. In 2013, Rolex became the official timekeeper to the FIA Formula 1 motor racing championship. Rolex has also been the official timekeeper to the Le Mans 24 Hours motor race since 2001. Ex-Formula 1 driver Sir Jackie Stewart has advertised Rolex since 1968. Others who have done so for some years include Arnold Palmer, Roger Penske, Jean Claude Killy, and Dame Kiri Te Kanawa. It is also the sponsor of the Rolex International Jumping Riders Club Top 10 Final competition.

Economic success and how it is related

At its core, Economics is the study of how humans make decisions in the face of scarcity. These can be individual decisions, family decisions, business decisions or societal decisions. If you look around carefully, you will see that scarcity is a fact of life. Scarcity means that human wants for goods, services and resources exceed what is available. Resources, such as labor, tools, land, and raw materials are necessary to produce the goods and services we want but they exist in limited supply. Of course, the ultimate scarce resource is time – everyone, rich or poor, has just 24 hours in the day to try to acquire the goods they want. At any point in time, there is only a finite amount of resources available.

Profiting using internet

There's a lot of ways that individuals can earn money via the internet. Aside from manufacturing, retailing industry is more likely to shift on the internet. Countless websites are available and the competition has never been hard since creating a known business online is hard. There are strategies that need to be considered for your online business to be seen such as countries or locations within the scope of your business and marketing and advertising online. It's hard to find the exact target audience on the internet since the ground of the internet hasn't fully furnished. Advertisements are everywhere, indistinct quantities of the audience, the unsupervised flow of popularity. It's hard to determine than putting a physical store on a street where the owner could see the quantities of people passing by and getting to the store. Online stores are hard to determine as they solely rely on advertisements which are also hard to maneuver on how many audiences could possibly see it. Clients are virtual and don't have any symbol of as a representation unless some terms are met e.g. quantities of sold products. The strategy for having an online product is less but it has the potential to reach every corner of the globe.

Business card site. For some small businesses, a simple one-page website with the name, description, contact info and maybe a logo may be all

that's needed. You can also include some product information, but the basic concept is a one-page website that represents your company or yourself.

Portfolio site. A portfolio site is similar to a business card website, except you'll have a section on the web page where you showcase your work and give people options for contacting you. Photography studios commonly use this type of website, so do design firms and other creative endeavors.

Product brochure site. This kind of website is an extension of your company's sales and marketing efforts. You'll be able to include goods and services your business offers for visitors to browse through. This website may include some pricing guidelines but doesn't enable customers to make purchases online.

E-commerce site. With an e-commerce site, you'll be able to showcase your products or services and allow visitors to buy them online. At first, the setup process for an eCommerce site may seem daunting, but there are many simplified methods and tools on the internet today that will enable you to sell online.

Select the right tool to build a website

With so many options available today, it can be difficult to choose the best instruments for the job. Choosing the best platform upon which you build your site will be one of the most important decisions you make. This choice is critical because you'll be tied to that platform for some time and it's never easy (or possible) to move your website from one platform to another.

To create your new website with the recommended WordPress platform, you'll need a domain name and web hosting, provider. Once you've selected the right platform for your site, you need to start thinking of a domain name. This domain will be yourname.com, yourbusiness.com or something similar. If you're marketing yourself, you'll want to use your first and last name. Think johnsmith.com. Even if you aren't promoting yourself, it's not a bad idea to get your name as a domain now, in case

you want to use it in the future. If you are marketing your business, you will want to use your company name. Think "yourbusiness.com."

Web hosting provider

After choosing a domain name, selecting reliable hosting services will be one of the most important decisions you make. To a large degree, the functionality and performance of your website will depend on your hosting provider. The host makes sure your site is available to potential readers 24/7, and it's where your files are stored online.

The wrong web host can cause many problems with your website. Just imagine choosing a mobile company that has no reception. Your web host is a major piece of the puzzle to maintaining a successful internet site. Therefore, it's crucial that you choose a reliable provider.

We highly recommend Bluehost, which powers over 2 million websites worldwide. And for our visitors only, they offer an exclusive deal that includes a FREE DOMAIN NAME and a 30-day money-back guarantee.

Bluehost web hosting company is recommended by WordPress.org as one "of the best and brightest of the hosting world".

WordPress has two zones: the front-end and the back-end.

The front end is what your visitors will see when they come to your website. Many of the tasks performed on the back-end will be visible on the front end, such as theme customizations, plugin functionality enhancements, and content publication. Actions can also be performed by you and your visitors directly from the front-end of the website, including commenting and social sharing.

The back end, also known as the WordPress dashboard, allows you to fully manage your site's content, community, functionality, and design. It's accessible only by users who have an account on your site. To access your WordPress dashboard, you need to type yourwebsite.com/wp-admin in the address bar of your browser and login using your WordPress username and password.

The dashboard

The Dashboard is the center of the website administration. It consists of three main parts left-side menu, top toolbar, and middle section. The left-hand column of your WordPress dashboard is where you'll find all of your admin options and where most of your creative effort will be focused.

Home takes you to your dashboard.

Updates show you any themes or plugins that need to be updated because a new version has been released. If WordPress itself is updated, you'll see a number in a red circle next to this menu item.

Media shows every photo, video, and file you've uploaded as part of a post or page. You can also upload files directly to the media section.

Pages are usually evergreen, static web pages. Examples include the "About Us" section on a company website or the "Services" page.

Comments are what visitors comment on in response to one of your posts or pages. If you have comments, a number inside a red circle will appear next to this menu item.

Appearance contains themes, design, and features related to the appearance of your site.

Plugins are extra mini programs that help increase the functionality of your site. You can use plugins to turn your website into a membership site, add social media sharing, eliminate comment spam or just to do something cool or fancy with your graphics.

Settings are used for just about anything. It's the first place you want to go when setting up a new site.

Popup

Popup is the generic term used for website popups. More specifically, they are the type of popup that appears on top of your current browser page. Popups can appear like a highlighted image; however, they can also extend from any side of a webpage including the top and bottom.

Popups used to appear in new browser windows or tabs, but these days they're typically modal, which means that they run as part of the page your visitor is browsing and cannot be blocked by popup blockers.

Pop-Under

A pop-under is a type of popup that appears in a new window underneath the web page you're currently browsing. They're less obtrusive since they open in a new window. However, they're also more easily blocked by popup blockers.

Time-Driven Popup

A time-driven popup appears after a visitor is on your site for a set amount of time, giving them some space to learn what your site is about before being hit with an ad or offer.

Behavior-Driven Popup

The behavior driven popup appears after a certain condition is met. For example, a behavior-driven popup may appear after a visitor gets to their third page on your site, scrolls 66 percent down one of your pages or opens a specific page.

Exit Popup

The exit popup shows itself when a visitor browses to a site different than yours. It behaves just like a regular popup and is a great opportunity to extend a special offer to entice visitors before they're gone.

While they offer integration with many of the top website hosting platforms, these tools can also be used on stand-alone websites. is like the Swiss-army knife of popup tools. Offering both a WordPress plugin and a standalone solution that can be plugged into any website, the tool enables you to easily build popups with your choice of behaviors and design. You can also choose from a gallery of pre-built templates. Another full-featured solution, Marketizator offers robust personalization features up to and including the ability to personalize based on a visitor's local weather. (Now that's what we call location-

based marketing!) To use the tool, you have to insert some JavaScript code at the beginning of your site's HTML code and then forget about it. Any changes you make over in Marketizator will take effect on your site. One highlight: The tool integrates with Google Analytic for in-depth reporting. As shown above, WisePops aims to make it easy to create and deploy website popups. The tool offers integration with many of the most popular website hosting platforms including WordPress, Drupal, and others. One nice touch: WisePops enables you to target your popups at visitors based on source, frequency, browser, and device (e.g. "only show to first-time visitors from Facebook").

Movies

Movies are a way of entertaining ourselves. People will go to the cinema, buy a ticket and watch. These processes have been there for a long time and it helped the entertainment industry to earn a profit. A lot of people today are still going to the cinema and watching the shows but there is a possibility that in the future, the number of people that would go to the cinema will lessen. The existence movies will not go extinct at least by technical ways but its quality may improve in the three-dimensional scale where viewers can feel that they're at the scene itself. Similar functions are available today but like the IMAX.

IMAX is a system of high-resolution cameras, film formats, film projectors and theaters known for having very large screens with a tall aspect ratio (of ~1.4:1) and steep stadium seating. Graeme Ferguson, Roman Kroitor, Robert Kerr, and William C. Shaw were the co-founders of what would be named the IMAX Corporation (founded in September of 1967 as Multiscreen Corporation, Limited), and they developed the first IMAX cinema projection standards in the late 1960s and early 1970s in Canada. Unlike conventional projectors, the film runs horizontally so that the image width is greater than the width of the film. When IMAX was introduced, it was a radical change in the movie-going experience. Viewers were treated to the scene of a gently curved giant screen more than seven stories tall (~75 feet in height, with the tallest being 117') and steep stadium seating that made for a visually immersive experience,

along with a sound system that was far superior to the audio at typical theaters in the years prior to the advent of THX. Some IMAX theaters have a dome screen geometry which can give the viewer an even more immersive feel. Over the decades since its introduction, IMAX evolved to include "3D" stereoscopic films, introduced in January 1998, and then began to proliferate with a transition away from the analog film into the digital era. Beginning in May of 1991, a visceral dimension of the movie experience was added by having the audience's seats mounted on a full-motion platform as an amusement park ride in IMAX ride film theaters. Switching to digital projection, introduced in July 2008, came at a steep cost in image quality, with 2K projectors having roughly an order of magnitude less resolution. Maintaining the same 7-story giant screen size would only make this loss more noticeable, and so many new theaters were being built with significantly smaller screen sizes, yet being marketed with the same brand name of "IMAX". These newer theaters with the much lower resolution and much smaller screens were soon being referred to by the derogatory name "LieMAX", particularly because the company did not make this major distinction clear to the public, going so far as to build the smallest "IMAX" screen having 10 times less area than the largest while persisting with the exact same brand name. Since 2002, some feature films have been converted into IMAX format for displaying in IMAX theatres, and some have also been (partially) shot in IMAX. By late 2017, 1,302 IMAX theatre systems were installed in 1,203 commercial multiplexes, 13 commercial destinations, and 86 institutional settings in 75 countries, with less than a quarter of these having the capability to show the 70mm film at the resolution of the large format as originally conceived.

IMAX uses a simple illusion to make the audience feel an almost panoramic view but there are still reasons on why it couldn't replace an ordinary viewed movie and it was because it's not appealing enough and costs more. By means of appeal, there are still flaws depending on the audiences because some may view the movie in a not satisfying way that could either be caused by the individual's vision.

Cinema's in malls would still be around for a long time but the entertainment industries may provide a better experience in viewing movies that have a similar concept to that of IMAX that couldn't be presented on illegal online websites. Its creation could be due to other innovations from the combinations of our current ideas like virtual reality. Online illegal websites may find a way of delivering the same experience to its audience by also adapting to new innovations. If it's given that the authorities can't suppress the illegal activities online, they will continue to distribute contents that steal possible profit from the entertainment industry. Movies are expected to improve on the quality of story and delivery. Animation companies will develop more ways for the faster creation of designs and elements of a movie. The software will be more integrated and products for editing and other tools for cinematography will be available on different platforms. The creation of the actual work of individuals will be guided by auto-generated tools such as A.I.'s or a program. The subscription of people to online platforms will continue to rise where they will be able to watch different services from the entertainment industry. Companies with funds will invest a great amount of time that might even take decades to finish some of the projects to build their reputation and to build a new record. Filming and creation of movies are like a discovery of science where individuals will make new developments that will be criticized by the viewers.

Today, some of us are seeking from all the developed movies. They establish standards and once the customers have seen it, they would only be satisfied if the work is on the same level or higher. It is important for companies to always ascertain the quality of their shows from its editing up to its content. Marketing of these movies will also be distributed just like how companies of locomotives and appliances use media to introduce their work to the masses.

Business Digital

Businesses will be more enveloped by an online platform. Investors don't need to go to places since meetings could be done online. Website platforms for this functionality that will also provide privacy since a

business strategy must always be kept from their competitors. Investing has always been a way that is available to clients who wanted their money to grow. It is the startup for most of the starting companies to have the funds that they needed so that they could earn a profit. Before discussing the hypothetical future of business and other financial terms, it is important to know how these services function and what they are all about.

Banking is an industry that handles cash, credit, and other financial transactions. Banks provide a safe place to store extra cash and credit. They offer savings accounts, certificates of deposit, and checking accounts. Banks use these deposits to make loans. These loans include home mortgages, business loans, and car loans.

Banking is one of the key drivers of the U.S. economy. Why? It provides the liquidity needed for families and businesses to invest in the future. Bank loans and credit mean families don't have to save up before going to college or buying a house. Companies use loans to start hiring immediately to build for future demand and expansion.

Banks are a safe place to deposit excess cash. The Federal Deposit Insurance Corporation (FDIC) insures them. Banks also pay savers interest rates or a small percent of the deposit.

Banks can turn every one of those saved dollars into $10. They are only required to keep 10 percent of each deposit on hand. That regulation is called the reserve requirement. Banks lend the other 90 percent out. They make money by charging higher interest rates on their loans than they pay for deposits.

Investing: The act of committing money or capital to an endeavor with the expectation of obtaining an additional income or profit.

Legendary investor Warren Buffett defines investing as "... the process of laying out money now to receive more money in the future." The goal of investing is to put your money to work in one or more types of investment vehicles in the hopes of growing your money over time.

Investing is really about "working smarter and not harder." Most of us work hard at our jobs, whether for a company or our own business. We often work long hours, which requires sacrifice and adds stress. Taking some of our hard-earned money and investing for our future needs is a way to make the most of what we earn.

Investing is also about making priorities for your money. Spending is easy and gives instant gratification—whether the splurge is on a new outfit, a vacation to some exotic spot or dinner in a fancy restaurant. All of these are wonderful and make life more enjoyable. But investing requires prioritizing our financial futures over our present desires.

Investing is a way to set aside money while you are busy with life and have that money work for you so that you can fully reap the rewards of your labor in the future. Investing is a means to a happier ending.

There are many different ways you can go about investing, including putting money into stocks, bonds, mutual funds, ETFs, real estate (and other alternative investment vehicles), or even starting your own business.

Every investment vehicle has its positives and negatives, which we'll discuss in a later section of this tutorial. Understanding how different types of investment vehicles work is critical to your success. For example, what does a mutual fund invest in? Who is managing the fund? What are the fees and expenses? Are there any costs or penalties for accessing your money? These are all questions that should be answered before making an investment. While it is true there are no guarantees of making money, some work on your part can increase your odds of being a successful investor. Analysis, research and even just reading up on investing can all help.

Now that you have a general idea of what investing is and why you should do it, it's time to learn about how investing lets you take advantage of one of the miracles of mathematics: compound interest.

Computer Literacy

It would much be easier for us to not physically going to places and achieve the same goals in only a short matter of time. All that everyone needed is an awareness of how these things functions and to be computer literate.

Computer literate is a term used to describe individuals who have the knowledge and skills to use a computer and other related technology. This term is usually used to describe the most basic knowledge and skills needed to operate software products such as an operating system, a software application, or an automated Web design tool. Computer literacy is becoming an increasingly essential skill.

Computer literacy involves learning how to access information and perform basic operations on a computer. It can be understood in the same way that traditional literacy applies to print media. However, because computers are much more advanced than print media in terms of access, operation and overall use, computer literacy includes many more types of cognitive and technical skills, from understanding text and visual symbols to turning devices on and off or accessing parts of an operating system through menus.

There are many different specific skills involved in computer literacy. Higher level skills like coding, HTML Web development, and network administration are not usually referred to as computer literacy. Some basic maintenance of a computer, or use of products like the Microsoft Office suite, may fall into this category of knowledge. Computer literacy courses may offer instruction on how to use Microsoft Office, how to use an operating system and how to use an Internet browser. Those with higher level skills, like programmers, are sometimes called "power users."

The world that was living today and the world of a hypothetical future doesn't necessarily mean a focus only on computers to become inter-technological literate. It is also important to know the different uses of hardware that have something to do to the internet. Functionalities from the computers will not stay on the computer but it will spread among

different gadgets. Different professional software is having their different versions with almost the same access and use to different gadgets. It is expected to improve on the following years and the functionality of this software will improve and become closer to its counterparts to the computer.

Inter-technological Literate

Inter-technological literate derives from the term of internet and technology where it means literacy to both internets via technology. It is the awareness of someone to be aware, access, and use the internet across different platforms.

Business Gains

Lots of business entities will be affected by technological improvement and not all business can adapt to having an online representation. Many businesses will be able to shift their accommodation will have more than customers than it used to be but every gain of a corporation is a loss to its competitors. Other business companies will have a better creation of the product but since the availability of tools will be distributed to individuals, some companies will slowly get snatched of viewers or audiences.

As Fletcher/CSI reflects on the past 30 years of advising the world's leading companies, it is interesting to analyze how the Fortune 500 list has changed since our founding in 1988. Today, we focus on providing competitive intelligence and strategy consulting services to technology, life sciences, finance & insurance, and CPG companies. However, in 1988, we primarily served clients in the manufacturing/industrial and financial services sectors. To see a snapshot of industry changes over the last three decades, we looked at the top 30 Fortune 500 companies in both 1988 and the most recent list (published by Fortune.com in 2017) to see how the lists compared. As expected, the top companies on the Fortune 500 list today and 30 years ago represent the major industries that we have advised during the respective eras. Here are a few other observations that stood out after comparing the lists:

1. Approximately 25% of the top 30 companies in 1988 are part of the top 30 list of 2017, including Exxon Mobil, General Motors, AT&T, Ford Motor, General Electric, Chevron, and Boeing.

2. In 1988, the top 30 companies were dominated by the oil/petroleum, gas, and automotive industries.

3. The 2017 top 30 list is represented by more industries than the 1988 list, with an observed increase in companies from the healthcare, technology, insurance, grocery, and retail sectors.

4. In 2017, healthcare-related companies dominate the top 30, but not a single healthcare player was included in the top 30 in 1988.

5. Several of the energy companies that were part of the top 30 list in 1988 remain in the top 30 in 2017, but there has been significant M&A activity in this space over the past few decades, e.g., Mobil and Exxon merger; Chevron acquisition of Texaco.

6. Revenues achieved by the top company in 2017 (Walmart) are almost five times greater than revenues gained by the top company in 1988 (General Motors).

7. The majority of the top 30 companies in 1988 still exist today in 2017.

Business loss

The media which is part of these businesses will also be affected. The Radio stations that used to have the greatest number of clients will be downgraded and the focus of people will shift into new entities. Entities like Facebook, Twitter, and Instagram. Facebook is developing different functions to add different access for its users using different platforms. There are more entertaining contents on social media than traditional media like the radio. Although there are still audiences who prefer radio, newer generations will first be introduced on the media that is trending that can only be found on the Internet-related platforms. It is expected that the users of radio will have lesser demand over the following year.

Obsolete Technology

Computer peripherals are rendered obsolete when current technology does not support product repair or remanufacture. Obsolete products, like central processing units (CPU), memory chips and network interface cards (NIC) cannot be remanufactured because advanced technologies supersede original product manufacturing capabilities. Because of performance, price and functionality issues, product redevelopment is not always cost-effective.

Additionally, service providers do not always provide support for older products, rendering them obsolete. Mobile wireless technology is a classic example.

Organizations may deliberately market products subject to rapid obsoletion to generate long-term revenue, also known as planned obsolescence. For example, a manufacturer may design a device that will become obsolete within a year of purchase, which forces consumers to replace equipment on a more frequent basis.

Obsolete computer equipment is usually recycled to recover precious metals and reusable plastics.

DVD (an abbreviation of the digital versatile disc) is a digital optical disc storage format invented and developed in 1995. The medium can store any kind of digital data and is widely used for software and other computer files as well as video programs watched using DVD players. DVDs offer higher storage capacity than compact discs while having the same dimensions.

Prerecorded DVDs are mass-produced using molding machines that physically stamp data onto the DVD. Such discs are a form of DVD-ROM because data can only be read and not written or erased. Blank recordable DVD discs (DVD-R and DVD+R) can be recorded once using a DVD recorder and then function as a DVD-ROM. Rewritable DVDs (DVD-RW, DVD+RW, and DVD-RAM) can be recorded and erased many times.

DVDs are used in DVD-Video consumer digital video format and in DVD-Audio consumer digital audio format as well as for authoring DVD discs written in a special AVCHD format to hold high definition material (often in conjunction with AVCHD format camcorders). DVDs containing other types of information may be referred to as DVD data discs.

Fax (short for facsimile), sometimes called telecopying or telefax (the latter short for telefacsimile), is the telephonic transmission of scanned printed material (both text and images), normally to a telephone number connected to a printer or other output device. The original document is scanned with a fax machine (or a telecopier), which processes the contents (text or images) as a single fixed graphic image, converting it into a bitmap, and then transmitting it through the telephone system in the form of audio-frequency tones. The receiving fax machine interprets the tones and reconstructs the image, printing a paper copy. Early systems used direct conversions of image darkness to audio tone in a continuous or analog manner. Since the 1980s, most machines modulate the transmitted audio frequencies using a digital representation of the page which is compressed to quickly transmit areas which are all-white or all-black.

Betamax (also called Beta, as in its logo) is a consumer-level analog-recording and cassette format of magnetic tape for video. It was developed by Sony and was released in Japan on May 10, 1975. The first Betamax device introduced in the United States was the LV-1901 console, which included a 19-inch (48 cm) color monitor, and appeared in stores in early November 1975. The cassettes contain 0.50-inch-wide (12.7 mm) videotape in a design similar to that of the earlier, professional 0.75-inch-wide (19 mm), U-matic format. Betamax is obsolete, having lost the videotape format war to VHS. Despite this, Betamax recorders would not be discontinued until 2002, while new Betamax cassettes were available until March 2016, when Sony stopped making and selling them.

Bitcoin

Bitcoin (₿) is a cryptocurrency, a form of electronic cash. It is a decentralized digital currency without a central bank or single administrator that can be sent from user to user on the peer-to-peer Bitcoin network without the need for intermediaries.

Transactions are verified by network nodes through cryptography and recorded in a public distributed ledger called a blockchain. Bitcoin was invented by an unknown person or group of people using the name, Satoshi Nakamoto, and released as open-source software in 2009. Bitcoins are created as a reward for a process known as mining. They can be exchanged for other currencies, products, and services. Research produced by University of Cambridge estimates that in 2017, there were 2.9 to 5.8 million unique users using a cryptocurrency wallet, most of them using bitcoin

Bitcoin has been criticized for its use in illegal transactions, its high electricity consumption, price volatility, thefts from exchanges, and the possibility that bitcoin is an economic bubble. Bitcoin has also been used as an investment, although several regulatory agencies have issued investor alerts about bitcoin.

Units

The unit of account of the bitcoin system is a bitcoin. Ticker symbols used to represent bitcoin are BTC and XBT. Its Unicode character is ₿. Small amounts of bitcoin used as alternative units are millibitcoin (mBTC), and satoshi (sat). Named in homage to bitcoin's creator, a satoshi is the smallest amount within bitcoin representing 0.00000001 bitcoins, one hundred millionth of a bitcoin. A millibitcoin equals 0.001 bitcoins; one thousandth of a bitcoin or 100,000 satoshis.

Price and volatility

The price of bitcoins has gone through cycles of appreciation and depreciation referred to by some as bubbles and busts. In 2011, the value of one bitcoin rapidly rose from about US$0.30 to US$32 before returning

to US$2. In the latter half of 2012 and during the 2012–13 Cypriot financial crisis, the bitcoin price began to rise, reaching a high of US$266 on 10 April 2013, before crashing to around US$50. On 29 November 2013, the cost of one bitcoin rose to a peak of US$1,242. In 2014, the price fell sharply, and as of April remained depressed at little more than half 2013 prices. As of August 2014, it was under US$600. During their time as bitcoin developers, Gavin Andresen and Mike Hearn warned that bubbles may occur.

According to Mark T. Williams, as of 2014, bitcoin has volatility seven times greater than gold, eight times greater than the S&P 500, and 18 times greater than the US dollar.

Beware of These Five Bitcoin Scams

By Joe Liebkind

Bitcoin's meteoric rise in prices over the last year has awakened mainstream interest in the original cryptocurrency. With prices looking bullish once again, investing in bitcoin has never been as popular, but the rise in interest has not been without consequences. One of the downsides of new investors entering the market is the increase in the number of scams, frauds, and stories of retail investors who lose their coins to shady ventures. From ICO scandals to wallet theft and fraud, regular consumers can fall prey to crime easily.

It may seem as though it's the wild west for investors, but it doesn't have to be. While there are certainly risks in the market, the opportunities may be irresistible for some. However, being cautious is always a must, and there are clear signs of scams that investors can look for. By avoiding these traps, users can better their chances for success and protect their investments. These are some of the most common scams, and how they can be avoided.

Hardware Wallet Theft

For users who are concerned with security and privacy, a hardware wallet – a physical device that stores their private keys – is an increasingly

popular option. Usually, as small as key-chain USB drives, these wallets offer an offline way to help crypto investors protect their bitcoin even further. However, there have been reports that some of them have built-in vulnerabilities that open them to hackers that could easily steal all a user's holdings.

This is far from the only issue, however. According to Ofir Beigel, owner of 99Bitcoins.com, "one scam entails selling hardware wallets to users with a 'pre-configured' seed phrase hidden under a scratch card. The new user is told that he should scratch the card ... and set up the wallet with the compromised seed." This creates a backdoor that allows hackers to simply drain funds once a wallet is activated. These scams are becoming more common, but they can easily be avoided by only accepting wallets from trusted sources.

Exchange Scams

Despite their decentralized nature, most cryptocurrencies are still bought and sold at exchanges. While this makes it easier to find the coins investors desire, there is still no regulatory body overseeing these exchanges in many countries. Thus, many investors have been left penniless when the exchanges they signed up for turn out to be traps. In December, several South Korean exchanges were exposed, leading to promises of stiffer regulations by the country's authorities.

These scams are not hard to spot but can be costly if not avoided. One of the biggest red flags is the promise of unrealistic prices. Exchanges that promise heavy discounts on bitcoin use this strategy to lure in unsuspecting victims. Additionally, users can check exchanges' URLs. Web addresses should always begin with HTTPS, a sign that traffic is encrypted. Visiting unsecured websites is a bad idea, but alert investors can avoid losing thousands by looking for the right signs.

Fake ICOs

One of the best results of the cryptocurrency boom has been the rise of the initial coin offering as a way for companies to raise capital. With thousands of new blockchain-based companies entering the market with

unique ideas and exciting projects, users can now back their favorite businesses easily. However, this massive explosion of ICO opportunities has inevitably raised the specter of fraud.

There are several ways scammers can separate investors from their bitcoin. One popular method involves creating fake websites that resemble ICOs' and instructing users to deposit coins into a compromised wallet. Other times, it's the ICOs themselves at fault. Centra Tech, for example, a blockchain venture backed by several celebrities, has been sued in the US. The company stands accused of portraying fake team members, misleading investors, and lying about their products. The best way to avoid these scams is close research that involves picking apart the white paper, reviewing the team behind the venture, and key board members or investors. Before making any investment, it's vital to learn as much about the company as possible to avoid any unpleasant surprises.

Cloud Mining Schemes

Mining is the only way to extract new bitcoins without buying or exchanging them, but it has become an incredibly resource-intensive activity. Due to the unique way new coins are mined, it takes massive amounts of processing power and electricity, and thus money, to mine a coin. However, many companies now offer regular users the ability to rent some server space to mine coins for a set rate.

Some companies offer "lifetime contracts" that keep costs the same and supposedly offer outstanding returns. However, as the difficulty of mining increases, the same investment will return smaller amounts each time. Moreover, some companies make bold claims regarding their returns without being transparent about the true costs and diminishing returns. Others simply operate Ponzi schemes that can lead to massive losses. It's vital to look into opportunities and understand the risks and costs associated with mining before investing.

Multi-Level Marketing

Even in the digital spheres, many multi-level marketing schemes have emerged that offer naïve investors excellent 'opportunities' for progressively larger sums of bitcoin. MLMs, as they're known, are predicated on offering quick returns, but actually, involve taking more money for the promise of even higher profits.

One major company that has been repeatedly outed is OneCoin, whose owners were implicated in several other shady operations. The company offered investors massive earnings, and even luxury goods and perks for paying more. However, there is little information on the company outside of their own site, and users have left scathing reviews online. It's important to always pay attention to a company's fine print and ensure that their claims are feasible and real. Avoiding these scams early can protect investors' wallets.

With the current craze, being vigilant and doing one's due diligence are a must before investing in bitcoin. The market is also showing signs of maturing, leading to better transparency and clearer rules. Regardless, any smart investor's first step should always be careful research to ensure their investments are always winners.

Illuminating the Dark Web

By Robert Gehl

In the wake of recent violent events in the U.S., many people are expressing concern about the tone and content of online communications, including talk of the "dark web." Despite the sinister-sounding phrase, there is not just one "dark web." The term is actually fairly technical in origin and is often used to describe some of the lesser-known corners of the internet. As I discuss in my new book, "Weaving the Dark Web: Legitimacy on Freenet, Tor, and I2P," the online services that make up what has become called the "dark web" have been evolving since the early days of the commercial internet—but because of their technological differences, are not well understood by the public, policymakers or the media.

As a result, people often think of the dark web as a place where people sell drugs or exchange stolen information—or as some rare section of the internet, Google can't crawl. It's both, and neither, and much more.

SEEKING ANONYMITY AND PRIVACY

In brief, dark websites are just like any other website, containing whatever information its owners want to provide, and built with standard web technologies, like hosting software, HTML and JavaScript. Dark websites can be viewed by a standard web browser like Firefox or Chrome. The difference is that they can only be accessed through special network-routing software, which is designed to provide anonymity for both visitors to websites and publishers of these sites.

Websites on the dark web don't end in ".com" or ".org" or other more common web address endings; they more often include long strings of letters and numbers, ending in ".onion" or ".i2p." Those are signals that tell software like Freenet, I2P or Tor how to find dark websites while keeping users' and hosts' identities private.

Those programs got their start a couple of decades ago. In 1999, Irish computer scientist Ian Clarke started Freenet as a peer-to-peer system for computers to distribute various types of data in a decentralized manner rather than through the more centralized structure of the mainstream internet. The structure of Freenet separates the identity of the creator of a file from its content, which made it attractive for people who wanted to host anonymous websites.

Not long after Freenet began, the Tor Project and the Invisible Internet Project developed their own distinct methods for anonymously hosting websites.

Today, the more commonly used internet has billions of websites—but the dark web is tiny, with tens of thousands of sites at the most, at least according to the various indexes and search engines that crawl these three networks.

A More Private web

The most commonly used of the three anonymous systems is Tor – which is so prominent that mainstream websites like Facebook, The New York Times and The Washington Post operate versions of their websites accessible on Tor's network. Obviously, those sites don't seek to keep their identities secret, but they have piggybacked on Tor's anonymizing web technology in order to allow users to connect privately and securely without governments knowing.

In addition, Tor's system is set up to allow users to anonymously browse not only dark websites but also regular websites. Using Tor to access the regular internet privately is much more common than using it to browse the dark web.

Moral Aspect of Dark Browsing

Given the often-sensationalized media coverage of the dark web, it's understandable that people think the term "dark" is a moral judgment. Hitmen for hire, terrorist propaganda, child trafficking and exploitation, guns, drugs, and stolen information markets do sound pretty dark.

Yet people commit crimes throughout the internet with some regularity—including trying to hire killers on Craigslist and using Venmo to pay for drug purchases. One of the activities often associated with the dark web, terrorist propaganda, is far more prevalent on the regular web.

Defining the dark web only by the bad things that happen there ignores the innovative search engines and privacy-conscious social networking – as well as important blogging by political dissidents.

Even complaining that dark web information isn't indexed by search engines misses the crucial reality that search engines never see huge swaths of the regular internet either—such as email traffic, online gaming activity, streaming video services, documents shared within corporations or on data-sharing services like Dropbox, academic and news articles behind paywalls, interactive databases and even posts on social media

sites. Ultimately, though, the dark web is indeed searchable as I explain in a chapter of my book.

Thus, as I suggest, a more accurate connotation of "dark" in "dark web" is found in the phrase "going dark"—moving communications out of clear and public channels and into encrypted or more private ones.

Managing Anxieties

Focusing all this fear and moral judgment on the dark web risks both needlessly scaring people about online safety and erroneously reassuring them about online safety.

For instance, the financial services company Experian sells services that purport to "monitor the dark web" to alert customers when their personal data has been compromised by hackers and offered for sale online. Yet to sign up for that service, customers have to give the company all sorts of personal information—including their Social Security number and email address—the very data they're seeking to protect. And they have to hope that Experian doesn't get hacked, as its competitor Equifax was, compromising the personal data of nearly every adult in the U.S.

It's inaccurate to assume that online crime is based on the dark web—or that the only activity on the dark web is dangerous and illegal. It's also inaccurate to see the dark web as content beyond the reach of search engines. Acting on these incorrect assumptions would encourage governments and corporations to want to monitor and police online activity—and risk giving public support to privacy-invading efforts.

The 'deep web' maybe 500 times bigger than the normal web. Its uses go well beyond buying drugs

By Saheli Roy Choudhury, Arjun Kharpal

The so-called dark web, a portion of the hidden internet, is usually associated with a host of illegal activities including the buying and selling of drugs, firearms, stolen financial data and other types of valuable information. The selling points? Total anonymity.

That may sound nefarious, but some experts argue that the dark web is also useful in circumventing internet censorship.

While most people spend their time online on what is known as the surface web — the portion of the World Wide Web that can be accessed with standard browsers and search engines — it has become relatively easy for anyone to access the dark web.

The dark web is a small subset of the deep web, which is part of the internet that is not found using search engines. That includes many websites that require users to log in with a username and password, and the deep web is estimated to be about 400 to 500 times larger than the common internet. The dark web is relatively smaller — it is made up of a series of encrypted networks that is able to hide users' identities and locations and can only be accessed with special software.

The most popular of those networks is called TOR, or The Onion Router, which was developed initially for government use before it was made available to the general public.

"When people typically refer to the dark web, a lot of the time they're referring to a portion of the internet that's accessible using an anonymous browsing network called TOR," Charles Carmakal, a vice president at cybersecurity firm FireEye, told CNBC's "Beyond the Valley" podcast.

One of the primary functions of the TOR network is that it allows users to access ".onion" pages, which are specially encrypted for maximum privacy.

Carmakal explained that TOR also lets users connect to normal websites anonymously so that their internet service providers cannot tell what they're browsing. Similarly, the websites will not be able to pinpoint the location of the users browsing their pages.

On the TOR browser, the connection requests are re-routed several times before reaching their destination. For example, if a user in Singapore is trying to connect to a website in London, that request on a TOR browser

could be routed from Singapore to New York to Sydney to Cape town to, finally, London.

According to Carmakal, a service like TOR is a useful tool for many users to bypass state censorship and crackdowns on the internet. With it, he said, they can communicate with the free world without any repercussions. The service is also used by journalists and law enforcement, he said.

Still, the term dark web today is commonly associated with illegal activities. In recent years, a number of high-profile marketplaces on the dark web were taken down for selling drugs and other contraband, including Silk Road, AlphaBay and Hansa.

Law enforcement agencies around the world have been working hard to take down communities on the dark web that criminals use, according to James Chappell, co-founder of a London-based threat intelligence company Digital Shadows.

Hansa, for instance, was taken down by the Dutch national police last year after authorities seized control of the marketplace. In a press release, the officials said they had collected around 10,000 addresses of buyers on the marketplace and passed them onto Europol, the European Union's law enforcement body.

"It was very interesting to see the effect this had. Initially, we thought that lots of websites would come back online, just replacing Hansa as soon as it was taken down," Chappell told, "Beyond the Valley." Instead, a lot of the users moved away from TOR and onto message-based services like Discord and Telegram, he said.

Bitcoin Statistics

Many have wondered if bitcoin could be the next global currency. While you may have heard the term bitcoin thrown around, it is understandable if you're still fuzzy on the intricacies of this digital payment system. Before attempting to answer the question posed above, it is important to understand exactly what a bitcoin is.

Bitcoin is a relatively new technology; in fact, it is less than a decade old. Created back in 2007, bitcoin is the world's first decentralized virtual form of currency. As of the fall of 2016, it is now an accepted form of payment in dozens of countries around the globe. As more nations continue to adopt this groundbreaking technology, it increases the chances that bitcoin will, in fact, become the next global form of currency and one of the few not tied to a specific nation's economy or a banking system.

Experts estimate that in just three years, by the year 2019, there will be five million active bitcoin users. Of these five million, fifty-one percent of users are expected to be outside the United States.

These are impressive statistics; however, consider an even more impressive estimation: bitcoins are expected to be the world's sixth largest reserve currency by the year 2030.

That said, just as currency and exchange rate fluctuate constantly depending on external factors such as politics, current economic conditions, stock market trading and various transaction trends, bitcoins react in a similar fashion. So far this year (2016) bitcoin achieved a market high of $467.80, and a market low of $358.77.

In mid-2016, Recorded Future noticed members of the cybercriminal underground discussing their growing dissatisfaction with Bitcoin as a payment vehicle, regardless of their geographical distribution, spoken language, or niche business. Recorded Future conducted an extensive analysis on 150 of the most prominent message boards, marketplaces, and illicit services, which unexpectedly revealed that Litecoin is surpassing other cryptocurrencies in preference, and is currently the second most dominant coin on the dark web after Bitcoin.

To understand and anticipate any upcoming shift in the next six to 12 months, Recorded Future analyzed 150 of the most prominent message boards, marketplaces, and illicit services. Contrary to what we learned by observing the chatter between criminals during the past several weeks, Bitcoin remains the gold standard in the dark web, with all vendors accepting it as a payment, and Litecoin emerged as the second most

popular currency, with 30 percent of all vendors who implemented alternative payment methods willing to accept it. Dash is closely trailing Litecoin with 20 percent of the market. Unexpectedly, Bitcoin Cash was the third most common cryptocurrency with 13 percent of vendors trusting it as a payment method.

Litecoin is the second oldest cryptocurrency after Bitcoin. It was introduced in 2011 and was intended to be a superior version of Bitcoin. Litecoin's core technology is almost identical to Bitcoin's, but improved, allowing it to conduct transactions faster, resulting in significantly lower commission fees and a larger number of coins being mined. In the seven years since its inception, Litecoin has been able to piggyback off an extensive infrastructure of Bitcoin. However, with all its advantages, Litecoin does not offer any additional security to its owner. Like Bitcoin, Litecoin transactions are entirely transparent. Further analysis not only showed that Eastern European criminals are more proactive in the implementation of alternative payment options compared to the English-speaking communities but also which currency is the most preferred for each group. While Russians favored the accessibility and convenience of Litecoin, with a more diverse and established supporting infrastructure, English-speaking members seem to be more security-oriented, choosing Monero for its built-in safety features.

Adaptation and why it's important

Adaptation is a necessary process in order to maintain stability or to gain something. Different functionalities were added and more tolerance is being made. Just as how it applies in the biological world, the same principle applies in our modern society. Different schools are having a different way of enriching the students by the use of technology. Some allow the students to have their own laptops while others have gadgets where they could read. Different websites are also available for learning. One example of is Edmodo which is a website and that has a community that allows a free interaction via online between educators and students.

Abstract and Conclusion from Study on "Student Preference towards the Use of Edmodo as a Learning Platform to Create Responsible Learning Environment"

From Kandappan Balasubramaniana, V.Jaykumar, Leena Nitin Fukey

Edmodo is a free and secure educational learning network used to provide a simple way for teachers to create and manage an online classroom community as well as enables students to connect and work with their classmates' teachers anywhere and anytime. The purpose of this study was to determine the student preference towards the use of information and communication technology in the form of academic networking site-Edmodo on student engagement and responsible learning. This paper seeks to evaluate whether Edmodo is an authentic teaching strategy that should be employed by more teachers hoping to encourage a student-centered technology-driven learning environment where students are actively engaged and practicing views of responsible learning. The study was conducted at a private university in Selangor district in Malaysia. The participants were 285-degree students, out of which 249 students were taken for the analysis as they fall under the Edmodo users. This research study used a quantative method and a research designed survey was administered to gather questions with answers associated with a 5-point Likert scale ranging from strongly agree to disagree strongly. The survey question was designed using the RASE (Resources, Activity, Support, and Evaluation) model to support the student preference on using the Edmodo in the teaching and learning arena. The survey was developed using Google drive and was shared among the students through email and other sources. The result of the study shows that incorporating Edmodo encourages both student engagement and responsible learning when particular Edmodo features are employed. The result through the analysis supports that the students' preference of using Edmodo is mainly towards for the resources, support, and communication such as forum, discussions and also for online activities. Students find Edmodo a wonderful and user-friendly social learning platform that enables them to enjoy working on an online class.

The results of this study may inspire teachers to reappraisal the way they conduct their classes.

The study filled some knowledge gaps in the largely unexplored Edmodo territory as a learning platform among the students at University level. Edmodo as a learning platform that has some distinct advantages over the traditional classroom environment. The advantages lie in that Edmodo can foster the combined knowledge creation of a group better than individuals diaries and discussion, because Edmodo facilities sharing ideas beyond the classroom via an online platform that allows readily available access at random times to continue such discussion, online quiz, sharing folder options and mainly connection to the global experts of various disciplines. This study supports through the finding that student's preference on the use of Edmodo as a learning platform is strongly agreed at all levels of RASE pedagogical model and also to create a responsive learning environment through online activities carried out on their own self-paced learning styles. Assuming continuous growth of the social network, Edmodo becomes a phenomenon that captures the university student of a current generation because most of the student and also teachers shared that it is very user-friendly. The implementation of Edmodo by educators as a learning platform for the students could become a powerful medium that extends the responsible learning environment beyond the classroom.

There are also online libraries that make the database of resources much easier to have within our grasp. Some contain even older records of limited books that are not available for print in our physical world. Although some of these are illegal, various opportunities could arise from the examples of having an online database.

Quipper

Quipper helps teachers manage classes, send assignments to their students and get analytics on the performance of their students. Quipper helps students build their knowledge through 'mastery' of topics, modules, and courses, earning rewards and having fun as they go.

Quipper allows teachers to simply and painlessly publish their own educational content for their schools or classes.

In short, Quipper empowers both teachers and students by supplementing traditional methods with a platform that's powerful and exciting, but simple too. It aims to use technology to improve the quality of education by creating the best teaching and learning experience by creating a world where everyone has easy access to quality education and is thus empowered to create a better future.

Quipper is a free e-learning platform for teachers and students with ready-made lessons and quizzes. There are also online video lessons and assessments for students to learn anytime anywhere. The online class platform for teachers and students is where lessons are interactive and real-time. A dashboard is part of Quipper School which allows teachers to manage multiple classes and groups of students. With this, they can broadcast announcements to everyone, particular groups or individual students.

Students, on the other hand, get real-time feedback in the Quipper School quizzes and exams, knowing if their answer is correct or otherwise. They can try answering the questions, especially the incorrect ones, over and over again until they fully comprehend and master the topic at hand. But what makes Quipper School interesting is it is "gamified." Quipper's gamified learning system allows the students to earn points or coins to encourage them to study more and answer correctly.

Digital reading

There are constant discussions on the future designs of digital libraries, where digital libraries are a broad term encompassing scholarly archives, text collections, cultural heritage, and educational resource sites. It is important to point out the obvious fact that whatever the design — collaborative or user-oriented — much of the information in digital libraries is preserved for the purposes of access and reading. This has led researchers to call for a stronger emphasis on the user's point of view in

digital libraries, in addition to technological and organizational viewpoints, especially on interoperability, and, in the case of reading applications, a call to comply with preferences of real readers.

Reading is the aim and essence of all text production. Screen reading — or digital reading — has become immensely widespread and is an integral part of interactive communication and reception of all kinds of digital texts. Digital texts have generated a wide range of new reading practices, such as a complementary reading of a text in multimedia and Web presentations, e-mail, Web browsing, and e-learning. Computer users have to develop multiple literacies, but despite a wide variety of uses, today's display screens fall short when it comes to reading lengthy texts such as journal articles and books. Research heavily supports the general belief that most people still prefer to read lengthy texts on paper.

Reading, or the process of understanding written linguistic messages, is a complicated cognitive task involving important parts of the brain. It takes years of training to become a fluent reader. Even small disturbances in typography, ergonomics, or word understanding can disrupt the reading process and bring the act of reading to a stop. Today's commonly used digital equipment and software cannot compete with printed paper as a medium for sustained reading.

For libraries distributing digital texts, this situation represents a challenge. To analyze the challenge, we dichotomize the concept of reading and study the uses of digital libraries in light of two types of reading: intentional reading and functional reading:

The traditional ways of teaching are also being changed because of the technological advancements where students will prefer to present a report by a projector. In a hypothetical future, education will also be driven by the vast changes through a network connection and gadgets. These tools will leave alongside us and we will be able to harness a great amount of technology every time. There is a possibility that these forms of entertainment and access can't leave us without vacant time since cellphones and other gadgets are easily accessible. Humans tend to mimic the efficiency around them and in today's society, it can be seen.

Almost every other people are holding their cellphones while walking, studying, reading, and standing in public places. It makes us to not waste time and be entertained or gain knowledge while standing, simply browsing on a cellphone.

Collections of Classic Literature

A number of institutions have digitized the complete writings of famous authors, such as Henrik Ibsen, an influential Norwegian playwright. In the Henrik Ibsen's Writings Project - the first editions of Ibsen's plays and poems - his letters a large collection of professional commentaries, and other writings are all marked up in digital text form using TEI. This critical text edition will be published both in digital form and in print. The printed book edition will comprise a total of 30 volumes: 15 volumes of text, and 15 volumes of commentaries. The digital format of this collection has yet to be determined. OpenReader versions would be intriguing since the OpenReader format will be able to properly represent, and user agents display, the complex document structures used in many of Ibsen's writings.

The Ibsen Project wants its digital collection to be useful for both research and intentional reading. Scholars and students must be able to compare works and to follow themes and ideas throughout the entire Ibsen corpus. Since the OpenReader format is being specifically designed to enable powerful inter- and intra-publication linking and related functionality, it is suitable for this purpose. OSoft's dotReader is a good candidate format, as it already provides powerful linking, annotation and text searching tools for an entire library of digital books, and it will soon support OpenReader as its primary format.

For many other collections of writer's works, such as the Oxford Text Archive and the Electronic Text Center at the University of Virginia Library, OpenReader is likewise a viable and intriguing format. These libraries hold freely accessible collections of classic literature in various e-book formats. The collections are for teachers, students, scholars, and the general public. The texts are mastered in XML (TEI) and converted into usable e-book formats using various tools (including XSLT). Since

these texts are meant for intentional reading and certain forms of functional reading associated with study and learning, OpenReader is an intriguing and advantageous e-book format.

Scholarly and scientific archives

Scholarly and scientific information is published in digital form by online (Web-formatted) journals and in electronic document versions of printed articles and books. The information is available in both subject-specific and more general institutional archives. BioMed Central is an example of the first, and the California Digital Library an example of the second. Today, HTML and PDF are the predominant text-based formats used in these archives. PDF is excellent for distribution of content intended primarily for print (it exactly reproduces the printed page) but is not ideal for screen reading. HTML is more flexible in presentation but lacks some of the important features necessary for intentional reading.

Scholarly articles are typically read both intentionally and functionally. For research purposes, what is needed in addition to readability is the ability to do robust searching, add notes, insert bookmarks, highlight text, and, when allowed, copy portions of the text for pasting into other documents. The OpenReader format is suitable for all of these purposes provided, of course, as the user agent has such functionality built in. As noted previously, OSoft's dotReader, which will soon support OpenReader, has already implemented these functional reading features. The openness of the OpenReader is also a huge advantage for scholarly access.

Open Library

Open Library is an online project intended to create "one web page for every book ever published". Created by Aaron Swartz, Brewster Kahle, Alexis Rossi, Anand Chitipothu, and Rebecca Malamud, Open Library is a project of the Internet Archive, a nonprofit organization. It has been funded in part by grants from the California State Library and the Kahle/Austin Foundation. Open Library provides online access to much public domain and out-of-print books.

Google Books

Google Books (previously known as Google Book Search and Google Print and by its codename Project Ocean) is a service from Google Inc. that searches the full text of books and magazines that Google has scanned, converted to text using optical character recognition (OCR), and stored in its digital database. Books are provided either by publishers and authors, through the Google Books Partner Program, or by Google's library partners, through the Library Project. Additionally, Google has partnered with a number of magazine publishers to digitize their archives.

The Publisher Program was first known as Google Print when it was introduced at the Frankfurt Book Fair in October 2004. The Google Books Library Project, which scans works in the collections of library partners and adds them to the digital inventory, was announced in December 2004.

The Google Books initiative has been hailed for its potential to offer unprecedented access to what may become the largest online body of human knowledge and promoting the democratization of knowledge. However, it has also been criticized for potential copyright violations, and lack of editing to correct the many errors introduced into the scanned texts by the OCR process.

As of October 2015, the number of scanned book titles was over 25 million, but the scanning process has slowed down in American academic libraries. Google estimated in 2010 that there were about 130 million distinct titles in the world, and stated that it intended to scan all of them.

Part Three - The Big Shift

Changes for the Future of New Media

From our current situations, we can hypothesize what will happen in the future. Cellphones and gadgets of today are like seed our futuristic community and the innovations will cling up to different and new sophisticated inventions. Change is essential since we are building a better community for the sake of us and future generations. We are more globalized and ideas are being shared where people can choose their own preferences. Information and justice are being judges based on the morality of the majority.

Two possible outcomes of Internet Adaptation

Internet adaptation is a term used to describe what we are experiencing right now. Adults that didn't have any background to these technological advancements are taking an interest since it proposes a new kind of entertainment and learning. Some of them wanted to be a part of a growing community and the businesses have taken a new step online. Internet transactions are the future of a modern world and there are two possible outcomes to some of the platforms that we are currently using today.

Platform integration

Platform integration is the improvement of any aspect of platforms by making it perform a better use and have updated functions. It is a possible outcome of platforms to convert, shift, and improve as long as the traditional traces of a platform is present. An example of a platform is a television. It is a platform we used for decades to watch the news, and entertain ourselves through different channels. Platform integration on the case of television would be its outcome by adding additional aspects that could adapt and compete into a hypothetical future scenario e.g.

television will have multipurpose via the internet. It could be a platform used for a larger medium that can be connected directly and can be used like computers we have today. Television already can be connected to our cellphones and consoles which is a process of continuous improvement that we experiencing today.

Extinction

Another possible outcome for platforms is its inability to adapt nor make changes that are successful to cope up in our hypothetical future which results in its inability to make a profit. Gadgets that will not be improved since better technological advancement might cause its inability to compete. The idea of our modern world will focus on its multiple access and functions and gadgets with only one function might not last. An example of a fading gadget is the radio. It is used decades ago but different platforms are starting to emerge and so the price and value of the gadget lowered. It can't any longer adapt since different gadgets offer the same functionality.

Why Television will not win against the Internet?

Television has its uses for delivering us shows that are free. People don't need to pay for a subscription to watch on a channel or television series unlike some of the online services but the Internet, in general, is vast. It has a lot of functions that anyone could browse for their preferences. People could watch shows depending on their preferences, unlike television where people watch on what is being streamed. Telecommunication companies, on the other hand, is well funded due to its years of accumulated profit for its equipment unlike some of the creators and content that are found on the internet.

Telecommunication companies also used different platforms using the internet as a website for their shows or an application where people can sometimes watch for free. Telecommunication companies started to shift their products and shows when the internet started to reach the whole globe while the television stayed on its machine improvements. The televisions become thinner, bigger, and clearer but it is only a medium

for channels, cables, and serves as a bigger display for games or internet-related services. Television might just become a display tool that could be optional for future years once every channel of telecommunication companies shifted to the internet. For every foundation where users will use a service, the website or application must have an efficiency to their demand that is more capable than television.

Smart TV

The advent of digital television allowed innovations like smart TVs. A smart television, sometimes referred to as connected TV or hybrid TV, is a television set or set-top box with integrated Internet and Web 2.0 features, and is an example of technological convergence between computers, television sets, and set-top boxes. Besides the traditional functions of television sets and set-top boxes provided through traditional Broadcasting media, these devices can also provide Internet TV, online interactive media, over-the-top content, as well as on-demand streaming media, and home networking access. These TVs come pre-loaded with an operating system.

Smart TV should not to be confused with Internet TV, Internet Protocol television (IPTV) or with Web TV. Internet television refers to the receiving of television content over the Internet instead of by traditional systems—terrestrial, cable and satellite (although the internet itself is received by these methods). IPTV is one of the emerging Internet television technology standards for use by television broadcasters. Web television (WebTV) is a term used for programs created by a wide variety of companies and individuals for broadcast on Internet TV. A first patent was filed in 1994 (and extended the following year) for an "intelligent" television system, linked with data processing systems, by means of a digital or analog network. Apart from being linked to data networks, one key point is its ability to automatically download necessary software routines, according to a user's demand, and process their needs. Major TV manufacturers have announced the production of smart TVs only, for middle-end and high-end TVs in 2015. Smart TVs are expected to become the dominant form of television by late 2010s.

Internet television

Internet television (Internet TV) (or online television) is the digital distribution of television content via the Internet as opposed to traditional systems like terrestrial, cable, and satellite, although the Internet itself is received by terrestrial, cable, or satellite methods. Internet television is a general term that covers the delivery of television shows, and other video content, over the Internet by video streaming technology, typically by major traditional television broadcasters. Internet television should not be confused with Smart TV, IPTV or Web TV. Smart television refers to the TV set which has a built-in operating system. Internet Protocol television (IPTV) is one of the emerging Internet television technology standards for use by television broadcasters. Web television is a term used for programs created by a wide variety of companies and individuals for broadcast on Internet TV.

Film and Television adaptation

Filming has been part of our relaxation. Before the internet, people spent more time sitting on a couch in front of the television with a habit of just indulging themselves whether the show is really their preferences. Now, people have a choice on what to watch and if given the choice, we will go our standards and preferences. Once we reach a certain standard, it's hard to go back from what we used to have. Since there is a possibility among the millions of shows that are available online, people tend to find and accumulate what satisfies them the most.

Marketing

Marketing has changed its methods to promote a film since online videos become available.

In Theaters

Trailers are a mainstay of film promotion because they are delivered directly to movie-goers. They screen in theatres before movie showings. Generally, they tell the story of the movie in a highly condensed fashion compressing maximum appeal into two and a half minutes.

- Film posters
- Slideshows - stills, trivia, and trivia games from the film, shown between movie showtimes.
- Standees (freestanding paperboard life-size images of figures from the film)
- Cardboard 3D displays, sometimes producing sound

Television and Radio

Hollywood movie distributors spend about $4 billion a year to buy paid advertising (30-second TV commercials, newspaper ads, etc.) and over half, that total is placed on broadcast and cable TV, which are the main vehicles for advertising movies to audiences. The TV is effective because it is an audio-visual medium – like film – and can deliver a vast audience quickly, which is crucial because films typically don't linger in theaters more than 4–6 weeks, according to Marketing to Moviegoers: Second Edition.

Product placement: paid active or passive insertion (as on-set posters, and action figures) of film brand in drama or sitcom shows, or as passing mentions in dialogue. For example, 20th Century Fox commissioned an I, Robot-themed motorcycle, featured on two episodes (2:17, 2:18) of American Chopper. The film Memoirs of a Geisha was placed throughout an episode of the TV show Medium.

Extended placement: full episodes of television talk shows (Oprah), entertainment news programs (ET), or network news programs (20/20), devoted to compensated exposure of the film, stars, clips, director, etc.

In addition, interviews with actors and directors which are filmed en masse at a hotel with local and national entertainment reporters which are featured on local news shows, programs on cable networks, and series such as Byron Allen's series of entertainment series like Entertainment Studios.

Production and paid broadcast of behind-the-scenes documentary-style shows, the type of which are mainly produced for HBO, Showtime, and Starz

Advance trailers, longer previews, or behind-the-scenes footage on rental videos and DVDs

Print

- Paid advertisement in newspapers, magazines, and inserts in books.
- Cross-promotion of original book or novelization, including special printings, or new cover jackets ("Now a major motion picture.")
- Comic special editions or special episodes
- Merchandising
- Paid co-branding (Eragon in American Chopper-two episodes), or co-advertising (Aston Martin and James Bond films) of a product with the film
- Promotional giveaways: branded drink cups, toys, or food combinations at fast food chains
- Promotional tours and interviews

Film actors, directors, and producers appear for television, cable, radio, print, and online media interviews, which can be conducted in person or remotely. During film production, these can take place on set. After the film's premiere, key personnel make appearances in major market cities or participate remotely via satellite video conference or telephone. The purpose of interviews is to encourage journalists to publish stories about their "exclusive interviews" with the film's stars, thereby creating "marketing buzz" around the film and stimulating audience interest in watching the film.

When it comes to feature films picked up by a major film studio for international distribution, promotional tours are notoriously grueling. Key cast and crew are often contracted to travel to several major cities around the world to promote the film and sit for dozens of interviews. In

every interview, they are supposed to stay "on message" by energetically expressing their enthusiasm for the film in a way that appears candid, fun, and fresh, even though it may be their fifth or sixth interview that day. They are expected to disclose just enough juicy "behind-the-scenes" information about the film making the process or the filmmakers' artistic vision to make each journalist feel like he or she got a nice scoop, while at the same time tactfully avoiding disclosure of anything truly negative or embarrassing.

The availability of videos that are being released from big multi-media companies lets the possible viewers watch the trailers or any promotional video of a film to be recognized. These multi-media companies have large quantities of subscribers or individuals that receive their contents. These contents are associated with entertainment industries to help them gain their audience. The Internet has offered us the availability to share, watch, and create a different kind of media e.g. songs, art, videos.

Teasers are really short videos that contain clips of the most eccentric parts of a film that is yet to premiere. It contains minimal detail of the movie only highlighting the most amusing parts of it. Just as the name suggests, teasers tease the viewers, with minimal dialogue and action clips from the movie, without giving out too much content of the movie.

They are often released before trailers, and work well in building the anticipation of the audience. Teasers are very short and could last for less than a minute. One of the very first teasers to be made was the ad for the Idol Dancer movie that was released in the year 1920. In the past teasers would be showcased right before the movies launches, approximately within a week. Today teasers are released way ahead, sometimes even months or years before the official release dates are announced.

Trailers also known as previews are more detailed advertisements of movies that will premiere in the near future. Trailers contain the exciting, funny and important parts of a film shortened into two and a half minutes which is the maximum length approved by the Movie Picture Association of America (MPAA).

The very first trailer was created in the year 1913 for the movie, The Pleasure Seekers. Trailers follow a three-act structure, where important excerpts from the beginning, then the middle and finally the end of the movie are composed into a short clip. The concept behind trailers is being used up within several other industries as a marketing tool. Other than the movie industry, television shows, books, video games, and theatrical events use it.

Duration of Teasers and Trailers - Teasers are meant to be short and can last from 13 seconds to a minute. The maximum time for a teaser is a minute.

Trailers, on the other hand, can last between one minute to two minutes and thirty seconds, which is the regulation set by (MPAA).

Purpose of Teasers and Trailers - Teasers have the main aim of teasing the audience, stirring up anticipation and getting the audience intrigued about the film. Trailers serve a slightly different purpose, their main aim is to inform the audience of the movie, it dishes out much more information of the cast and the plot twists, giving the viewers a better insight of what to expect.

Online shows that only streams on a particular website or application also made their way on reaching a great number of audiences where they could manage to have physical advertisements on a train station, at the street, and etc. This shows us that online shows could be the next step and outnumbering the production rate contents of other entertainment companies.

Directors, film-makers, and producers have more connection to its audiences since people who viewed their film can have feedback via online. This technique of receiving feedback and improvement provides more insight to the creators on what the audience wants. Criticisms are abundant are more honest online than on it is an actual interview because people can express their opinions knowing that they are far. People know that when you are far from an actual possible conflict or interaction, the lesser the problems could be. An improvement to a work

that could affect how a product from entertainment industry be delivered is a part of marketing.

Viewer Quantities Fluctuations

There's a large number of movies that are available in some countries alone and since the internet has become a stockpile of products, different media that are available online will be combined into the internet.

The cinema of India consists of films produced in the nation of India. Cinema is immensely popular in India, with as many as 1,600 films produced in various languages every year. Indian cinema produces more films watched by more people than any other country; in 2011, over 3.5 billion tickets were sold across India, 900,000 more than Hollywood. Mumbai, Chennai, and Hyderabad are the major centers of film production in India.

As of 2013, India ranked first in terms of annual film output, followed by Nigeria, Hollywood, and China. In 2012, India produced 1,602 feature films. The Indian film industry reached overall revenues of $1.86 billion (₹93 billion) in 2011. In 2015, India had a total box office gross of US$2.1 billion, third largest in the world.

Indian cinema is a global enterprise. Its films have a following throughout Southern Asia and across Europe, North America, Asia, the Greater Middle East, Eastern Africa, China and elsewhere, reaching in over 90 countries. Biopics including Dangal became transnational blockbusters grossing over $300 million worldwide.

Nigeria - Nollywood

In April 2012, it was reported that the US hedge fund, Tiger Global Management, had invested US$8 million in iROKOtv, the world's largest online distributor of licensed Nollywood films. This substantial injection of funds to scale-up iROKOtv's video streaming operations was a testimony to the growing international prominence of Nigeria's film industry. Nollywood, as Nigeria's film industry is popularly known, produces on average 1500 films per year. This makes it the largest film

industry in Africa and globally, second only to Bollywood. The industry's phenomenal growth in the last two decades is nothing short of incredible.

United States - Hollywood

The cinema of the United States, often metonymously referred to as Hollywood, has had a large effect on the film industry in general since the early 20th century. The dominant style of American cinema is the classical Hollywood cinema, which developed from 1917 to 1960 and characterizes most films made there to this day. While Frenchmen Auguste and Louis Lumière are generally credited with the birth of modern cinema, American cinema soon came to be a dominant force in the industry as it emerged. It produces the total largest number of films of any single-language national cinema, with more than 700 English-language films released on average every year. While the national cinemas of the United Kingdom (299), Canada (206), Australia, and New Zealand also produce films in the same language, they are not considered part of the Hollywood system. Hollywood has also been considered a transnational cinema. Classical Hollywood produced multiple language versions of some titles, often in Spanish or French. Contemporary Hollywood offshores production to Canada, Australia, and New Zealand.

IMDb (Internet Movie Database) is an online database of information related to films, television programs, home videos and video games, and internet streams, including cast, production crew, and personnel biographies, plot summaries, trivia, and fan reviews and ratings. An additional fan feature, message boards, was abandoned in February 2017. Originally a fan-operated website, the database is owned and operated by IMDb.com, Inc., a subsidiary of Amazon.

As of October 2018, IMDb has approximately 5.3 million titles (including episodes) and 9.3 million personalities in its database, as well as 83 million registered users.

There will be a part of our future history that the quantities of these media that are only movies will match the number of an entire population of a single country. If we are going to consider all the videos that we might

possibly get could even reach the population of the whole globe. It's a large quantity of data and we have also large quantities of audiences. However, only a particular few of those media, have the most numbers of views that are being talked and known by most of us.

Fluctuation is a change or variation in a quantity over time. Viewers quantities fluctuations are simply about the continuous change of tides of the viewers. By considering that every audience has their own preferences and every time they decide on what to watch, the number of accumulated views of a particular media will vary while only affecting most of at the top of the film. Those media will have varying views and there's a huge gap between the popular media from other media.

Effects of the internet to television companies

The Internet has made its impact on today's media and it will continuously affect the industry into their services. The Internet has affected different technological advancement like cellphones and if a gadget succeeds, other gadgets such as television should improve too. The functions of television will surely be affected as there's a higher possibility that it could be replaced by other forms of gadget. At the following years, television could still have their position as a primary medium for channels however the manufacturers and production of television might begin to slowly decrease.

Functions such as touchscreen and a more efficient and faster connection to other tools will be provided by the television. Laptops, computers, and cellphones begin to be connected on the television. A platform like television would still be around for years as it gives a larger view but it wouldn't take over the leading cellphone or a similar gadget.

The attention of household users will be shifted to their phones or any other gadget that connects them to the internet, unlike television.

Literary Works and How it will be Changed

Literary works have been a part of our social community. There are libraries, bookstores, and other retailing companies that sell paperbound

or hardbound books. Some of the books that we've read are having their movies and television series and the whole process of a writer connecting to the audience by only using words will not stop but the medium of delivery will mostly change. There are some libraries that have lesser readers each day since the emergence of the internet and bookstores that are going to bankruptcy.

With over 17,000 libraries and 2.5 billion materials circulated annually in the United States alone, libraries are a ubiquitous part of the American landscape. However, as libraries modernize, they face an increasingly harsh budget environment, as well as technological disruption in media, scholarship, and education. The political, social, and technological environment is one of transformation and uncertainty.

As of 2004, U.S. library usage was experiencing growth in spite of predictions to the contrary at that time. Instead, the impact of technology on libraries has been mixed. While usage of some library services, such as reference assistance, has declined, there has been a well-documented increase in the usage of public libraries in the U.S. and Canada over the last decade. Most libraries have added services such as public computers, free Wi-Fi, and digital materials such as web sites and e-books, leading to the higher overall usage of the library. Counties and cities also continue to invest in library infrastructure. As of 2012, library construction and renovation has remained steady. According to a 2013 survey by the Pew Internet and American Life Project, 54 percent of Americans ages 16 and older have used a public library in some way in the past 12 months. A similar poll of Britons, conducted in 2010, stated that 67 percent had visited a library within the last year. Public libraries remain very popular among all users, and as of 2014, younger patrons read and use the library at the same rate as older ones. Over 94 percent of Americans say that "having a public library improves the quality of life in a community."

At the same time, public funding of libraries has declined. While libraries have a positive reputation, it is clear that citizens value other government services over libraries when budgets must be cut. School and academic libraries have also faced both severe budget troubles and declining usage

of traditional library services like reference and interlibrary loan. Budget cuts and closures of publicly funded libraries in the Canada and UK have begun to affect the availability of library services in those countries. A study conducted in 2014 revealed that a number of visits to public libraries had dropped by approximately 12% since 2009, demonstrating the effects of this decline. Library functions, services, and usage are changing so rapidly that it is difficult to establish standards or measures of value. As these trends continue or accelerate, the status of libraries is likely to remain dynamic and unclear. Most libraries are moving existing staff into information positions instead of employing new information custodians, making a developing interest in expert improvement opportunities. The scope of expert advancement open doors for bookkeepers to teach themselves in great information rehearses expanded all through 2015 and will keep on developing in 2016, essentially because of two activities. The library has for quite some time been in charge of social affair, arranging, and shielding significant data. Present day research and information accumulation have made some amazing progress from the day's libraries were overseeing and getting to probably the most punctual dial-up online databases. Today, advanced information is gathered in such overpowering sums that one of the greatest difficulties lies essentially in investigating the data to discover significant ends in the excess of information. Building up, keeping up, and growing an internet-based life nearness is vital for libraries. Gregg Dodd, Director of Marketing at Columbus Metropolitan Library, clarifies the estimation of a computerized procedure obviously, saying, "Our clients live in an advanced world, so this is an imperative space to interface with them."

Why Borders Failed While Barnes & Noble Survived

By Yuki Noguchi

It appears to be all over for the Borders bookselling chain. The company will be liquidated — meaning sold off in pieces — and almost 11,000 employees will lose their jobs. The chain's 400 remaining stores will close their doors by the end of September.

The retailer's first bookstore opened in Ann Arbor, Mich., 40 years ago. Along with competitor Barnes & Noble, Borders pioneered the book megastore business. But Borders made some critical missteps over the years that cost it the business.

The vast tracts of retail space that Borders will soon vacate speak to a gargantuan business that essentially killed itself. At one time, the size was its advantage. Borders built a reputation on offering a huge variety of books — tens of thousands of titles in a single store — at a time when most bookstores could afford to stock a fraction of that.

Borders also had an early technical advantage: a superior inventory system that could optimize, and even predict, what consumers across the nation would buy.

But in the mid-1990s, Borders lost its edge.

"It made a pretty big bet in merchandising. [Borders] went heavy into CD music sales and DVD, just as the industry was going digital. And at that same time, Barnes & Noble was pulling back," says Peter Wahlstrom, who tracks Barnes & Noble for the investment research firm Morningstar.

He says Barnes & Noble also invested in beefing up its online sales. Eventually, it also developed its own e-reader, the Nook.

Borders did not. Instead, it expanded its physical plant, refurbished its stores and outsourced its online sales operation to Amazon.

"In our view, that was more like handing the keys over to a direct competitor," Wahlstrom says.

Indeed, outside a Borders bookstore in Arlington, Va., shoppers say they rarely buy books the old-fashioned way.

"I'll go to Borders to find a book, and then I'll to go to Amazon to buy it, generally," customer Jennifer Geier says.

With so many people going online to buy books, Borders lost out. The last time it turned a profit was 2006. In February of this year, it filed for bankruptcy protection.

Those who bemoaned the rise of bookselling giants might see the irony in Border's demise. With one of the major players gone, there might be some room, once again, for the little guys.

"I think there are a bunch of different niches around that can still be sustained, but I don't think there's a need for the mass-book seller to be as prevalent or as apparent as they were five or 10 years ago," Wahlstrom says.

Wahlstrom says Borders is disappearing at a time when, as consumers, readers are more empowered than ever. He says he still reads paper books but also reads on his iPhone, computer or tablet.

"Just as I'm probably device agnostic, I am supplier agnostic. I can go online, I can go to Barnes & Noble, I can go to Apple, or I can go to Google. Or I can borrow it from a friend or I can go to a library," he says.

Dan Raff, a management professor at The Wharton School, argues that smaller-town America will suffer from the loss of a chain bookstore.

"The big-box store was a glorious thing while it lasted. To people in many parts of America, they were a kind of Aladdin's cave," Raff says. At Borders, people could access literary variety, contrary to smaller, independent bookstores.

With Barnes & Noble staking its future on digital technology, Raff says, it's likely the big bookstore will only live on in big cities.

Magazines That Have Ceased Publication

I.D. Magazine/F&W Media (1954 - January/February 2010)

But I.D., a small bimonthly, still faced the same forces that had already knocked far larger titles from print. The downturn in print advertising, the increasingly specialized information needs of I.D.'s core readership among product designers, and the proliferation of other resources all

worked against I.D.'s sustainability, according to Gary Lynch, publisher and editorial director of the F&W Media Design Community. F&W said it will continue to produce the I.D. Annual Design Review, an international design competition.

National Geographic Adventure/National Geographic (Spring 1999 - December/January 2009/2010)

National Geographic Adventure had amassed half a million paying readers and collected four National Magazine Awards, including one for general excellence in 2002, since its debut as a quarterly in 1999. But the brutal economic climate and the changing contours of the media business conspired against it in 2009. Its ad pages fell 35% in 2009, a year when monthlies as a whole fell 21%, according to the Media Industry Newsletter.

After exploring a sale of the title, National Geographic wound up deciding to pull it from print, where it had already reduced the annual frequency to eight issues from 10 last year, and continue the National Geographic Adventure brand online and in other media, including newsstand editions, books, e-magazines, and mobile applications. The editor in chief since its introduction, John Rasmus, and 16 other employees are losing their jobs as a result.

"We're tremendously proud of what John Rasmus and his team have accomplished over the last 10 years," said John Q. Griffin, exec VP, and president of publishing at the National Geographic Society, as he announced Adventure's exit from print. "They have consistently delivered award-winning editorial to an enthusiastic audience of readers and advertisers. But given the current advertising environment and the opportunities we see in emerging digital platforms; we think the time is right to transition the Adventure brand."

Giant Magazine/Radio One (2004 - January 2010)

"We didn't pay much for Giant, $270,000, so really the big thing for us is the losses that we incur on it," president-CEO Alfred Liggins said during

earnings call in February 2008. "But we bought Giant really sort of like the editorial platform for what we're going to do online."

By November 2009, Radio One decided to bet exclusively on the online play, rebranded GiantLife, and suspended the print edition, which had a guaranteed paid circulation of 250,000. "Over the past three years, the print version of Giant magazine has grown in advertiser support and fostered a loyal following among readers both online and off," said Tom Newman, president of Interactive One, the digital division of Radio One. "The economic downturn has had a tremendous impact on print media, and we had to make the decision to suspend printing the publication. Additionally, we recognize the increase in demand for real-time information and see this as an opportunity to leverage our existing robust online platform to better serve Giant consumers and advertisers through our interactive medium."

An organization and businesses exist and continue to earn profit it there are enough audiences, supporters, or users. If it didn't have any of those, then its purpose to serve will fail. New media made us busy whenever we are and there are countless amounts of information and books that are available online and can be accessed offline that made the users to just browse their answers. It is less hassle, a larger database, and faster access. In a modern world, a user wouldn't take hours flipping pages to find what they're looking for but instead, they will be able to have the answers through their phones. It's not only browsers that make individuals search for an answer online but there are software and applications that instantly give us answers into our math equations.

Today, you can choose from learning tools that help you track formulae and learn algebra, to apps that let you solve equations by simply pointing the camera. The various app stores also have a number of scientific calculators available for cheap, or free, making this handy tool far more accessible than back in the day when it used to cost a small fortune.

Photomath

Photomath is probably the best app for solving mathematical problems. It uses augmented reality, which means that you can simply point your camera at any piece of paper with an equation or an arithmetic problem and it will find a solution. There are limitations of course. At the moment, the app can't recognize handwritten problems but does a good job identifying printed ones. It also can't solve quadratic equations, functional equations or calculus problems.

That said, the app does a great job with basic arithmetic problems and algebraic equations. The app shows solutions on screen and shows a "Steps" prompt that shows how it solved the problem. It also keeps a log of all the equations it has solved, so you can quickly refer to an older problem if needed. Photomath is free on iOS and Windows Phone. The Android app is expected next year, according to the developer's website.

Solve4x

This free iOS app comes with an equation solver where you can either manually type in an equation for it to solve, or you can snap a picture and automatically process the entire equation. You can also use a photo that's already been saved to the gallery. It works with printed text, and even then, there can be some garbled text, so a little light text editing after the picture is taken is required at times. One limitation is that the app doesn't support equations with brackets. The app solves the equations - the idea is that parents can use it to verify the results that their kids get, without having to remain up to date with complex algebra, though you might want to keep your kids away from smartphones in that case. Solve4x is free on iOS.

iMathematics

iMathematics lets you type in equations and solves them for you. The paid version can solve a wider range of equations than Photomath does. Aside from this, the app also includes various learning modules, which we discuss in more detail in the section below. The only downside is that unlike Photomath however, with iMathematics, you have to enter the

equations manually - you can't just take a picture of the equations. \iMathematics is available for free on iOS and Android. You can unlock the pro version with an in-app purchase.

These applications might become a way for students to stop thinking critically but on the other hand, some of these applications offer an informative approach to explain how it comes up to that answer. Some of it shows solutions and explanatory guides and students might not need an accompany from an individual since some websites, software, and applications can already fulfill their need.

Books

Books contain information either for academics, and stories. We've been using it throughout centuries so that we can contain our thoughts, inform, and tell a story. It helped us in our education and learning but the fundamental medium of this information is being changed. Different publications have closed and the traditional way of creating books by using papers are going to diminish. There could still be a few amounts of traditional publishing companies but it will not be the main source for books but instead the digital platform. The eBook has also begun since the rise of the internet and many publishing companies have emerged online. These online publications have access to different online and physical retailing companies where users can buy books.

An electronic book, also known as an e-book or eBook, is a book publication made available in digital form, consisting of text, images, or both, readable on the flat-panel display of computers or other electronic devices. Although sometimes defined as "an electronic version of a printed book", some e-books exist without a printed equivalent. E-books can be read on dedicated e-reader devices, but also on any computer device that features a controllable viewing screen, including desktop computers, laptops, tablets, and smartphones.

eBooks are files that you can read on a digital device – a tablet, smartphone, computer, etc. But again, considering other files can be read on digital devices (i.e. word documents) eBooks have specific

characteristics that differentiate them. One distinct characteristic of an eBook: the text should not be editable. An eBook should always be converted into a format that ensures it's uneditable. With thousands of people having access to it on digital devices, people could potentially change any content without the author's permission. So, in order to qualify as an actual eBook, the text should not be able to be changed in any way, just like a paperback book.

Electronic Books has been replacing the printed books and the numbers of its clients are rising. There are online publications where an indie author can submit their manuscripts or ready eBooks and by filling out some information such as tax forms, they could distribute and sell their eBooks. This digital selling has been successful and a lot of traditional readers are shifting their medium of reading content via their phones.

Amazon's Best Seller of 2018

The Handmaid's Tale

The Handmaid's Tale is a novel of such power that the reader will be unable to forget its images and its forecast. Set in the near future, it describes life in what was once the United States and is now called the Republic of Gilead, a monotheocracy that has reacted to social unrest and a sharply declining birthrate by reverting to and going beyond, the repressive intolerance of the original Puritans. The regime takes the Book of Genesis absolutely at its word, with bizarre consequences for the women and men in its population.

Electronic Books and modern technology also allow different methods for information distribution e.g. Audio Books which helps readers to listen while doing other works. Audio Books also helps disabled individuals to learn and entertain themselves.

A Killer's Mind (Zoe Bentley Mystery Book 1)

The New York Times and Washington Post bestselling serial-killer thriller that will leave you wondering, is the past really in the past?

Three Chicago women have been found strangled, embalmed, and posed as if still alive. Doubting the findings of the local PD's profiler, The FBI calls on forensic psychologist Zoe Bentley to investigate.

The Conversion of Print to Digital

Many of the books that can found on a printed copy might have its digital copy. These copies are sometimes provided by authors themselves or a publishing entity that has the rights to make a copy of the book. There are different reasons why publishing houses convert their printed books into digital. Digital copies are more efficient in distributing the book to worldwide customers. Digital copies can gain popularity faster than printed. The author or publishing entity could earn money and the content of the book itself will stay on a database and not be destroyed by physical means.

Pros of eBooks

Easy to carry – Since it is a smartphone or a tablet, it can easily slip into your pockets. You don't need to carry them in your hands often like physical books.

Countless eBooks – If you own a smartphone or tab, or better, Amazon Kindle, then you can store several eBooks in your device. Also, if you are connected to the Internet then you can get access to various novels according to your desire. But, on the other hand, it is really difficult to carry even 10 physical books. With the rise of mobile usage, eBooks have been replacing textbooks lately, which consumes less space and time for every student.

Comfort – You can easily take notes, change the font size, magnify whenever you want and you can even copy the content and share them on your social media or in your diary. You can even read them at night without even disturbing other people. There is an inbuilt dictionary in so many eBook reading apps which makes the reading experience easy and simple.

Eco-Friendly – You don't affect the environment while reading an eBook. No trees are destroyed to print the eBooks and you also save a lot of ink which eventually affects the environment.

Cheap and Free – There are chances that you may find a cheaper version of the same book but in an eBook format. Apart from that, you also get a lot of free classic books in many eBook reading apps.

Cons of eBooks

Availability – Not every book has got an eBook version. It can be a difficult task to find an eBook for that not so famous book. And, in case you find one, it will cost you a lot for sure.

Eye-strain – This is the biggest con of reading eBooks. Since you will be constantly staring at the screen of the device, it will strain your eyes, resulting in red-eyes or itchiness in eyes. (P.S. If you own a Kindle device, you'll get better results, as compared to normal smartphones or tabs.)

Caring – You need to be careful while reading an eBook. If the device gets dropped or if you accidentally spill any beverage on them, it will spoil the device. So, you need to be as much care as you can. You can't sleep with an eBook but, you can do with a book.

Battery Issue – An eBook reader needs a battery to run which can discharge anytime. Imagine you are at the climax of the book and suddenly your battery starts showing warnings and in the next minute, it's dead.

You can't share an eBook – Remember how good it felt when you give your book to your friend for reading and later, he/she thanks you for lending such a wonderful book. Well, eBook deprives you of this joy. Sharing eBooks through Emails and Facebook won't give you this much joy.

Pros of Books

Availability – You can get books from anywhere. They are just available everywhere. Be it the book shop at the corner or the stall near the station, you can easily get a book near your location.

The Feel – Nothing can beat the feel of reading a new book. That lovely fragrance of new book and the way you keep it with so much care and love are just beyond eBooks. Apart from this, books carry sentimental values too.

They are cheap – You can always get second-hand good quality books at almost half the price of the original books. They even have several shops exclusively for selling such books.

No/less eye strain – Reading a book causes much less eye strain as compared with an eBook. If you are reading a book with correct sitting posture and at the right distance, it won't cause any eye strain at all.

Caring – You don't need much care for books as you need with eBooks. You can place them anywhere, can throw them on your bed, can play ball with them and you can even sleep with them.

Cons of Books

Size – Books are heavy and big in size. You can only carry a book or two in your hands and you will need a bag to carry more books which is not a good option.

Affects Environment – No matter how much they claim, a single book will cost so many trees their life that you can't just imagine. Although, recycling is an option in the end, you are actually contributing for Green House effect.

You need a light source – You can't read a book in a tunnel or a night without a light source, while an eBook can be read at any time of the day, same is not possible with a book.

Durability – Books are not much durable as eBooks. Either the ink get fades away or the paper starts degrading. An eBook can last for almost a century but maintaining a book for even 25 years is a very difficult task.

Book Self – You can store 200 eBooks in a tiny memory card, but you will need a whole room for keeping 200 physical books.

Why Digital?

We might come across to doubt on why everything seems to be connected and be shifting on a different angle at this decade. Digital doesn't only cover the digital availability on our screens and televisions but it is also accompanied by the internet. As we might have learned, the internet will change our way of life and our whole processes. This scenario of everyone being connected and bounded by social platforms could be good to some us but for others, it is equivalent to destroying our tradition. Things, even knowledge will change but clinging into our tradition and having their importance is good either. It is important that we are having maybe our greatest revolution throughout centuries since it connected to all divisions in our community such as industries and science. Digital offers us new ways and more possibilities.

Every second, 22 articles are downloaded from ScienceDirect

By Harald Boersma

In 2012, approximately 700 million full-text articles were downloaded from ScienceDirect – that's 22 articles per second and 12% increase from 2011. These articles were downloaded by an average of nearly 10 million unique users each month, with the number reaching 11 million per month in the fourth quarter.

How do we come up with these numbers? Basically, we count machine cookies. In doing this, we make a distinction between customer users and guest users. The 10 million figure is based on the machine cookies we counted for our customer accounts only. This means that the actual number of visitors is a lot higher, as there are 10 million guest account users who don't have subscription access.

So, it's safe to say that the actual number of unique visitors is between 10 and 20 million, but we can't be precise due to some overlap between our customer and guest-user accounts.

Either way, those who are looking for authoritative research have come to the right place. There are now more than 11 million articles accessible via ScienceDirect, and we expect to add another 365,000 this year. Those final articles will come from over 1 million article submissions that will produce more than 1.3 million review reports. To store all this data, we use 11 terabytes (11,000 GB) of server space for ScienceDirect.

These figures are an indication of what I'd call our scientific footprint. It reminds of the enormous responsibility we have to serve millions of scientists with the content, platforms and tools to make sure they can be great at what they do. But it also reminds us to focus on what makes ScienceDirect so popular; we can never let the "numbers" obscure what's most important – the needs of the individual user.

DIGITAL IN 2018: WORLD'S INTERNET USERS PASS THE 4 BILLION MARK

By Nathan Mcdonald

The new 2018 Global Digital suite of reports from We Are Social and Hootsuite reveals that there are now more than 4 billion people around the world using the internet. Well over half of the world's population is now online, with the latest data showing that nearly a quarter of a billion new users came online for the first time in 2017. Africa has seen the fastest growth rates, with the number of internet users across the continent increasing by more than 20 percent year-on-year.

Much of this year's growth in internet users has been driven by more affordable smartphones and mobile data plans. More than 200 million people got their first mobile device in 2017, and two-thirds of the world's 7.6 billion inhabitants now have a mobile phone.

More than half of the handsets in use today are 'smart' devices too, so it's increasingly easy for people to enjoy a rich internet experience wherever they are.

Social media use continues to grow rapidly too, and the number of people using the top platform in each country has increased by almost 1 million new users every day during the past 12 months. More than 3 billion people around the world now use social media each month, with 9 in 10 of those users accessing their chosen platforms via mobile devices.

The number of internet users in 2018 is 4.021 billion, up 7 percent year-on-year. The number of social media users in 2018 is 3.196 billion, up 13 percent year-on-year. The number of mobile phone users in 2018 is 5.135 billion, up 4 percent year-on-year.

It's not just the number of people using the internet that has increased this year; the amount of time that people spend on the internet has also gone up over the past 12 months. The latest data from GlobalWebIndex shows that the average internet user now spends around 6 hours each day using internet-powered devices and services – that's roughly one-third of their waking lives. If we add this together for all 4 billion of the world's internet users, we'll spend a staggering 1 billion years online in 2018.

Internet penetration rates may still be low across much of Central Africa and Southern Asia, but these regions are also seeing the fastest growth in internet adoption. Users in Africa are up by more than 20 percent year-on-year, with the reported number of internet users in Mali increasing by almost 6 times since January 2017. The number of internet users in Benin, Sierra Leone, Niger, and Mozambique has more than doubled over the past year too.

Accelerating access in developing economies will impact the internet experience for users everywhere, as companies like Google, Facebook, Alibaba, and Tencent strive to deliver scalable global products that address the needs and contexts of these new users. These changes will

have a profound influence on the future of the internet, so we'll explore this topic in more detail in a separate blog post over the next few days.

More than two-thirds of the world's population now has a mobile, with most people now using a smartphone. The number of unique mobile users around the world is up by more than 4 percent year-on-year, although penetration rates remain below 50 percent across much of Central Africa. Smartphones are the world's preferred choice for going online too, accounting for a greater share of web traffic than all other devices combined.

The latest data from App Annie shows that people now spend 7 times longer using mobile apps compared to mobile web browsers, so mobile's 'share of the internet' is likely even higher than the figures above suggest. The latest data from Facebook reinforces this finding, with just 5 percent of the platform's global user base not accessing the platform via a mobile device.

Almost 1 million people started using social media for the first time every day over the past year – that's equivalent to more than 11 new users every second. The global number of people using social media has grown by 13 percent in the past 12 months, with Central and Southern Asia recording the fastest gains (up 90 percent and 33 percent respectively). Saudi Arabia has posted the fastest individual country growth rate across our 40 focus economies at 32 percent, but India is only just behind, with a 31 percent annual growth in social media users.

As part of this growth, we're seeing larger numbers of older users joining social media too. On Facebook alone, the number of users aged 65 and above has increased by almost 20 percent in the past 12 months. The number of teenagers using Facebook has also increased, but the number of users aged 13 to 17 has only grown by 5 percent since January 2017.

Gender ratios remain a concern across the internet though, with the latest data from Facebook suggesting that women are still significantly underrepresented across much of Central Africa, the Middle East, and Southern Asia. For the third year in a row, Filipinos spend the greatest

amount of time on social media, with the average user in the country spending almost 4 hours on social every day. The Brazilians are catching up though, and the Indonesians and the Thais have overtaken the Argentinians to take the third and fourth spots in this year's rankings.

It's been another good year for Mark Zuckerberg and team, with all of Facebook Inc.'s platforms posting impressive growth during 2017. Facebook's core platform still dominates the global social landscape, with total users up 15 percent year-on-year to reach almost 2.17 billion at the start of 2018. WhatsApp and Facebook Messenger both grew twice as fast as the core Facebook platform though, with the number of people using each messenger app up by 30 percent year on year. Both apps are still tied in terms of user numbers, but the latest data from shows that WhatsApp has a stronger geographic position. WhatsApp is now the top messenger app in 128 countries around the world, compared to Facebook Messenger's 72. There are now only 25 countries around the world where a Facebook-owned app isn't the top messenger platform.

Despite these impressive messenger stats though, Instagram managed to claim Facebook Inc.'s standout growth story over the past 12 months, with the number of global users up by a third. To help businesses everywhere quantify the Instagram opportunity in their respective countries, we've included local numbers for Instagram use across more than 230 countries in this year's regional reports. You'll find links to those at the end of this post.

For this year's reports, we've teamed up with Locowise to share details of Facebook reach and engagement for 179 countries around the world. As expected, organic reach and engagement have both dropped over the past year, with average reach down by more than 10 percent year-on-year. Despite the depressing trends, these numbers will be valuable benchmarks for marketers everywhere – especially because they offer insights into the number of brands using paid media (note that the chart below is a summary of slides 69 and 72 in the Digital in 2018 report).

Mobile data connections are getting faster all over the world, with GSMA Intelligence reporting that more than 60 percent of mobile connections

can now be classified as 'broadband'. However, there are significant differences in mobile connection speeds between countries. Mobile users in Norway enjoy average download speeds of more than 60 Mbps; almost three times the global average. Mobile users in 6 countries – including the Netherlands, Singapore, and the UAE – now enjoy average connection speeds of more than 50 Mbps. At the other end of the spectrum, mobile users in 18 countries – including India and Indonesia – still suffer from average connection speeds of less than 10 Mbps.

There is good news, though: average mobile connection speeds increased by more than 30 percent over the past year. This isn't just good news for the impatient, either; faster connections may also help to reduce stress. Research has shown that delays of just a few seconds while buffering video content can trigger the same increase in anxiety levels as watching a horror movie on your own or trying to solve a complex math problem. Partly thanks to these faster download speeds, the average smartphone user around the world now consume almost 3GB of data every month – an increase of more than 50 percent since this time last year.

The latest data from Statista's Digital Market Outlook shows that the total value of the e-commerce market for consumer goods grew by 16 percent over the past year. Total annual spend in 2017 reached almost US$1.5 trillion, with fashion products representing the largest single category. Worldwide, the number of people using e-commerce platforms to buy consumer goods (e.g. fashion, food, electronics, and toys) grew by 8 percent, with almost 1.8 billion people around the world now buying online. Roughly 45 percent of all internet users now use e-commerce sites, but penetration varies considerably between countries.

The amount that each person spends on e-commerce is also growing, with average revenues per user (ARPU) up by 7 percent year-on-year to reach US$833. The British are the biggest e-commerce spenders, with annual spend in the UK now greater than US$2,000 per user. It's worth highlighting that these are just the figures for consumer goods too; if we add spend on other categories such as travel, digital content, and mobile apps, total global e-commerce value is likely to be closer to US$2 trillion.

Possible Information loss

In this age, we have lots of information that are stored in our devices. Cellphones have much space it could hold for all your media and software needs e.g. Apple iPhone 6S / iPhone 6S Plus with a total of 128GB.

We maneuvered our gadgets in a way where anyone can access data by using different domains. Websites contain thousands of words that have sometimes links to other websites which creates a network of entangled storage of information. Every day, on some most used websites, users uploads data of media e.g. pictures and videos on their different digital platforms. Depending on the capacity of a domain, they could accumulate a large amount of data that could contain all your history of uploads. They have these functions to value the contents of a user.

It's hard to keep track of every media on the internet but the following shows the massive quantities that are being uploaded every day:

1. 1,209,600 new data producing social media users each day.

2. 656 million tweets per day!

3. More than 4 million hours of content uploaded to YouTube every day, with users watching 5.97 billion hours of YouTube videos each day.

4. 67,305,600 Instagram posts uploaded each day

5. There are over 2 billion monthly active Facebook users, compared to 1.44 billion at the start of 2015 and 1.65 at the start of 2016.

6. Facebook has 1.32 billion daily active users on average as of June 2017

7. 4.3 BILLION Facebook messages posted daily!

8. 5.75 BILLION Facebook likes every day.

9. 22 billion texts sent every day.

10. 5.2 BILLION daily Google Searches in 2017.

11. The amount of mobile data is also blowing up – at the start of 2014, mobile phones/tablets uploaded and downloaded around 2 exabytes (1 exabyte = 1 billion gigabytes) of data. At the start of 2017, data created on mobile devices quadrupled to over 8 exabytes.

12. At the start of 2017, there were 3.394 billion mobile internet users. This means that in 2017 there are more mobile internet users than desktop internet users, with mobile being used to access 51.4% of web pages and desktop to access 43.4% (tablet is used for 4.9% and other devices for the remaining .13%)

13. Approximately 21.9 billion text messages are sent each day in 2017, compared to 18.7 billion in 2016 – a 17% increase in just one year.

14. Amazon is dominating the marketplace – Amazon processes $373 MILLION in sales every day in 2017, compared to about 120 million Amazon sales in 2014

15. By the end of 2016, Uber had 40 million monthly active users

16. Venmo processes $74.7 million in transactions EVERY DAY

17. 91% of retail brands use 2 or more social media channels

18. 81% of all small and medium businesses use some kind of social platform

19. Internet users have an average of 7.6 social media accounts

20. Social media users grew by 320 million between Sep 2017 and Oct 2018.

21. That works out at a new social media user every 10 seconds.

22. Facebook Messenger and Whatsapp handle 60 billion messages a day

23. When asked 81% of teenagers felt social media has a positive effect on their lives

Information loss wasn't all because of a data that cannot be retrieved via corruption, deletion, and hacking but it is also about the loss of tracking a particular data.

Borough's Data Translocation

This refers to the information loss by means of irretrievable data by a single individual or shared individuals while given that the data is on the internet and possible to be retrieved. The reasons of the irretrievable state by an individual/s particular data are losing its track; forgotten location; loss due to entangled and high quantities of data around the particular data.

Simply, Borough's Data Translocation is data that gone missing due to the vastness of the internet. Clients that attempts to find it, wasn't able to because of the limited information that they have on the particular data and since there are many data on the internet, the clients couldn't retrieve the information. It is commonly happening in this era of since the popularity of internet rises and search engines that runs depending on the code that you've given to them aren't enough to find a marble in a desert. The storage of data on the internet will continue to multiply that once information was on it, it'll be hard to search for it.

The search engine is a service that allows Internet users to search for content via the World Wide Web (WWW). A user enters keywords or key phrases into a search engine and receives a list of Web content results in the form of websites, images, videos or other online data. The list of content returned via a search engine to a user is known as a search engine results page (SERP).

To simplify, think of a search engine as two components. First, a spider/web crawler trolls the web for content that is added to the search engine's index. Then, when a user queries a search engine, relevant results are returned based on the search engine's algorithm. Early search engines were based largely on page content, but as websites learned to game the system, algorithms have become much more complex and search results returned can be based on literally hundreds of variables.

There used to be a significant number of search engines with significant market share. Currently, Google and Microsoft's Bing control the vast majority of the market. (While Yahoo generates many queries, their back-end search technology is outsourced to Microsoft.)

According to Net Market Share the global marketing share percentage, in terms of the use of Search Engines heavily favored Google throughout 2017 - averaging a net share of 74.54%. This again reinforces the fact that Google is the market leader, however, it also highlights that the "Others" such as Yahoo, Bing, and Baidu, etc. still hold a large audience and it would be silly to simply ignore them (averaging between 5-10% market share).

It is interesting to note that although Google holds the most market share month on month it has been slowly decreasing from August, with Badui's share slowly rising to 14.69%. Other search engines like AOL, duckduckgo and Ask all have less than 1% market share.

However, Google still dominated when for mobile devices holding more than 90% market share. This is not surprising considering the accessibility of Chrome on mobile devices and its changes to mobile indexing to provide higher quality search results and UX design. Badui only holds a 5.44% market share with Yahoo and Bing holding less than 1% each.

In 2017 46.8% of the global population accessed the internet and by 2021 this figure is projected to grow to 53.7%. The number of people using internet search engines is increasing year on year and is almost unfathomable. Using the above Market Share chart and the data from Internet live stats, we can see the number of daily searches on Google - 3.5 billion, which equates to 1.2 trillion searches per year worldwide.

It is interesting to note how far search engines have come - in 1999 it took Google one month to crawl and index 50 million pages, however in 2012 it took less than one minute! The internet is moving at a much faster pace and it is important to keep up in order to keep your content seen.

The possible solution to the problem of Borough's Data Translocation is depleted the quantities of data on the internet; develop a more

integrated search engine that could find data with almost accurate certainty depending what a particular user wants; have concrete multiple division from all the data on the internet; limit and stabilize the amount of information that we have on the internet.

The Open Information Age

We are in the years where we create more innovations in technology and the internet. We develop in fast in upgrades, equipment, and technological designs. Some of us might not know but the value of information based on discovery is shifting to our technological advances rather than philosophical nor scientific integrations. Technology and information are part of Science and so math but this specific division of our discoveries are making its way into a different level. We developed our engineering mechanically and electronically in these devices that our cellphones might seem more advanced rather than our clothing. We are learning to embark and go smaller on an atomic scale all due to a better profit and competition for gadgets. The information is also parallel since some can have their transactions, sharing, and data supply via these technological advances.

It is an open information age because users have a free interaction on what they are being received and what they will share or send. Some of the books that we need for academic purposes on schools are available online. It isn't restricted for access because the choice of having the information is available. This only refers to our free of choice on information access but not on our capability whether we can buy some of the content online. Some websites and applications need a registration while other's need a subscription for purchasing a bundle of their contents. Different sites offer alternatives and most of them are just like any other business entities, competing to gain money.

Free Internet for all

Free internet is possible with the same rate of internet speed that we are having today. Although, there could be a division between services that are proposed towards people. These services could have a wide gap in

terms of functions and speed. One of the reasons that there could be a free internet is to establish a full engaging community to their online products. Companies might start to develop ways so that they could provide internet connection so that their target audience will increase. It could be the companies that are successful and is maneuvered by online system e.g. online retailing companies. However, there is a conflict to the businesses of telecommunication companies but since our world is continuously integrating on its online platform, there could be a major change in establishing an online connection.

Some telecommunication companies provide an inferior service of accessing some platforms e.g. free data. It enables the user to access with limited functions.

Free/busy data is information about the availability of individuals within an organization at specified times. The user status data indicates whether the time period specified is free, busy or tentative, or if the user has set theirs out of office status. However, the data contains no explanatory information, such as whether the user is in a meeting or has a personal appointment or whether they are physically in the office at the requested time.

Free/busy data allows people to find available slots for appointments and meetings in other users' calendars, even if they cannot confer with the user. Exchange Server and Outlook Web App (OWA) both use free/busy data to track user availability.

The data in a user's free/busy file contains only about 100 bytes, so storing, managing, and replicating it places minimal demand on network resources. However, free/busy data replication affects how up-to-date the data is. If only one copy of free/busy information exists per user, then OWA must connect to that specific file. If the server is distant and network traffic is heavy, response time might be unacceptably slow. In that case, free/busy data can be replicated on multiple servers, but because of lag times inherent in replication, some copies of the data are likely to be obsolete at any given time.

Because of the complexity involved, OWA does not merge new data into existing data. Instead, it deletes a user's existing free/busy data and writes new data that represents the current calendar state.

Facebook Is Giving Away Free Mobile Data to Some Users

By: Cadie Thompson

Facebook may not have its own smartphone yet, but the company is still making a major push into mobile services. The social network has partnered with more than 18 mobile operators in 14 countries to provide free or discounted data access for users of Facebook's messaging service, the company announced Sunday at the Mobile World Congress in Barcelona, Spain. The move is aimed at users in emerging markets and will be available on Messenger for Android, Messenger for Apple's iOS and on Facebook for Every Phone, which is the company's app that works on more than 2,500 different phones.

Facebook has been pushing to grow its mobile messaging app and has been rolling out new features hoping to lure new users in. In December, the company expanded its app to anyone with a mobile phone, allowing anyone with a name and phone number to sign up for Facebook Messenger. In January, the social network updated its app to allow iPhone users to place calls over a WiFi network. The new free and discounted data access will be available in the coming months in specific operators in the following countries: TMN in Portugal, Three in Ireland, Airtel and Reliance in India, Vivacom in Bulgaria, Bakcell in Azerbaijan, Indosat, Smartfren, AXIS and XL Axiata in Indonesia, SMART in Philippines, DiGi in Malaysia, DTAC in Thailand, Viva in Bahrain, STC in Saudi Arabia, Oi in Brazil, Etisalat in Egypt, and Tre in Italy.

Information processing

Information processes vary on different scales and platforms. Companies that reached the market first and accumulated huge quantities of profits are able to exert more services rather than the new ones. Information is like stream represented by digits and electric energy that is continuously flowing in the cables or spaces. This information is being delivered to us

by these entities that are more likely to improve on their scale of speed by upgrading their equipment in the future. One can assume that Internet-related companies might build one-day tall satellites that could reach every human being on the planet.

Software and sites

LibreOffice is a full suite of office software, including excellent apps for text documents, spreadsheets, presentations, and databases. These are all fully compatible with the latest Microsoft file formats, so you'll have no trouble sharing files that work with users of Word, Excel, PowerPoint, and Access.

This means that document formatting is properly preserved for printing if you have to import/export files between LibreOffice and Microsoft Office, something not all office software platforms can do. However, it is a downloadable product rather than one you can work with in the cloud, unlike some others like Office 365 and G Suite. Documents look just as sharp and professional as those created using paid-for software, and there are hundreds of templates available to download, use and edit.

Powerful and flexible, open-source image editor GIMP is as close to Adobe Photoshop as you can get without opening your wallet. It supports layers and is packed with advanced tools for enhancing your pictures or creating new ones from scratch. You can adjust every aspect of your pictures' appearance manually, or use the dozens of customizable filters and effects to achieve amazing results with just a few clicks. GIMP comes with a huge array of user-created plugins pre-installed, and adding more is a piece of cake. If you don't need the power of GIMP and prefer a simpler interface, check out Paint.NET – another superb open source photo editor that's a little lighter on features, but easier to master.

VLC Media Player is one of the world's most popular free media players, and for good reason – it can handle just about any audio file, video file, or media stream you can throw at it, without the need to mess around installing additional codecs. VLC Media Player gives you an amazing degree of control over playback, letting you optimize video and audio for

your specific hardware configuration. VLC Media Player is ideal for streaming podcasts, as well as internet radio stations like Last.fm and TuneIn Radio. There's also a superb archive of extensions and skins, and the WYSIWYG Skin Editor lets you create your own custom designs. The latest addition to VLC is 360-degree playback, which lets you enjoy immersive videos with a VR headset, and more exciting developments are on the horizon to keep pace with new video technology.

Google

Google is the most popular search engine as well as the most visited website globally. Currently, there are 1.17 billion monthly active Google users in the world. The site was founded on September 4, 1998, by Larry Page and Sergey Brin. Today, Google processes more than 40,000 searches in a second.

Apart from its search engine the site provides a lot of other services – such as their popular email service – Gmail, and specialized searches through blogs, catalogs, videos, news items, etc. It also has social networking tools, organization tools, and chat tools, services for mobile devices and more. There are 3,560,046 websites that link to Google. The average daily time spent on the site is 8:01 in which the users view approximately 9 pages [8.93]. Google.com is ranked 1st most popular site in the US, 3rd in India in the same category, 2nd in Japan and 1st in Iran.

Baidu.com

Launched on January 18, 2000, Baidu is the Chinese language search engine and the most visited website in China. It provides "simple and reliable" search experience in Chinese, including a search of multi-media content – MP3 music and movies. What is more, the site was the first to offer WAP and PDA-based mobile search in China.

Apart from being the most popular Chinese language search engine, similar to Qq.com, Baidu also provides over 50 other services. On average the visitors spend 7:54 minutes on Baidu and view 6 pages [6.31].

Wikipedia

Wikipedia is a free online encyclopedia. Initially launched on January 15, 2001, by Jimmy Wales and Larry Sanger, the website is today's largest and most popular general reference work on the Internet. Since Wikipedia is a free website, you can find millions of articles in 287 languages there (according to otechworld.com – 45 million pieces) and they are open to being edited by everyone on the internet. Currently, the website Wikipedia is owned by the nonprofit Wikimedia Foundation. As you can see above Wikipedia attracts most users in the US, followed by Japan, India, China, and Germany. The average visitor sees about 3 pages [3.27] and spends 4:11 minutes on the site. A prominent stat is that 68.40 % of visits to the site come from a search engine.

Facebook

Facebook is a social networking website where users can post comments, share photographs and post links to news or other interesting content on the web, chat live, and watch short-form video. You can even order food on Facebook if that's what you want to do. Shared content can be made publicly accessible, or it can be shared only among a select group of friends or family, or with a single person.

Facebook is user-friendly and open to everyone. Even the least technical-minded people can sign up and begin posting on Facebook. Although it started out as a way to keep in touch or reconnect with long-lost friends, it rapidly became the darling of businesses that were able to closely target an audience and deliver ads directly to the people most likely to want their products or services. Facebook makes it simple to share photos, text messages, videos, status posts and feelings on Facebook. The site is entertaining and a regular daily stop for many users. Unlike some social network sites, Facebook does not allow adult content. When users transgress and are reported, they are banned from the site. Facebook provides a customizable set of privacy controls, so users can protect their information from getting to third-party individuals.

Online fundraising professionals know that you need four things to successfully raise funds online:

1. An ask is timely, specific, and compelling.

2. Visuals — ideally an eye-catching, emotional video — to tell a story and inspire action.

3. An incredibly easy-to-use fundraising platform.

4. An easy way for donors to ask their peers for donations.

Fundraisers on Facebook will do all of this in one central location. In fact, FB is using the techniques found at popular crowdfunding sites such as Kickstarter or Crowdrise.

Now your supporters can set up a dedicated page to raise money from their peers for your cause right on Facebook. When FB users "join" a Fundraiser on Facebook, they can keep up with the progress of a campaign and get updates from your charity. For charities, this simplifies managing a peer-to-peer campaign on FB. Much like Facebook Events, nonprofits can update donors with photos and videos, and accept donations right within Facebook.

The best part of this new feature is that all the information about a fundraising campaign is in one place, rather than spread out across the News Feed or on an external website. Fundraisers on Facebook keeps your supporters and donors where they want to be — within Facebook — with no need to click out to another site. It makes the experience seamless. When donors provide their credit card information, they can make a gift on the Fundraiser page, and then spread the word to their Facebook friends with just a tap. Shared posts on Facebook also feature a Donate button linking to your campaign, thus multiplying its reach and bringing in more donors. Fundraisers on FB works seamlessly with the Facebook Donate Button.

Facebook Donate Button

The Donate button has been available to qualifying nonprofits on Facebook since 2013, but now it has become more useful than ever. What is the best feature of the Donate button? Users can make a donation to a cause they care about without ever leaving Facebook. And the button appears on your supporters' peer-to-peer pages when they fundraise for you. Making the FB donate button even more useful is that if users link their credit card to their FB account, it only takes a few taps to make a secure donation the next time. The ability to keep users on Facebook when making their donation is critical to the success of these new tools.

In Q4 2018, Facebook reached 2.7 billion monthly users across Facebook, Instagram, WhatsApp, or Messenger each month, with more than 2 billion people using at least one of Facebook's services every day. The company also reported that Instagram Stories reached 500 million daily active users, up from 400 million in June 2018. Facebook's advertising revenue across all of its products reached over $16.6 billion, up to $3 billion since the previous quarter. Of the $3 billion, $2 billion came from Stories ads. Facebook also launched a new brand safety certification program for Facebook Marketing Partners. The first companies to receive certification are DoubleVerify, an ad measurement platform, and OpenSlate, a video content rating platform for marketers, both of which are launching new Facebook brand safety tools. The New York Times reported that Facebook is planning to integrate Messenger, WhatsApp, and Instagram into a unified underlying technical infrastructure. Facebook states that the services would continue to operate as stand-alone apps and offer end-to-end encryption, which means all messages will be protected from being viewed by anyone except the participants in a conversation.

The integration plan raises antitrust scrutiny and questions about data protection and security. It also leads to concerns about the influence Facebook could have over news and politics if all of its messaging products are essentially linked and enable cross-platform communication. Facebook Launches New Privacy and Data Resource for

Businesses: Facebook launched new privacy and data use the hub to help businesses understand and comply with its policies. The website offers access to Facebook's data usage policies, insights on how specific tools and ad products utilize audience information, and advice on how business users can protect their audience's data and information.

Facebook on Virtual

For years now, people have been interacting in virtual reality via avatars, computer-generated characters that represent us. Because VR headsets and hand controllers are trackable, our real-life head and hand movements carry into those virtual conversations, the unconscious mannerisms adding crucial texture. Yet even as our virtual interactions have become more naturalistic, technical constraints have forced them to remain visually simple. Social VR apps like Rec Room and Altspace abstract us into caricatures, with expressions that rarely (if ever) map to what we're really doing with our faces. Facebook's Spaces is able to generate a reasonable cartoon approximation of you from your social media photos but depends on buttons and thumb-sticks to trigger certain expressions. Even a more technically demanding platform like High Fidelity, which allows you to import a scanned 3D model of yourself, is a long way from being able to make an avatar feel like you.

Yaser Sheikh was a Carnegie Mellon professor investigating the intersection of computer vision and social perception. When Oculus chief scientist Michael Abrash reached out to him in 2015 to discuss where AR and VR might be going, Sheikh didn't hesitate to share his own vision. "The real promise of VR," he says now, both hands around an ever-present bowl of coffee, "is that instead of flying to meet me in person, you could put on a headset and have this exact conversation that we're having right now—not a cartoon version of you or an ogre version of me, but looking the way you do, moving the way you do, sounding the way you do."

(In his founding document for the facility, Sheikh described it as a "social presence laboratory," a reference to the phenomenon wherein your brain responds to your virtual surroundings and interactions as though

they're real. Then again, he also wrote that he thought they could accomplish photorealistic avatars within five years, using seven or eight people. While the mission remained, expectations necessarily changed. So did the name: Oculus Research became known as Facebook Reality Labs last year.)

The theory underlying Codec Avatars is simple and twofold, what Sheikh calls the "ego test" and the "mom test": You should love your avatar, and your loved ones should as well. The process enabling the avatars is something far more complicated—as I discovered for myself during two different capture procedures. The first takes place in a dome-like enclosure called Mugsy, the walls and ceiling of which are studded with 132 off-the-shelf Canon lenses and 350 lights focused toward a chair. Sitting at the center feels like being in a black hole made of paparazzi. "I had awkwardly named it Mugshooter," Sheikh admits. "Then we realized it's a horrible, unfriendly name." That was a couple of versions ago; Mugsy has increased steadily in both cameras and capability, sending early kludges (like using a ping-pong ball on a string to help participants hold their face in the right place, car-in-the-garage-style) to deserved obsolescence.

In Mugsy, research participants spend about an hour in the chair, making a series of outsize facial expressions and reading lines out loud while an employee in another room coaches them via webcam. Clench your jaw. Relax. Show all your teeth. Relax. Scrunch up your whole face. Relax. "Suck your cheeks in like a fish," technical program manager Danielle Belko tells me while I try not to succumb to paralyzing self-consciousness. "Puff your cheeks."

If the word panopticon comes to mind, it should—though it would be better applied to the second capture area, a larger dome known internally as the Sociopticon. (Before joining Oculus/Facebook, Sheikh established its predecessor, Panoptic Studio, at Carnegie Mellon.) The Sociopticon looks a lot like Microsoft's Mixed Reality Capture Studio, albeit with more cameras (180 to 106) that are also higher-resolution (2.5K by 4K versus 2K by 2K) and capture a higher frame rate (90Hz versus

30 or 60). Where Mugsy concentrated on your face, the Sociopticon helps the Codec Avatar system learn how our bodies move—and our clothes. So, my time in there is less about facial expression and more about what I'd describe as Lazy Calisthenics: shaking out limbs, jumping around, playing charades with Belko via webcam.

The point is to capture as much information as possible (Mugsy and the Sociopticon gather 180 gigabytes every second) so that a neural network can learn to map expressions and movements to sounds and muscle deformations, from every possible angle. The more information it captures, the stronger its "deep appearance model" becomes and the better it can be trained to encode that information as data—and then decode it on the other end, in another person's headset, as an avatar. As anyone who struggled through video compression woes in the early days of the internet knows, that's where the "codec" in Codec Avatars comes from: coder/decoder.

It's not just raw measurements. As research scientist Jason Saragih tells me, the data has to be interpreted. Regular users won't have Mugsy and the Sociopticon in their living rooms, after all—they'll only have their VR and AR headsets. While VR wearables of today are known as head-mounted displays, researchers at FRL have created a line of HMCs, or head-mounted capture systems. Known internally as Argent, these HMCs point infrared LEDs and cameras at various areas of the face, allowing the software to re-constellate them into the person's likeness.

Someday soon, Sheikh and his team want to be able to extend that face scan to the whole body, so the software will need to be able to work around what Saragih calls "extrinsics"—the weirdnesses that would otherwise make a virtual interaction less lifelike. If it's dark where you are, for example, the system needs to be able to compensate. If you move your hand behind your back, the system needs to be able to account for that so that if your friend walks behind you (in VR), they can see what your hand is doing. There are others, like being able to predict how you move in order to keep your avatar's movement as smooth as possible,

but they're all aimed at removing the variables and letting your avatar be an unfettered, undiluted representation of you.

Facebook Spaces

Currently, Facebook Spaces is available on the Oculus Rift — a VR system that lets users explore virtual worlds. "Today, we're introducing Facebook Spaces," said the social media superpower in a recent press release. "A new VR app where you hang out with friends in a fun, interactive virtual environment as if you were in the same room." With Facebook Spaces, users create an avatar — a virtual doppelgänger based on their Facebook profile picture — sync their Facebook account and explore digital landscapes. Once they cross over to this other dimension, users can chat and exchange virtual gifts, watch 360-degree videos, make video calls and take virtual selfies. Up to four Facebook friends can interact at one time. While Facebook Spaces is a social app, it offers unparalleled marketing opportunities, specifically within an event context.

The rise of VR has already transformed the events and experiential landscapes. Not only does VR bring live experiences to people who can't attend an event — earlier this year, FOX Sports streamed highlights of the Super Bowl in VR on its mobile app — but this technology enhances events for spectators, too. Intel, for example, hosted its 2017 CES conference in VR. (Organizers placed 260 VR units on chairs for attendees.) "This is the most technically difficult event we have ever done," said a company's spokesperson.

Facebook only launched Spaces last month, and while its features might be limited as the app is still in beta, this technology signals the future of event management and certainly the revolution of virtual events and event live streaming on the whole. The avatar-based voice chat system facilitates easy communication and the immersive, geographically limitless, virtual hangouts make communicating with customers easy, fresh, innovative, and fun. No longer will virtual events feel like navigating Windows 95. New types of VR apps like Spaces provide event organizers with unlimited opportunities for marketing and creating bespoke customer experiences in the future.

Joel Comm, CEO of InfoMedia, believes Spaces will have an impact on events. "This is what VR events are going to be like," he says. "In the not-too-distant future, you'll attend one." Whether it's a wedding or a sales pitch, apps like Spaces let users experience all the action without leaving their home.

Facebook isn't the only social platform to experiment with VR. In 2016, Snapchat's Spectacles marked the beginning of the company's AR/VR exploration. Then there's YouTube, which offers a broad range of 360-degree and 3-D videos. In fact, YouTube's Virtual Reality channel already has more than 2.3 million subscribers. These technological developments prove one thing: VR is here to stay.

The number of active VR users is expected to reach 171 million by 2018, and event marketers will continue to be on the forefront of experimenting with virtual experiences like those provided by Facebook Spaces.

Spectacles

Originally, Spectacles were meant to be "sunglasses that capture your world" via the Snapchat photo- and video-sharing app. The latest version of Spectacles 2 is essentially smart glasses that are designed to work with the Snapchat app. They feature polarized lenses, a traditional look, and come with a black "semi-soft" case instead of the bright yellow hard case. Since Spectacles first debuted, they've undergone a couple of transformations. But the new Veronica and Nico styles are available now, for $199, in "limited quantities" at launch.

Although these websites and software aren't fixed on their demand and reach. Different companies and innovations might emerge in the future with a different concept with more functionalities might appear one day and change the tides of the market just like the radio to television, and to the internet.

Google

Google LLC is an American multinational technology company that specializes in Internet-related services and products, which include online advertising technologies, search engine, cloud computing, software, and hardware. It is considered one of the Big Four technology companies, alongside Amazon, Apple and Facebook.

Google was founded in 1998 by Larry Page and Sergey Brin while they were Ph.D. students at Stanford University in California. Together they own about 14 percent of its shares and control 56 percent of the stockholder voting power through supervoting stock. They incorporated Google as a privately held company on September 4, 1998. An initial public offering (IPO) took place on August 19, 2004, and Google moved to its headquarters in Mountain View, California, nicknamed the Googleplex. In August 2015, Google announced plans to reorganize its various interests as a conglomerate called Alphabet Inc. Google is Alphabet's leading subsidiary and will continue to be the umbrella company for Alphabet's Internet interests. Sundar Pichai was appointed CEO of Google, replacing Larry Page who became the CEO of Alphabet.

The company's rapid growth since incorporation has triggered a chain of products, acquisitions, and partnerships beyond Google's core search engine (Google Search). It offers services designed for work and productivity (Google Docs, Google Sheets, and Google Slides), email (Gmail/Inbox), scheduling and time management (Google Calendar), cloud storage (Google Drive), instant messaging and video chat (Google Allo, Duo, Hangouts), language translation (Google Translate), mapping and navigation (Google Maps, Waze, Google Earth, Street View), video sharing (YouTube), note-taking (Google Keep), and photo organizing and editing (Google Photos). The company leads the development of the Android mobile operating system, the Google Chrome web browser, and Chrome OS, a lightweight operating system based on the Chrome browser. Google has moved increasingly into hardware; from 2010 to 2015, it partnered with major electronics manufacturers in the production of its Nexus devices, and it released multiple hardware

products in October 2016, including the Google Pixel smartphone, Google Home smart speaker, Google Wifi mesh wireless router, and Google Daydream virtual reality headset. Google has also experimented with becoming an Internet carrier (Google Fiber, Project Fi, and Google Station).

Web-based services

Google offers Gmail for email, Google Calendar for time-management and scheduling, Google Maps for mapping, navigation and satellite imagery, Google Drive for cloud storage of files, Google Docs, Sheets and Slides for productivity, Google Photos for photo storage and sharing, Google Keep for note-taking, Google Translate for language translation, YouTube for video viewing and sharing, Google My Business for managing public business information, and Duo for social interaction. In March 2019, Google unveiled a cloud gaming service named Stadia.

Software

Google develops the Android mobile operating system, as well as its smartwatch, television, car, and Internet of things-enabled smart devices variations. It also develops the Google Chrome web browser, and Chrome OS, an operating system based on Chrome.

Hardware

In January 2010, Google released Nexus One, the first Android phone under its own brand, "Nexus". It spawned a number of phones and tablets under the "Nexus" branding until its eventual discontinuation in 2016, replaced by a new brand called Pixel. In 2011, the Chromebook was introduced, described as a "new kind of computer" running Chrome OS.

In July 2013, Google introduced the Chromecast dongle, that allows users to stream content from their smartphones to televisions. In June 2014, Google announced Google Cardboard, a simple cardboard viewer that lets user place their smartphone in a special front compartment to view virtual reality (VR) media. The Pixel and Pixel XL smartphones with the Google Assistant, a next-generation contextual voice assistant, built-in.

Google Home, an Amazon Echo-like voice assistant placed in the house that can answer voice queries, play music, find information from apps (calendar, weather, etc.), and control third-party smart home appliances (users can tell it to turn on the lights, for example). The Google Home line also includes variants such as the Google Home Hub, Google Home Mini, and Google Home Max.

Enterprise services

G Suite is a monthly subscription offering for organizations and businesses to get access to a collection of Google's services, including Gmail, Google Drive, and Google Docs, Google Sheets and Google Slides, with additional administrative tools, unique domain names, and 24/7 support.

On September 24, 2012, Google launched Google for Entrepreneurs, a largely not-for-profit business incubator providing startups with co-working spaces known as Campuses, with assistance to startup founders that may include workshops, conferences, and mentorships. Presently, there are 7 Campus locations in Berlin, London, Madrid, Seoul, São Paulo, Tel Aviv, and Warsaw.

On March 15, 2016, Google announced the introduction of Google Analytics 360 Suite, "a set of integrated data and marketing analytics products, designed specifically for the needs of enterprise-class marketers" which can be integrated with BigQuery on the Google Cloud Platform. Among other things, the suite is designed to help "enterprise class marketers" "see the complete customer journey", generate "useful insights", and "deliver engaging experiences to the right people". Jack Marshall of The Wall Street Journal wrote that the suite competes with existing marketing cloud offerings by companies including Adobe, Oracle, Salesforce, and IBM.

Internet services

In February 2010, Google announced the Google Fiber project, with experimental plans to build an ultra-high-speed broadband network for 50,000 to 500,000 customers in one or more American cities. Following

Google's corporate restructure to make Alphabet Inc. its parent company, Google Fiber was moved to Alphabet's Access division.

In April 2015, Google announced Project Fi, a mobile virtual network operator, that combines Wi-Fi and cellular networks from different telecommunication providers in an effort to enable seamless connectivity and fast Internet signal.

In September 2016, Google began its Google Station initiative, a project for public Wi-Fi at railway stations in India. Caesar Sengupta, VP for Google's next billion users, told The Verge that 15,000 people get online for the first time thanks to Google Station and that 3.5 million people use the service every month. The expansion meant that Google was looking for partners around the world to further develop the initiative, which promised "high-quality, secure, easily accessible Wi-Fi". By December, Google Station had been deployed at 100 railway stations, and in February, Google announced its intention to expand beyond railway stations, with a plan to bring citywide Wi-Fi to Pune.

A search engine and one of the leading companies that came from the emergence of the internet might take control of some of the biggest functionalities that could happen in the future. It has a lot of services that it provides these days an allows users to have the best access to the internet. Finding answers, websites, and the things we need are never been easier but companies that share a big part to the internet have also control most of it. It's not only Google that provides services there are also browsers and search engines that could lead users into accessing illegal networks and transactions. There are companies like Google e.g. Bing, Ask, DuckDuckGo, CC Search, and etc. These companies might replace one another for being the leading and most used browsers but nonetheless, these tools or perhaps something similar is important for accessing the internet in our future.

Online news

Online News also started to emerge despite the presence of traditional television shows. However, since there is an increased rate of citizens

that are able to access and wanted to check news via the internet, independent companies used these opportunities to build their news sites. Some have services locally while others have international news.

Top U.S news websites

Yahoo! News - Yahoo! News is a news website that originated as an internet-based news aggregator by Yahoo!. Articles originally came from news services such as the Associated Press, Reuters, Fox News, Al Jazeera, ABC News, USA Today, CNN and BBC News.

Google News - Google News is a custom internet newspaper with articles from 4,500 different news sources and all the search functions of Google.

HuffingtonPost - HuffPost (formerly The Huffington Post and sometimes abbreviated HuffPo) is an American news and opinion website and blog, with localized and international editions. The magazine is edited from a liberal political perspective. It was founded in 2005 by Andrew Breitbart, Arianna Huffington, Kenneth Lerer, and Jonah Peretti. The site offers news, satire, blogs, and original content and covers politics, business, entertainment, environment, technology, popular media, lifestyle, culture, comedy, healthy living, women's interests, and local news.

CNN - Cable News Network (CNN) is an American news-based pay television channel owned by WarnerMedia News & Sports, a division of AT&T's WarnerMedia. CNN was founded in 1980 by American media proprietor Ted Turner as a 24-hour cable news channel. Upon its launch, CNN was the first television channel to provide 24-hour news coverage and was the first all-news television channel in the United States.

The New York Times - The New York Times is an American newspaper based in New York City with worldwide influence and readership. Founded in 1851, the paper has won 127 Pulitzer Prizes, more than any other newspaper. The Times is ranked 17th in the world by circulation and 2nd in the U.S.

Applications

Flipboard

Flipboard has established itself as one of the most popular news apps for both Android and iOS. And for good reason. Flipboard accesses content from around the world and curates the content you care about most. You'll find a tab called For You to see the content you'll like best, as well as the option to explore stories you might not typically see. Its reader is outstanding and makes accessing content simple.

Apple News

If you're an iPhone owner, Apple News comes with the company's iOS operating system. That means you can immediately get access to the news you care about without ever needing to download a third-party app.

Apple News kicks things off by first asking you what kinds of content you care most about. It then uses that information to create a curated list of news stories that might suit you. The service will also send you notifications to let you know when a new story comes in and if you're a Mac user, you can syndicate content across devices.

If you're an Android user, however, Apple News isn't available to you. There's some hope that Apple will bring its many apps, including Apple News, to Android in the future, but there's no telling whether it will happen.

Google News

Google has been a major player in the news business for years. Its aggregation engine is widely viewed as one of the best in the market and those who have been accessing news in the browser have relied on it for quite a long time. Google News on the iPhone and Android smartphones offer a similar experience.

Like its competitors, Google News comes with a function for analyzing your tastes and delivering you the content you care about. And when you

boot it up, you'll see the top five stories right now. Better yet, you can find a single story, but also get a timeline of articles to help you see how the story has evolved over time. And since it works with your Google account, you can access news in the browser, on mobile, and elsewhere.

Feedly

Feedly is smaller than some of the heavyweights in the news app market listed above, but it's coming on strong, thanks to one of the more appealing designs in this roundup. With Feedly, you'll find an app that comes with a stripped-down design that eschews bulky banners, ugly sidebars, and other issues. Instead, the app simply provides you easy access to the content you care about and a nice, full-screen pane to read the articles on your phone. Best of all, it comes with a night mode for reading content in the dark.

In addition to surfacing content around the Internet, Feedly also comes with an artificial intelligence feature that identifies the kind of content you care about and delivers it to your phone. It's a handy way to find the news you love.

These companies start to accumulate profit and develop their content. Their clients will get higher than it will at the match to a traditional news channel. These websites will develop their own way of networks in accumulation for information and it is expected that future services could make the information that is coming from them to be more trustworthy. Unlike traditional news, online news doesn't need to have a daily quota and time slot that must be done but instead, they could develop filtering processes to check the information before delivering it to the masses. These companies could also warn faster the people if there is an emergency in an integrated modern world where everyone could receive messages, notifications via their phones.

Internet Information Flow Theories

This refers to the different theoretical situations that shows possible problems and crisis concerning to our rate of information gathering, system developments, technological and networking integration.

Verizon Communications | USA | Market value: $201 billion Verizon Communications Inc is one of the largest telecom companies in the world and among top telecommunication companies in the USA with a market value of around $201 billion in 2018. Verizon is headquartered in Manhattan, New York City and operates in over 150 countries worldwide. Over the recent years, the company has put its main focus on developing digital & mobile infrastructures and has been investing heavily in next-generation 5G wireless technologies as well as the multitrillion-dollar Internet of Things (IoT) opportunities. Fios Gigabit connection can deliver up to 940/880 Mbps.

AT&T Inc is another American multinational telecommunication conglomerate with a market value of $198 billion in 2018. Headquartered in Dallas, Texas, the company offers a wide range of products and services, including mobile phone, satellite TV, Home Security, Fixed Telephone, Digital TV as well as Broadband internet, etc. to over 355 million customers across 56 U.S. metropolitan cities, with plans for further expansion. It has ultra-fast internet starting with 1000 Mbps connection.

Google now processes over 40,000 search queries every second on average which translates to over 3.5 billion searches per day and 1.2 trillion searches per year worldwide. Google now processes over 7 billion search queries a day worldwide (though some say it could be as high as 10 billion per day). 15% of those queries have never been searched for on Google before. As of January 2019, there were over 1.94 billion websites on the Internet. info.cern.ch was the first-ever website on the Internet, published on August 6, 1991. The world averages an internet penetration rate of 55.1% (as compared to 35% in 2013).

Information Clash Theory

This theory proposes the conflict between two residing information within the internet that holds the same purpose. These conflicts are due to massive quantities of information that we are possibly experiencing today and might be in the future. The quantities of information within the internet will reach the probability needed for multiple information's answers to differ to one another.

The evidence of the possibility of this theorem is the difference in context from two colliding sources that share the same purpose. Since the amount of information is increasing within the internet, the chances of having two sources or information that have a conflicting answer will also increase. An example of this is two different interpretations of equations that have the same purpose to answer and represent a particular process also as a solution but contains a difference in their properties or answers.

Simply, the rising technology and capacity of every database will result in a more possible increase in the amount of information which will have its conflicts in terms of value, answer, and interpretation. More varied sources will come out that will put in conflict from specific information that could cause confusion towards users. Information Clash Theory could be present but uncertain in today's situation since there is no present technology that could keep track of every information's value, answer, and interpretation.

Information Overload Theory

Information Overload Theory is a hypothetical possibility wherein data, media, and information quantities will reach its limit via the internet or a similar process that will make the data, media, and information to become indeterminable. It is related to Borough's Data Translocation where particular information, media, and data that are needed cannot be retrieved due to the amount of information, media, and data. This theory refers to the whole situation including the irretrievable information, media, and data by a specific means caused by massive quantities that will result in the information uncertainty principle.

It could be a problem if our future will have inconvenient access and finding resources due to the amount of information. The same instance applies when a server that reaches its limits of clients gets affected by dysfunctions that are related to the server.

Information Uncertainty Principle is when users had conflicts determining an answer, process, and value due to their difference in resources, equations, and information. Possibly, all information will have its corresponding digital equivalence and from the contents of different authors, historians, and mathematicians, there will be a problem in credibility and determining the right value, meaning, and answer.

In Philosophy, there is no such thing as an absolute fact so we cope and develop varying branches that express standards that are expressed by a spectrum from which information we can trust. We develop laws, principles, measurements, and terms such as scientific facts so that we can make sense of anything. It is developed throughout centuries and due to new developments, we are able to make sense some of this world. However, any information will emerge and not all can't be classified. Humans will have problems determining which must be used and credible. This problem is being classified by programs that are made by individuals but the scopes of programming are only limited. The possible method for this hypothetical problem would be the use of Artificial Intelligence or a program that have larger scopes on determining the meaning as well as answers to sort this information.

A computer program is a collection of instructions that performs a specific task when executed by a computer. A computer requires programs to function. A computer program is usually written by a computer programmer in a programming language. From the program in its human-readable form of the source code, a compiler can derive machine code—a form consisting of instructions that the computer can directly execute. Alternatively, a computer program may be executed with the aid of an interpreter. A collection of computer programs, libraries, and related data are referred to as software. Computer programs may be categorized along functional lines, such as application

software and system software. The underlying method used for some calculation or manipulation is known as an algorithm.

Computer programming is a way of giving computers instructions about what they should do next. These instructions are known as code, and computer programmers write code to solve problems or perform a task. The end goal is to create something: that could mean anything from a web page, or a piece of software, or even just a pretty picture. That's why computer programming is often described as a mix of art and science; it's technical and analytical, yet creative at the same time.

A program does nothing more than telling the computer how to accept some type of input, manipulate that input, and spit it back out again in some form that humans find useful. Table 1 lists some common types of programs, the types of input that they accept, and the output that they produce.

Essentially, a program tells the computer how to solve a specific problem. Because the world is full of problems, the number and variety of programs that people can write for computers is practically endless. But to tell a computer how to solve one big problem, you usually must tell the computer how to solve a bunch of little problems that make up the bigger problem.

The future of Programming According to Yoppworks

8 Predictions of Future Programming Based on 2017 Trends

Computer programming involves writing instructions that a computer system follows, or writing and testing the code for software and applications. In accomplishing these tasks, programmers must learn languages such as C++, Java, or Scala. Some of the job responsibilities are similar to those of software developers. They include modeling and planning the way in which code will be written.

Programmers often work with integrated development environments and are involved in building, fixing, and modifying:

1. Computer operating systems

2. Social networking applications

3. Software-as-a-Service solutions

4. Automated internet search platforms

5. Artificial intelligence programs

6. Voice recognition systems

Scala Will Become More Mainstream

Released in 2003, after design efforts began in 2001, Scalable Language or Scala is an object-oriented programming language that is interoperable with Java. A program written in this language will run in any environment that Java runs in, making it highly versatile. The similarity makes it attractive to programmers. Capabilities include support for functional programming (which will be highlighted next) and compatibility with algebraic and anonymous data types.

Operator overloading, raw strings, and named parameters are available, although Scala can run on a Java Virtual Machine that doesn't include these functions. It supports cluster computing as well. Yoppworks offers classes and training on building applications using this language with Akka, an open-source toolkit. It enables developers to create software applications on their computer, so long as they have access to the internet.

Applications developed in this manner are efficient and easily scalable, further boosting the appeal and potential of Scalable Language.

Functional Programming

This method of programming uses declarative statements and expressions, focusing on mathematical functions to define statements. It is based somewhat on lambda calculus. Despite being rooted in a system developed in the 1930s, the concept is now looking like a fundamental one for writing the code of the future.

Functional Type Programming Will Be the Basis for Writing JavaScript

However, it won't be limited to HTM, imperative object-oriented, or other singular aspects of code writing, but for drafting entire sets of code. Some elements from the past are no longer necessary and many, in fact, have become irrelevant. Tools for creating more legible code are available that work with the advanced computing power of today. Programmers can write shorter, less complex code for higher-order tasks and by combining fundamental functions.

Programmers Will Become More Dependent on Functional Languages

The concept supports running sections of software in parallel, across different machines and CPU cores. That eliminates the need for complex synchronization. Therefore, Web requests and other functions requiring concurrent processing can be better managed. The trends also affect programmers of smartphone applications, interconnected devices, and servers that support the interactions between them.

Languages such as Scala, Haskell, and Clojure have not only grown in popularity but are expected to continue as the demands for flexible, functional programming expand.

Open Source

Open source software has already dominated the computer programming world. Vast networks of professionals and other enthusiasts have collaborated to make application solutions better. One can access code and modify, copy, and share it. The Apache HTTP Server, Firefox, MySQL, and Perl are all examples of open source programs.\

Apache Spark Will Dominate Data Processing

Datasets are becoming increasingly larger, but this open source framework uses fault tolerance and data parallelism to allow programming on a different level. It provides an interface for programming data clusters. Built by software developers from more than

200 companies, Apache Spark's features are supportive of big data processing.

It runs on any platform and is speedier than other solutions; in fact, it is 100 times as fast as Hadoop clusters. The same data can be used to execute multiple jobs, thanks to in-memory data sharing and cyclic data flow, demonstrating the platform's potential as the demand for faster data processing accelerates.

Open Source Won't Only Be an Interest to Programmers

Programmers love to tinker with open source, but they and people taking computer programming courses at Yoppworks won't be the only ones interested in the concept. Already, we are all using open source software when we visit websites, stream music, chat with friends, and check email. It's used to route and transmit data, right down to the core of today's communication infrastructure, which is based on remote computers, mobile phone applications, and Web browsers. Remote computing, or cloud computing, is increasing in importance and is sure to continue as we rely more on internet-connected devices.

The Preference for Open Source Software Will Be Ubiquitous

The concept appeals to many different types of people. It gives them control over the code. Even non-programmers can make use of the software because they can tweak it to their needs, rather than use it as marketing. The appeal is also growing because such software is easier to study than other types; for example, students can share their work while developing their skills. Open source has changed the way people learn computer programming, right down to sharing mistakes to help others avoid them.

Fixes, updates, and upgrades can be made without the permission of original programmers. Quick fixes can mean the software is more secure. Also, since programmers tend to work on open source software over the long term, they can depend on these tools without them becoming obsolete. Therefore, reliance on open standards may mean more product stability than with many proprietary software tools.

Big Data

Scala, the programming language used to write Apache Spark, and which is used for building applications with Akka, is part of this movement. Aside from fueling the demand for related programming courses, this has even more potential impacts on the future of programming. These points below highlight both the future and what is happening now.

Big Data Adoption Is No Longer Limited to Analytics

Not too long ago, IT departments were focused on using big data for analyzing network activity, usage, and security, among other things. Today, the applications are increasingly driving the demand in all industries. Many analytical processes will still require vast quantities of data, but big data's application in banking and securities, communications and entertainment, healthcare, education, manufacturing, retail, government, energy, insurance, and transportation give it leverage that computer programmers cannot ignore.

The programming of the future is sure to be different than that of the past, in many ways, and is being shaped by the trends of today. From new languages to functional programming and the use of big data, there are bold predictions swirling about the field of computer programming. Here are eight of them that paint a detailed picture of what may be to come.

Big Data Is Fueling the Potential for AI and Machine Learning

There is a connection with the emergence of data virtualization, as big data analytics are possible in real time without moving any information. Data resources don't even have to be in a single repository. The future looks brighter than ever for artificial intelligence and machine learning. Both depend on data to build predictive models that could be used to support a device's potential for autonomy.

Predicting security issues before they happen is another possibility. This is significant, given the vulnerability of the Internet of Things. Big data and relevant programming techniques may keep hackers away from

home security systems, automotive electronics, and even toys as cybercriminals seek new ways to obtain data and disrupt lives.

We, therefore, predict programmers will implement artificial intelligence and machine learning to solve some of today's most pervasive computing issues.

Learn Computer Programming with Today's Most Relevant Training Courses

The tools, technologies, and resources available today will have a profound impact on future programming. It's also easier than ever before to obtain training. From the basics of functional programming to specific languages such as Scala, you can learn from the comfort of your own home. For more about the latest online programming courses, contact YoppWorks at 1-888-322-6002 or browse our online training options today.

Information System Entanglement

Information System Entanglement is a problem from a hypothetical conflict. It is a general classification to the problems regarding networks that are negatively affected because of interference. Interference is a conflict that could be sourced back from outside of a network or inside the network. Outside interference is an indirect cause of a negative effect on a series of network. Inside Interference is an indirect cause of a negative effect on a series of network. The series of the network on this theory only refers to two or more connected networks during the interference.

A server is a computer, a device or a program that is dedicated to managing network resources. Servers are often referred to as dedicated because they carry out hardly any other tasks apart from their server tasks. There are a number of categories of servers, including print servers, file servers, network servers and database servers. In theory, whenever computers share resources with client machines, they are considered servers.

Nearly all personal computers are capable of serving as network servers. However, usually, software/hardware system dedicated computers have features and configurations just for this task. For example, dedicated servers may have high-performance RAM, a faster processor, and several high-capacity hard drives. In addition, dedicated servers may be connected to redundant power supplies, several networks, and other servers. Such connection features and configurations are necessary as many client machines and client programs may depend on them to function efficiently, correctly and reliably.

In order to operate in the unique network environment where many computers and hardware/software systems are dependent on just one or several server computers, a server often has special characteristics and capabilities, including the ability to update hardware and software without a restart or reboot, advanced backup capability for frequent backup of critical data, advanced networking performance, automatic (invisible to the user) data transfer between devices, high security for resources, data and memory protection.

Server computers often have special operating systems not usually found on personal computers. Some operating systems are available in both server and desktop versions and use similar interfaces. However, an increase in the reliability of both server hardware and operating systems have blurred the distinctions between desktop and server operating systems.

An application server is a type of server designed to install, operate and host applications and associated services for end users, IT services and organizations. It facilitates the hosting and delivery of high-end consumer or business applications, which are used by multiple and simultaneously connected local or remote users.

An application server consists of a server operating system (OS) and server hardware that work together to provide computing-intensive operations and services to the residing application. An application server executes and provides user and/or other app access when utilizing the installed application's business/functional logic. Key required features of

an application server includes data redundancy, high availability, load balancing, user management, data/application security, and a centralized management interface. Moreover, an application server may be connected by enterprise systems, networks or intranet and remotely accessed via the Internet.

Depending on the installed application, an application server may be classified in a variety of ways, including as a Web server, database application server, general purpose application server or enterprise application (EA) server.

The term database server may refer to both hardware and software used to run a database, according to the context. Like software, a database server is the back-end portion of a database application, following the traditional client-server model. This back-end portion is sometimes called the instance. It may also refer to the physical computer used to host the database. When mentioned in this context, the database server is typically a dedicated higher-end computer that hosts the database.

Note that the database server is independent of the database architecture. Relational databases, flat files, non-relational databases: all these architectures can be accommodated on database servers.

In the client-server computing model, there is a dedicated host to run and serve up the resources, typically one or more software applications. There are also several clients who can connect to the server and use the resources offered and hosted by this server.

When considering databases in the client-server model, the database server may be the back-end of the database application (the instance), or it may be the hardware computer that hosts the instance. Sometimes, it may even refer to the combination of both hardware and software.

In smaller and mid-sized setups, the hardware database server will also typically host the server part of the software application that uses the database. If we consider a bank, for instance, the hardware database server will host the software database server and the bank's software

application. This application will likely connect to the database via specific ports and use inter-process communication to log into and access the data resident in the database. The users in the bank, seated at their personal computers, will also use the client module of the application installed on their computers to connect to the database. In this example, there are actually two client-server models we are looking at: the database and the application.

In larger setups, the volume of transactions may be such that one computer will be unable to handle the load. In this case, the database software will reside on a dedicated computer and the application on another. In this scenario, there is a dedicated database server, which is the combination of the hardware and software, and a separate dedicated application server.

A network server is a computer designed to act as a central repository and help in providing various resources like hardware access, disk space, printer access, etc, to other computers in the network. A network server might not differ from a workstation in hardware, but the functionality it performs clearly differentiates it from other workstations. Network servers help in simplifying the different tasks for system administrators including those centering around management. Any configuration or security updates can be applied to a network server instead of individually passing to different computers connected to the network.

Computer Virus

A computer virus, much like a flu virus, is designed to spread from host to host and has the ability to replicate itself. Similarly, in the same way, that flu viruses cannot reproduce without a host cell, computer viruses cannot reproduce and spread without programming's such as a file or document.

In more technical terms, a computer virus is a type of malicious code or program written to alter the way a computer operates and is designed to spread from one computer to another. A virus operates by inserting or attaching itself to a legitimate program or document that supports

macros in order to execute its code. In the process, a virus has the potential to cause unexpected or damaging effects, such as harming the system software by corrupting or destroying data.

Once a virus has successfully attached to a program, file, or document, the virus will lie dormant until circumstances cause the computer or device to execute its code. In order for a virus to infect your computer, you have to run the infected program, which in turn causes the virus code to be executed.

This means that a virus can remain dormant on your computer, without showing major signs or symptoms. However, once the virus infects your computer, the virus can infect other computers on the same network. Stealing passwords or data, logging keystrokes, corrupting files, spamming your email contacts, and even taking over your machine are just some of the devastating and irritating things a virus can do.

While some viruses can be playful in intent and effect, others can have profound and damaging effects. This includes erasing data or causing permanent damage to your hard disk. Worse yet, some viruses are designed with financial gains in mind.

In a constantly connected world, you can contract a computer virus in many ways, some more obvious than others. Viruses can be spread through email and text message attachments, Internet file downloads, and social media scam links. Your mobile devices and smartphones can become infected with mobile viruses through shady app downloads. Viruses can hide disguised as attachments of socially shareable content such as funny images, greeting cards, or audio and video files.

To avoid contact with a virus, it's important to exercise caution when surfing the web, downloading files, and opening links or attachments. To help stay safe, never download text or email attachments that you're not expecting, or files from websites you don't trust.

Samples of Computer Viruses

ILOVEYOU - The ILOVEYOU virus is considered one of the most virulent computer viruses ever created and it's not hard to see why. The virus managed to wreak havoc on computer systems all over the world, causing damages totaling in at an estimate of $10 billion. 10% of the world's Internet-connected computers were believed to have been infected. It was so bad that governments and large corporations took their mailing system offline to prevent infection.

The virus was created by two Filipino programmers, Reonel Ramones, and Onel de Guzman. What it did was use social engineering to get people to click on the attachment; in this case, a love confession. The attachment was actually a script that poses as a TXT file, due to Windows at the time hiding the actual extension of the file. Once clicked, it will send itself to everyone in the user's mailing list and proceed to overwrite files with itself, making the computer unbootable. The two were never charged, as there were no laws about malware. This led to the enactment of the E-Commerce Law to address the problem.

Code Red - Code Red first surfaced in 2001 and was discovered by two eEye Digital Security employees. It was named Code Red because the pair were drinking Code Red Mountain Dew at the time of discovery. The worm targeted computers with Microsoft IIS web server installed, exploiting a buffer overflow problem in the system. It leaves very little trace on the hard disk as it is able to run entirely on memory, with a size of 3,569 bytes. Once infected, it will proceed to make a hundred copies of itself but due to a bug in the programming, it will duplicate even more and ends up eating a lot of the systems resources.

It will then launch a denial of service attack on several IP address, famous among them the website of the White House. It also allows backdoor access to the server, allowing for remote access to the machine. The most memorable symptom is the message it leaves behind on affected web pages, "Hacked by Chinese!", which has become a meme itself. A patch was later released and it was estimated that it caused $2 billion in lost

productivity. A total of 1-2 million servers were affected, which is amazing when you consider there were 6 million IIS servers at the time.

Melissa - Named after an exotic dancer from Florida, it was created by David L. Smith in 1999. It started as an infected Word document that was posted up on the alt.sex usenet group, claiming to be a list of passwords for pornographic sites. This got people curious and when it was downloaded and opened, it would trigger the macro inside and unleash its payload. The virus will mail itself to the top 50 people in the user's email address book and this caused an increase of email traffic, disrupting the email services of governments and corporations. It also sometimes corrupted documents by inserting a Simpsons reference into them.

Smith was eventually caught when they traced the Word document to him. The file was uploaded using a stolen AOL account and with their help, law enforcement was able to arrest him less than a week since the outbreak began. He cooperated with the FBI in capturing other virus creators, famous among them the creator of the Anna Kournikova virus. For his cooperation, he served only 20 months and paid a fine of $5000 of his 10-year sentence. The virus reportedly caused $80 million in damages.

Malware

The term malware is a contraction of malicious software. Put simply, malware is any piece of software that was written with the intent of doing harm to data, devices or to people. When you hear talk of viruses, Trojans, spyware and the like, what you're really hearing is the talk of different kinds of malware. These can be criminal organizations looking for tools to operate in the digital world, or government intelligence agencies looking to access the data locked away in the computers, networks and mobile devices of their targets.

List of Common Malware

Virus: Like their biological namesakes, viruses attach themselves to clean files and infect other clean files. They can spread uncontrollably, damaging a system's core functionality and deleting or corrupting files. They usually appear as an executable file.

Trojans: This kind of malware disguises itself as legitimate software, or is included in legitimate software that has been tampered with. It tends to act discretely and create backdoors in your security to let other malware in.

Spyware: No surprise here: spyware is malware designed to spy on you. It hides in the background and takes notes on what you do online, including your passwords, credit card numbers, surfing habits and more.

Worms: Worms infect entire networks of devices, either local or across the internet, by using network interfaces. It uses each consecutive infected machine to infect more.

Ransomware: Also called scareware, this kind of malware can lock down your computer and threaten to erase everything — unless a ransom is paid to its owner.

Adware: Though not always malicious in nature, particularly aggressive advertising software can undermine your security just to serve you ads — which can give a lot of other malware a way in. Plus, let's face it: pop-ups are really annoying.

Botnets: Botnets are networks of infected computers that are made to work together under the control of an attacker.

The Information and systems of such networks are entangled to one another and so interference could possibly affect all the entangled networks. It will result in a series of connection that could affect one another. An example of this is when a server was affected by an inside interference e.g. virus, that affected negatively the networks that are connected to the server.

Credibility

Credibility is a hard thing to find these days as more information keeps surfacing via the internet and online platforms are making their way as a top resource for information. Many data and information are being shown to the public and there is also an increasing number of subscribers that wanted to be informed as it is faster. It's been a common way of traditional news to make their headlines more interesting that it actually is. These ways make the information to be less trustworthy as they tend to mislead the audience for the sake of establishing interesting headlines.

In online news, these ways don't change but instead, some of the platforms that deliver news via the internet also use the techniques of putting a misleading but interesting title to gain views. This might leave the audience to be disappointed and leaves a bad impression on them but there are instances that in the future they might know that it is only a click bait but the psychology of fast accessing where they could just know whether it's true or not by just a click, makes them to still view and increase the popularity of the online news platform.

Clickbait is a piece of content that intentionally over-promises or misrepresents in order to pull users onto a particular website. Clickbait generally captures users with a snappy, sensationalist headline — such as "you won't believe this", or "you'll never guess what happened next" — but then fails to deliver on the user's implicit expectations.

Clickbait articles tend to run under 300 words and don't ordinarily include original ideas or content. Instead, they're summaries of longer stories or embedded videos that could be found elsewhere, and upon inspection don't necessarily match their corresponding headline or lede.

A lot of small business owners and marketing agencies like to use clickbait because it's a super-fast way of generating web traffic — and it can generate results. Industry-specific listicles, in particular, can save users a lot of time and energy attempting to aggregate information for themselves. The subsequent increase in traffic this content creates can

improve a site's search engine presence phenomenally. Generally speaking, that's a win-win.

Whether that traffic directly translates to higher conversion rates and an increase in sales is more difficult to say. But if companies over-rely on click-baiting, it can often come back to bite them hard.

Click-bait hasn't also just been around for the headlines and front pages of news or article but it is also used in all media. When a blogger that wanted to gain views on the internet wanted to attract attention, they used the tactics of putting a title that will make the possible audience to watch it. These days, we have different preferences and programs filter the contents depending on our liking. These programs based their filtering depending on our history of what we've watched, creators that we subscribed, and liked contents. This sorting makes us browse and scroll from choices that are based on preferences. The standards of users are increasing in preferring their media and thumbnails with catchy titles attract the attention of the users. However, misleading already proposes the problem of misinterpreting the content or the actual problem.

Credibility doesn't just scope the contents but the platform itself. Some users are able to review a platform based on its accuracy and unbiased content and it's a good way for users to determine which platforms have credible news. Good online news contains pieces of evidence, sources, and undergoes editing and fact-checking but many online platforms today, are delivering information and receiving bad feedback due to their biased, misleading, and inaccurate information.

Samples of Fake News

Filipino netizens fume over Lonely Planet video featuring Banaue Rice Terraces

From Rappler.

MANILA, Philippines – Travel guide Lonely Planet is in hot water for publishing a video that claimed the famed Banaue Rice Terraces, dubbed

by some as the "Eighth Wonder of the World," were built by the Chinese. The video was a feature on the "world's greenest places."

According to ABS-CBN, the Lonely Planet video noted that the rice terraces were "first built around 2,000 years ago by the Chinese." The video has since been taken down from the guide's Facebook page but users were able to take screenshots – as the internet always does.

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the terraces are an "outstanding example of an evolved, living cultural landscape that can be traced as far back as two millennia ago in the pre-colonial Philippines."

"They are all the product of the Ifugao ethnic group, a minority community that has occupied these mountains for thousands of years," the organization notes on its website.

"The Ifugao Rice Terraces are the priceless contribution of Philippine ancestors to humanity. Built 2000 years ago and passed on from generation to generation, the Ifugao Rice Terraces represent an enduring illustration of an ancient civilization that surpassed various challenges and setbacks posed by modernization," UNESCO further noted.

"Thank you for flagging this, we'll share this with our editors who'll take a further look into it. We'll share updates/action points on this thread," Lonely Planet first said on Twitter, addressing a tweet with a screenshot of the mistake.

Eagle-eyed users were also able to point out that Lonely Planet, it turns out, has been consistent in the claim. On its website, it says of the rice terraces: "World Heritage listed, they're impressive not only for their chiseled beauty but because they were introduced around 2000 years ago by the Chinese."

Lonely Planet has since apologized for the mistake. "We now recognize that our claim that they were introduced 2000 years ago by the Chinese is misleading," the travel guide said in a tweet. The late Otley Beyer, an American anthropologist who moved to Ifugao in 1905, theorized that

2,000 years ago, a group of people from Indo-China who knew how to cultivate wet terraces, migrated and settled in Ifugao.

This skill was eventually passed on to mountain folk, who "applied their understanding of gravity and use of conduits to channel water from distant streams to water their fields," according to Ifugao scholar Manuel Dulawan. – Rappler.com

'Brighton council inhumane to tent dwellers'

In January 2017, a story emerged claiming that Brighton and Hove City Council had evicted homeless people from their tents on New Year's Day and that they had been given only ten minutes warning to move their belongings otherwise they would be taken to the dump.

The story was shared widely to much outrage but was subsequently found to be untrue. Brighton and Hove City Council ensured that theargus.co.uk published a clarification, explaining that the council had denied these allegations entirely.

'Cannibalism' and The Sun

In August 2017, the Independent Press Standards Organization decided that The Sun newspaper had breached the journalistic code of conduct across six different articles where it claimed that Matthew Williams' murder of Cerys Yemm was 'demonic' and that he was a 'cannibal' who had eaten parts of her face.

IPSO found the Sun's story placed false weight on the claims of both an eye witness and the victim's sister-in-law, and that an inquest into the case had found that there was no evidence that the perpetrator was 'cannibalistic.'

'100,000 people face a Christmas without universal benefit'

Paul Lewis, the presenter of BBC Radio 4's Money Box Programme, reported in November that up to 100,000 people would receive less (or zero) Universal Credit over the Christmas period. The BBC claimed that

those who are paid weekly would have five paydays in December, and would, therefore, earn too much to be eligible for the benefit.

The story was covered by several mainstream publications before it was found to be erroneous and that the actual figure was much lower. Chief Secretary to the Treasury Liz Truss addressed the Commons, stating that it is 'disgraceful that fake news was put out on our national broadcaster.' The BBC released a statement challenging that the mistake should be described as fake news, saying 'There is a difference between fake news and inaccuracies in a legitimate story.'

Part Four - Media Extinction

Information Loss and Platform extinction

Platforms are changing from physical into digital and not every form of printed context will be converted into digital. Most of the printed books will have their inaccurate or accurate conversion of information depending on their value, rarity, and amount of information. It will take years before the traditional publishers of printed books will vanish due to their lack of demand. However, it will take a long time before printed books will be gone to our households. For future generations, books might not be common to see. Some of the printed books will be stored in museums and book collectors. Several years will pass and most of the books that are not preserved properly will start to become unreadable due to its own degradation. Many of the information that came from printed copies of a book will be lost. Even most of the printed books have many companies, some of them will not be converted and encoded. On the other hand, digital contents will rise that will make up most of the market of digital information and resources. Education will change on their terms of platforms used and instead use modern technology to inform and gather information. Printed books will not be the main source of information and local libraries will be emptied.

Books, Journals, Magazines

Aside from books, different platforms will also be changed. Magazines, pamphlets, journals, and notebooks will be affected in different years. Printed contents will be lesser every decade until our civilization are fully engulfed in new platforms. Magazine companies might adopt a different type of media through a website platform and if it has multi-purpose services, it could adapt to our future civilization.

This means that the more functionality a platform offers, it'll be more convenient for users to have one access for different services. Since the integration of the internet has made some of the services connected, our services will focus on convenience. For magazines, it could be similar to websites where advertising companies will pay them in their articles together with the pictures of their models or products.

Caijing

Caijing is an independent magazine based in Beijing that covers societal, political, and economic issues, with a focus on civil rights, public affairs, and business. CAIJING.com.cn is a Chinese business and financial news website. Content is available in English on its sister site, English.CAIJING.com.cn. The Website provides original news and analysis for readers seeking a clear picture of business, finance and economic developments in China. A daily newsletter and weekend supplement are also available.

Duzhe

Duzhe is a biweekly Chinese general interest magazine. It is among the most widely circulated and the leading magazines in the People's Republic of China. The magazine includes original articles, condensed articles reprinted from other magazines, book excerpts, and collections of jokes, anecdotes, quotations, and other short pieces.

Mental Floss

You may be familiar with the popular YouTube channel and website, but mental floss also has its own quirky magazine filled with unconventional information and trivia. This magazine will give you material for new ideas and arm you with a bunch of facts that will make you feel smarter at parties. How could you not with articles like "15 Words You Didn't Realize Were Named After People" and "How Much Paper Would It Take to Print the Internet?"?

Radio

Radio focuses only on audio but some of it is also available to be viewed on our social media and television. It's been away for many years for faster access on news that the scheduled news on television. It reaches fastest to provinces and by listening, people gather news and reporters could easily connect to their radio station through an audio connection. Establishing a video feed for the reporters to show on the television takes time and inconvenient on immediate reporting. There's a reason why the gadget radio sold and has been used for many years. Radios can pick up the signal from afar and can be accessed even without a plug; users could listen even while doing something else; faster delivering of information; can be carried and isn't heavy; lots of stations to choose from. However, many things have changed throughout the years. It might seem that radio is convenient for the last three decades but the convenience of gadgets today become smaller. Cellphones are lighter and have the smaller version and can be easily carried around inside a pocket unlike older versions of the radio. The hardware of radio also changed into smaller that could fit into a pocket however, there will be a downgrade on its use compared to other new gadgets because it only served one purpose. Radio stations adapted to different platforms that they were able to be connected via phones however, audio of news isn't quite enough for today's community. The Internet has offered us new and interesting news and entertainment with videos so the radio which solely relies on its audio content will be diminished in use in the following years. Online news with more interesting features which might have a reliable source and flow of information through the internet will replace the role of the radios.

The World and Media Theories

This part will discuss the media on today's society and to the future along with the theories that could better explain the shifting of information and platforms that are happening today. These circumstances could affect the majority of how we will communicate and process of our future.

Media has always been changing our lives. Media serves as a network of information that distributes and reflect from the feedback of the society. Media is our tool for communication which we can build relationships. Our improvements in this field affect how we might interact with ourselves and the others. Media represents the whole den of the standards of the community and represents the voices of both the majority and minority. We might come into a future where none of us expects like how the people a hundred years ago think of what we will be today. There's been a huge from them and us and so a hundred years from now, the same instance will occur. Future generation could access information even up to the quantum scale. We could live in a society where everything might look different and outstanding.

Does Life In 2018 Live up to What We Predicted a Century Ago?

By Claudia Geib

People in the early 20th century were hopeful about future innovation might bring. The technology that came out of World War I and the growing potential brought by electricity (half of all U.S. homes had electric power by 1925) had many looking ahead to the coming century. Futurists of the early 1900s predicted an incredible boom in technology that would transform human lives for the better.

In fact, many of those predictions for the future in which we live weren't far off, from the proliferation of automobiles and airplanes to the widespread transmission of information. Of course, the specifics of how those devices would work sometimes fell broad of the mark. Yet these predictions show us just how much our technology has progressed in just a century — and just how much further more innovation could take us.

On a cool February day in 1917, storied inventor Alexander Graham Bell gave the graduating class of McKinley Manual Training School a rousing speech that would later sound a bit like prophecy.

"Now, it is very interesting and instructive to look back over the various changes that have occurred and trace the evolution of the present from the past," Bell said, after recalling the incredible transformation wrought

by electricity and automobiles alone. "By projecting these lines of advance into the future, you can forecast the future, to a certain extent, and recognize some of the fields of usefulness that are opening up for you."

In 1876, Bell himself had patented the device known as the telephone, which used wires to transmit the sound of human speech. As this device spread, its capabilities allowed voices to cross enormous distances. In 1915, one such "wireless telephony" system had allowed a Virginia man to speak to another in Paris while a man in Honolulu listened in — a distance of 4,900 miles (about 7,886 kilometers), setting the record for the longest distance communication at that time.

Bell marveled at this achievement and the change it had already created, predicting that "this achievement surely foreshadows the time when we may be able to talk with a man in any part of the world by telephone and without wires." At the time of Bell's speech, the U.S. had an estimated 11.7 million working telephones; by the year 2000, that number had risen to nearly 103 million.

Extrapolating forward, Bell predicted a future in which this technology allowed people to pretty much anything remotely: "We shall probably be able to perform at a distance by wireless almost any mechanical operation that can be done at hand," he said. And he wasn't wrong.

Technology Gets Personal

In 1900, Smithsonian curator and writer John Elfrith Watkins, Jr., penned an article titled "What May Happen in the Next Hundred Years" for The Ladies' Home Journal. Looking forward at the fresh new century, Watkins imagined a world in which technology wasn't left in the hands of industry or the military — instead, it would be redirected to entertain and convenience everyday people.

Though he didn't foresee television in its current form, Watkins predicted that technology would one day bring distant concerts and operas to private homes, sounding "as harmonious as though enjoyed from a theatre box," and that "persons and things of all kinds will be brought

within focus of cameras connected electrically with screens at opposite ends of circuits, thousands of miles at a span." He also predicted that color photographs would one day be quickly transmitted around the world, and that "if there be a battle in China a hundred years hence snapshots of its most striking events will be published in the newspapers an hour later." One can only guess what he would have thought of the selfie.

Watkins imagined that technology would transform our homes and diets. Though the mechanically-cooled refrigerator wasn't invented until 1925, and wouldn't become widely used until the 1940s, Watkins correctly predicted that "refrigerators will keep great quantities of food fresh for long intervals," and that "fast-flying refrigerators on land and sea" would deliver fruits and vegetables from around the world to provide produce out-of-season. He even called the development of fast-food delivery, anticipating "ready-cooked meals... served hot or cold to private houses." He believed these meal deliveries would replace home-cooking entirely (for some city-dwellers with Seamless accounts, that's not too far off), and might arrive by pneumatic tubes as well as by "automobile wagons."

Some of Watkins' predictions might have been close to reality, but he was pretty far off about other aspects of life in the 21st century. He thought that man would have exterminated pests like roaches, mice, and mosquitoes, as well as all wild animals, which would "exist only in menageries." This prediction was surprisingly common in the early 1900s and might have been a reaction to then-recent extinctions like that of the quagga (1883), the passenger pigeon (1914), and the thylacine (1934). Though we are now going through another global extinction caused by human activity, we can be grateful that we haven't quite reached the level of extinction most Victorian futurists expected.

Watkins also thought that we would have eliminated the letters C, X or Q in the everyday alphabet, as they were "unnecessary;" that humans would essentially make ourselves an into super-species, with physical education starting in the nursery, until "a man or woman unable to walk

ten miles at a stretch will be regarded as a weakling." Unfortunately, our global obesity problem shows the reality was, in fact, quite the opposite.

Thematically, though, these predictions are sound: As the use of electricity spread, and technology like automobiles and telephones became more affordable to use, Watkins could envision an age in which technology was entirely integrated into our lives. To futurists of the early 1900s, it seemed obvious that robots and automation would be essential to 21st-century people, serving as our chauffeurs, cleaning the house, scheduling the laundry, and even electrically transmitting handshakes.

Alexander Graham Bell also predicted this trend, and he thought it heralded something particularly promising for the McKinley graduates he addressed in 1918. Foreseeing the rise of an industry centered around technology and an exploding need for scientists and engineers, he told them: "It is safe to say that scientific men and technical experts are destined in the future to occupy distinguished and honorable positions in all the countries of the world. Your future is assured."

Computers might be changed into a different kind of platform which will be called by a different name. There could be an improved portion of our lives like our cellphones but the other aspects of our life remain the same. There could be a realization of our unjust society due to the huge gaps in improvement from technology to our society.

Three Possible Outcomes Regarding Media and Other Conflicting Interference

By the study of Maximus Borough, there are three-segmented possible outcomes that are related to the media and to its conflicts. The conflicts refer to the negative impact that an entity could affect media and network.

Technological, Information and Network Revolution

3D Metal Printing

We've all become used to 3D plastic printing over the last few years, and the ease it has brought to design and prototyping. Advances in technology mean that instant metal fabrication is quickly becoming a reality, which clearly opens a new world of possibilities. The ability to create large, intricate metal structures on demand could revolutionize manufacturing.

Artificial Embryos

For the first time, researchers have made embryo-like structures from stem cells alone, without using egg or sperm cells. This will open new possibilities for understanding how life comes into existence – but clearly also raises vital ethical and even philosophical problems.

Sensing City

At Toronto's Waterfront district, Google's parent company, Alphabet, are implementing sensors and analytics in order to rethink how cities are built, run, and lived in. The aim is to integrate urban design with cutting edge technology in order to make "smart cities" more affordable, livable and environmentally sustainable.

Cloud-based AI services

Key players here include Amazon, Google, IBM, and Microsoft, which are all working on increasing access to machine learning and artificial neural network technology, in order to make it more affordable and easier to use.

Perfecting Online Privacy

Blockchain-based privacy systems make it possible for digital transactions to be recorded and validated while protecting the privacy of the information and identities underlying the exchange of information. This means it is easier to disclose information without risking privacy or exposure to threats such as fraud or identity theft.

Internet's Undersea Cables

By David W. Brown

In describing the system of wires that comprises the Internet, Neal Stephenson once compared the earth to a computer motherboard. From telephone poles suspending bundles of cable to signs posted warning of buried fiber optic lines, we are surrounded by evidence that at a basic level, the Internet is really just a spaghetti-work of really long wires. But what we see is just a small part of the physical makeup of the net. The rest of it can be found in the coldest depths of the ocean. Here are 10 things you might not know about the Internet's system of undersea cables.

Ninety-nine percent of international data is transmitted by wires at the bottom of the ocean called submarine communications cables. In total, they are hundreds of thousands of miles long and can be as deep as Everest Is tall. The cables are installed by special boats called cable-layers. It's more than a matter of dropping wires with anvils attached to them—the cables must generally be run across flat surfaces of the ocean floor, and care is taken to avoid coral reefs, sunken ships, fish beds, and other ecological habitats and general obstructions. The diameter of a shallow water table is about the same as a soda can, while deep water cables are much thinner—about the size of a Magic Marker. The size difference is related to simple vulnerability—there's not much going on 8000 feet below sea level; consequently, there's less need for galvanized shielding wire. Cables located at shallow depths are buried beneath the ocean floor using high-pressure water jets. Though per-mile prices for installation change depending on total length and destination, running a cable across the ocean invariably costs hundreds of millions of dollars.

It seems like every couple of years, some well-meaning construction worker puts his bulldozer in gear and. While the ocean is free of construction equipment that might otherwise combine to form, there are many ongoing aquatic threats to the submarine cables. Sharks aside, the Internet is ever at risk of being disrupted by, trawling by fishing vessels, and. A Toronto-based company has proposed running a cable through the

Arctic that connects Tokyo and London. This was previously considered impossible, but climate change and the melting ice caps have moved the proposal firmly into the category.

There are well over a thousand satellites in orbit, we're landing probes on comets, and we're planning missions to Mars. We're living in the future! It just seems self-evident that space would be a better way to virtually "wire" the Internet than our current method of running really long cables-slash-shark-buffets along the ocean floor. Surely satellites would be better than a technology invented before the invention of the telephone—right? As it turns out, no. (Or at least, not yet.) Though fiber optic cables and communications satellites were both developed in the 1960s, satellites have a two-fold problem: latency and bit loss. Sending and receiving signals to and from space takes time. Meanwhile, researchers have developed optical fibers that can transmit information at 99.7 percent the speed of light. For an idea of what the Internet would be like without undersea cables, visit Antarctica, the only continent without a physical connection to the net. The continent relies on satellites, and bandwidth is at a premium, which is no small problem when one considers the important, data-intensive climate research underway. Today, Antarctic research stations produce more data than they can transmit through space.

As of 2014, there are 285 communications cables at the bottom of the ocean, and 22 of them are not yet in use. These are called "dark cables." (Once they're switched on, they're said to be "lit.") Submarine cables have a life expectancy of 25 years, during which time they are considered economically viable from a capacity standpoint. Over the last decade, however, global data consumption has exploded. In 2013, Internet traffic was 5 gigabytes per capita; this number is expected to reach 14 gigabytes per capita by 2018. Such an increase would obviously pose a capacity problem and require more frequent cable upgrades. However, new techniques in phase modulation and improvements in submarine line terminal equipment (SLTE) have boosted capacity in some places by as much as 8000 percent. The wires we have are more than ready for the traffic to come.

Technology made us humans to propel our understanding of the things that are bigger than us. We are able to have satellites that made our connection possible. Long cables under our oceans that some of us didn't know existed. Reasons that make us possible to have information within our grasp.

Network revolution is a term to describe the shift of information, network, and media that started since the emergence of the internet globally. The first practical schematics for the Internet would not arrive until the early 1960s when MIT's J.C.R. Licklider popularized the idea of an "Intergalactic Network" of computers. Shortly thereafter, computer scientists developed the concept of "packet switching," a method for effectively transmitting electronic data that would later become one of the major building blocks of the Internet.

The first workable prototype of the Internet came in the late 1960s with the creation of ARPANET, or the Advanced Research Projects Agency Network. Originally funded by the U.S. Department of Defense, ARPANET used packet switching to allow multiple computers to communicate on a single network. The technology continued to grow in the 1970s after scientists Robert Kahn and Vinton Cerf developed Transmission Control Protocol and Internet Protocol, or TCP/IP, a communications model that set standards for how data could be transmitted between multiple networks. ARPANET adopted TCP/IP on January 1, 1983, and from there, researchers began to assemble the "network of networks" that became the modern Internet. The online world then took on a more recognizable form in 1990, when computer scientist Tim Berners-Lee invented the World Wide Web. While it's often confused with the Internet itself, the web is actually just the most common means of accessing data online in the form of websites and hyperlinks. The web helped popularize the Internet among the public and served as a crucial step in developing the vast trove of information that most of us now access on a daily basis.

Brief History of the Internet in Asia

The 1960s was the period that saw the birth of technologies and concepts that were to become the foundation of the Internet. In the 1960s, the concepts of packet switching, which was to become the fundamental technology of the Internet, were proposed. During the period between the late 1960s and early 1970s, efforts to construct domestic computer networks were launched in countries such as France, UK, and the USA. The most notable one is ARPANET (Advanced Research Project Agency Network) in the USA in 1969. In Asia, similar efforts to develop computer networks were launched in the 1970s and 1980s. They include CSIRONET and N-1 Network in Australia, and Japan, respectively.

(International) Academic Networkshop was one of the early coordination meetings on the Internet globally and had the first meeting in 1992. Asia started participation in the meeting from 1983. The first Asian coordination meeting, ANW-AP was held during the 1984 ANW, and Australia, Japan, and Korea participated in the meeting. In the 1980s, there was much development of UUCP-based computer networks in Asia as well as in other continents. These domestic UUCP networks in Asia were linked internationally including Australia, Indonesia, Japan, Korea, and Singapore in 1983, and the international UUCP-based network in Asia was called AsiaNet. They were used for email and news. AsiaNet was also linked to North America (seismo, and hplabs) and Europe(mcvax).

In 1985, a conference focusing on computer networks, PCCS (Pacific Computer Communications Symposium), which was one of the world's first conference to address on the Internet, was held in Seoul, with approximately 300 Internet experts participating from Asia, Europe, and North America. Joint Network Meeting was held during the Symposium with presentations of research and education networks in Australia, Japan, and Korea as well as European networks. Other countries and economies such as China, Indonesia, Singapore, and Taiwan participated in the meeting, too. In addition, the PCCS provided the impetus for the annual meeting of JWCC (Joint Workshop on Computer Communications), a meeting of Asian computer network experts was held annually with the

meeting venue alternating between Japan and Korea initially. The participants of the JWCC expanded gradually, resulting in its development into ICOIN (International Conference on Information Network).

Korea's first Internet with IPv4, SDN (System Development Network), began its operation in 1982 with two nodes. The international link to the USA was done with UUCP since the direct international link with IP was not permitted in the USA. Other countries followed the development of IPv4-based computer networks in the 1980s and beyond. The direct international link with IP to the USA was permitted later in the decade. With PACCOM (Pacific Communications Networking) Project in 1989, several countries connected to the USA through Hawaii. They include Australia, Japan, Korea, and New Zealand. Many other countries connected to the US Internet in the 1990s with their domestic Internet development.

Asia Pacific Regional Internet Conference on Operational Technologies (APRICOT) was created by volunteers of APNIC, APNG, and others to provide a forum for those key Internet builders in the region to learn from their peers and others leaders in the Internet community from around the world, and had its first annual conference in 1996 in Singapore. APRICOT is managed by APIA, another spinoff from APNG as APNG Commercial WG. There were two new major initiatives in the mid-1990s to develop regional research and education networks; APAN (Asia Pacific Network Consortium), and AI3(Asia Internet Interconnection Initiative Project).

By the late 1990s, there are many Internet-related organizations in the Asia Pacific, and a common to exchange information among these organizations and discuss the relevant issues became necessary. The first meeting was held in 1998. Since then, AP* Retreat was held during APRICOT in winter and APAN in summer every year. The internationalization of the Internet became very important as the Internet became common in the world. In order to progress the Internet internationalization, the Internationalized domain name (IDN) project

was started in Asia, and IETF decided to standardize on IDN in the late 1990s. Subsequently, a set of the standards on IDN were completed in the early 2000s. During the period of IDN development, several organizations were created to address IDN issues including MINC (Multilingual Internet Name Consortium), CDNC (Chinese Domain Name Consortium), and JET (Joint Engineering Team) in addition to INFITT, which addresses on Tamil Language and Arabic language group.

The Asia-Pacific Development Information Programme (APDIP) is an initiative of the United Nations Development Programme (UNDP) that aims to promote the development and application of new information and communication technologies for poverty alleviation and sustainable human development in the Asia-Pacific region. PAN (Pan Asia Networking) is an IDRC program to seeks to understand the positive and negative impacts of information communication technologies (ICTs) on people, culture, the economy, and society, so as to strengthen ICT uses that promote sustainable development on the Asian continent. IDRC renamed the above program as PAN (Pan Asia Networking) in 2000. 11. Central, South and West Asia The Internet came late to central, south, and west (middle east) Asia, but many interesting activities were reported lately. SANOG was started in 2003 to bring together operators for educational as well as cooperation. SANOG provides a regional forum to discuss operational issues and technologies of interest to data operators in the South Asian Region and meets twice a year. SANOG is the first regional Internet organization in South Asia with participants from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. SANOG has very close cooperation with the rest of Asian Internet organizations including APNIC and APRICOT.

The Internet became very popular in Asia lately, and the Internet user population in Asia surpassed those of North America and Europe in the 2000s. There are many other Internet areas where Asia is leading the world including broadband penetration, online game, and mobile Internet. Broadband proliferation started in the late 1990s in Korea, first, followed by other East Asia countries and economies including Hong Kong, Taiwan, Japan and metropolitan areas of China. They are leading

the Broadband penetration globally with many innovative applications. Broadband is rapidly becoming a social infrastructure in the region. Online game over the Internet is one of the applications where East Asian countries and economies are leading globally. This is partially due to broadband proliferation. Many leading companies on the online game reside in the region. The mobile Internet based on cellular telephone became very popular in Asia, starting from i-mode in Japan in 1999, followed by countries and economies in East Asia including Hong Kong, Korea, and Taiwan. The mobile Internet is used for email, web access, e-commerce, and many other applications. Many innovative applications have been developed in Asia.

First Possible Outcome: Complete Improvisation-Worldwide Improvement

It portrays to a hypothetical community of worldwide society wherein the improvisation, technological advancements, and internet connection affects positively the whole world. The scopes of its effects envelop aspects of a community even by the slightest improvement in terms of access via media and internet without any decrease on a state of access on media and the internet.

Media and network help the whole communities to gain faster, more efficient, and contentment to the people. It is a community without suppression but with more developed rights and freedom of expression that might change the overall living of individuals in a community.

Positive community experiences also provide members with a sense of belonging and the feeling of being able to express themselves without feeling judged. Communities that excel at promoting this feeling of belonging encourage members to speak up about their ideas and opinions, which, in turn, leads to members considering their positions from a deeper perspective. Involvement in positive and encouraging communities facilitates self-reflection and exploration of core values and beliefs.

The most effective communities share similar values and belief systems that cooperate to help accomplish one or several goals. These goals can vary radically depending on the community in question. For example, one community may value environmental goals such as promoting recycling and making forest areas more friendly to wildlife while another community may put more value on improving the education system.

Central to developing a positive community is comfort among citizens when it comes to speaking their minds and expressing what is important to them. Individuals who feel encouraged to give their input about an issue, who feel heard when they do speak their mind are more likely to feel connected to their community.

Diversity is abundant in all communities. However, among every group containing diversity, there are always individuals who fall in the minority. Positive communities work to ensure that those who fall in minority populations are not treated differently. These communities give a voice to minority populations through frequent consultation with members of those societies about how the community can improve to meet their needs better.

Positive communities work to foster a feeling of genuine connection among members by providing plenty of opportunities for interaction. Creating a feeling of connection works to make members more motivated to meet their obligations and work towards the established goals of the community.

Communication is essential for any effective community. All of the wheels need to be moving at the same pace for the project to continue successfully. Positive leaders ensure that all members are aware of the projects currently in process, as well as what they can do to help those projects run smoothly.

Second Possible Outcome: Incomplete Improvisation- Worldwide Increased Class Gap

This possibility portrays the future of society as an only partially improved. It improved in different ways of technology and communication on only a limited part of the world. Most likely, the limited part where first world countries that are able to have an increased benefit in term of society and media. This could mean that they are able to have access into a particular functionality which is a media or something that came from the internet while the lower division of the world, aren't able to. It could differ aside from functionality e.g. faster services, better technology, and positive implications of new technology and media. But first, it is important to know the difference between first, second, and third world countries.

The term "First World" refers to so-called developed, capitalist, industrial countries, roughly, a bloc of countries aligned with the United States after World War II, with more or less common political and economic interests: North America, Western Europe, Japan, and Australia.

"Second World" refers to the former communist-socialist, industrial states, (formerly the Eastern bloc, the territory and sphere of influence of the Union of Soviet Socialists Republic) today: Russia, Eastern Europe (e.g., Poland) and some of the Turk States (e.g., Kazakhstan) as well as China.

"Third World" are all the other countries, today often used to roughly describe the developing countries of Africa, Asia, and Latin America. The term Third World includes as well capitalist (e.g., Venezuela) and communist (e.g., North Korea) countries, as very rich (e.g., Saudi Arabia) and very poor (e.g., Mali) countries. Third World Countries classified by various indices: their Political Rights and Civil Liberties, the Gross National Income (GNI) and Poverty of countries, the Human Development of countries (HDI), and the Freedom of Information within a country.

Despite ever-evolving definitions, the concept of the third world serves to identify countries that suffer from high infant mortality, low economic

development, high levels of poverty, low utilization of natural resources, and heavy dependence on industrialized nations. These are the developing and technologically less advanced nations of Asia, Africa, Oceania, and Latin America. Third world nations tend to have economies dependent on the developed countries and are generally characterized as poor with unstable governments and having high rates of population growth, illiteracy, and disease. A key factor is the lack of a middle class — with impoverished millions in a vast lower economic class and a very small elite upper class controlling the country's wealth and resources. Most third world nations also have a very large foreign debt.

The term "Fourth World" first came into use in 1974 with the publication of Shuswap Chief George Manuel's: The fourth world: an Indian reality (amazon link to the book), the term refers to nations (cultural entities, ethnic groups) of indigenous peoples living within or across state boundaries (nation states).

The structure of our society might not be as it is in the future but the concept of this second possible outcome is about partial improvement on media and the internet.

As the media and internet have created a gap between the improved and not, the services in almost all other fields of industries and services will be affected. The gap will increase as the majority of the population from each side will experience a dramatic change in their course. A society that has better access are bound to learn and create while continuing its increasing success while the part of the world that will not have any improvements will stay low as they cannot compete to the progressing world. It'll be harder for the population of not improved society to take the lead or grab an opportunity since the standards become high.

Third Possible Outcome-Private Monopoly

The third possible outcome regarding the future of our society between media and internet will be on the possibility of privatization of companies on media and access and use via the internet. It'll be owned by rich or

authoritarian entities that will decide the majority of actions regarding our future society. For example, an entity that has the control has the right to maneuver the functionalities and services depending on what the entity wanted. It could become a source of profit from a particular entity where they hold the websites and different platforms. The private entities could use it for the sake of political agendas.

Monopoly - A market structure characterized by a single seller, selling a unique product in the market. In a monopoly market, the seller faces no competition, as he is the sole seller of goods with no close substitute. These entities could also have another take on issue on establishing private media for the security. Making the internet and media private could be a process to eliminate a threat of security such as cyber terrorists. In a monopoly market, factors like government license, ownership of resources, copyright and patent and high starting cost make an entity a single seller of goods. All these factors restrict the entry of other sellers in the market. Monopolies also possess some information that is not known to other sellers. Characteristics associated with a monopoly market make the single seller the market controller as well as the price maker. He enjoys the power of setting the price for his goods.

Cybersecurity encompasses an array of challenges to protect digital information and the systems they depend upon to affect communication. The interconnected world of computers forms the Internet, which offers new challenges for nations because regional or national borders do not control the flow of information as it is currently managed. The Internet, in the most basic sense, works like any other remote addressing system, for example, a telephone number corresponds to a particular device, a home or building address corresponds to a particular geographic location. The Internet's addressing system is called the Internet Protocol (IP).

Each computer network and computing device designed to communicate over the Internet must have a unique address to send or receive messages. The Internet Corporation for Assigned Names and Numbers (ICANN) is responsible for the task of managing these addresses so that

each unique Internet device (computer, cell phone, personal digital device) has a unique IP number designation. This Internet addressing system translates these numbers into World Wide Web addresses best known by the extensions .com, .edu, .net, and .org. This addressing system makes it very easy for people to find the people and Web addresses they are seeking. IP registration information or WHOIS data on Internet address holders is a source of contention between privacy/free speech/human rights advocates and law enforcement and commercial and government interests.

Privacy interest in cybersecurity involves establishing protocols and effective oversight regarding when, why, and how government agencies may gain access to personal information that is collected, retained, used, or shared. U.S. businesses and government share responsibility for the insecurity of consumer online personal information. There is no single federal minimum standard for data protection that enforces fair information practices (FIPs). Fair information practices regulate and enforce consumer privacy rights regarding data collection, retention, use, and sharing of personal information. The federal approach has focused not on the protection of personal information, but on the purpose of the information collection.

The history of U.S. government agencies conducting sanctioned and unsanctioned surveillance of domestic communication by colluding with telecommunications and wire communication companies is well known. (The Puzzle Palace, Inside the National Security Agency America's Most Secret Intelligence Organization (1983)- James Bamford) Domestic surveillance first began as a means of acquiring information on criminal activities and quickly moved to document people's engagement in social or political activities and their exercise of constitutionally protected rights to expression and assembly. Fundamentally, control of society is, in large part, about the ability of government to control communications.

One key challenge facing digital communications users is that this medium suit those inclined to spy unlike any other form of surveillance because the intruder can hide the fact that communication has been

compromised. The National Security Agency is no amateur at delving into personal communications that are secured by law or design from snooping.

Consumer Cybersecurity Interest

Online consumers have been victimized by cyber-threats in the form of spyware; malicious computer viruses, worms, or malware; and fraud or abusive sales tactics that lure consumers to invest in bogus products or services. Online consumers routinely fall victim to identity theft, as well as spam, phishing or pharming attacks. Consumers are also facing the challenge of determining which products or services to trust to provide goods and services as advertised.

Political Advocacy and Academic Cybersecurity Interest

For individuals and organizations that rely on the Internet for research, access to information, collaboration, political participation, fundraising, coalition building, campaigns, advocacy, organized dissent, political speech, watchdog actions against government and businesses, freedom of expression, dissemination of information or for outreach to constituencies--cybersecurity does matter a great deal.

Threats posed to political activity include deceptive campaign tactics that deface Websites, target donations for theft, create a denial of service attacks on Websites, or send messages that are deceptive or misleading regarding the rules for voter participation on election day. If responses to cyber-attacks deny advocates access to the Internet and/or advanced communications networks, this would deny them the means to engage in a wide range of activities that could include election protection efforts during public elections, mobilize supporters for public protests, educate consumers, or empower constituencies to know and understand policy that impacts their lives. Academics and researchers must have a trustworthy and reliable means of exchanging ideas, participating in discussions, and collaborating on projects that advance their areas of research interest.

Business Cybersecurity Interest

Large and small companies have cyber-threats within and outside of their control such as data breaches, theft of company secrets, spying, attacks on computer networks, and damage to critical systems. Many companies are considering the challenges of cybersecurity and looking to new business applications such as cloud computing to secure data. However, cloud computing has enormous security and privacy risks relating to dependence on untrustworthy or unevaluated third parties.

New business and government services such as electronic health records and development and updating of critical infrastructure such as the Smart Grid each offer new cybersecurity privacy challenges for consumers.

National Security Cybersecurity Interest

The cyber-threats to any nation can range from disruption of an agency's networks or information services to the public to cyber-warfare. Depending on the agency, type of cyber-attack, its scope, duration, and effectiveness, the consequences for the online and offline operation of local, federal, or state government components can range from annoying delays in communications to serious damage to infrastructure threatening life or property.

Cyber-attacks or incidents that threaten the command and control structure of the national government or its assets including national defense, emergency response, and economic systems are of growing concern. The digital infrastructure of the nation must be treated as a strategic national asset. The new mission is to deter, detect, and defend against disruptions and attacks of all descriptions.

It could also be used as surveillance for a just community regardless of an individual's privacy; limiting the amount of information.

Reach Variance of the New Media

We are developing more ideas and technology because of the demands of a better gadget however, there is always a difference in the distribution of an update or technology depending on its clients. Some countries are receiving faster supplies of newer versions of cellphones through physical stores while others will wait for outdated phone's shipment for a cheaper price. The company retails sometimes depends on their priority from their data of the target audience which a cellphone was likely to sell. There is a huge amount of differences between some of the countries' currency value compared to others.

Social class

One of the bases of selling technology is whether a specific audience has the ability to buy the product. It depends on the attributes from a set of audience but different clients also have different needs and demands. We might all want a better version of phone but there is a question of whether we could buy it or not. The purchasing power simply determines the capacity of an individual to buy.

Purchasing power is the value of a currency expressed in terms of the number of goods or services that one unit of money can buy. Purchasing power is important because, all else being equal, inflation decreases the number of goods or services you would be able to purchase.

Purchasing power affects every aspect of economics, from consumers buying goods to investors and stock prices to a country's economic prosperity. When a currency's purchasing power decreases due to excessive inflation, serious negative economic consequences arise, including rising costs of goods and services contributing to a high cost of living, as well as high-interest rates that affect the global market, and falling credit ratings as a result. All of these factors can contribute to an economic crisis.

Purchasing power loss/gain is an increase or decrease in how much consumers can buy with a given amount of money. Consumers lose

purchasing power when prices increase and gain purchasing power when prices decrease. Causes of purchasing power loss include government regulations, inflation, and natural and manmade disasters. Causes of purchasing power gain include deflation and technological innovation.

The reach of changes varies on the social class since fewer people are willing to be part of something that is expensive. Even some of these gadgets are beneficial, there are still priorities e.g. food, water, and shelter which differs on our social class. Higher social class tend to have more money thus, the greater purchasing power to be within the reach of updated technology.

Family and Nation

Family and Nation affects the social reach of such media. Many households can't sustain the availability of the internet and it is expected that it will improve in the following years but there will still be few families that will not have the opportunity to access the internet. There are various reasons why new media couldn't contain all the families of the world such as poverty. Some of the households to this day still suffers from having basic needs so it would be hard for them to have access to the new media. New media requires the technology and access needed before someone could connect to a network. There would still be a means of technology and processing before someone could adapt to the new media. There is no guarantee that the internet will be free in the future but it bound to improve.

According to the most recent estimates, in 2015, 10 percent of the world's population lived on less than US$1.90 a day, compared to 11 percent in 2013. That's down from nearly 36 percent in 1990. Nearly 1.1 billion fewer people are living in extreme poverty than in 1990. In 2015, 736 million people lived on less than $1.90 a day, down from 1.85 billion in 1990. Although there is an improved aspect of our media and network, there still economic problems that affect the financial state of a family. Two regions, East Asia and Pacific (47 million extreme poor) and Europe and Central Asia (7 million) have reduced extreme poverty to below 3 percent, achieving the 2030 target.

More than half of the extreme poor live in Sub-Saharan Africa. In fact, the number of poor in the region increased by 9 million, with 413 million people living on less than US$1.90 a day in 2015, more than all the other regions combined. If the trend continues, by 2030, nearly 9 out of 10 extreme poor will be in Sub-Saharan Africa. The majority of the global poor live in rural areas are poorly educated, employed in the agricultural sector, and under 18 years of age.

Cultural conflict on the access of the internet is a reason for some families who value their belief and tradition to not engage in new media. They have their personal opinions that they valued to hold themselves from the changes in society and the internet.

A nation is the bigger representation of society and is maneuvered by their type of government. There are types of government that allow the authority to take control of what is being shown on television and in a hypothetical future, the same instances will occur on the internet. Government restricts the flow of information and what is being shown on the media to change the people's perception.

Internet reach has changed the views by many of us due to enlightenment. People become aware of the issues concerning their government, state, and crisis. People knew their role and by today and years to come, they try to become fulfilled like the others. Although it proposes a problem if the entire communication network of a particular country is blocked. Globalization by media and network surfaced ideologies that made most people be part of it. It's shown in our ways of living today and we check our phones more often than before. Technology will take most of our time but it will not be applicable to other countries since a government is powerful enough to stop the flow of information.

Individual trust

There is a credibility doubt mostly from older individuals when they come across to information that is coming from the internet. Some people trusted more textbooks than a random article that pops from Facebook.

It might seem reasonable but downgrading the information that is coming from the internet, essentially isn't good. Some sites and articles are reliable and the platform of new media will become the next step of communication.

This reach limit depends on the individual's opinion and experience. They might've read fake news which makes them affect their judgment on judging news. They could be reluctant of something that they are unaware of. People tend to trust more a tradition that has been effective for years and so introducing the whole concepts of new processes will be hard to indulge. However, it is important to consider new developments since tradition will not stay long.

Students on the Internet

Today, it has become the favorite tools of students in their research activities and favored more than books and libraries do. The internet and the library are both considered huge depository of knowledge where a vast source of information, records, and documents are stored. They both serve a similar objective – that is to provide knowledge. However, due to innovations in technology, the computer has come to replace libraries and the internet with books at an unprecedented rate. Thus, digital information technology has dramatically altered the methods that faculty and students access information.

One seen reason why the internet is favored over books is due to the uniformity of its information. As libraries do not offer the same sets of information, the internet does. A certain topic about the history of a particular country, for example, will vary from one country to another and will depend on the author of the book. An American author, for example, writing for his own country's history will provide more factual and extensive information and exhaustive in providing facts compared to Asian writing about American culture.

The universality of information provided by the internet can be accessed by individuals from all points of the world guaranteeing that the same information is being fed to students with internet connections from the

northern hemispheres to the southern part of the world as there are no regional or local versions of information. More to say, the information is generic to all even if the internet is translated into several languages.

Laptops, and desktops computers and internet-ready cellular phones have made the internet accessible anywhere around the world. Whether one is having lunch or riding a bus, information can be accessed compared to going to the libraries where elements such as time and energy are considered. The computers indeed provided for a multitasking method that libraries do not offer. Furthermore, the internet gives information within seconds after navigation to links, which books do not do.

Access

Access is one of the blockades that many of us didn't have the opportunity. Telecommunication companies offer to individuals who can pay to acquire services. Since a huge amount of population today are still below or within the poverty line, they do not have access to new media. There could be a solution in the future for technological improvement wherein the amount to acquire services will become cheaper until it's free. If that's the case, there's still a problem with buying a cellphone or a gadget. Aside from that, there could be locations that don't have any signals for the network. The coverage of network connections throughout the world is getting bigger as there are always upgrades for internet services.

The Race to Innovation

Consumer-driven data consumption, fueled by the mobile and broadband services in IoT devices, which have soared and put unprecedented pressures on networks. Thanks to the introduction of GDPR, it has also been the year of stronger encryption practices as users, organizations and lawmakers alike became increasingly concerned about privacy and the safety of their data and infrastructure.

The race for 5G is on and will continue apace in 2019. Many telcos around the world have already developed 5G architecture and initiating them

field tests this year. Across the industry, expect to see 1GB access move to 10GB and 10GB aggregation to 100GB in order to cope with 4G growth and to lay the groundwork for new 5G-bearing core networks. There will also be increased interest in 5G research and development emerging from other industries outside the traditional telco market, including in energy, agribusiness, and transportation, who all see the vast potential 5G technology presents to revolutionize the way they can deliver their goods and services. Fueled by consumer and business demand, carriers and governments alike are pushing the deployment forward with the ambitious goal of rolling out 5G networks more widely by 2020.

It felt like not a week went by in 2018 when there wasn't news of a data breach or a network being compromised. According to the report from EfficientIP in November, 43% of telco organizations suffered from DNS-based malware over the previous 12 months. It was also highlighted that 81% took three days or more to apply a critical security patch after notification.

As networks become increasingly software-defined their infrastructure is as vulnerable to attacks as the bits and bytes sent through the network. For this reason, 2018 saw more and more network operators and telcos role out business-wide encryption. In 2019, holistic network security will become more important than ever and expect to see encryption transition from a niche play to a more pervasive technology.

Countries that have no or limited access to the internet

Belarus

In 2006, 2007 and 2008, Belarus was listed as an "Internet enemy" by Reporters Without Borders (RWB). The government of Belarus uses second and third generation controls to manage Belarus' national information space. Before 2006, most places in Belarus did not have access to broadband internet of any kind. Today, Minsk, the capital of Belarus, is the most connected place in the country with internet access in rural areas being limited.

Cuba

Internet was introduced to Cuba in the late 90s but stagnated for various reasons, including lack of funding and tight government restraints. There however still is extensive censorship with the government tightly controlling the internet. Currently, less than half of the country's population has access to the internet. Notably, it is not possible to use the mobile internet in the country.

North Korea

Although the internet is available in North Korea, it is strictly limited. Permission is with special authorization, mainly for government reasons. Access to the global internet is limited to a smaller group.

Saudi Arabia

In Saudi Arabia, some websites are blocked. Access to Wikipedia and Google Translate was also blocked in 2006 since people were using them to bypass filters that the government had placed. Saudi Arabia's internet access has been called expensive and of low quality.

The possible difference between the two services of internet

Internet services and its acquisition will be one of the closest to humanity's fundamental need. The basic right and need of someone to access on the internet will demand changes on various companies. It will affect the technological geographical pursuits into achieving a hypothetical whole world where everyone can access. However, there is a possibility that before someone would gain access to the internet, they will be divided into two classifications. It's like a user of a website and they will have a choice whether to be subscribed and have full benefits on the website or gain access for free but limited information. It could be compared to today's free data.

In the future, the same treatment could still remain the same but there is a higher chance of having more improved systematic acquiring of data. For example, an individual that is under the service of free access can still gain a fair amount of data where they could watch their shows and

browse on the internet but individuals who paid for telecommunication services will have superior access than having free. It could be a private flow of connection on which data is being processed faster; lower advertisements; new function.

Demand

New media will be based on the client's demand and its distribution will follow the market. It could differ in versions of gadgets and since there are many companies who specialize in different functions, it'll depend on the client's preferences. Clients will decide their own market which will sell them a technology based on past their past preferences. Different markets will have different results that depend on the price, quality, and functionality which will make the varying reach of new media depending on demand.

Gadgets at the start of the century have skyrocketed. The number of people who had phones increased and so the start of countless development started. Since its gadgets shared a big part in the industry many companies started to invest in technological companies and so it began the worldwide demand. Each division of the market has its top demands. The products that mostly sells are gadgets but there are market divisions that have different demand. It means that the customers within that particular boundary have lesser demand for gadgets. The quality of a cellphone affects the services and access of a user which determines his/her social reach.

The Start of Cellphones

The world's first cell phone was launched in 1983. It was the Motorola DynaTAC 800x. It was priced at around $4,000 and lasted for 30 minutes of talk time before dying. It was also about the size of a foot-long sub from Subway. Despite the phone's large size, it was still considered to be the most portable telephone ever made. For the first time in history, a human being could call someone without the constraints of wires or portable phone holders. Prior to the release of the Motorola DynaTAC 8000x, several major developments had paved the way for the first cell phone.

The original Mobile Telephone Service (MTS) offered by AT&T was soon supplanted by Improved Mobile Telephone Service (IMTS). AT&T heard the complaints of its customers and sought to address them. They added more radio channels, for example, which meant more simultaneous calls could be placed in each geographic area. The system also featured improved customer dialing. Customers no longer had to call the operator to set up each call. The subscriber equipment also no longer weighed 36kg.

In 1973, 10 years before a cell phone was first released onto the market, the first cell phone call was made by Motorola researcher and executive Martin Cooper. Cooper, from Motorola, placed a call to Dr. Joel Engel of Bell Labs. The call on which this phone was made was an early prototype of the DynaTAC mobile phone. It weighed 1.1kg and was 23cm long.

"1G" refers to the first automated analog cellular networks around the world. 1G was first deployed in Tokyo in 1979 and would spread throughout the rest of Japan in 1981. Sweden, Norway, Finland, and Denmark also received 1G that same year.

2G introduced cellphone networks to people around the world. Suddenly, everyone needed a mobile phone in their daily lives. Before long, demand had outstripped existing 2G technology. People wanted to do more than just call: they wanted to browse the internet at faster and faster speeds. It became clear that 2G technology was not able to keep up. Thus, 3G started to roll out around the world. Once again, the world's first 3G network was launched in Tokyo. Tokyo received the technology in May 2001. The main advantage of moving from 2G to 3G was that 3G used packet switching instead of circuit switching to transmit data. This allowed for faster data transmission speeds (2 Mbit/s data rates, for example).

4G's main improvement over 3G technology was its data-optimization, which promises to offer speeds up to 10 times faster than existing 3G technologies. Two different 4G technologies were developed, including the WiMAX standard and the more popular LTE standard.

Technological Advancements

Modern technology has indeed changed our lives and will continually have its own research due to the increasing demand. Many repair shops are emerging and so products that customize gadgets. Here are some of the technological advancements that are invented.

Internet was developed by the US government to improve its military communication methods. Today the internet is public and it is the most widely used means of communication than any other means. Cyber communication gives people valued learning and independence. Communication via the internet has dramatically expanded the social circle.

Online networking websites, like Facebook and Twitter, have become the most popular means of instant communication. These websites allow users to communicate with friends, family, and clients from moment to moment. Users can add images, update their status (telling everyone what they are doing), start a fan page for your business, send personal messages, and more. The idea behind these websites is to give users the opportunity to connect with people, even if they are thousands of miles apart.

Websites like these are bringing people together irrespective of their race, culture, geographic location or their physical appearance. Young people geographically remote, disabled, or housebound due to illness may find online chat an important form of communication (Wakefield, M. A., & Rice, C. J., 2008). Cyber communication has been proved to be helpful in children to overcome shyness and improving their social interaction skills by using online interactive tools like Facebook, Twitter and others like those. The Internet allows people to express themselves who otherwise would feel uncomfortable doing so in person. The Internet has made communication cheaper, faster and available to everyone from an individual to businesses. Internet is being used for communication in the educational field, for example, online forums, online books, etc. Websites like YouTube allows people to communicate

via posting videos or music files on the platform. YouTube has eased communication in various fields. People can watch anything from educational videos to participating in political discussions. Internet is a necessity in today's world. Tourists use the internet to find direction for popular hot spots, students use it for communicating educational ideas for schoolwork, shoppers use it to stay connected to distant friend and relatives by e-mail, instant messaging or chat. Internet both expands and changes the communities in subtle ways.

Virtual Reality

Virtual reality lies within the concept of simulation. It is about creating an illusion of aspects we perceive. It drives our minds into thinking what was actually not in there.

Virtual reality has come with our doubtful interpretations of reality. In Philosophy, we think and question ourselves what really is real? Is it based only on our perception? What if virtual reality comes fully into our minds? Does it mean that virtual could be actually real? Then there's also doubt to our current states.

Elon Musk thinks we're all probably trapped in a "Matrix"-like pseudo-existence. "If you assume any rate of improvement at all, then games will be indistinguishable from reality, or civilization will end. One of those two things will occur. Therefore, we are most likely in a simulation, because we exist. I think most likely — this is just about probability — there are many, many simulations," he added. "You might as well call them a reality, or you could call them multiverse."

"Why would you make a simulation that's boring? You'd make a simulation that's way more interesting than base reality," Musk said, citing the video games and movies that humanity makes, which are "distillation[s] of what's interesting about life."

Concepts of simulation and virtual reality had arrived at media. We created movies that made us think of possible future technology or doubt what we perceive today. Movie suggestions influenced our drive for

discovery and could be one of the reasons for our present technology-the virtual reality.

The Thirteenth Floor (1999)

In late 1990s Los Angeles, Hannon Fuller is the inventor of a newly-completed virtual reality (VR) simulation of 1937 Los Angeles, filled with simulated humans unaware they are computer programs. When Fuller is murdered just as he begins premature testing of the VR system, his friend and protégé, Douglas Hall who is also the heir to the company, becomes the primary suspect. The evidence against him is so strong that Hall begins to doubt his own innocence. He sends himself down into the simulated reality looking for answers.

The Matrix (1999)

A computer hacker learns from mysterious rebels about the true nature of his reality and his role in the war against its controllers.

Synecdoche, New York (2008)

From the writer of Adaptation, Being John Malkovich and Eternal Sunshine of the Spotless Mind. The plot follows an ailing theater director as he works on an increasingly elaborate stage production whose extreme commitment to realism begins to blur the boundaries between fiction and reality. Its motifs and themes include a play-within-the-play, Jungian psychology, delusion, death, and simulations of reality. Written and directed by Charlie Kaufman. Starring the late great Philip Seymour Hoffman, Catherine Keener, Samantha Morton, Hope Davis, and Jennifer Jason Leigh.

The whole concept of virtual reality isn't only about what we have today e.g. gadgets that allow us to view in whole different three-dimensional scale. It is also about anything that replaces our perception of reality. It could be in the form of small gadget that we have today, the full system that could cover whole humanity, and microchip in our minds. It might seem like science fiction but by observing our rate of advancements and

by searching the possible next platform of integration aside from cellphones, virtual reality isn't a far idea.

Rise and Fall

Just like any businesses, the manufacturers of virtual reality gadgets today based their marketing and production depending on the number of clients. There is an increasing virtual community although it's lower than other services it is an important step that signifies a potential to the virtual gadget businesses.

HTC Vive

HTC Vive is different from other VR systems because it gives you the freedom to roam around a room. While other systems will allow you some movement, HTC Vive uses sensors that can be mounted on walls to map your location in the physical space, integrating this into the virtual world. The downside is that you'll also need a big enough play space to use it in that fashion. The headset integrates a range of sensors, presenting the slick visuals to your eyes and you have to wear additional headphones to complete the picture. There are bespoke Vive hand controllers and their locations are also mapped within the 3D space, offering plenty of versatility when it comes to immersion and interactivity.

Acer AH101 Windows Mixed Reality

Windows Mixed Reality is a newcomer to VR. It needs the latest version of Windows 10 to run, but the idea is to bring VR to the masses, by making the hardware more affordable, the software standard and the PC requirements more accessible. Although we've seen a number of headsets and have reviewed the Acer and Asus headsets in detail. Acer succeeds in bringing the price down although there are some compromises along the way and the materials do feel a little cheap. The design is good, but there's a little too much light leakage from the back which brings the experience down.

Gadgets are also accompanied by online products that offer contents for the gadgets. It is usually funded or in partnership by the creators of virtual gadgets manufacturers which supports their requirements for a system. Some contents and products are limited to only some virtual gadgets which are specifically made for that purpose for competition. If good content is only available at one platform of virtual reality, customers are more likely to buy the virtual reality gadget that can have good content. Virtual reality offers a thrilling experience as it has a touch of realism. It's continuously developing different fields on gaming and scenarios.

Appeal to customers

Virtual reality has an impact on the audience since the idea of a different three-dimensional experience is new. The entertainment industry which shows about the future being virtual and other simulation concepts has supported the business and community to dwell on the new concept. Different Youtubers also tried it and posted videos which encouraged their clients to try.

Devices

Virtual reality has a different basis on their concepts of a process for viewing three dimensions that are based on science.

The primary subject of virtual reality is simulating the vision. Every headset aims to perfect their approach to creating an immersive 3D environment. Each VR headset puts up a screen (or two - one for each eye) in front of eyes thus, eliminating any interaction with the real world. Two autofocus lenses are generally placed between the screen and the eyes that adjust based on individual eye movement and positioning. The visuals on the screen are rendered either by using a mobile phone or HDMI cable connected to a PC.

To create a truly immersive virtual reality there are certain prerequisites - a frame rate of minimum 60fps, an equally competent refresh rate and minimum 100-degree field of view (FOV) (though 180 degrees is ideal). The frame rate is the rate at which the GPU can process the images per second, the screen refresh rate is the pace of the display to render

images, and FOV is the extent to which the display can support eye and head movement.

If either of these doesn't work as per the standards the user can experience latency i.e. too much time gap between their actions and the response from the screen. We need the response to be less than 20 milliseconds to trick the brain which is achieved by combining all the above factors in the right proportion. Another issue that needs to be catered here is to prevent tearing (cybersickness) resulting due to the inconsistency between the frame rate and refresh rate. If the GPU's fps is more than the screen refresh rate then the image can become distorted. To counter this issue, we limit the framerate to the monitor's refresh rate this done using a tech called Vertical Sync (VSync).

Among the major headsets available today, Vive and Rift both have 110-degree FOVs, Google Cardboard has 90, the GearVR has 96 and the new Google Daydream offers up to 120 degrees. As for frame rate, both HTC Vive and Oculus Rift come with 90hz displays, while the PlayStation VR offers a 60hz display.

Eye and head tracking can be ensured using laser pointers, led lights or mobile sensors. In mobile, we use the accelerometer to detect three-dimensional movement, gyroscope for angular movement and magnetometer to identify the position relative to the Earth. If we need to achieve a very high accuracy then cameras and sensors can be installed in the room where you would use the headset. Although this is a much costlier setup as compared to using basic phone sensors.

Quantum teleportation

Quantum mechanics on our science as some of us may know are simply tiny scale with weird behavior but these tiny scales and processes could be the new way of faster development on the internet. As clients, we hate products that have defects and internet connection is one of those. It buffers, load, glitch, and hang. Also, it is vulnerable to malware and computer viruses. Quantum mechanics could be the way to have lesser

flaws and easier communication. It is important to know first the brief information about quantum mechanics.

Quantum mechanics is the branch of physics relating to the very small. It results in what may appear to be some very strange conclusions about the physical world. At the scale of atoms and electrons, many of the equations of classical mechanics, which describe how things move at everyday sizes and speeds, cease to be useful. In classical mechanics, objects exist in a specific place at a specific time. However, in quantum mechanics, objects instead exist in a haze of probability; they have a certain chance of being at point A, another chance of being at point B and so on.

Certain properties, such as position, speed, and color, can sometimes only occur in specific, set amounts, much like a dial that "clicks" from number to number. This challenged a fundamental assumption of classical mechanics, which said that such properties should exist on a smooth, continuous spectrum. To describe the idea that some properties "clicked" like a dial with specific settings, scientists coined the word "quantized."

Reliable timekeeping is about more than just your morning alarm. Clocks synchronize our technological world, keeping things like stock markets and GPS systems in line. Standard clocks use the regular oscillations of physical objects like pendulums or quartz crystals to produce their 'ticks' and 'tocks'. Today, the most precise clocks in the world, atomic clocks, are able to use principles of quantum theory to measure time. They monitor the specific radiation frequency needed to make electrons jump between energy levels. The quantum-logic clock at the U.S. National Institute of Standards and Technology (NIST) in Colorado only loses or gains a second every 3.7 billion years. And the NIST strontium clock, unveiled earlier this year, will be that accurate for 5 billion years—longer than the current age of the Earth. Such super-sensitive atomic clocks help with GPS navigation, telecommunications, and surveying.

Traditional cryptography works using keys: A sender uses one key to encode information, and a recipient uses another to decode the message.

However, it's difficult to remove the risk of an eavesdropper, and keys can be compromised. This can be fixed using potentially unbreakable quantum key distribution (QKD). In QKD, information about the key is sent via photons that have been randomly polarized. This restricts the photon so that it vibrates in only one plane—for example, up and down, or left to right. The recipient can use polarized filters to decipher the key and then use a chosen algorithm to securely encrypt a message. The secret data still gets sent over normal communication channels, but no one can decode the message unless they have the exact quantum key. That's tricky because quantum rules dictate that "reading" the polarized photons will always change their states, and any attempt at eavesdropping will alert the communicators to a security breach.

A standard computer encodes information as a string of binary digits, or bits. Quantum computers supercharge processing power because they use quantum bits, or qubits, which exist in a superposition of states—until they are measured, qubits can be both "1" and "0" at the same time.

This field is still in development, but there have been steps in the right direction. In 2011, D-Wave Systems revealed the D-Wave One, a 128-qubit processor, followed a year later by the 512-qubit D-Wave Two. The company says these are the world's first commercially available quantum computers. However, this claim has been met with skepticism, in part because it's still unclear whether D-Wave's qubits are entangled. Studies released in May found evidence of entanglement but only in a small subset of the computer's qubits. There's also uncertainty over whether the chips display any reliable quantum speedup. Still, NASA and Google have teamed up to form the Quantum Artificial Intelligence Lab based on a D-Wave Two. And scientists at the University of Bristol last year hooked up one of their traditional quantum chips to the Internet so anyone with a web browser can learn quantum coding.

A team of researchers at Japan's Hokkaido University developed the world's first entanglement-enhanced microscope, using a technique known as differential interference contrast microscopy. This type of microscope fires two beams of photons at a substance and measures the

interference pattern created by the reflected beams—the pattern changes depending on whether they hit a flat or uneven surface. Using entangled photons greatly increases the amount of information the microscope can gather, as measuring one entangled photon gives information about its partner.

Humans aren't the only ones making use of quantum mechanics. One leading theory suggests that birds like the European robin use the spooky action to keep on track when they migrate. The method involves a light-sensitive protein called cryptochrome, which may contain entangled electrons. As photons enter the eye, they hit the cryptochrome molecules and can deliver enough energy to break them apart, forming two reactive molecules, or radicals, with unpaired but still entangled electrons. The magnetic field surrounding the bird influences how long these cryptochrome radicals last. Cells in the bird's retina are thought to be very sensitive to the presence of the entangled radicals, allowing the animals to effectively 'see' a magnetic map based on the molecules.

Quantum mechanics enables perfectly secure cloud computing

by University of Vienna

Researchers have succeeded in combining the power of quantum computing with the security of quantum cryptography and have shown that perfectly secure cloud computing can be achieved using the principles of quantum mechanics. They have performed an experimental demonstration of quantum computation in which the input, the data processing, and the output remain unknown to the quantum computer. The international team of scientists will publish the results of the experiment, carried out at the Vienna Center for Quantum Science and Technology (VCQ) at the University of Vienna and the Institute for Quantum Optics and Quantum Information (IQOQI), in the forthcoming issue of Science.

Quantum computers are expected to play an important role in future information processing since they can outperform classical computers in many tasks. Considering the challenges inherent in building quantum

devices, it is conceivable that future quantum computing capabilities will exist only in a few specialized facilities around the world – much like today's supercomputers. Users would then interact with those specialized facilities in order to outsource their quantum computations. The scenario follows the current trend of cloud computing: central remote servers are used to store and process data – everything is done in the "cloud." The obvious challenge is to make globalized computing safe and ensure that users' data stays private.

The latest research, to appear in Science, reveals that quantum computers can provide an answer to that challenge. "Quantum physics solves one of the key challenges in distributed computing. It can preserve data privacy when users interact with remote computing centers," says Stefanie Barz, lead author of the study. This newly established fundamental advantage of quantum computers enables the delegation of quantum computation from a user who does not hold any quantum computational power to a quantum server while guaranteeing that the user's data remain perfectly private. The quantum server performs calculations but has no means to find out what it is doing – a functionality not known to be achievable in the classical world.

The scientists in the Vienna research group have demonstrated the concept of "blind quantum computing" in an experiment: they performed the first known quantum computation during which the user's data stayed perfectly encrypted. The experimental demonstration uses photons, or "light particles" to encode the data. Photonic systems are well-suited to the task because quantum computation operations can be performed on them, and they can be transmitted over long distances.

The process works in the following manner. The user prepares qubits – the fundamental units of quantum computers – in a state known only to himself and sends these qubits to the quantum computer. The quantum computer entangles the qubits according to a standard scheme. The actual computation is measurement-based: the processing of quantum information is implemented by simple measurements on qubits. The user tailor’s measurement instructions to the particular state of each qubit and

sends them to the quantum server. Finally, the results of the computation are sent back to the user who can interpret and utilize the results of the computation. Even if the quantum computer or an eavesdropper tries to read the qubits, they gain no useful information, without knowing the initial state; they are "blind."

QUANTUM INTERNET IS 13 YEARS AWAY. WAIT, WHAT'S QUANTUM INTERNET?

By Sophia Chen

A YEAR AGO, this week, Chinese physicists launched the world's first quantum satellite. Unlike the dishes that deliver your Howard Stern and cricket tournaments, this 1,400-pound behemoth doesn't beam radio waves. Instead, the physicists designed it to send and receive bits of information encoded in delicate photons of infrared light. It's a test of a budding technology known as quantum communications, which experts say could be far more secure than any existing info relay system.

They've kept the satellite busy. This summer, the group has published several papers in Science and Nature in which they sent so-called entangled photons between the satellite—nicknamed Micius, after an ancient Chinese philosopher—and multiple ground stations. If quantum communications were like mailing a letter, entangled photons are kind of like the envelope: They carry the message and keep it secure. Jian-Wei Pan of the University of Science and Technology of China, who leads the research on the satellite, has said that he wants to launch more quantum satellites in the next five years. By 2030, he's hoping that quantum communications will span multiple countries. In 13 years, you can expect the quantum internet.

Which means ... what exactly? In the simplest terms, it will involve multiple parties pinging information at each other in the form of quantum signals—but experts haven't really figured out what it will do beyond that. "'Quantum internet' is a vague term," says physicist Thomas Jennewein of the University of Waterloo. "People, including myself, like to use it. However, there's no real definition of what it means."

That's because so much of the technology is still in its infancy. Physicists still can't control and manipulate quantum signals very well. Pan's quantum satellite may have been able to send and receive signals, but it can't really store quantum information—the best quantum memories can only preserve information for less than an hour. And researchers still don't know what material makes the best quantum memory.

They also aren't sure how they'd transmit signals efficiently between the nodes of the future quantum web. Blanketing Earth in quantum satellites is expensive—Pan's cost $100 million. Ground-based transmission via optical fiber isn't perfect either: Quantum signals die out after about 60 miles of transmission. The signals can't be amplified like an electronic signal, either. So, researchers are developing special devices known as quantum repeaters that can transmit signals over long distances.

That research will take time. Even if Pan gets his international network up and running by 2030, it's not like it'll be handling your social media feed by then. And maybe we wouldn't want it to, either. Just because something is "quantum" doesn't mean it's automatically better, says physicist Kai-Mei Fu of the University of Washington. "In many cases, it doesn't make a lot of sense to communicate quantum mechanically," she says. Quantum signals have weird properties like superposition, where a particle's location is a probability distribution, and it has no precise location. Most communication between humans would still be far easier to express by encoding regular old 1's and 0's in blips of electricity.

So, what's the point of it? In the near future, the quantum internet could be a specialized branch of the regular internet. Research groups all over the world are currently developing chips that might allow a classical computer to connect to a quantum network. People would use classical computing most of the time and hook up to the quantum network only for specific tasks.

For example, says physicist Renato Renner of ETH Zurich, you might connect a classical personal computer to a quantum network to send a message using quantum cryptography—arguably the most mature quantum technology. In quantum cryptography, a sender uses a

cryptographic key encoded in a quantum signal to encrypt a message. According to the laws of quantum mechanics, if someone tried to intercept the key, they would destroy it.

The quantum internet could also be useful for potential quantum computing schemes, says Fu. Companies like Google and IBM are developing quantum computers to execute specific algorithms faster than any existing computer. Instead of selling people personal quantum computers, they've proposed putting their quantum computer in the cloud, where users would log into the quantum computer via the internet. While running their computations, they might want to transmit quantum-encrypted information between their personal computer and the cloud-based quantum computer. "Users might not want to send their information classically, where it could be eavesdropped," Fu says.

But it'll take a while—if ever—before a quantum network gets as big or as versatile as our current internet. "To get to the point where billions of quantum devices are connected to the same network, where any connected device can talk to any other device, we'd be lucky to see it in our lifetime," Jennewein says.

The incremental progress doesn't bother Renner. He's just excited that these experiments inspire physicists to think about quantum mechanics in new ways. "All these developments will certainly help our understanding of physics," he says. "As a physicist, I want to stress that we are not only application-driven but also driven by our search for understanding." As consumers, though, we'll be waiting for our new gadgets.

History of communication

Joseph Henry invented the Electric Telegraph even though before this there were other forms of communication such as post due to innovations in printing via printing presses, it wasn't until the development of electrical engineering in the 19th Century where new methods of communication started to evolve.

The electric telegraph used electrical signals to convey messages which were the first form of electrical communication. These electrical signals needed a code which was developed by Samuel F.B Morse in 1837, called Morse Code. This code translated letters into on/off signals which were used as a prime source of communication during its time.

It wasn't until 1849 where one of our most recognizable and useful forms of communication was invented, the telephone. Even though it was invented by Antonio Meucci in 1849, it wasn't until 1876 when Alexander Graham Bell won the first U.S patent to make the phone. Before the invention of the telephone, however, the word telephone was used for other inventions and not just the phone as we know today. Within 50 years of the phone's release, the phone had become an irreplaceable invention in homes.

Just over 100 years after the initial invention of the phone, in 1973, Motorola created a device that is in nearly every pocket of every person on this planet, the mobile phone. Before this, telephones all had cords, tethered to one spot in your house so you could never have a conversation in private. The mobile phone changed this forever, although it was certainly not what we know today, it revolutionized the field of communication forever, starting a chain reaction of development.

One of the most iconic phones ever invented is none other than the Nokia 3310, because who doesn't remember snake? The game entertained us all for many hours a day. It was an amazing time, where you didn't have to worry about dropping it or running out of battery, the iPhone could learn something about battery life from the most beloved phone in history.

If there is one invention that has forever changed the way we communicate with one another as well as life, it is the invention of the internet. Before the internet, you would have to actually have a conversation with someone to learn about them or go to school to learn something new. The internet came along and changed the way we interacted with the world forever. Although the internet was being developed in the since the 1950s, it wasn't until 6 August 1991 when the

internet was brought to our homes, a day that changed everything. With the internet came one of the most iconic moments in human history, MSN Messenger. Remember, every day running home from school to talk to your friends about everything and anything who you had just seen half an hour before?

The internet was a game changer, with people reimagining what is possible with technology as well as what could be done with devices that already existed. If there was one thing the mobile phone was missing since its birth it was the internet. Even though phones had access to the internet, it was extremely difficult and expensive. That wasn't until the invention of the smartphone. In the early 2000s, companies such as Blackberry and Nokia were making phones that connected us to the internet.

One of the most memorable of all these phones is the Blackberry Curve 8520, using BBM to catch up with your school friends every day and to message your crush. The world of smartphones was forever changed on June 29, 2007, the release of the iPhone. The iPhone pushed the mobile phone into the modern day, it is a device nearly every one of us has in our hands every day and a lot you are probably reading this article on right now.

The final stage in this story is social media, remember MySpace. Today when we think of social media, we think of Facebook, Instagram, Twitter, and Snapchat, but it was MySpace that was the first major social media platform. Before this, there were other blogging sites but none quite as big as MySpace. Founded in 2003, MySpace was the most beloved time of our lives, even though none of us use it anymore, it has a special place in our hearts. The launch of Facebook and Twitter was in 2006, Instagram in 2010 and Snapchat in 2011. Social Media has changed the way we live, oversharing our lives for all to see, curating our identities on the internet that is hardly a true reflection of who we are.

Throughout history, every time there is a development in communication, we become more dependent on it. Our culture today is so used to living online that we are unaware of how to communicate

offline, we are so used to creating an identity online that offline we don't know who we really are. We have become dependent on the internet in every aspect of our lives, from personal to work. Although every development has enhanced our lives, even more, every development has also reprogrammed our lives.

A brief history of technology

Social resources are similarly an indispensable prerequisite to successful innovation. Many inventions have foundered because the social resources vital for their realization—the capital, materials, and skilled personnel—were not available. The notebooks of Leonardo da Vinci are full of ideas for helicopters, submarines, and airplanes, but few of these reached even the model stage because resources of one sort or another were lacking. The resource of capital involves the existence of surplus productivity and an organization capable of directing the available wealth into channels in which the inventor can use it.

The mechanics of transmission have been enormously improved in recent centuries by the printing press and other means of communication and also by the increased facility with which travelers visit the sources of innovation and carry ideas back to their own homes. Traditionally, however, the major mode of transmission has been the movement of artifacts and craftsmen. Trade in artifacts has ensured their widespread distribution and encouraged imitation. Even more important, the migration of craftsmen—whether the itinerant metalworkers of early civilizations or the German rocket engineers whose expert knowledge was acquired by both the Soviet Union and the United States after World War II—has promoted the spread of new technologies.

The evidence for such processes of technological transmission is a reminder that the material for the study of the history of technology comes from a variety of sources. Much of it relies, like any historical examination, on the documentary matter, although this is sparse for the early civilizations because of the general lack of interest in technology on the part of scribes and chroniclers. For these societies, therefore, and for

the many millennia of earlier unrecorded history in which slow but substantial technological advances were made, it is necessary to rely heavily upon archaeological evidence.

Technological knowledge was transmitted by traders, who went out in search of tin and other commodities, and by craftsmen in metal, stone, leather, and the other mediums, who passed their skills to others by direct instruction or by providing models that challenged other craftsmen to copy them.

The Romans were responsible, through the application and development of available machines, for an important technological transformation: the widespread introduction of rotary motion. This was exemplified in the use of the treadmill for powering cranes and other heavy lifting operations, the introduction of rotary water-raising devices for irrigation works (a scoop wheel powered by a treadmill), and the development of the waterwheel as a prime mover.

In respect to the recent history of technology, however, one fact stands out clearly: despite the immense achievements of technology by 1900, the following decades witnessed more advance over a wide range of activities that the whole of previously recorded history. The airplane, the rocket and interplanetary probes, electronics, atomic power, antibiotics, insecticides, and a host of new materials have all been invented and developed to create an unparalleled social situation, full of possibilities and dangers, which would have been virtually unimaginable before the present century. The 20th century witnessed a colossal expansion of electrical power generation and distribution. The general pattern has been toward ever-larger units of production, using steam from coal- or oil-fired boilers.

The vital piece of equipment has been the computer, especially the electronic digital computer, a 20th-century invention the theory of which was expounded by the English mathematician and inventor Charles Babbage in the 1830s. The essence of this machine is the use of electronic devices to record electric impulses coded in the very simple binary system, using only two symbols, but other devices such as punched cards

and magnetic tape for storing and feeding information have been important supplementary features. By virtue of the very high speeds at which such equipment can operate, even the most complicated calculations can be performed in a very short space of time.

Part Five - Advances in Technology

The Maneuvering of Technology

Technological achievements will continue to spur and we might get out of space for upgrading our means of communication. Many satellites are in our atmosphere, receiving and transmitting information to us.

According to the Index of Objects Launched into Outer Space, maintained by the United Nations Office for Outer Space Affairs (UNOOSA), there were 4 987 satellites orbiting the planet at the start of the year; an increase of 2.68% compared to end of April 2018.

UNOOSA recorded 382 objects launched into space during 2018, which is 15.67% lower than the 453 objects launched in 2017 that was the record year for objects launched into space. Part of this reduction is down to the fact that Planet, who have been regular cubesat launchers over the last few years have achieved their initial goal of imaging the Earth's landmasses every day, and so they are currently focused on maintaining, rather than expanding their constellations.

According to UNOOSA, in history, a total of 8 378 objects have been launched into space. Currently, 4 994 are still in orbit – although 7 of them are in orbit around celestial bodies other than the Earth; meaning there are 4 987 satellites whizzing around above our heads every single day. The Union of Concerned Scientists (UCS) keeps a record of the operational satellites and their latest update provides details to the end of November 2018. Using this database together with the UNOOSA Index shows that there are currently 1 957 active satellites in orbit, which represents just under 40% of the satellites orbiting the planet. Interestingly, this is also 1.16% lower than the last update of this database for April 2018. In effect, this means that there are 3 030 limps

of metal flying around the Earth at thousands of miles per hour doing absolutely nothing.

These satellites that are comprised of heavy metals and sophisticated tools will increase their quantities unless there is a new scientific breakthrough that would make the satellite services. For now, it seems that satellites will stay there for a while. However, increasing quantities of satellites in our atmosphere means there is more debris that might fall.

The Kessler syndrome (also called the Kessler effect, collisional cascading or ablation cascade), proposed by the NASA scientist Donald J. Kessler in 1978, is a scenario in which the density of objects in low Earth orbit (LEO) is high enough that collisions between objects could cause a cascade where each collision generates space debris that increases the likelihood of further collisions. One implication is that the distribution of debris in orbit could render space activities and the use of satellites in specific orbital ranges impractical for many generations.

The Kessler syndrome is troublesome because of the domino effect and feedback runaway wherein impacts between objects of sizable mass spall off debris from the force of the collision. The fragments can then hit other objects, producing even more space debris: if a large enough collision or explosion were to occur, such as between a space station and a defunct satellite, or as the result of hostile actions in space, then the resulting debris cascade could make prospects for long-term viability of satellites in low earth orbit extremely low. However, even a catastrophic Kessler scenario at LEO would pose minimal risk for launches continuing past LEO, or satellites traveling at medium Earth orbit (MEO) or geosynchronous orbit (GEO). The catastrophic scenarios predict an increase in the number of collisions per year, as opposed to a physically impassable barrier to space exploration that occurs in higher orbits.

If that happened in our future world, the increased number of satellites might alarmingly cause some problems. If the satellites are one of our foundation in the communicating process, it'll be hard for us to adjust in a sudden interruption. Communication will be lost and if our lives or society are maneuvered by the internet, it could turn into a catastrophic

problem. Integration of our systems means embedding our physical processes into digital. It's like running a program for an entity of machine to move and if the connection collapses, the process will be over.

Scientists and leading researchers developed ways to prevent our world from collapsing. Even the internet that covers our world partially, they've made ways to prevent problems from occurring. In terms of the digital problem, the information will be most affected if something bad happens to the internet. Since they are all entangled and connected, losing a connection may result in data loss. Information could be retrieved but the amount of information that was lost will take time.

Internet's Thought Experiment

The Internet isn't a magic box with an on/off switch. It's not even a physical thing. It's a collection of physical things and it's constantly changing. The Internet isn't the same entity from one moment to the next -- machines are always joining or leaving the Internet. It's possible for parts of the Internet to go offline. In fact, this happens all the time. Whether it's a particular server that crashes and needs to be rebooted or replaced or a cable under the ocean gets snagged by an anchor, there are events that can disrupt Internet service. But the effects tend to be isolated and temporary.

While there is such a thing as the Internet backbone -- a collection of cables and servers that carry the bulk of data across various networks -- it's not centralized. There's no plug you could pull out from a socket or a cable you could cut that would cripple the Internet. For the Internet to experience a global collapse, either the protocols that allow machines to communicate would have to stop working for some reason or the infrastructure itself would have to suffer massive damage.

Since the protocols aren't likely to stop working spontaneously, we can rule out that eventuality. As for the massive damage scenario -- that could happen. An asteroid or comet could collide with the Earth with enough force to destroy a significant portion of the Internet's infrastructure. Overwhelming gamma radiation or electromagnetic fluctuations coming

from the sun might also do the trick. But in those scenarios, the Earth itself would become a lifeless hulk. At that stage, it hardly matters whether or not you can log in to MySpace.

If the cable and satellite services would be unavailable. You could still access television programming sent via broadcast towers if you had an antenna. But if the cable and satellite systems were part of the general collapse, you'd lose access to most channels. You wouldn't be able to log on to social networking sites and services like Facebook or Twitter. You wouldn't be able to fire up an instant messaging service to check up on friends. Many of the tools we rely on to keep up with what our friends and family are doing would cease to exist. If the cell phone towers and telephone lines were also affected, we'd be reduced to writing letters and sending them through the post office.

Transferring files between computers would be difficult, too. You'd either need to store the files on some form of physical media like a compact disc or you'd need to connect the two computers with a physical cable. Projects that depend upon grid computing to make complex calculations wouldn't work either. Cloud computing services would also fail and the information you store on those services could become inaccessible. If the Internet did collapse somehow, the economic impact would be disastrous. While the loss of services like electronic banking or PayPal would be annoying, the effects would extend much further.

Think of the businesses that depend upon the Internet. Every Web site would be offline. Huge companies like Google or Amazon would become obsolete instantly. Other companies like Microsoft would see enormous sections of their operations disappear. Even companies that only use the Web as a means of advertisement would be adversely affected.

Assuming the collapse was either of a permanent or extended nature, many companies would go out of business. Hundreds of thousands of people would be out of a job. Google employs nearly 20,000 people alone. With hundreds of companies folding or cutting back on staff, the market would be flooded with people in need of a job.

According to the U.S. Census Bureau, e-commerce accounted for 35 percent of all shipments from the manufacturing industry in 2007. That amounts to more than $1.8 trillion for that industry alone. When you extrapolate those numbers to all industries across the entire world, you'll see that commerce on the Internet is big business. If the Internet collapsed, multiple industries would experience an instant recession. There's no easy way to bounce back from a loss of trillions of dollars.

Some countries would feel the sting more than others. Developed countries would face severe economic crises as entire industry sectors either disappeared or struggled to survive in the wake of devastating losses. Other countries wouldn't suffer as many direct effects from the collapse because they don't have much of a presence on the Internet. But these countries would also suffer as the trade and aid they depend upon from other connected countries decreases.

The economic fallout would probably be the primary crisis governments would face around the world if the Internet were to collapse. But that would just be one problem world leaders would face.

In the United States, there's a push to develop the power grids around the nation into a smart grid. Smart grids could theoretically respond to customer needs more efficiently, conserve power and communicate with one another over Internet connections. In theory, this system could reduce power outages and other problems. But if the Internet were to collapse, a smart grid would be crippled. Massive power outages could become a problem across any country using such a system.

As the Internet has become more pervasive, countries have used it to gather intelligence and to spy on one another. The loss of the Internet would be an enormous blow to intelligence agencies. Sharing information would become slow and difficult. Some governments might react to such a situation rashly. It's impossible to predict how each government would react; however, it's not hard to imagine a series of events that could escalate into a conflict.

Assuming world leaders could maintain order and resist the urge to blow each other up, other problems would surface. The Internet has become an important part of many educational programs. The loss of the Internet would leave a void that other resources would need to fill. Resources cost money -- something that would be in short supply as markets around the world try to recover from staggering losses.

In the United States, military organizations and some research institutions are part of networks that are similar to the Internet but are technically not part of the Internet itself. If these networks remained unaffected, at least some electronic communication and data transmission would be possible. But if our imaginary crisis extended all the way to these computer networks, the country would become vulnerable to all sorts of attacks.

Industry Shift

Industries made ways to be better and maintain its profit. It also became an open opportunity for others to start anew in digital business. From the emergence of the internet with less popularity, many people saw the chance to build the top businesses that we know today.

PayPal was established in December 1998 as Confinity, a company that developed security software for handheld devices founded by Max Levchin, Peter Thiel, Luke Nosek, and Ken Howery. PayPal was developed and launched as a money transfer service at Confinity in 1999, funded by John Malloy from BlueRun Ventures.

In March 2000, Confinity merged with X.com, an online banking company founded by Elon Musk. Musk was optimistic about the future success of the money transfer business Confinity was developing. Musk and then-president and CEO of X.com, Bill Harris, disagreed on this point and Harris left the company in May 2000. In October of that year, Musk made the decision that X.com would terminate its other Internet banking operations and focus on the PayPal money service.

In 2004, a group of friends at college created an innovative new social media platform with the aim of connecting Harvard students through an online community. 14 years later, Facebook is one of the most influential social networks in the world, boasting approximately 2.2 billion monthly users. It all began in 2003 when Facebook founder and CEO Mark Zuckerberg created an online programme called "Facemash", which allowed users to objectify fellow students by comparing photos of their faces and selecting who they deemed as "hotter". While Zuckerberg faced punishment from the Harvard administration and narrowly escaped expulsion from the college altogether for his actions, "Facemash" provided the framework for what was to become Facebook.

Google's history began in 1995 when Larry Page met Sergey Brin. At the time Larry Page was a Ph.D. student at Standford University, and Sergey was considering studying there. In 1996 Larry and Sergey began work on a search engine called BackRub. The name comes from the algorithms ranking for how many "back-links" a page has. This engine worked on the Stanford servers for more than a year which eventually clogged up the bandwidth. Google.com was registered on September 15th, 1997. Google, is a play on words of "googol" which is a mathematical term for the number 1 followed by 100 zeros. It is rumored that this reflects the founders' mission to organize the infinite amount of information on the internet.

Apple is another insanely popular international brand, but few people realize that it was started in a California garage by three young men. Steve Jobs, Steve Wozniak, and Ronald Wayne developed the first Apple computer in 1976 in the garage of Steve Jobs' parents' house.

The Apple I was sold as a motherboard to a local store for $500 and shortly thereafter, the team continued on to create the Apple II computer. The founders' products and the company became famous when they got a break from their Macintosh line of products, from which they earned millions of dollars. Now, Apple is leading a technological revolution with its various devices, including Mac computers, iPhones, iPods, and iPads.

Every computer user knows the Microsoft brand. It's the remarkable and famous software that was once created in a small Albuquerque garage by Bill Gates and his friend Paul Allen. Both of them gave more importance to programming language and software operations and worked in collaboration with IBM. They got their first operating system licensed for $80,000. They kept working hard and some years later they developed their most impressive and exceptional operating system, called Windows. Today, Windows is the most widely used software on the globe. About 80% of computers worldwide are running this operating system.

Job Shifting

The Major change that is happening in our technological pursuit of communication and technology is starting to affect the economic needs. This would affect the demand for the job and our community as a whole.

With the explosive growth of mobile-based internet usage, the need for these positions continues to grow, ranking third on CareerCast's report in terms of expected growth. Most software developers have a bachelor's degree in computer science. Application Software Developer is the top in-demand job as of 2019.

The Game Industry

If we are going to compare the games from the 1970s to today, a lot has changed. Changes from graphics, platforms, contents, and designs leaped from small dots up to realistic details. Companies sold to clients and the optimization of games became parallel to the success of the technology. The Internet has offered a new playing ground for gamers to establish an active community to build relationships from other gamers and improve client to creator's exchange. Creators develop more of their works since gaming isn't only available and can be bought through gaming stores but also online. Creators now can sell additional features online via online payment. Advertisements also helped creators to have funds and are the primary profits for indie game creators.

ARPANET (Advanced Research Projects Agency Network) begins to implement the future internet protocol. Data packet switching, which

later provides TCP/IP, gives us a system of 15 nodes and email. At the time, unbeknownst to ARPANET, this will lay the essential groundwork for the Pokémon Go launch.

Atari is created, which sets the benchmark for game development at scale. Atari is a company originally founded in 1972 that became a major player in the video and arcade game industry. Atari products enjoyed popularity during what some call the "Golden Age" of video games, where engineers were beginning to explore the possibilities of newly developed hardware and computer science methodology.

Dungeons & Dragons (commonly abbreviated as D&D) is a fantasy tabletop role-playing game (RPG) originally designed by Gary Gygax and Dave Arneson. It was first published in 1974 by Tactical Studies Rules, Inc. (TSR). The game has been published by Wizards of the Coast (now a subsidiary of Hasbro) since 1997. It was derived from miniature wargames, with a variation of the 1971 game Chainmail serving as the initial rule system. D&D's publication is commonly recognized as the beginning of modern role-playing games and the role-playing game industry.

In 1975 we have the joystick hit arcade games, which revolutionizes how games are played. The joystick is released for the game Gunfight. In 1977 the Atari VCS is released. This opens the concept of the game cartridge. In 1984, BITNET develops MAD. This is the first game to be accessed by a worldwide computer network. SGI Dogfight, which becomes the first game to use the Internet Protocol (TCP/IP), is released in 1986. The game was limited to a single network, as broadcast packets were used.

Through the early to mid-90s, Sega, Nintendo, and Atari tried to push online gaming forward. What they found was the internet was expensive and not quite fast enough. This process began as early as 1993. The first-person shooter game, Marathon, was released for the Macintosh at the end of 1994. At the turn of the Millennium, the Sega Dreamcast was released. This is the first game console with true internet capabilities. Unfortunately, it did not take off. The theory is that they were just a bit ahead of their time. 2000 also saw the release of the Sony Playstation 2.

This had internet capabilities, but with the already popular Sony Playstation, it had no trouble with success.

Much of the VR landscape is unknown and in its primitive stages for mass consumer appeal. What we can say, is there is a lot of hype around the topic.

Tencent Games is the video game publishing division of Tencent Interactive Entertainment, itself a division of Tencent. Tencent Games was founded in 2003 to focus on online games. Tencent released its first game QQ Tang (QQ堂) in 2004, which is based on its social media platform QQ. This was soon followed by QQ variant games such as Dungeon Fighter Online, a side-scrolling online beat 'em up game; QQ Fantasy, a 2D online game that incorporates elements from Chinese mythology; Xunxian, a 3D, online RPG; QQ Sanguo, an online casual role-playing game set during the Three Kingdoms period; QQ Huaxia, an online RPG; QQ Dancer, an online musical dancing game that offers QQ IM interactivity; QQ Nanaimo, an online game set on a desert island where players maintain houses and pets; QQ Speed, a casual online racing game; QQ R2Beat, an online in-line skating game; QQ Tang, an "advanced casual game" with gameplay derived from Chinese literature; QQ PET, and a QQ IM-based desktop virtual pet game.

Sony Interactive Entertainment LLC (SIE) is a multinational video game and digital entertainment company that is a wholly owned subsidiary of Sony Corporation of America, the central hub for the American businesses under the Japanese conglomerate Sony Corporation. The company was founded in Tokyo, Japan, and established on November 16, 1993, as Sony Computer Entertainment (SCE), to handle Sony's venture into video game development through its PlayStation brand.

Activision Blizzard, Inc. is an American video game and film holding company based in Santa Monica, California. The company was founded in July 2008 through the merger of Activision and Vivendi Games, the company is traded on the NASDAQ stock exchange under the ticker symbol ATVI, and since 2015 has been one of the stocks that make up the

S&P 500. Activision Blizzard currently includes five business units: Activision Publishing, Blizzard Entertainment, King, and Major League Gaming, and Activision Blizzard Studios.

Improvisation

Improvisation in different fields will be beneficial. There will be more upgrades to our current technology that will make our lives easier. Communication will be faster, studies will be accumulated, and globalization in our necessities. Transactions will be done via the internet which means that banking and investing online will have better accommodation. Scams will not be tolerated as cybersecurity will be strengthened and independence will arise. Humanity can freely express themselves by different platforms and will seek more of it. Physical processes will partially be converted into digital and the competition online for businesses and popularity will be harder.

We are looking at today's conversion to our futuristic ideas. Traces of it are everywhere making its way into a more popular method. Education is having its way into improving by letting gadgets be part of learning. Programming and robotics are being taught to young generations and it is no doubt that they will be ones who will carry such learning for building our future world. Some schools are already using technologies for innovating learning.

The language-teaching machine comprises a humanoid robot and mobile application, one of four robots in a pilot program at primary schools in the southern city of Tampere. The robot is able to understand and speak 23 languages and is equipped with software that allows it to understand students' requirements and helps it to encourage learning. In this trial, however, it communicates in English, Finnish and German only. The robot recognizes the pupil's skill levels and adjusts its questions accordingly. It also gives feedback to teachers about a student's possible problems.

University of Florida - Online

The University of Florida is one of many online colleges that offers a comprehensive selection of online degrees at the bachelor's level, master's level, and doctoral level. Opportunities for undergraduates include bachelor's degrees in popular fields such as business administration, computer science, nursing, and psychology. Students also enjoy online options in specialized fields such as fire and emergency services, microbiology and cell science, and sport management. Graduate students can choose from a total of 77 online master's degrees, most of which focus on STEM fields and specializations, and nine online doctorate programs.

48 states and the District of Columbia currently support online learning opportunities that range from supplementing classroom instruction on an occasional basis to enrolling students in full-time programs. These opportunities include dual enrollment, credit recovery, and summer school programs, and can make courses such as Advanced Placement and honors, or remediation classes available to students. Both core subjects and electives can be taken online, many supported by online learning materials. While some online schools or programs are homegrown, many others contract with private providers or other states to provide online learning opportunities.

Utah Electronic High School – An 18-year-old online high school providing a range of courses to students year-round. The school can award diplomas to students who are home-schooled, have dropped out, or are ineligible to graduate from a traditional high school for specific reasons.

North Carolina Virtual Public School – An online high school offering 120 courses to students both during and after the school day. The courses offered include Advanced Placement and honors courses, world languages, electives, credit recovery, and online college courses. The school also provides test preparation and career planning services to students.

Blended learning opportunities incorporate both face-to-face and online learning opportunities. The degree to which online learning takes place, and the way it is integrated into the curriculum, can vary across schools. The strategy of blending online learning with school-based instruction is often utilized to accommodate students' diverse learning styles and to enable them to work before or after school in ways that are not possible with full-time conventional classroom instruction. Online learning has the potential to improve educational productivity by accelerating the rate of learning, taking advantage of learning time outside of school hours, reducing the cost of instructional materials, and better-utilizing teacher time. These strategies can be particularly useful in rural areas where blended or online learning can help teachers and students in remote areas overcome distance.

Michigan Virtual School – Michigan's students are able to take online classes and access online learning tools from their middle and high schools via this virtual school. Michigan Virtual also provides full-time learning opportunities to middle and high school students. Districts in the state work with the virtual school to grant course credit and diplomas to students.

Walled Lake Consolidated School District – This Michigan district's online summer school credit recovery program was expanded to include online learning opportunities during the school year. Students can now enroll in up to two online courses each semester while continuing to attend school for at least four hours a day. Eleventh and twelfth graders may also choose to enroll concurrently in postsecondary courses via a partnership with a local community college. The credit recovery program reduced per-student costs by 57 percent and the district estimates that by offering two online courses during the school year it has been able to save $517 per student on instructional costs.

Most of it is private but there will be a time where students from both public and private will have the necessities and tools needed for equal learning. Learning an advanced programming language will be a normal norm and people will gain more abilities than ever before.

Movies will become based on studies and the history of their current sales with a specific target audience. The small details of every film will be important and the audience will critic every single detail that is flawed. Movies and other products will be pushed on their limit as they arrive in perfection. Plot, script, viewing, and sounds will highly affect the rating of a show and mostly be based on findings of future cinematography research and studies. Aside from movies, entertainment or cinematography studies will result in a different kind of entertainment. It is a hypothetical idea that will be based on their customer's high standards and will address their satisfaction through means of a psychological basis. Today, we have movies that undergo long time-span of creating for the purpose of selling an excellent achievement in cinematography. Some of the movies took thousands of time of conceptualizing, animation, and creating character designs with over millions of dollars in budget. Here are some of the movies that take the longest amount of time in creating and the feats they created in cinematography innovation.

Boyhood - It took 12 years for Director Richard Linklater wanted to capture the process of growing up in a way that was true to life, so he brought a group of actors together for a week every year for twelve years in order to chart Mason's (Ellar Coltrane) life from age 6 to 18.

The Lego Movie - It took 4 years and animated films tend to take a long time in general, but The Lego Movie took a bit longer than normal, thanks to the extensive script rewrites that needed to be done – much of the originally planned film The Piece of Resistance was scrapped and reworked – and all of the detail that went into animating every single Lego brick in the film.

Sleeping Beauty - It took 8 years and before any artwork or animation work could start, the entire film was filmed on a soundstage with real actors, so that the animators would have something to model all of the characters on. Once the labor-intensive process, which involved hand-inking the cels and paying such attention to detail that background animation could sometimes take up to a week a frame to complete,

began, Walt Disney needed to sign off on every single day's work, adjusting things until he felt they were perfect.

Cronos - It Took: 8 years for Guillermo del Toro's dedication to every detail of his films was enough to guarantee a long shooting schedule, but then the film ran over budget, which brought filming to a halt. Del Toro raised the last bit himself through loans, some of which had a 60 percent interest rate, and star Ron Perlman was forced to take a pay cut. That he graciously did so solidified his friendship with the director for life.

The Simpsons Movie - Fox greenlit the film way back in 1997. In the years until its release in 2007, they had to get the voice cast to sign on (which they did in 2001), almost 160 versions of the script were written (plots kept being repurposed for TV episodes) and animation needed to start production, which took several years to complete.

Avatar - Writer, and director James Cameron had originally planned to start filming in 1997, after finishing Titanic, but was forced to wait until the technology needed to make Pandora come alive was completed. In addition, years of work was put into the screenplay, the language of the Na'vi and the development of the special effects which took them 10 years.

In order to create the Na'Vi and the world of Pandora convincingly - and on schedule - over 900 digital artists were employed. Most of the visual effects were done by WETA Digital, who had already worked on the "Lord of the Rings" trilogy. For "Avatar", they had to break the mold and invent new techniques. For instance, WETA developed a new digital lighting system which enabled them to picture the deep incidence of light in the thick jungles of Pandora in a most convincing way. Due to the photo-realistic realization, Cameron had demanded, vast amounts of data storage had to be provided. In order to use them effectively and efficiently, WETA developed the storage system, Mari. In the end, the processing and storage of a large amount of data required over 4,000 Hewlett-Packard servers, 35,000 CPUs and an area of 930 square meters for the servers. So as to make sure that none of the dark blue error messages cluttered up the screens, they switched to the Linux operating

system. In 2009, the server farm which was made available for the production ranked among the 200 most processor-intensive computer clusters in the world. Ultimately, an (uncompressed) finished minute of film contained about 17.28 gigabyte - and the results achieved are unquestionably excellent, particularly in the dimension that Cameron had chosen to represent his world in the third one.

Physical Mechanisms Integration via the Internet

There are applications that helped us in our daily lives that serve as a support tool. Some of it specializes in fitness, health, and driving. These inventions might be on the actual built of future mechanisms that allow individuals to operate machinery with connection on the internet.

There are plenty of GPS-driven apps and software to choose from, including options that may have come pre-installed in your car's dashboard interface or on your mobile device like Google Maps and MapQuest. Most do a respectable job when it comes to step-by-step navigation, and some even account for congestion and other factors that could affect your overall drive time.

Waze handles things a bit differently, though, relying on the power of the people to steer you down the right roads. With over 100 million users sharing noteworthy information about what they encounter along the way, Waze stays constantly updated about anything that could slow your progress. Input from your fellow drivers, known as Wazers, lets the app alert you to important items such as construction, police activity, accidents and even minor things to look out for like potholes and disabled cars on the shoulder.

Artificial Intelligence

Artificial Intelligence has supported our current lives into solving algorithms and problems that will take a considerable amount of time if done by a human.

However, it is hard to create an A.I. that is completely aware e.g. humans, animals. Scientists and researchers are struggling to develop the learning

of a machine or a program on its own that have the same complexity as a human being. The mind alone of an average human being contains a large amount of data compared to a quantum computer.

As of 2017, brains still have a leg up on AI. By some comparisons, human brains can process for more information than the fastest computers. In fact, in the 2000s, the complexity of the entire Internet as compared to a single human brain. This might surprise you. After all, computers are better at activities that we equate with smarts, like beating Gary Kasparov in chess or calculating square roots. Brains, however, are great at parallel processing and sorting information. They are so good at some activities that we take their strengths for granted, like being able to recognize a cat, tell a joke, or make a jump shot. Brains are also about 100,000 times more energy-efficient than computers, but that will change as technology advances. Estimates are that computers will surpass the capability of human brains around the year 2040, plus or minus a few decades. Whenever computers reach "human capacity," they may just keep right on improving. They are not burdened by the constraints that hold back brains. Neurons, for example, are the brain's building blocks and can only fire about 200 times per second, or 200 Hertz. Computer processors are measured in gigahertz: billions of cycles per second. Signals on neurons travel at about one-millionth of the speed of fiber optic cables. And don't forget, brains have to be small enough to fit inside skulls, and they inconveniently tire, forget, and die.

When it comes to storing information, however, biology once again shows that technology has a long way to go. This might surprise you, as well. After all, a computer hooked up to the Internet can beat human Jeopardy champions, and computers are great at memorizing things like phone books. But consider DNA as memory storage. Each of your six trillion cells contains all of the information to make your whole body. DNA can hold more data in a smaller space than any of today's digital memories. According to one estimate, all of the information on every computer in 2015 coded onto DNA could "fit in the back of an SUV." In fact, DNA can already be used to store non-biological information. In 2015, the works of Shakespeare were encoded into DNA.

The essence of memory, of course, lies in its durability. DVDs and other hard drives decompose after 20 or 30 years. However, scientists have sequenced 30,000-year-old Neanderthal DNA. (The Neanderthal who left us her personal data may have paid with her life, but unless she sends us a bill, the data storage was free!) Intact DNA has been found that is close to a million years old. DNA can also be used to store non-biological information. Who would have imagined that in 2015 I could bring my son a Bitcoin encoded on a fragment of DNA as a birthday present?

Brains and DNA show us that our methods of storing and processing digital information still have a lot of runways to keep getting better. This potential will be realized by new approaches, such as quantum computing or 3D neural processing.

Computer scientists like Ray Kurzweil contend that Artificial Intelligence (AI) will breeze past human intelligence — and keep on learning. AI and humans will work side by side to turbocharge the speed of invention. Kurzweil and others call this the "singularity," a term used to describe phenomena that approach infinity in some way. The singularity is a self-stoking cycle of machines using their own AI to make even smarter machines. There is plenty of speculation about what the singularity will look like, when it will arrive, or whether it will even occur. The notion of the singularity might seem pretty abstract, but super-smart AI might represent a real danger, as cited by Stephen Hawking and Elon Musk. In 2015, Hawking and Musk joined Apple co-founder Steve Wozniak and about 1,000 other robotics and AI researchers in an open letter warning of "a military artificial intelligence arms race."

It is hard to know whether or not to lie awake at night worrying about AI's threat to humanity, but the idea that machines can get much smarter is important to all of us. Learning machines are fundamentally different from other technologies. Steamships can't make themselves into better steamships, but smart machines can make themselves smarter.

That's the distance of processing and storage between our advanced technology and a biological entity. The mind alone shares a tremendous amount of sophistication that there is no single code that could define it.

We have emotions, a connection between brain and body, sense, decision-making, and analysis.

Imagine if we can re-create the power of a quantum computer that has the same capacity of our brain and uses it on discovering new information and innovation. A machine that has the same storage and sophistication could run a better as a server and new media.

Google A.I.

Google is one of the leading companies that are able to discover new ways in our industry. They have cellphone products, machines, gaming, browser, and A.I. They have invested in making new discoveries like Artificial Intelligence.

A. I's

Aside from Google A.I., there are also other companies that are trying to solve the awareness of machines. To learn by itself without any outside interference. This could unlock a branch of discovery that could be used to make more efficient. A.I.'s doesn't only focus on robots, a program can also be A.I. and it can be the key for better sorting of information in media.

AIBrain

Based in California, AIBrain is an artificial intelligence company that builds AI solutions for smartphones and robotics applications. It three products: AICoRE, the AI agent, iRSP, an intelligent robot software platform, and Futurable, a future simulation AI game where every character is a fully autonomous AI. The focus of their work is to develop artificial intelligence infused with the human skill set of problem-solving, learning and memory.

Amazon

The online retail giant offers both consumer and business-oriented AI products and services. Amazon Echo brings artificial intelligence into the home through the intelligent voice server, Alexa. For AWS, the company

has three primary services: Lex, a business version of Alexa, Polly, which turns text to speech, and Recognition, an image recognition service.

Anki

Anki is dedicated to bringing consumer robotics into everyday life through its Cozmo and Anki Overdrive products. Cozmo is Anki's flagship robot. Cozmo has been described as one of the most sophisticated consumer robots to date due to its emotional responses while Overdrive is a car racing game complete with the track.

CloudMinds

CloudMinds is developing what it calls an end-to-end cloud intelligence (CI) system called Human Augmented Robotics Intelligence (HARI) platform for robots. CI is different from AI in that it combines machines with humans rather than treating them as separate entities. This allows the robot to be controlled by human beings. It also offers the Mobile Intranet Cloud Services (MCS), provides information security for remote robot control.

Deepmind

Not a product company, Deepmind is nonetheless a major leader because of its role in AI research. Based in London, it recruits heavily from Oxford and Cambridge, which are leading the way in AI and ML research. Its research papers are widely read as soon as they are published. Google (see below) acquired DeepMind.

The ultimate aim of artificial intelligence research is the technological singularity- the point at which technology overtakes the human. What it will bring and how it will transform it we won't realize until it's arrived.

Takeover is a hypothetical scenario in which artificial intelligence becomes the dominant form of intelligence on Earth. The good part is that these automation technologies will take over the tedious, mortifying and dehumanizing jobs, and leave us free to pursue things we like.

Advanced societies will simply work fewer hours per week and only highly skilled people will have work, rest will get universal basic income or basic support free of cost. secret algorithms are already taking over the world and soon there will be a master algorithm that will govern everything.

The technological singularity is also called intelligence explosion and in the world of transhumanism, death will be wrong. Technology might give us freedom allowing us to pursue things that will explore the genuine meaning of life, and everybody wins. Machines will become great at persuasion and can drive humanity to a common goal or it can devise its own long-term goal that does not act in accordance with human values.

Solving the problems

A recent ground-breaking discovery of the disease Amyotrophic Lateral Sclerosis (ALS), was made through a partnership between Barrow Neurological Institute and the artificial intelligence company IBM Watson Health. IBM Watson, the artificial intelligence computer, reviewed thousands of pieces of research and was able to identify new genes linked to ALS.

According to a report by Stanford University, not only will self-driving cars reduce traffic-related deaths and injuries, but they could bring about changes in our lifestyles as well. We will have more time to work or entertain ourselves during commutes.

AI can transform how we learn. Last year, students at Georgia Tech University in the US were startled to discover that their helpful teaching assistant had in fact been a robot all along. After initial teething problems, the robot started answering the students' questions with 97% certainty.

Google has used its artificial intelligence platform Deep Mind to predict when its data centers will get too hot. Cooling systems are only activated when required. AI has saved Google around 40% in energy costs at its server farms.

Algorithm and how it Works

From understanding A.I.'s and their possible benefits, it is important to know how it fully works. There are requirements that need to be passed before a machine or program be considered as an A.I., and even though there isn't a completely aware A.I., machines and programming already helped us in our daily lives. In our future, understanding machine learning algorithm will be broader that it could help them to be closer to a complete A.I.

Artificial consciousness (AC), also known as machine consciousness (MC) or synthetic consciousness (Gamez 2008; Reggia 2013), is a field related to artificial intelligence and cognitive robotics. The aim of the theory of artificial consciousness is to "Define that which would have to be synthesized were consciousness to be found in an engineered artifact" (Aleksander 1995).

Neuroscience hypothesizes that consciousness is generated by the interoperation of various parts of the brain, called the neural correlates of consciousness or NCC, though there are challenges to that perspective. Proponents of AC believe it is possible to construct systems (e.g., computer systems) that can emulate this NCC interoperation. Artificial consciousness concepts are also pondered in the philosophy of artificial intelligence through questions about mind, consciousness, and mental states.

AI can be categorized as either weak or strong. Weak AI, also known as narrow AI, is an AI system that is designed and trained for a particular task. Virtual personal assistants, such as Apple's Siri, are a form of weak AI. Strong AI, also known as artificial general intelligence, is an AI system with generalized human cognitive abilities. When presented with an unfamiliar task, a strong AI system is able to find a solution without human intervention.

Because hardware, software and staffing costs for AI can be expensive, many vendors are including AI components in their standard offerings, as well as access to Artificial Intelligence as a Service (AIaaS) platforms. AI as

a Service allows individuals and companies to experiment with AI for various business purposes and sample multiple platforms before making a commitment. Popular AI cloud offerings include Amazon AI services, IBM Watson Assistant, Microsoft Cognitive Services and Google AI services.

While AI tools present a range of new functionality for businesses, the use of artificial intelligence raises ethical questions. This is because deep learning algorithms, which underpin many of the most advanced AI tools, are only as smart as the data they are given in training. Because a human select what data should be used for training an AI program, the potential for human bias is inherent and must be monitored closely.

Some industry experts believe that the term artificial intelligence is too closely linked to popular culture, causing the general public to have unrealistic fears about artificial intelligence and improbable expectations about how it will change the workplace and life in general. Researchers and marketers hope the label augmented intelligence, which has a more neutral connotation, will help people understand that AI will simply improve products and services, not replace the humans that use them.

Arend Hintze, an assistant professor of integrative biology and computer science and engineering at Michigan State University, categorizes AI into four types, from the kind of AI systems that exist today to sentient systems, which do not yet exist. His categories are as follows:

Type 1: Reactive machines. An example is Deep Blue, the IBM chess program that beat Garry Kasparov in the 1990s. Deep Blue can identify pieces on the chess board and make predictions, but it has no memory and cannot use past experiences to inform future ones. It analyzes possible moves -- its own and its opponent -- and chooses the most strategic move. Deep Blue and Google's AlphaGO were designed for narrow purposes and cannot easily be applied to another situation.

Type 2: Limited memory. These AI systems can use past experiences to inform future decisions. Some of the decision-making functions in self-driving cars are designed this way. Observations inform actions

happening in the not-so-distant future, such as a car changing lanes. These observations are not stored permanently.

Type 3: Theory of mind. This psychology term refers to the understanding that others have their own beliefs, desires, and intentions that impact the decisions they make. This kind of AI does not yet exist.

Type 4: Self-awareness. In this category, AI systems have a sense of self, have consciousness. Machines with self-awareness understand their current state and can use the information to infer what others are feeling. This type of AI does not yet exist.

Importance of Possible Awareness

Possible awareness of machine means that we have achieved to recreate the same complexity as us artificially. It could unravel the secrets of consciousness and perpetuate our lives in a different way. Achieving to create consciousness proves that the concept of conscious can be processed. Studies and organizations continuous to decipher and extend their knowledge to achieve such feats but doing so are hard.

Even without awareness on a machine, our future entails to society that is mainly compromised of it. Robots could replace jobs, inventions support our body, things help to survive living things. We have a common interpretation from the downsides of building an Artificial Intelligence e.g. robots killing humans. These are perpetuated by movies but it also removes the idealistic desire of a human to engage on such discovery. It doesn't necessarily mean that we're building complex machines for war or killing but to create to make our lives simpler. It could be used for cleaning the streets where it can sort out the trashes by algorithm; tasks for lifting and heavy work.

Machines including A.I. can help to create faster designs while having the data from us. Those data and research combined could create a product that is more suited for us. Machines are good at a single task of analysis where it could identify a thing and convert it into something better.

Nvidia AI turns sketches into photorealistic landscapes in seconds

By Matt Burns

Today at Nvidia GTC 2019, the company unveiled a stunning image creator. Using generative adversarial networks, users of the software are with just a few clicks able to sketch images that are nearly photorealistic. The software will instantly turn a couple of lines into a gorgeous mountaintop sunset. This is MS Paint for the AI age.

Called GauGAN, the software is just a demonstration of what's possible with Nvidia's neural network platforms. It's designed to compile an image of how a human would paint, with the goal being to take a sketch and turn it into a photorealistic photo in seconds. In an early demo, it seems to work as advertised.

GauGAN has three tools: a paint bucket, pen, and pencil. At the bottom of the screen is a series of objects. Select the cloud object and draw a line with a pencil, and the software will produce a wisp of photorealistic clouds. But these do not image stamps. GauGAN produces results unique to the input. Draw a circle and fill it with the paint bucket and the software will make puffy summer clouds.

Users can use the input tools to draw the shape of a tree and it will produce a tree. Draw a straight line and it will produce a bare trunk. Draw a bulb at the top and the software will fill it in with leaves producing a full tree.

GauGAN is also multimodal. If two users create the same sketch with the same settings, random numbers built into the project ensure that software creates different results.

In order to have real-time results, GauGAN has to run on a Tensor computing platform. Nvidia demonstrated this software on an RDX Titan GPU platform, which allowed it to produce results in real time. The operator of the demo was able to draw a line and the software instantly produced results. However, Bryan Catanzaro, VP of Applied Deep Learning Research, stated that with some modifications, GauGAN can run

on nearly any platform, including CPUs, though the results might take a few seconds to display.

In the demo, the boundaries between objects are not perfect and the team behind the project states it will improve. There is a slight line where two objects touch. Nvidia calls the results photorealistic, but under scrutiny, it doesn't stand up. Neural networks currently have an issue on objects it was trained on and what the neural network is trained to do. This project hopes to decrease that gap.

Nvidia turned to 1 million images on Flickr to train the neural network. Most came from Flickr's Creative Commons, and Catanzaro said the company only uses images with permission. The company says this program can synthesize hundreds of thousands of objects and their relation to other objects in the real world. In GauGAN, change the season and the leaves will disappear from the branches. Or if there's a pond in front of a tree, the tree will be reflected in the water.

Nvidia will release the white paper today. Catanzaro noted that it was previously accepted to CVPR 2019.

Catanzaro hopes this software will be available on Nvidia's new AI Playground, but says there is a bit of work the company needs to do in order to make that happen. He sees tools like this being used in video games to create more immersive environments but notes Nvidia does not directly build software to do so.

It's easy to bemoan the ease with which this software could be used to produce inauthentic images for nefarious purposes. And Catanzaro agrees this is an important topic, noting that it's bigger than one project and company. "We care about this a lot because we want to make the world a better place," he said, adding that this is a trust issue instead of a technology issue and that we, as a society, must deal with it as such.

Even in this limited demo, it's clear that software built around these abilities would appeal to everyone from a video game designer to architects to casual gamers. The company does not have any plans to

release it commercially, but could soon release a public trial to let anyone use the software.

Changes to the Government's Systematical Approach

Some of our schools have already a website that views information, schedules, and posts. Universities began to implement as there is an increasing number of students that are online. Via the website or any digital contact, schools often just post their announcements and activities instead of posting on bulletin board. It only needs connection and students will have no hassle of getting information. These systems and processes upgrades through I.T. experts and a lot of online school's systems have different functions. Educators and management from schools can message the members of a school website, give the grades, apply for enrollment, and etc. The same process applies to official websites of the government and some of it has been around than most of when the schools started their systems. Government systems only have limited information for some countries and are divided into different websites that are within the government for different purposes. Processing has become online, services are upgrading, and it will continuously be improved. Their approaches could be different in the future. The government-based website might connect into other systems for better identification and more people will use the system.

Kinds of Government System Media

As we improve the systems and more people tend to rely on online services, government approaches to various media could also be different. These approaches were divided because of their different functions and scopes.

Private Government Media System

It is a media system that is owned by the government with the purpose of providing service to citizens under the government. It is a media platform that could have different branches that are dependent/independent of the government. Officials and individuals

who only had given the right from the actual government itself could authorize or change anything from the website of the government? It is a media system where the authority and individuals given the right could control freely any sectors of media that are under the private government system.

The situation and conditions that this private government media system offers are similar to the state of authority North Korea has. North Korea as of 2019 has control to their media and governing.

North Korea has one of the most repressive media environments in the world. All domestic media outlets are state-controlled and closely monitored, and produce propaganda with the aim of ensuring absolute loyalty to Kim Jong-un, who assumed the country's leadership after the death of his father and predecessor, Kim Jong-il, in 2011. Reports suggest that the political environment in North Korea became more repressive in 2016, as Kim increased state oppression amid the continued deterioration of the economy.

Access to foreign and independent media is tightly restricted, and those found consuming unauthorized news content face severe punishment. A handful of journalists working underground intermittently produce independent news reports, but these are generally unavailable within North Korea and are consumed by audiences abroad.

Despite restrictions on media, in recent years there has been an increase in the flow of news and information into the country. Foreign radio stations and organizations produce news broadcasts from across the border that can be heard in North Korea. Smuggled foreign DVDs have also become an important source of information about life outside North Korea. However, according to North Korean defectors, Kim has intensified efforts to curb the inflow of outside information, including by tightening security along the country's borders. Thae Yong-ho, a former North Korean diplomat who defected in August 2016, said during a news conference that the regime closely monitors diplomats who returned to the country from abroad in order to prevent them from spreading outside news.

Access to the country by foreign journalists is limited. However, the regime does on occasion invite foreign journalists to cover events that shed a favorable light on the state; they are assigned North Korean minders, who accompany them on state-planned itineraries. In May 2016, authorities expelled a team of three BBC journalists who were covering a research trip to the country by a group of Nobel laureates; officials reportedly objected to their coverage of life in Pyongyang, and of the country more generally. However, in September, AFP opened a North Korean bureau, joining just a few other foreign news organizations with a permanent presence in the country. These include the Associated Press (AP), Russia's RIA Novosti, Japan's Kyodo news agency, and China's Xinhua news agency.

Public Government Media System

It is a media system that can be both owned by the government and the citizens with the purpose of providing service to citizens under the government. It is a media platform that could have different branches that are dependent on the government. Officials and individuals who only had given the right can change the media system with the intention of fixing, updating, and improving the services. Citizens under the government have the right to access, participate, and express their opinions via media this government-media system.

Semi-Private Government Media System

It is a media system that is partially owned by the government with the purpose of providing service to citizens under the government. The quantities of individuals that can have the limited authority are dependent on the actual government itself and authorities. The scopes of control of the individuals with limited authority will be designated by the authorities. Its scopes are changing the media system, expressing an opinion, announcing, and appeal. It is a media platform that could have different branches that are dependent/independent of the government. Officials and individuals who only had given the right depending on the conditions and limitations from the actual government itself could authorize or change anything from the website of the government. It is a

media system where the authority and individuals given the right under a limited control could control freely any sectors of media that are under the semi-private government system.

Virtual Integration System Media

It is a government media system with the integration of the advanced virtual system. The scopes and power which this media system hold will be dependent on the changes in technology, and the virtual world. No permanent rules on this media will be implemented and such rules and authority will only hold its effect temporarily. Temporary rules and conditions will stay in effect as long as there are no updates and both individuals and authority are affected by it.

Integrating government media system to a hypothetical virtual community will have an easier interaction. People that are under the rules will be affected and expression of information will be faster. There could be virtual representations of us where there will be a definable interaction amongst us.

Government website can also be used for direct civic engagement regarding citizens' experiences or even community issues. Easily and efficiently capturing feedback will only help as you consider updating your engagement strategies – everything from enhancing the user experience to adding relevant topics to meeting agendas.

Many of these platforms also allow officials to speak directly with their constituents about their most pressing demands. This helps create trust between local government and the citizens they serve because it shows residents that government leaders are listening closely and can help provide solutions for bolstering services and provisioning across the community.

By creating a functional website with easy navigation, officials can better connect with their constituents and ensure that the public stays well-informed at all times. You might also consider adding a rotator so that when critical information comes up, you are ready to add information so citizens see it easily on their first visit.

While the website is the top platform for communicating with citizens, Granicus' 2017 Digital Communications Trends report has more information on how government organizations are connecting with the public.

Far Future Possibility

In a far future, it is hard to know what might happen. Even by the next half of a century from now, scientific discoveries are advancing and they go up by different rates. The technology could surpass the other fields of discovery while maintaining dependent on the flow of information. Internet could forever change our lives and permanently replace our tradition. We might say that traditions will never be lost as long as it is preserved by museums but even physical entities could vanish due to the demand online. An individual that was shown something better will always seek out the better option. On our case, most humans prefer indulging themselves online since it's an entertainment that is less hassle and enjoyable.

Americans spend more time than ever watching videos, browsing social media and swiping their lives away on their tablets and smartphones. American adults spend more than 11 hours per day watching, reading, listening to or simply interacting with media, according to a new study by market research group Nielsen. That's up from nine hours, 32 minutes just four years ago.

In the first quarter of the year, U.S. adults spent three hours and 48 minutes a day on computers, tablets, and smartphones. This is a 13-minute increase from the previous quarter, and 62% of that time is attributed to app/web browsing on smartphones. Television still accounts for most media usage, with four hours and 46 minutes spent watching TV every day in the first quarter of this year. Media use is reaching new levels of intensity. Parents with children aged eight to 18 years of age spend over nine hours with screen media each day, according to a 2016 survey of 1,700 such parents by Common Sense

Media, a San Francisco-based organization that examines the impact of technology and media on families.

According to Nielsen, the average U.S. gamer age 13 or older spent 6.3 hours a week playing video games during 2013. That's up from 5.6 hours in 2012, which was up from 5.1 hours in 2011. If you like fun, we're trending in the right direction.

As for which systems were used most often in 2013, seventh-generation consoles (Xbox 360, PS3, Wii) beat PCs by a percentage point – 34% to 33% – while mobile phones took a distant third at 10%. Tablets followed at 9%, dedicated gaming handhelds at 6%, eighth-gen consoles at 4% and "other" at 4%.

Tradition will not fully be lost as they are preserved in museums. Radios, old gadgets, and some books might be the next displays of our history but if a traditional thing doesn't have any users left then its function to a community is gone.

Books are being thrown away, or sometimes packed away, as digitized versions become more available. This is an important time to plan carefully for there is much at stake.

Digital technologies are changing both how library materials are accessed and increasingly how library materials are preserved. After the Internet Archive digitizes a book from a library in order to provide free public access to people worldwide, these books go back on the shelves of the library. We noticed an increasing number of books from these libraries moving books to "off site repositories" to make space in central buildings for more meeting spaces and workspaces. These repositories have filled quickly and sometimes prompt the de-accessioning of books. A library that would prefer to not be named was found to be thinning their collections and throwing out books based on what had been digitized by Google. While we understand the need to manage physical holdings, we believe this should be done thoughtfully and well.

Two of the corporations involved in major book scanning have sawed off the bindings of modern books to speed the digitizing process. Many have a negative visceral reaction to the "butchering" of books, but is this a reasonable reaction?

A reason to preserve the physical book that has been digitized is that it is the authentic and original version that can be used as a reference in the future. If there is ever a controversy about the digital version, the original can be examined. A seed bank such as the Svalbard Global Seed Vault is seen as an authoritative and safe version of crops we are growing. Saving physical copies of digitized books might at least be seen in a similar light as an authoritative and safe copy that may be called upon in the future.

As the Internet Archive has digitized collections and placed them on our computer disks, we have found that the digital versions have more and more in common with physical versions. The computer hard disks, while holding digital data, are still physical objects. As such we archive them as they retire after their 3-5-year lifetime. Similarly, we also archive microfilm, which was a previous generation's access format. So hard drives are just another physical format that stores information. This connection showed us that physical archiving is still an important function in the digital era.

In the next couple of years, we might find ourselves unknowingly dwelling on new innovations. There could be a major change on the internet by the next couple of years and we might unlock the use of the different process of providing flow information. It is by quantum mechanics. We might not understand it today and seems impossible but everything that we have today looked impossible to visions of the many from the past.

Embracing the New Community

Our new community are expected to be more connected but might feel isolated. Since the emergence of the internet, we discovered to fully engage ourselves into different means of communication but it could give a hard take on our physical means of communication. Just like radios and old inventions, they have replaced laptops and cellphones, so similar

aspects will also change in our psychology, sociology, and physiology. All four of them including technology are connected. If one had a huge leap of effect, the others will be affected. Our understanding of these four aspects are limited and there are still lots of secrets that we couldn't explain. One of such is the increase in suicidal individuals from the last few years. It could be a possible effect from the rise of technology.

Internet Overuse May Cause Depression

By Bill Hendrick

Aug. 2, 2010 -- Teenagers who are addicted to the Internet are more likely to develop depression or other psychiatric problems than teens who are classified as normal Internet users, a new study says. Researchers in Australia and China studied pathological or uncontrolled Internet use and later mental health problems in 1,041 teenage students in China. The students were free of depression and anxiety at the start of the study.

Sixty-two of the teenagers were classified at the start of the study as being moderately pathological users of the Internet, and two were found to be severely at risk for uncontrollable urges to go online.

Nine months later, the youngsters were evaluated again for anxiety and depression and 87 were judged as having developed depression. Eight reported significant anxiety symptoms.

Researchers say that their work suggests that teens who use the Internet pathologically may be about 2.5 times more likely to develop depression than teens who are not addicted to the Internet.

"This result suggests that young people who are initially free of mental health problems but use the Internet pathologically could develop depression as a consequence," the authors write. "As we understand that mental health problems among adolescents bear a significant personal cost as well as costs to the community, early intervention, and prevention that targets at-risk groups with identified risk factors is effective in reducing the burden of depression among young people." The study is

published online in advance of the October print issue of Archives of Pediatrics & Adolescent Medicine.

Teens and Internet Addiction

The researchers say screening young people who may be at risk of Internet addiction may be a good idea in all high schools to identify those who may need counseling or treatment.

The youths in the study were between 13 and 18 and attended high schools in Guangzhou, China.

Researchers say the findings "have direct implications for the prevention of mental illness in young people, particularly in developing countries."

They write that although previous research has found that pathological Internet users are mostly young men with introverted personalities, the rates of psychiatric symptoms among girls are rising.

The researchers say that most of the youths in the study, 93.6%, were classified as normal users.

The study reports that:

45.5% said the most common use of the Internet was for entertainment.

28.1% said they used the Internet to search for information.

26.4 % said they used the Internet to avoid boredom, make friends, or communicate with school chums.

"Young people who used the Internet pathologically were more likely to use it for entertainment and less likely to use it for information," the authors say.

Major depression is on the rise among Americans from all age groups but is rising fastest among teens and young adults, new health insurance data shows. The findings are almost certainly an underestimate, as well. The Blue Cross Blue Shield data comes from 41 million health records and counts people who got a diagnosis of major depression. Many people

who report symptoms of depression say they have not been diagnosed or sought treatment for it?

"Many people are worried about how busy they are," said Dr. Laurel Williams, chief of psychiatry at Texas Children's Hospital. "There's a lack of community. There's the amount of time that we spend in front of screens and not in front of other people. If you don't have a community to reach out to, then your hopelessness doesn't have any place to go." Kids and young adults, especially, feel rushed and pressured, Williams said.

While social media can connect people, who might otherwise feel isolated, it can also help pile on the pressure, she said.

"I wouldn't say that social media is responsible for a rise in depression — more the being rushed and lack of connections that we have in the structure of how we live lives now," she added.

But Dr. Karyn Horowitz of Bradley Hospital in Rhode Island thinks social media may be a big factor.

"For some kids, video game use can become an addiction leading to social isolation, poor school performance, and impaired sleep," she said.

"It is possible that the increased rates of depression in adolescents is related to a combination of increased electronics use and sleep disruptions in already vulnerable individuals," she added.

For the report, Blue Cross and Blue Shield looked at medical health insurance claims from 41 million insurance holders. They found 4.4 percent of them had a diagnosis of major depression in 2016. "Diagnoses of major depression have risen dramatically by 33 percent since 2013," the report reads. According to the report, 2.6 percent of youths aged 12 to17 were diagnosed with major depression in 2016, a 63 percent increase from 1.6 percent in 2013.

Among young adults aged 18 to 34, 4.4 percent had major depression in 2016, compared to 3 percent in 2013. That's a 47 percent increase.

The highest percentage of major depression diagnoses were among people aged 35 to 49. The survey found 5.8 percent of 35-to 49-year-olds had major depression in 2016, compared to 4.6 percent three years before.

It's been easier to cope up in our lives technically but changes that affect aspects of our lives may result in some changes.

Division of Life

Life is described and asked by countless philosophers. We are experiencing changes in ourselves and the society might be undergoing major changes that we are not aware of. It is not the change that has something to do with politics, divisions of land, and war but it could be a division to represent the many states of community that we are experiencing right now.

A community is comprised of citizens and changes into the majority of citizens is also a change into their community. If we are on public transportation, many citizens have their phones that are sometimes connected to the internet. By that connection, they laugh, keep them entertained, learn, and share. Most of our free time has been covered by our technology and media. It could be that they are chatting someone from afar, reviewing, participating in an online battle game, reading the comments, and socializing via different platforms. Connections have been easier and there are two types of communities. These divisions of the community represent our life on how and where we focus our lives.

First Division: The Physical World

The First division of life would be our Physical world. The physical world represents the traditional aspects of our lives including the vanishing tradition. It doesn't refer to a whole new dimension but these divisions represent our world into two different aspects that are divided since the emergence of the internet and new media.

The Physical world is the base world where the second division was made. Generally, it is our world by means of physical materials. It includes ourselves, buildings, things around us, and machines.

Second Division: The Virtual World

Inside the machines or platform that contains digital, is the virtual world. It is the second division that is made because of the emergence of the internet. Even without the internet, digital things and accessing them are considered as part of the virtual world. The second division was only considered due to the rise of population users via the internet. The virtual world was made of artificial aspects from our electronics and technology. The means of the virtual world has improved as our connection and communication becomes more varied. When someone is accessing an online community by the use of virtual gadgets, it is considered as being in the virtual world. When an individual is accessing his phone while commuting, it is also considered as being in the virtual world. Someone is considered to be on the virtual world as long as the focus of an individual is replaced by things that are digital.

Additional Schema: The Virtual-virtual world.

This is the additional part from the divisions of life which is the Virtual-virtual world. It pertains on the second part of a division of the life-the virtual world that has another virtual world. It is characterized when a user accessed a virtual world while accessing within it another virtual world. To better understand, an example of it is when an individual is simulating digitally while being on a simulation. Another example is when a man is using his phone and playing a game; the character in his game is playing another game and the original user from the physical world is aware and on focus on the attributes of what his simulated character is playing where the original client could be aware or unaware to the existence of the second world-virtual world but must be aware to the virtual-virtual world.

Is it Dystopian or Utopian?

If our community or perhaps the whole world was converted into something similar to a sci-fi movie, which is more likely to happen? It could be a world full of robots that are governed by an authority or a peaceful society which still values actual social communication while some of their lives and processes are integrated with online services and machines. We don't know what might happen since there are still a lot of changes and it seems that we couldn't expect flying cars. Although some of the proposed sci-fi scenarios might one day become true to our future, there are still aspects of technology that are still improving and still might be in the future. In the last fifty years, a lot of changes happened so it's probably the same rate of improvisation might occur in the following years.

Since our government and class of society could be affected as a whole, there are two possibilities for the new media and society could affect the government.

A dystopia alternatively, cacotopia, kakotopia, or simply anti-utopia) is a community or society that is undesirable or frightening. It is translated as "not-good place" and is an antonym of utopia, a term that was coined by Sir Thomas More and figures as the title of his best-known work, Utopia, published 1516, a blueprint for an ideal society with minimal crime, violence, and poverty.

Dystopias are often characterized by dehumanization, tyrannical governments, environmental disaster, or other characteristics associated with a cataclysmic decline in society. Dystopian societies appear in many fictional works and artistic representations particularly in stories set in the future. Some of the most famous examples are George Orwell's Nineteen Eighty-Four and Aldous Huxley's Brave New World. Dystopian societies appear in many sub-genres of fiction and are often used to draw attention to society, environment, politics, economics, religion, psychology, ethics, science or technology. Some authors use the term to refer to existing societies, many of which are or have been totalitarian states or societies in an advanced state of collapse. Contrary to the

technologically utopian claims, which view technology as a beneficial addition to all aspects of humanity, technological dystopia concerns itself with and focuses largely (but not always) on the negative effects caused by new technology.

Cyberpunk is a subgenre of science fiction in a futuristic setting that tends to focus on a "combination of lowlife and high tech" featuring advanced technological and scientific achievements, such as artificial intelligence and cybernetics, juxtaposed with a degree of breakdown or radical change in the social order.

A Utopia is an imagined community or society that possesses highly desirable or nearly perfect qualities for its citizens. The opposite of a utopia is a dystopia. One could also say that utopia is a perfect "place" that has been designed so there are no problems.

Utopia focuses on equality in economics, government and justice, though by no means exclusively, with the method and structure of proposed implementation varying based on ideology. According to Lyman Tower Sargent "there are socialist, capitalist, monarchical, democratic, anarchist, ecological, feminist, patriarchal, egalitarian, hierarchical, racist, left-wing, right-wing, reformist, Naturism/Nude Christians, free love, nuclear family, extended family, gay, lesbian and many more utopias. Utopianism, some argue, is essential for the improvement of the human condition. But if used wrongly, it becomes dangerous. Utopia has an inherent contradictory nature here." Sargent argues that utopia's nature is inherently contradictory because societies are not homogenous and have desires which conflict and therefore cannot simultaneously be satisfied. If any two desires cannot be simultaneously satisfied, true utopia cannot be attained because in utopia all desires are satisfied.

Though Francis Bacon's New Atlantis is imbued with a scientific spirit, scientific and technological utopias tend to be based in the future, when it is believed that advanced science and technology will allow utopian living standards; for example, the absence of death and suffering; changes in human nature and the human condition. Technology has affected the way humans have lived to such an extent that normal

functions, like sleep, eating or even reproduction, have been replaced by artificial means. Other examples include a society where humans have struck a balance with technology and it is merely used to enhance the human living condition (e.g. Star Trek). In place of the static perfection of a utopia, libertarian transhumanists envision an "extropia", an open, evolving society allowing individuals and voluntary groupings to form the institutions and social forms they prefer.

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