Unit I
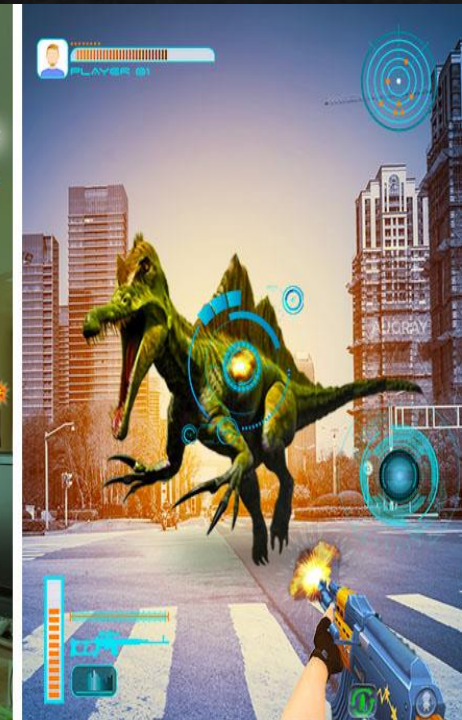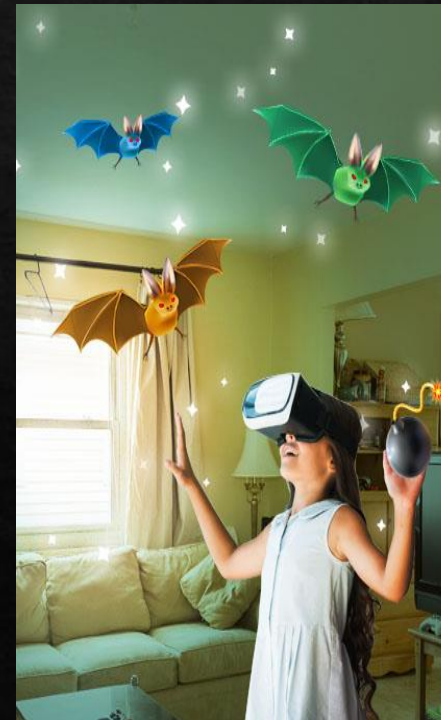# Cyber Psychology

The nature of cyber psychology cyber-psychology – definition – human computer interface – cyberspace as a psychological space – psychology in cyberspace - basic psychological features of cyberspace - networks as mind and self – model of cyber psychology - the online disinhibition effect.

Definition

◈ Cyberpsychology is the study of the human mind and behavior and how the culture of technology, specifically, virtual reality, the internet, and social media, affect them.

◈ Mainstream research studies focus on the effect of the Internet and cyberspace on the psychology of individuals and groups.

◈ Some hot topics include: online identity, online relationships, personality types in cyberspace, transference to computers, addiction to computers and Internet, regressive behavior in cyberspace, online gender-switching, etc.

◈ While much research in this field is based around Internet usage, cyberpsychology also includes the study of the psychological ramifications of cyborgs, artificial intelligence, and virtual reality.

◈ Cybersecurity is within cyberpsychology because it impacts the way that people live on a daily basis.

Cyberpsychology

- the study of the impact of computers, technology, and virtual environments on the psychology of individuals and groups

Human Activity — Cyberpsychology — Computer Activity
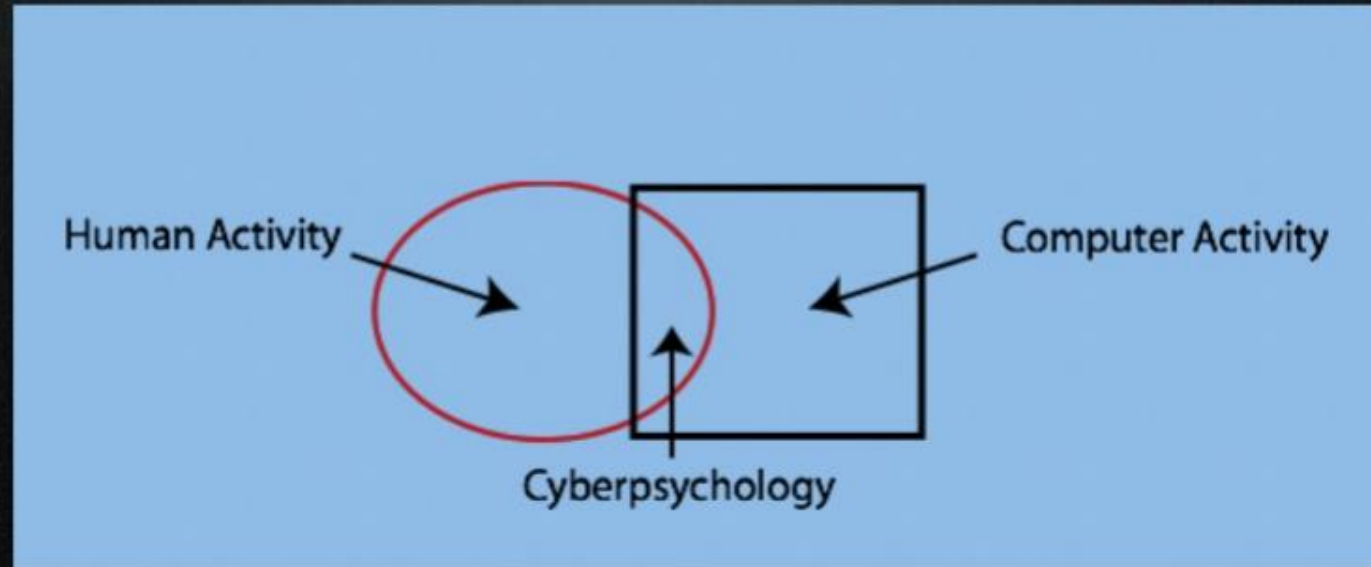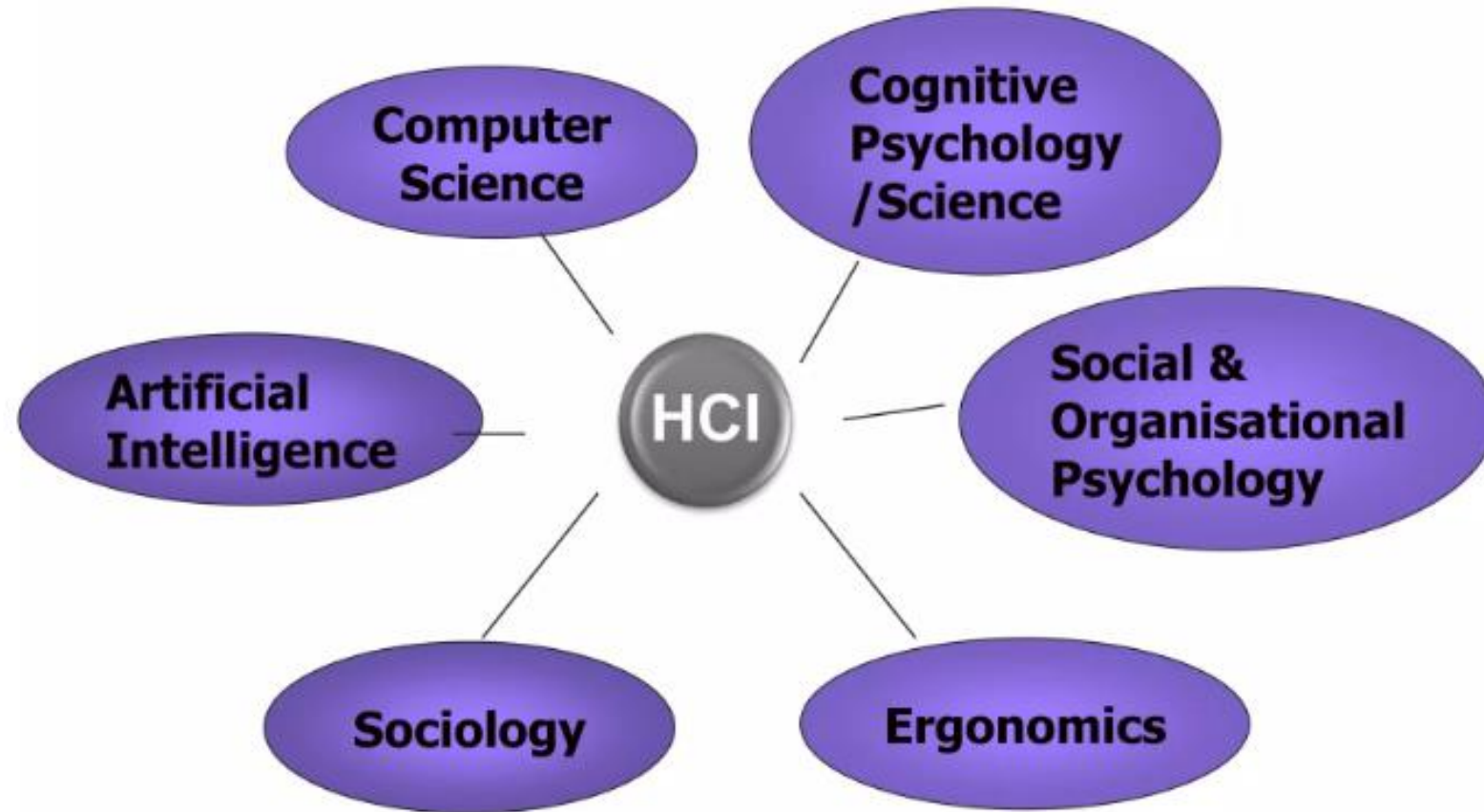
What is 'Human-Computer Interaction' (HCI)?

- Human-computer interaction (HCI) is the study of *how people interact with computing technology*.

- HCI study is the region of intersection between **psychology** and the social sciences, on the one hand, and computer science and **technology**, on the other.

- Human-Computer <u>interface.</u>

  - Where people "meet" or come together with machines or computer-based systems.

  - 'Physical interface' (e.g. buttons, screens, menus, etc.)

  - 'Logical interface'.

    - The **model** a system presents a user.

    - Set of **tasks** available and how they're organized.

What is 'Human-Computer Interaction' (HCI)?

- A key design activity is to design the **user-interface**.
- For every input and output the developer must consider the **interaction between the user and the computer**.
- Because the interaction is much like a dialog between the user and the computer, user-interface design is often referred to as '**dialog design**'.
- The field of HCI investigates how people **use** computer systems, so that better systems can be designed.
- One aspect is concerned with **technological innovation** (e.g. better input devices, like electronic pen etc.)
- The other aspect is concerned with the **human element** (e.g. how people reason, solve problems and interact with computers).

Disciplines Contributing to Human-Computer Interaction

Human-Computer Interaction as a Field of Study

- User-interface design techniques and HCI as a field of study evolved from studies of human interaction with machines in general – human factors engineering or **ergonomics**

- Formal study of human factors began in World War II, when aerospace engineers studied the effects of **arranging controls in cockpit**.

- What the pilot does is the "**human factor**" that engineers realised was beyond their control.
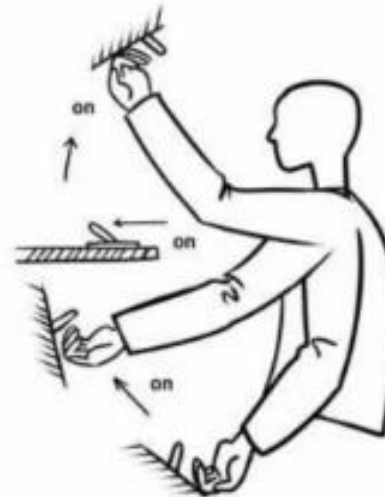
Boeing's 'sweep on' concept means all switches are turned on when switched upwards, irrespective to their location.

How does HCI / Human Factors differ from Experimental Psychology?

- Experimental Psychology is the scientific study of mind, brain, and behavior
  - *Why do humans think and behave the way they do?*
- HCI / **Human factors** is the study of human behavior in the context of technological systems.
  - *How should we design a system to accommodate the way humans think and behave?*

- "The study of how humans accomplish work-related tasks in the context of **human-machine system operation**, and how behavioral and non-behavioral variables affect that accomplishment" Meister (1989)

Human Factors

- Human Factors psychology examines the capabilities of humans and how these constraints and abilities affect design.
- Therefore, it is concerned with cognitive issues and research concerning **humans' interpretation of stimuli** and our abilities to deal with certain situations.
- The goal is to design systems with these capabilities and limitations in mind.
- Cognitive issues that must be considered:
  - **Memory** (span, retrieval, storage capacity).
  - **Visual and auditory** capabilities/interpretations.
  - **Attention** capacity (selective, focused, divided).
  - Judgment of tones, size, loudness, brightness.
  - Interpretation of coding (traffic lights).
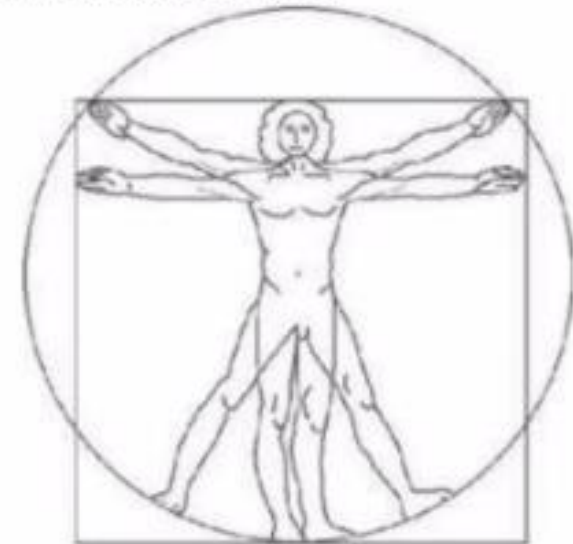
Emergence of the field of Human-Computer Interaction

- The field of human factors was associated with engineering, since engineers designed machines.
- But engineers often found human factors frustrating (different personality types).
- Gradually **specialists** emerged who drew on many disciplines to understand people and their **behaviour.**
- Disciplines drawn on for HCI:
    - Cognitive psychology.
    - Computer science.
    - Social psychology.
    - Linguistics.
    - Sociology.
    - Anthropology.

Evolution of HCI 'interfaces'

- **1950s** - Interface at the hardware level for engineers - switch panels.
- **1960-70s** - Interface at the programming level - COBOL, FORTRAN.
- **1970-90s** - Interface at the terminal level - command languages.
- **1980s** - Interface at the interaction dialogue level - GUIs, multimedia.
- **1990s** - Interface at the work setting - networked systems, groupware.
- **2000s** - Interface becomes pervasive.
  - RF tags, Bluetooth technology, mobile devices, consumer electronics, interactive screens, embedded technology, information appliances.

Human-Computer Dialogue

Person - Person ✓
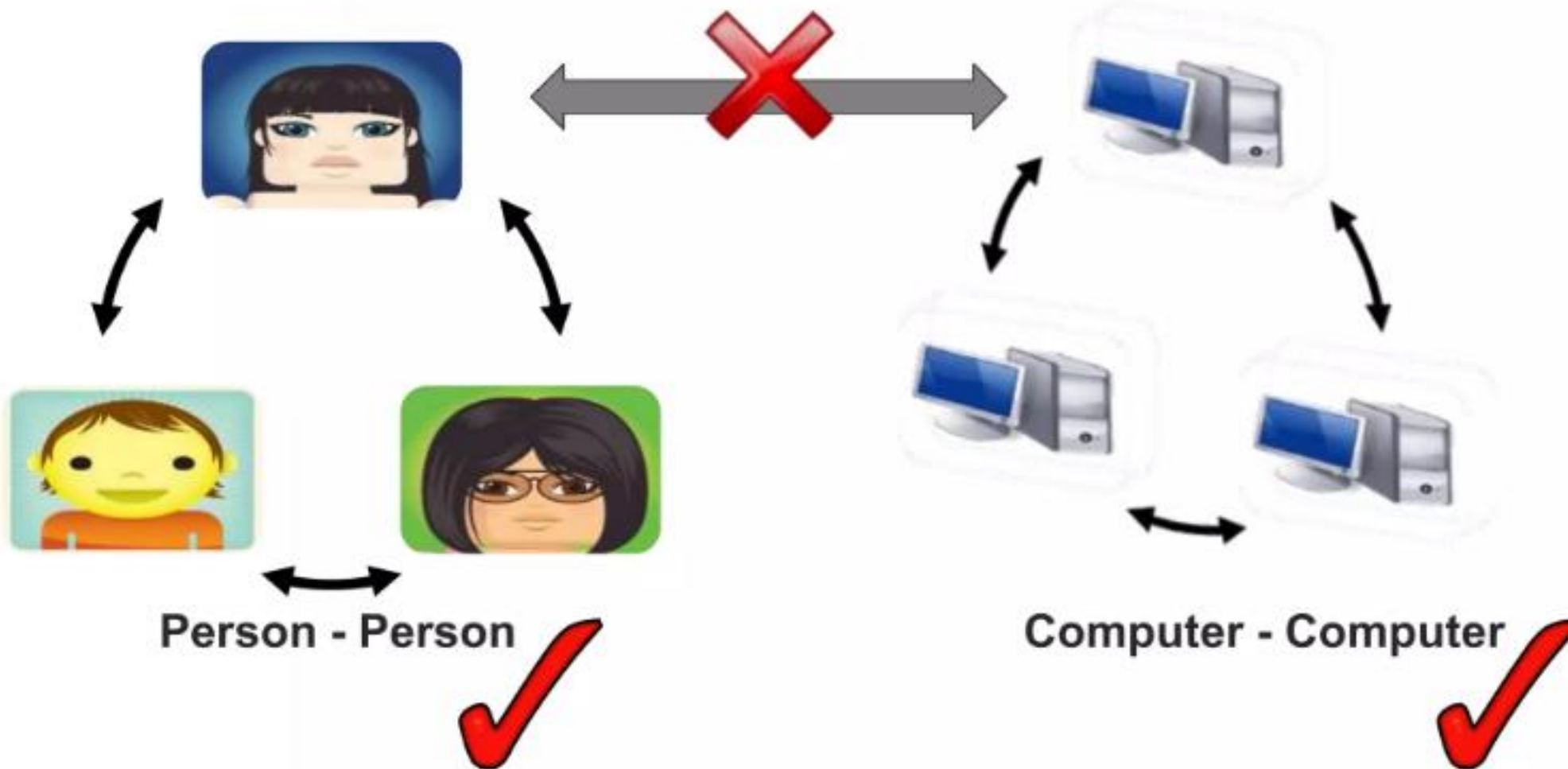
Computer - Computer ✓

Cyberspace as Psychological space

- With the advance of computers and online networks - especially the internet - a new dimension of human experience is rapidly opening up.

- The term "cyberspace" has been mentioned so often that it may at this point seem trite and overly commercialized.

- However, the experience created by computers and computer networks can in many ways be understood as a psychological "space."

- When they power up their computers, launch a program, write e-mail, or log on to their online service, users often feel - consciously or subconsciously - that they are entering a "place" or "space" that is filled with a wide array of meanings and purposes.

- Many users who have telneted to a remote computer or explored World Wide Web will describe the experience as "traveling" or "going someplace." Spatial metaphors - such as "worlds," "domains," or "rooms" are common in articulating online activities.

Cyberspace as Psychological space

◈ On an even deeper psychological level, users often describe how their computer is an extension of their mind and personality - a "space" that reflects their tastes, attitudes, and interests.

◈ In psychoanalytic terms, computers and cyberspace may become a type of "transitional space" that is an extension of the individual's intrapsychic world.

◈ It may be experienced as an intermediate zone between self and other that is part self and part other.

Cyberspace as Psychological space

"Orecchio"

- As they read on their screen the e-mail, newsgroup, or chat message written by an internet comrade, some people feel as if their mind is merged or blended with that of the other.

- In their April Fools prank, "Tidal Wave Communications" introduced a new computer accessory called "Orecchio" - a headset, using Telepathic Internet Data Exchange (TIDE) protocol, that enhances e-mail functionality by enabling you "to send your most important thoughts directly from their source: your mind."

- "Imagine no more keyboards and achy hands. No more eye strain from the glare of the screen. Just visualize the message you want to send, followed by your send command, and poof! Your email is transmitted to our network for quick delivery to its destination."

Cyberspace as Psychological space

◈ When one experiences cyberspace as this extension of one's mind - as a transitional space between self and other - the door is thrown wide open for all sorts of fantasies and <u>transference reactions</u> to be projected into this space.

◈ Under ideal conditions, people use this as an opportunity to better understand themselves, as a path for exploring their identity as it engages the identity of other people.

◈ Under less than optimal conditions, people use this psychological space to simply vent or act out their fantasies and the frustrations, anxieties, and desires that fuel those fantasies.

Basic Psychological Features of Cyberspace

◈ The virtual world is quite different than the in-person world. Digitizing people, relationships, and groups has stretched the boundaries of how and when humans interact.

◈ we will explore some of the unique psychological features of cyberspace that shape how people behave in this new social realm

◈ In different online environments we see different synergistic combinations of these features, thus resulting in a distinct psychological quality to each environment which determines how people experience themselves and others.

◈ We may think of these features as the fundamental elements of a conceptual model for a psychology of cyberspace

Basic Psychological Features of Cyberspace

◈ The effect of these elements on individuals, groups, and communities is an important theme. It's important to remember, though, that the ten elements described here are only part of the story. How people behave in cyberspace will always be a complex interaction between these features of cyberspace and the <u>characteristics of the person</u>.

Reduced Sensations

◈ Can you see a person in cyberspace - his facial expressions and body language? Can you hear the changes in her voice? Whether an environment in cyberspace involves visual and/or auditory communication will greatly affect how people behave and the relationships that develop among those people

Basic Psychological Features of Cyberspace

Reduced Sensations

◈ Multimedia gaming and social environments (such as the Palace), audio-video conferencing, podcasting, and internet-phoning surely are signs of the very sensory sophisticated environments to come.

◈ However, the sensory experience of encountering others in cyberspace - seeing, hearing, and Combining seeing and hearing - is still limited.

◈ For the most part people communicate through typed language.

◈ Even when audio-video technology becomes efficient and easy to use, the quality of physical and tactile interactions - for example, handshakes, pats on

Basic Psychological Features of Cyberspace

Texting

◆ Despite the reduced sensory quality of text communication, it should not be underestimated as a powerful form of self expression and interpersonal relating.

◆ E-mail, chat, instant messaging, SMS, and blogs continue to be the most common forms of social interaction for reasons beyond their ease of use and low cost compared to multimedia tools.

Identity Flexibility

◆ The lack of face-to-face cues has a curious impact on how people present their identity in cyberspace. Communicating only with typed text, you have the option of being yourself, expressing only parts of your identity, assuming imaginative identities, or remaining completely anonymous - in some cases, being almost invisible, as with the "lurker.

Basic Psychological Features of Cyberspace

Altered Perceptions

- Sitting quietly and staring at the computer monitor can become an altered state of consciousness. While doing e-mail or instant messaging, some people experience a blending of their mind with that of the other person.

- In the imaginary multimedia worlds - where people might shape-shift, speak via ESP, walk through walls, spontaneously generate objects out of thin air, or possess all sorts of imaginary powers - the experience becomes surrealistic.

- It mimics a state of consciousness that resembles <u>dreams.</u> These altered and dream-like states of consciousness in cyberspace may account for why it is so attractive for some people.

- It might help explain some forms of <u>computer and cyberspace addiction.</u>

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- In most cases, everyone on the internet has an equal opportunity to voice him or herself. Everyone - regardless of status, wealth, race, gender, etc. - starts off on a level playing field. Some people call this the "net democracy."

- Although one's status in the outside world ultimately will have some impact on one's life in cyberspace, there is some truth to this net democracy ideal.

- What determines your influence on others is your skill in communicating (including writing skills), your persistence, the quality of your ideas, and your technical know-how.

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- **Social Multiplicity**
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- By posting a message within a blog, discussion board, or social network - which are read by countless numbers of users - people can draw to themselves others who match even their most esoteric interests.
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- Unlike real world interactions, the user in cyberspace can keep a permanent record of what was said, to whom, and when. Because these interactions are purely document-based, we may even go so far as to say that the relationship between people are the documents, and that the relationship can be permanently recorded in its entirety. These records may come in very handy to the user.
- Although the ability to record has many advantages, there is a downside. Because people know that everything they say and do in cyberspace can be tracked and recorded, they may experience anxiety, mistrust, and even paranoia about being online. Should I be careful about what I say and where I go? Will it come back to haunt me? Who might have access to these records?

Media Disruption

We all expect our computers and the internet to interact with us. That's the name of the game. Nevertheless, no matter how complex and sophisticated our electronic tools become, there will always be moments when they fail to live up to their end of the bargain.
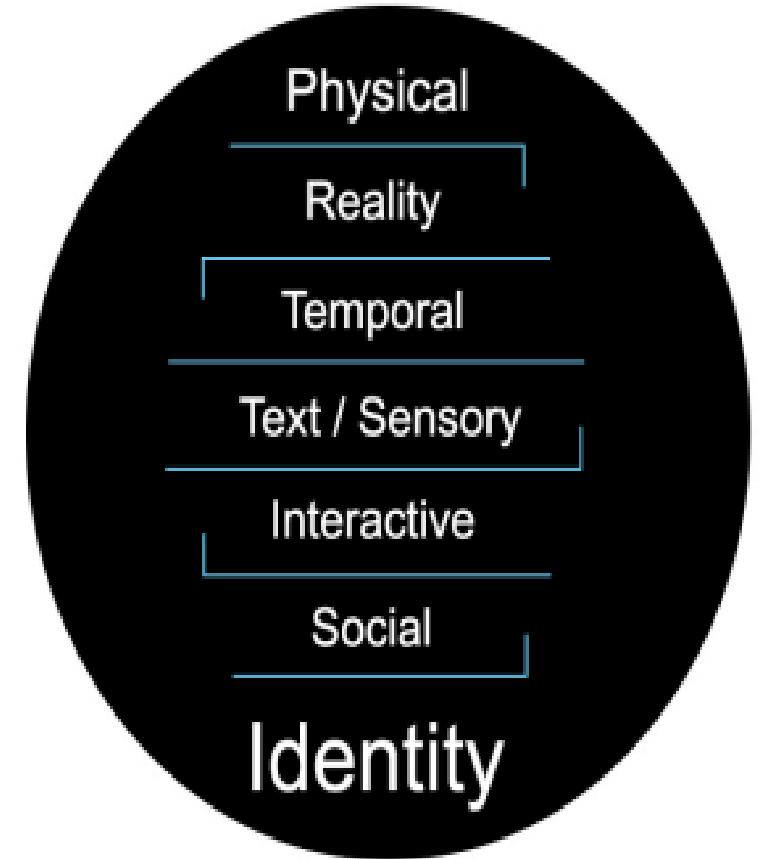
- There will be moments when software and hardware don't work properly, when noise intrudes into the communication, and connections break. There will be moments when our telecommunication systems give us nothing, not even an error message.

- The frustration and anger we experience in reaction to these failures says something about our relationship to our machines and the internet - something about our dependency on them, our need to control them.

- That lack of response also opens the door for us to project all sorts of worries and anxieties onto the machine that gives us no reply.

- Its called the <u>black hole</u> experiences of cyberspace. Fortunately, some computer-mediated environments are more robust than others. Those differences in reliability, predictability, and dependability bear important psychological effects.

Human Becomes Electric-Networks as Mind and Self

- Psychological and philosophical research can approach the rather fascinating question as to how the internet itself possesses a "personality." Old-timers, for example, often lament how the "character" of the net is changing as new and different types of people come online. Like the "self" of groups or an individual, the cyberworld consists of various subcomponents that collaborate, conflict, dissociate, and develop over time.

- Psychological models of the mind may help organize our understanding of this world. Where is the id, ego, and superego dynamics of the internet? Is the internet, or its subnets, self-actualizing organisms? If the internet is a complex system of links and associations - not unlike the human brain - is it a form of consciousness that is an extension or a manifestation of the human world? Perhaps someday it can attain its own independent consciousness.

Model of Cyber Psychology

- Cyberpsychology Architecture is a transdisciplinary model for understanding the psychological impact of different digital environments. It is based on the premise that cyberspace is psychological space, a projection or extension of the individual and collective human mind.

- Many disciplines focusing on internet research tend to specialize in a subset of the dimensions, although the model suggests that consideration of the other dimensions can enrich that research.

1. The IDENTITY dimension includes the possibilities for self presentation that occur in a particular online environment, including how people consciously and unconsciously use or avoid them, as well as the types of healthy and pathological aspects of identity that they manifest in that environment.

2. The SOCIAL dimension includes the possibilities for creating, managing, and aborting relationships with individuals and groups, including accurate and distorted interpersonal perceptions, varying levels of intimacy, and conflict versus collaboration.

3. The INTERACTIVE dimension entails how well a person can understand, navigate, and control a digital environment, including the sense of presence and immersion in that place, learning curves, and tendencies to anthropomorphize the device.

4. The TEXT dimension of an online environment is the extent to which it relies on text communication, the type of text communication (long to short forms), and the psychological effects of communicating via text.

5. The SENSORY dimension entails how the environment activates each of the five senses, especially the psychological effects of auditory and visual stimulation (pictures), but also the possibilities for tactile, kinesthetic, and olfactory stimulation.

6. The TEMPORAL dimension is the use and experience of time in a digital environment, including the synchronous/asynchronous spectrum, options for slowing, speeding, reversing, looping, and freezing time ("recordability").

7. The REALITY dimension entails how much a digital environment creates experiences based on fantasy and how much it is grounded in the familiarity of the everyday world.

8. The PHYSICAL dimension is how a digital environment involves the physical world and the corporeal body, including bodily sensations and movements, the impact of devices on one's physical surroundings, and physicality that is "dissociated" or "integrated" with digital experiences.

Using the Model in Research

      The dimensions of cyberpsychology architecture serve as a useful conceptual framework for understanding different digital environments. Any environment can be analyzed on each of the dimensions, including the extent and ways in which each dimension has deliberately been designed, as well as how it is actually used and experienced by the inhabitants of that environment.

Using the Model to Assess a Person's Digital Lifestyle

The eight dimensions of cyberpsychology architecture can serve as a foundation for a comprehensive and holistic assessment of one's lifestyle in cyberspace, including the interaction between that lifestyle and one's in-person world. The identity dimension lies at the core of the assessment with all the other dimensions converging on it. Some questions might lead into anxiety-provoking areas, such as inquiring about when someone chooses to be anonymous or invisible, and if the person does things online that he or she does not typically do in the "real" world. Unconscious expressions of identity might be inferred from online behavior as revealed in the assessment of the other seven dimensions.

The Online Disinhibition Effect

- It's well known that people say and do things in cyberspace that they wouldn't ordinarily say or do in the face-to-face world. They loosen up, feel more uninhibited, express themselves more openly. Researchers call this the "disinhibition effect." It's a double-edged sword.

- Sometimes people share very personal things about themselves. They reveal secret emotions, fears, wishes. Or they show unusual acts of kindness and generosity. We may call this *benign disinhibition*.

- On the other hand, the disinhibition effect may not be so benign. Out spills rude language and harsh criticisms, anger, hatred, even threats. Or people explore the dark underworld of the internet, places of pornography and violence, places they would never visit in the real world. We might call this *toxic disinhibition*.

The Online Disinhibition Effect

- What causes this online disinhibition? What is it about cyberspace that loosens the psychological barriers that block the release of these inner feelings and needs? Several factors are at play. For some people, one or two of them produces the lion's share of the disinhibition effect. In most cases, though, these factors interact with each other, supplement each other, resulting in a more complex, amplified effect.

✓ You Don't Know Me (dissociative anonymity)

✓ You Can't See Me (invisibility)

✓ See You Later (asynchronicity)

✓ It's All in My Head (solipsistic introjection)

✓ It's Just a Game (dissociative imagination)

✓ We're Equals (minimizing authority))

✓ Personality Variables

✓ True Self?

✓ Self Constellations Across Media

✓ Altering Self Boundary

- **<u>You Don't Know Me (dissociative anonymity)</u>**

As you move around the internet, most of the people you encounter can't easily tell who you are.

If you wish, you can keep your identity hidden. As the word "anonymous" indicates, you can have no name - at least not your real name. That anonymity works wonders for the disinhibition effect.

In fact, people might even convince themselves that those behaviors "aren't me at all." In psychology this is called "dissociation."

<u>You Can't See Me (invisibility)</u>

In many online environments other people cannot see you. As you browse through web sites, message boards, and even some chat rooms, people may not even know you are there at all

Invisibility gives people the courage to go places and do things that they otherwise wouldn't.

See You Later (asynchronicity)

- In e-mail and message boards, communication is asynchronous. People don't interact with each other in real time. Others may take minutes, hours, days, or even months to reply to something you say. Not having to deal with someone's immediate reaction can be disinhibiting. In real life, it would be like saying something to someone, magically suspending time before that person can reply, and then returning to the conversation when you're willing and able to hear the response.

- In some cases, as Kali Munro, an online psychotherapist, aptly describes it, the person may be participating in an "emotional hit and run.

It's All in My Head (solipsistic introjection)

- Reading another person's message might be experienced as a voice within one's head, as if that person magically has been inserted or "introjected" into one's psyche.

- Of course, we may not know what the other person's voice actually sounds like, so in our head we assign a voice to that companion. In fact, consciously or unconsciously, we may even assign a visual image to what we think that person looks like and how that person behaves. The online companion now becomes a character within our intrapsychic world, a character that is shaped partly by how the person actually presents him or herself via text communication, but also by our expectations, wishes, and needs. Because the person may even remind us of other people we know, we fill in the image of that character with memories of those other acquaintances.

It's Just a Game (dissociative imagination)

- If we combine solipsistic introjection with the escapeability of cyberspace, we get a slightly different force that magnifies disinhibition.

- People may feel that the imaginary characters they "created" exist in a different space, that one's online persona along with the online others live in an make-believe dimension, a <u>dream world</u>, separate and apart from the demands and responsibilities of the real world.

- They split or "dissociate" online fiction from offline fact. Emily Finch, an author and criminal lawyer studying identity theft in cyberspace, has suggested that some people see their online life as a kind of game with rules and norms that don't apply to everyday living (pers. comm., 2002). Once they turn off the computer and return to their daily routine, they believe they can leave that game and their game-identity behind.

We're Equals (minimizing authority)

- While online a person's status in the face-to-face world may not be known to others and it may not have as much impact as it does in the face-to-face world.

- If people can't see you or your surroundings, they don't know if you are the president of a major corporation sitting in your expensive office, or some "ordinary" person lounging around at home in front of the computer.

- Even if people do know something about your offline status and power, that elevated position may have little bearing on your online presence and influence.

- In most cases, everyone on the internet has an equal opportunity to voice him or herself. Everyone - regardless of status, wealth, race, gender, etc. - starts off on a level playing field. Although one's status in the outside world ultimately may have some impact on one's powers in cyberspace, what mostly determines your influence on others is your skill in communicating (including writing skills), your persistence, the quality of your ideas, and your technical know-how.

Personality Variables

- The disinhibition effect is not the only factor that determines how much people open up or act out in cyberspace.

- The strength of underlying feelings, needs, and drive level has a big influence on how people behave. Personalities also vary greatly in the strength of defense mechanisms and tendencies towards inhibition or expression.

- People with histrionic styles tend to be very open and emotional. Compulsive people are more restrained.

- The online disinhibition effect will interact with these personality variables, in some cases resulting in a small deviation from the person's baseline (offline) behavior, while in other cases causing dramatic changes.

True Self?

- Does the disinhibition effect release inner needs, emotions, and attributes that dwell beneath surface personality presentations? Does it reveal your "true self."

- For example, a woman with repressed anger unleashes her hostility online, thereby showing others how she really feels. Or a shy man openly expresses his hidden affection for his cyberspace companion.

- Some people do report being more like their true self in cyberspace. If personality is constructed in layers, with a core or true self buried beneath surface defenses and the seemingly superficial roles of everyday social interactions, then does the disinhibition effect release that true self?

Self Constellations Across Media

- The self interacts with the environment in which it is expressed. It is not independent of that environment.

- If a man suppresses his aggression in life but expresses it online, both behaviors reflect important aspects of his personality that surface under different conditions.

- If a woman is shy in-person but outgoing online, neither self-presentation is more true than the other. Both are dimensions of who she is, each revealed within a different situational context.

Altering Self Boundary

- discussion so far rests on the assumption that almost everyone online tends to be disinhibited, even if the effect is small. However, this isn't necessarily the case.

- Some people feel guarded and suspicious about cyberspace. You don't know who people really are, or how exactly they may be reacting to you behind their typed words.

- You don't realize who is watching you or what they know about you. You can't trust everyone's intentions. In <u>black hole situations</u>, you send out a message and receive no reply, for reasons not clear. Is anyone really there?

- No doubt, there are important individual differences in how people shift along the inhibition/disinhibition continum. The effect of inhibition or disinhibition might be weak or strong, depending on the person and the situation. People might experience small or wide oscillations between the two polarities. Some might be more susceptible to inhibition than to disinhibition, or vice versa. Studying what is revealed or hidden about people within the wide range of online environments can become a laboratory for understanding the subtle dynamics of the self.

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- Most online activities, including e-mail correspondence and chat sessions, can be recorded and saved to a computer file.
- Unlike real world interactions, the user in cyberspace can keep a permanent record of what was said, to whom, and when. Because these interactions are purely document-based, we may even go so far as to say that the relationship between people are the documents, and that the relationship can be permanently recorded in its entirety. These records may come in very handy to the user.
- Although the ability to record has many advantages, there is a downside. Because people know that everything they say and do in cyberspace can be tracked and recorded, they may experience anxiety, mistrust, and even paranoia about being online. Should I be careful about what I say and where I go? Will it come back to haunt me? Who might have access to these records?

Media Disruption

We all expect our computers and the internet to interact with us. That's the name of the game. Nevertheless, no matter how complex and sophisticated our electronic tools become, there will always be moments when they fail to live up to their end of the bargain.
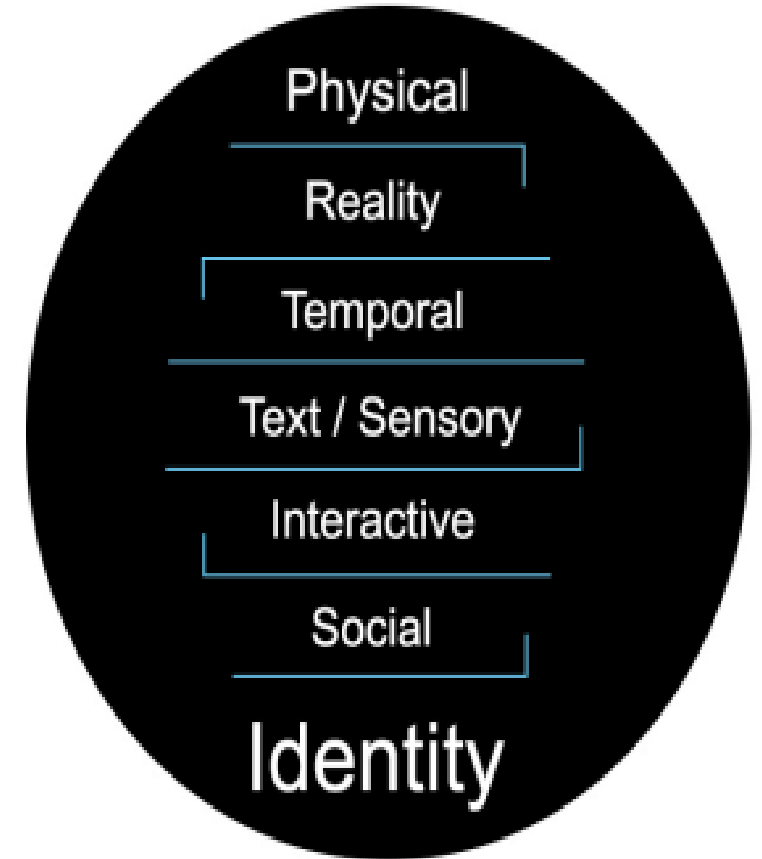
- There will be moments when software and hardware don't work properly, when noise intrudes into the communication, and connections break. There will be moments when our telecommunication systems give us nothing, not even an error message.

- The frustration and anger we experience in reaction to these failures says something about our relationship to our machines and the internet - something about our dependency on them, our need to control them.

- That lack of response also opens the door for us to project all sorts of worries and anxieties onto the machine that gives us no reply.

- Its called the <u>black hole</u> experiences of cyberspace. Fortunately, some computer-mediated environments are more robust than others. Those differences in reliability, predictability, and dependability bear important psychological effects.

Human Becomes Electric-Networks as Mind and Self

- Psychological and philosophical research can approach the rather fascinating question as to how the internet itself possesses a "personality." Old-timers, for example, often lament how the "character" of the net is changing as new and different types of people come online. Like the "self" of groups or an individual, the cyberworld consists of various subcomponents that collaborate, conflict, dissociate, and develop over time.

- Psychological models of the mind may help organize our understanding of this world. Where is the id, ego, and superego dynamics of the internet? Is the internet, or its subnets, self-actualizing organisms? If the internet is a complex system of links and associations - not unlike the human brain - is it a form of consciousness that is an extension or a manifestation of the human world? Perhaps someday it can attain its own independent consciousness.

Model of Cyber Psychology

- Cyberpsychology Architecture is a transdisciplinary model for understanding the psychological impact of different digital environments. It is based on the premise that cyberspace is psychological space, a projection or extension of the individual and collective human mind.

- Many disciplines focusing on internet research tend to specialize in a subset of the dimensions, although the model suggests that consideration of the other dimensions can enrich that research.

1. The IDENTITY dimension includes the possibilities for self presentation that occur in a particular online environment, including how people consciously and unconsciously use or avoid them, as well as the types of healthy and pathological aspects of identity that they manifest in that environment.

2. The SOCIAL dimension includes the possibilities for creating, managing, and aborting relationships with individuals and groups, including accurate and distorted interpersonal perceptions, varying levels of intimacy, and conflict versus collaboration.

3. The INTERACTIVE dimension entails how well a person can understand, navigate, and control a digital environment, including the sense of presence and immersion in that place, learning curves, and tendencies to anthropomorphize the device.

4. The TEXT dimension of an online environment is the extent to which it relies on text communication, the type of text communication (long to short forms), and the psychological effects of communicating via text.

5. The SENSORY dimension entails how the environment activates each of the five senses, especially the psychological effects of auditory and visual stimulation (pictures), but also the possibilities for tactile, kinesthetic, and olfactory stimulation.

6. The TEMPORAL dimension is the use and experience of time in a digital environment, including the synchronous/asynchronous spectrum, options for slowing, speeding, reversing, looping, and freezing time ("recordability").

7. The REALITY dimension entails how much a digital environment creates experiences based on fantasy and how much it is grounded in the familiarity of the everyday world.

8. The PHYSICAL dimension is how a digital environment involves the physical world and the corporeal body, including bodily sensations and movements, the impact of devices on one's physical surroundings, and physicality that is "dissociated" or "integrated" with digital experiences.

Using the Model in Research

The dimensions of cyberpsychology architecture serve as a useful conceptual framework for understanding different digital environments. Any environment can be analyzed on each of the dimensions, including the extent and ways in which each dimension has deliberately been designed, as well as how it is actually used and experienced by the inhabitants of that environment.

Using the Model to Assess a Person's Digital Lifestyle

The eight dimensions of cyberpsychology architecture can serve as a foundation for a comprehensive and holistic assessment of one's lifestyle in cyberspace, including the interaction between that lifestyle and one's in-person world. The identity dimension lies at the core of the assessment with all the other dimensions converging on it. Some questions might lead into anxiety-provoking areas, such as inquiring about when someone chooses to be anonymous or invisible, and if the person does things online that he or she does not typically do in the "real" world. Unconscious expressions of identity might be inferred from online behavior as revealed in the assessment of the other seven dimensions.

The Online Disinhibition Effect

- It's well known that people say and do things in cyberspace that they wouldn't ordinarily say or do in the face-to-face world. They loosen up, feel more uninhibited, express themselves more openly. Researchers call this the "disinhibition effect." It's a double-edged sword.

- Sometimes people share very personal things about themselves. They reveal secret emotions, fears, wishes. Or they show unusual acts of kindness and generosity. We may call this *benign disinhibition*.

- On the other hand, the disinhibition effect may not be so benign. Out spills rude language and harsh criticisms, anger, hatred, even threats. Or people explore the dark underworld of the internet, places of pornography and violence, places they would never visit in the real world. We might call this *toxic disinhibition*.

The Online Disinhibition Effect

- What causes this online disinhibition? What is it about cyberspace that loosens the psychological barriers that block the release of these inner feelings and needs? Several factors are at play. For some people, one or two of them produces the lion's share of the disinhibition effect. In most cases, though, these factors interact with each other, supplement each other, resulting in a more complex, amplified effect.

✓ You Don't Know Me (dissociative anonymity)

✓ You Can't See Me (invisibility)

✓ See You Later (asynchronicity)

✓ It's All in My Head (solipsistic introjection)

✓ It's Just a Game (dissociative imagination)

✓ We're Equals (minimizing authority))

✓ Personality Variables

✓ True Self?

✓ Self Constellations Across Media

✓ Altering Self Boundary

- **You Don't Know Me (dissociative anonymity)**

As you move around the internet, most of the people you encounter can't easily tell who you are.

If you wish, you can keep your identity hidden. As the word "anonymous" indicates, you can have no name - at least not your real name. That anonymity works wonders for the disinhibition effect.

In fact, people might even convince themselves that those behaviors "aren't me at all." In psychology this is called "dissociation."

You Can't See Me (invisibility)

In many online environments other people cannot see you. As you browse through web sites, message boards, and even some chat rooms, people may not even know you are there at all

Invisibility gives people the courage to go places and do things that they otherwise wouldn't.

See You Later (asynchronicity)

- In e-mail and message boards, communication is asynchronous. People don't interact with each other in real time. Others may take minutes, hours, days, or even months to reply to something you say. Not having to deal with someone's immediate reaction can be disinhibiting. In real life, it would be like saying something to someone, magically suspending time before that person can reply, and then returning to the conversation when you're willing and able to hear the response.

- In some cases, as Kali Munro, an online psychotherapist, aptly describes it, the person may be participating in an "emotional hit and run.

It's All in My Head (solipsistic introjection)

- Reading another person's message might be experienced as a voice within one's head, as if that person magically has been inserted or "introjected" into one's psyche.

- Of course, we may not know what the other person's voice actually sounds like, so in our head we assign a voice to that companion. In fact, consciously or unconsciously, we may even assign a visual image to what we think that person looks like and how that person behaves. The online companion now becomes a character within our intrapsychic world, a character that is shaped partly by how the person actually presents him or herself via text communication, but also by our expectations, wishes, and needs. Because the person may even remind us of other people we know, we fill in the image of that character with memories of those other acquaintances.

It's Just a Game (dissociative imagination)

- If we combine solipsistic introjection with the escapeability of cyberspace, we get a slightly different force that magnifies disinhibition.

- People may feel that the imaginary characters they "created" exist in a different space, that one's online persona along with the online others live in an make-believe dimension, a <u>dream world</u>, separate and apart from the demands and responsibilities of the real world.

- They split or "dissociate" online fiction from offline fact. Emily Finch, an author and criminal lawyer studying identity theft in cyberspace, has suggested that some people see their online life as a kind of game with rules and norms that don't apply to everyday living (pers. comm., 2002). Once they turn off the computer and return to their daily routine, they believe they can leave that game and their game-identity behind.

We're Equals (minimizing authority)

- While online a person's status in the face-to-face world may not be known to others and it may not have as much impact as it does in the face-to-face world.

- If people can't see you or your surroundings, they don't know if you are the president of a major corporation sitting in your expensive office, or some "ordinary" person lounging around at home in front of the computer.

- Even if people do know something about your offline status and power, that elevated position may have little bearing on your online presence and influence.

- In most cases, everyone on the internet has an equal opportunity to voice him or herself. Everyone - regardless of status, wealth, race, gender, etc. - starts off on a level playing field. Although one's status in the outside world ultimately may have some impact on one's powers in cyberspace, what mostly determines your influence on others is your skill in communicating (including writing skills), your persistence, the quality of your ideas, and your technical know-how.

Personality Variables

- The disinhibition effect is not the only factor that determines how much people open up or act out in cyberspace.

- The strength of underlying feelings, needs, and drive level has a big influence on how people behave. Personalities also vary greatly in the strength of defense mechanisms and tendencies towards inhibition or expression.

- People with histrionic styles tend to be very open and emotional. Compulsive people are more restrained.

- The online disinhibition effect will interact with these personality variables, in some cases resulting in a small deviation from the person's baseline (offline) behavior, while in other cases causing dramatic changes.

True Self?

- Does the disinhibition effect release inner needs, emotions, and attributes that dwell beneath surface personality presentations? Does it reveal your "true self."

- For example, a woman with repressed anger unleashes her hostility online, thereby showing others how she really feels. Or a shy man openly expresses his hidden affection for his cyberspace companion.

- Some people do report being more like their true self in cyberspace. If personality is constructed in layers, with a core or true self buried beneath surface defenses and the seemingly superficial roles of everyday social interactions, then does the disinhibition effect release that true self?

Self Constellations Across Media

- The self interacts with the environment in which it is expressed. It is not independent of that environment.

- If a man suppresses his aggression in life but expresses it online, both behaviors reflect important aspects of his personality that surface under different conditions.

- If a woman is shy in-person but outgoing online, neither self-presentation is more true than the other. Both are dimensions of who she is, each revealed within a different situational context.

Altering Self Boundary

- discussion so far rests on the assumption that almost everyone online tends to be disinhibited, even if the effect is small. However, this isn't necessarily the case.

- Some people feel guarded and suspicious about cyberspace. You don't know who people really are, or how exactly they may be reacting to you behind their typed words.

- You don't realize who is watching you or what they know about you. You can't trust everyone's intentions. In <u>black hole situations</u>, you send out a message and receive no reply, for reasons not clear. Is anyone really there?

- No doubt, there are important individual differences in how people shift along the inhibition/disinhibition continum. The effect of inhibition or disinhibition might be weak or strong, depending on the person and the situation. People might experience small or wide oscillations between the two polarities. Some might be more susceptible to inhibition than to disinhibition, or vice versa. Studying what is revealed or hidden about people within the wide range of online environments can become a laboratory for understanding the subtle dynamics of the self.