Video Games and Consciousness

Gino Yu
Objectives

- Persistent Nonsymbolic Consciousness Initiative
- Researchers in Consciousness with Study Society
- Study Society in Hong Kong
Development of Mind
Conditioned Response
Developmental Psychology

- **Innate Instincts (born)**
- **Emotions (0-7 years)**
- **Beliefs / Thought (rest of life)**

Factors:
- Media
- Society / Culture
- Parents, family, friends
- Personal Experiences

Brain regions:
- Cortex
- Limbic
- Medulla
Levels of Existence As Seen By Clare Graves

Clare Graves's theory holds that human beings develop through a series of "levels" or behavioral states. At each level a person learns and acts in a way that is consonant with the particular level. This table provides a schematic outline of Graves's theory. Each level is designated by two letters (e.g., F-S). The first letter stands for the neurological level on which the level is based and the second for the existential problems it is dealing with.

<table>
<thead>
<tr>
<th>Level</th>
<th>Learning System</th>
<th>Thinking</th>
<th>Motivational System</th>
<th>Specific Motivation</th>
<th>Means Values</th>
<th>End Values</th>
<th>Nature of Existence</th>
<th>Problems of Existence</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-N</td>
<td>Habituation: The individual adapts to his environment by a process of becoming accustomed to certain things, e.g., a baby gets used to his mother's breast, clothing, face, etc.</td>
<td>Automatic</td>
<td>Physiological</td>
<td>Periodic physiological needs (e.g., hunger)</td>
<td>No conscious value system; values are purely reactive</td>
<td>No conscious value system; values are purely reactive</td>
<td>Automatic</td>
<td>Maintaining physiological stability</td>
</tr>
<tr>
<td>B-O</td>
<td>Classical conditioning: (The individual learns through the association of one thing with another, as when he begins to salivate when his mother prepares to feed him.)</td>
<td>Assimilative</td>
<td>Assurance</td>
<td>Aperiodic psychological needs (e.g., warmth)</td>
<td>Traditionalism</td>
<td>Safety</td>
<td>Tribalistic</td>
<td>Achievement of relative safety</td>
</tr>
<tr>
<td>C-P</td>
<td>Operant conditioning: At this level, people learn best when they are rewarded for learning tasks.</td>
<td>Ego-centric</td>
<td>Survival</td>
<td>Psychological survival</td>
<td>Exploitation</td>
<td>Power</td>
<td>Egocentric</td>
<td>Living with self-awareness</td>
</tr>
<tr>
<td>D-Q</td>
<td>Avoidant learning: People at this level learn best when they are punished for errors. Without some punishment, D-Q individuals may not learn at all.</td>
<td>Absolute</td>
<td>Security</td>
<td>Order, meaning</td>
<td>Sacrifice</td>
<td>Salvation</td>
<td>Sainty</td>
<td>Achieving everlasting peace of mind</td>
</tr>
<tr>
<td>E-R</td>
<td>Expectancy: E-R types learn best when the outcome of their behavior meets their expectations; that is, when they behave in a certain way and get the reward that they expected to get. E-R people learn best through their own efforts, with mild risk and with considerable variety in the learning experience.</td>
<td>Multiplicative</td>
<td>Independence</td>
<td>Adequacy, competency</td>
<td>Scientism</td>
<td>Materialism</td>
<td>Materialistic</td>
<td>Conquering the physical universe</td>
</tr>
<tr>
<td>F-S</td>
<td>Observational: F-S people learn by watching other people and observing how they react. Their learning is through vicarious experience.</td>
<td>Relativistic</td>
<td>(things depend on particular situations)</td>
<td>Affiliation</td>
<td>Love, affiliation</td>
<td>Sociocentricity</td>
<td>Community</td>
<td>Personalistic</td>
</tr>
<tr>
<td>G-T</td>
<td>At the G-T and H-U levels, since people are in the second ladder of existence and all basic systemic processes are now open, learning in any form can and does take place. Here it is not new means, but changes in other aspects of the total system, such as the relative dissolution of fear, which accounts for changes in ability to learn.</td>
<td>Systemic</td>
<td>Existence</td>
<td>Self-worth</td>
<td>Accepting</td>
<td>Existence</td>
<td>Cognitive</td>
<td>Accepting existential dichotomies (e.g., life is the most precious thing there is, yet my life is unimportant)</td>
</tr>
<tr>
<td>H-U</td>
<td>Differential</td>
<td>Experience</td>
<td>????</td>
<td>Experiencing</td>
<td>Communication</td>
<td>Experientalistic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From "Human Nature Prepares for a Momentous Leap," The Futurist, April 1974
Physiological Processes

Body

Mind

Stories and Ideas

Conditioned Worldview (Ego)

Intention

Emotions and Feelings

Perception

Physiological Processes

Engagement

External World (“Real” or video game)
Personal Reality

Conditioned Belief System

Order of Perceived Importance

The weather
Understanding what Gino is Saying
My current project
My job
My career
My family
My relationship with mortality

Good to be Alive
Physical vs. Mental
**Fight or Flight**

**Sympathetic**
- Dilate bronchioles
- Speed up heartbeat
- Secrete adrenaline
- Decrease secretion
- Decrease motility
- Retain colon contents
- Delay emptying

**Parasympathetic**
- Constrict bronchioles
- Slow down heartbeat
- Increase secretion
- Increase motility
- Empty colon
- Empty bladder

**Spinal cord**
**Sympathetic ganglion chain**

**Note:**
- Secrete saliva
- Stop secretion
- Dilate gland
- Constrict
Dopamine and Serotonin

Dopamine Pathways

- Frontal cortex
- Functions
  - Reward (motivation)
  - Pleasure, euphoria
  - Motor function (fine-tuning)
  - Compulsion
  - Perseveration

Serotonin Pathways

- Striatum
- Substantia nigra
- Ventral tegmental area (VTA)
- Nucleus accumbens
- Hippocampus
- Raphe nucleus
- Functions
  - Mood
  - Memory processing
  - Sleep
  - Cognition

NIDA
Stories and Physiology are Interlinked by Emotion
Importance of Mindfulness

Past
- Guilt
- Regret
- Anguish
- Remorse
- Humiliation

Imaginary
- Inauthentic
- Fear
- Compulsion
- Insecurity

Thought

Future
- Fear
- Anger
- Anxiety
- Desire
- Need

Now (everything fine)
Radical Empiricism

- What is coming from the mind?
- What is coming from direct experience?
- What if all there was was what was immediately around you?
What Motivates Action?

- Physiological basis
  - (8-10 hours / day)
- Psychological basis (conditioned)
  - (14-16 hours / day)
What Motivates Action?

- Worldview
- Emotion at basis (fear, need, desire, etc.)
- Physiological state

Running out of time

Communicating ideas to people I may never see again
Mentally Based Reality

You Are Everything

You Are Nothing
Letting Go of Stories

- What’s this?
- ??
- Can the mind rest in not knowing?
Intellectual vs. Experiential Knowing

- Intellectual knowing.
  - $1 + 1 = 2$.

- Experiential knowing.
  - “I have to go to the bathroom.”
Intelligence highly awakened is **intuition**, which is the only true guide in life.

- J. Krishnamurti
Natural Intelligence

• 50+ trillion cells in your body
• Homeostasis
• Left brain makes up linear “story”
• Body knows before the Mind
• Benjamin Libet
• Joy is a natural state
Personal Evolution
Towards Insight

Conditioning
Instinct

Intelect

Synchronicity /
EQ / SQ

Intuition /
Insight

Doing

Being

Time
Intellect to Intuition

• What motivates you to act?
  • Story and emotion
    • Fear / need / desire
    • Joy
  • Awareness
  • Emergence
  • Flow
Tangible Benefits

• Find your passion and work from it

• Compassion / joy vs. anger / fear / frustration

• Health, wealth, happiness are byproducts

• Quality of life
Video Games

• Create an experience
• Repeatable
• Accurately record responses
• Biometric information
• Causal (interactive)
The following is a special edit of a 22 minute film from All Games Productions

Contact scot@allgames.com
What Makes Games Fun?

• Why are some games more fun than others?
• Why do certain people like certain games?
Flow

From Flow: The Psychology of Optimal Experience by Mihaly Csikszentmihalyi (page 74)
Sports

- What makes a sport engaging?
- Stress / gratification over time
Video Games

- Can we look at video games as stress / gratification vs. time?
Games to Facilitate Transformation

• Decouple mental from physiological
  • Stories that lead to actions from destructive emotions
  • Use of binding to manipulate perception
  • Entrain mind to listen to body (intuition)
Self Medication

• Can we replace pharmaceuticals with video game experiences?
• Induce the natural production of chemicals with video games
• Engage autonomic nervous system / reward systems
• ADHD / Autistic children seem to become engaged with video games
Mythical Storytelling

- Heroes Journey structure
- Players more attached to protagonist
- Illusion of agency
- Story -> Archetype -> Neural processes
Somatic Awareness

- Create a situation within a video game
- Biofeedback to assess player’s mental state
- Suspend game when player is stimulated
- Make player aware of physiological characteristics
Induce Altered States of Consciousness

• Flicker effect
• Hemi-sync
• EMDR
Self Analysis Tools

- World-view deconstruction
- Mind-maps
- Simulation and role-playing to explore alternative approaches

Gino
Other Approaches and Applications

- Parenting
  - What is the “boot-up” sequence and how do we minimize early trauma (e.g., of birth, formation of a mentally constructed worldview)
  - Action from symbolic knowledge
- Direct stimulation of the brain (TMS, tDCS)
Conclusion

• Emotions bind mind and body
• Model for transformation
  • Natural intelligence
• Several methods for using video games to facilitate transformation
• Engineering Enlightenment