Modern vs. mythic sleep & dreams
North American Assumptions

- Widespread presumption of dream content as meaninglessness/limited value
- Dreaming is socially devalued, dismissed
- Etiquette of telling a dream? Laugh!
REM Dreams

Stimulation from the external environment is blocked

A dream story is created from the brain’s own internally generated signals during sleep

Auditory areas activated

Memory and emotion areas activated

Visual areas activated

Body movement is suppressed
Dream Functions

- Freud’s 1900 “Interpretation of Dreams” where he claimed that dreams were the royal road to the unconscious.

- Research based theories of dream functions
  - adaptation to stressful events or the lack thereof as in the case of post traumatic stress nightmares
  - Emotional regulation has been viewed as a central function of dreams beyond just stress response integration
  - memory consolidation
  - evolutionary theory postulates that themes concerned with ancestral and current survival threats should be prevalent in dreams.
  - dreams as rehearsal for later events
Present Study

- In the present inquiry the dreams of hard core video game players were examined in order to see if their dream content was potentially affected by game play and if so how.
In order to be interviewed they had to say yes to these four criteria:

- Do you play video games on average several times a week? (frequency)
- Is your typical playing session more than 2 hours? (length)
- Have you been playing video games since before grade three? (age began)
- Have you played 50 or more video games over your lifetime? (number of games played)
Participants

- Solicited through on campus posters and emails
- 33 individuals answered the advertisement for participants
- over a two month period in early 2006
- 27 actually being interviewed, rest no shows
- 25 men and two women
- 85% were 25 years of age or younger
Semi-structured Interview

Protocol included these basic questions after several closed ended questions. Each had further elaborations as needed:

- **Why** do you play video games?
- Talk about the **emotions** you experience while playing video games.
- Describe the nature or quality of your **thinking** while playing video games.
- Discuss your sense of your **body** while playing video games.
- Do you ever experience **motion sickness** while playing video games?
- While playing video games how do you experience **time**?
- Please talk about your sense of **self** during video game play.
- **Do video games** come up in your dreams? If so how?
- **Tell me your most recent dream.**
- **Tell me your most recent dream** which in some way included video games.
- **Finally would you tell me your most noteworthy video game dream?**
- Have you ever had any experiences of **alterations in consciousness** associated with your video game play?
Procedure

- Interviews ranged from 30 minutes to an hour.
- Tape recorded using a portable digital voice recorder (Sony ICD – SX25).
- After each interview the interviewer recorded brief personal reactions to the interview.
- All interviews were transcribed.
Hall and Van de Castle Coding System

- Intricate coding system relying solely on dream reports to determine the meaning of a dream.
- One assumption: Frequency equals intensity
- Features:
  - Allows for high inter-rater reliability,
  - well developed norms,
  - categories are pertinent to waking concerns that may influence dreaming
  - (Domhoff, 1996)
Hall and Van de Castle Coding System

8 General Categories (creates many subscales)

- **Character** (Number, Gender, Identity, Age)
- **Social Interactions** (Aggression, Friendliness, Sexual)
- **Activities** (Movement, Verbal activity, Visual activity)
- **Striving** (Success, Failure)
- **Misfortune/Good Fortune** (Sickness, Falling, Winning)
- **Emotions** (Apprehension, Confusion, Happiness)
- **Physical Surroundings** (Settings and Objects)
- **Descriptive Elements** (Color, Size, Velocity)
Hall and Van de Castle Coding System

- DreamSAT spreadsheet
  (Schneider & Domhoff, 2006)
- Percentages and rates
- Group profiles
  (N=27, 56 dreams - males norms only)
  (Dreamresearch.net)
Significant Differences from Male Norms

Fewer friends (16% vs 31%, p<0.002) yet more dead or imaginary characters appearing in dream reports (21% vs 0%, p<0.000).

Why be human in a game? They have fewer powers than other types of creatures.
“I dreamt I was a character is Underworld 2, it was a werewolf character and then I became a 3rd person. It was the two main characters, it was the vampire girl and a hybrid werewolf character and I was another werewolf character beside them and we went into a vampire coven and we got to the weapons section of the vampire coven and then I woke up”
Significant Differences from Male Norms

Greater percentage of self-negativity (84% vs 65%, p<0.028)

Smaller number of dreams with aggression (32% vs 47%, p<0.023) yet more intense aggression (namely physical aggression, 86% vs 50%, p<0.000) in those dreams that did contain it.
“...so I went outside with my cat and shot these criminals that were trying to eat my dad and they were on top of my dad trying to eat his arms and he was fighting them off, and they were trying to hold him down and bite his shoulders and there was blood and stuff. And it was a very graphic shootout for a dream; it was very blood and guts ya know? And when I ran out of ammunition there was like pistol whipping and stuff going on and that one sticks out in my mind because it was very graphic...”.
Significant Differences from Male Norms

Fewer Misfortunes
(7% vs 36%, p<0.000)

Fewer Bodily Misfortunes
(0% vs 29%, p<0.024)

Thus less victim / more control
Subject 010- Dream 5

“...it was just you run around and whoever kills the most guys wins the map or whatever. But in the dream it was divided into teams and there was a giant cannon which wasn’t in the game but they were in the dream and they were pixilated so it looked like someone had drawn them and everything interacted, like it didn’t in that particular game environment, like everything was very simple, I’d walk up to something and you know the switch would move, and it was basically 2 sides to a conflict and we were bombarding each other. Like I had all the powers of the character like I could jump really high and I could switch guns and shoot things, and it was rewarding.”
Significant Differences from Male Norms

Dreams with at least one instance:

- Fewer friendliness  
  (2% vs 38%, p<0.000)
- Fewer sexuality  
  (0% vs 12%, p<0.000)
- Fewer good fortunes  
  (0% vs 6%, p<0.000)
Similarities with Male Norms

- Success
- Failure
- Striving
- Family members
More negative social/emotional elements (n=7) than positive elements (n=4).

(But in general dreams tend to focus on the negative)

Most no differences in scales.
Subject #028: Simultaneously participating and watching the action

Daniel: It was like there was a camera in my house and I was watching it from the camera.

Jayne: Were you also in your body?

Daniel: Yeah, kind of both. When I woke up I knew it was supposed to be a dream like I knew it should be a dream but while I was dreaming it I guess I didn’t know I just thought that was the normal way that you see things because you’re asleep and you really don’t know...The person watching has no real feelings, like holy crap he’s dead kind of feelings but sort of laughing. The person watching would have the feelings of my friend if I told my friend, those feelings like kinda laughing and you’re screwed kind of thing. But the person inside: really mad
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Theoretical Implications

- Emotional Regulation
  - Negative emotion (more self-negativity, less friendliness)
  - Positive emotion (more familiar characters and fewer misfortunes)

- Evolutionary theories of threat prevalence
  - Fewer aggressive dreams but more aggression when have them
  - Could gaming fulfills evolutionary need of dreams to mimic threats thus not put up with them as much

- Practice for waking life
Theoretical Implications

- Lucidity/Control dreams and gaming
  - Several studies have now found this association
  - As well as to electronic media use especially of the interactive type
  - Increased metacognition in dreams
  - Fewer nightmares
    - Classic nightmare is being chased for unknown reasons and not being able to help self