

# **IS THE VIRTUAL TOO UNREALISTIC?**

CRYING OVER UNSPILLED MILK

**LENNOX PUBLIC LECTURE**

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PROF. RICHARD A. **BARTLE**

UNIVERSITY OF ESSEX, UK

## INTRODUCTION

- THIS EVENING, I'M GOING TO TALK ABOUT **VIRTUAL WORLDS**
  - SPECIFICALLY, **GAME** WORLDS, OR **MASSIVELY MULTIPLAYER ONLINE ROLE-PLAYING GAMES**
    - **MMORPGS** FOR SHORT
    - **MMOS** FOR EVEN SHORTER...
- BECAUSE WE HAVE A **MIXED** AUDIENCE, I'LL START BY BRIEFLY OUTLINING THEIR **HISTORY**
  - NON-PLAYERS: "SO **THAT'S** WHAT AN MMO IS..."
  - PLAYERS: "SO **THAT'S** WHERE THEY CAME FROM..."

# THE LORD OF THE RINGS ONLINE

- THE LORD OF THE RINGS ONLINE, TURBINE, 2007:





# WORLD OF WARCRAFT

- *WORLD OF WARCRAFT, BLIZZARD, 2004:*



# EVERQUEST

- *EVERQUEST*, SONY ONLINE ENTERTAINMENT, 1999



*DIKUMUD*

- *DIKUMUD, COPENHAGEN UNIVERSITY, 1990*

[x2] A barrel has been left here.  
An angry-looking statue of Hoturi is standing here.  
An angry-looking statue of Priapus is standing here.  
A statue of Odin is standing behind the altar.  
A Sign for Newbies is here.  
You are a guest here until you save yourself.

If you need  
to get to your guild, use the guild medallion in your inventory. If you lose  
it, pray to the statue of Odin for another.

105m/202e/38hlook

Temple of Udgaard

You are inside the small and humble village temple in Udgaard. A simple  
stone altar, with strange stone carvings, is placed against the north wall. A  
small humble donation room is to the east. The temple exit is south to the  
Village Square.

[x2] A barrel has been left here.  
An angry-looking statue of Hoturi is standing here.  
An angry-looking statue of Priapus is standing here.  
A statue of Odin is standing behind the altar.  
A Sign for Newbies is here.

105m/202e/38h



## ABERMUD

- *ABERMUD, ALAN COX, 1987*

Your wimpy value is set to 15. See 'help change' to see what that means.

The Temple Of Paradise

You stand in the Temple of Paradise, a huge sandstone structure whose walls are decorated with ancient carvings and runes, some so old that even the priests no longer know their meanings.

A single set of steps lead south, descending the huge mound upon which the temple is built and ending in the forests below.

A roaring fire burns here. Its flames make the temple sparkle and glitter.

~~At your feet a huge sacrificial pit allows you to give valuables to the gods in the hope of being rewarded.~~

A furred umbrella lies here.

Obvious exits are:

North : Welcome Center

South : Forest Track

Down : Forest Track

Last login: Wed Sep 7 17:43:26 2005

>

MUD

- MUD, ROY TRUBSHAW & RICHARD BARTLE, 1978

Narrow road between lands.

You are stood on a narrow road between The Land and whence you came. To the north and south are the small foothills of a pair of majestic mountains, with a large wall running round. To the west the road continues, where in the distance you can see a thatched cottage opposite an ancient cemetery. The way out is to the east, where a shroud of mist covers the secret pass by which you entered The Land. It is raining.

\*w

Narrow road.

You are on a narrow east-west road with a forest to the north and Gorse scrub to the south. It is raining. A splendid necklace lies on the ground.

\*

- MUD DIDN'T COME FROM **ANYTHING**
- THIS IS WHY **I** GET TO GIVE THIS TALK AND YOU **DON'T!**



## WHY PEOPLE PLAY

- PEOPLE **TODAY** PLAY MMOS FOR THE **SAME** REASON PEOPLE OF **YORE** PLAYED TEXT MUDS
  - THEY GET TO **BE** AND BECOME **THEMSELVES**
- IT'S A QUEST FOR **SELF-UNDERSTANDING** AND **IDENTITY**
- THEY VISIT A PLACE THAT'S **LIKE** THE MUNDANE WORLD BUT **DIFFERENT** IN **STRANGE** AND **EXCITING** WAYS
  - THEY UNDERTAKE A **HERO'S JOURNEY**
- **UNFORTUNATELY**, IT WOULD TAKE ME **2 HOURS** TO EXPLAIN THE FULL **THEORY...**

## LOOKING FORWARD

- WHAT WOULD A PLAYER OF A 1980S **TEXT** MUD THINK OF **TODAY'S** MMOS?
- WELL THEY'D **STILL** RECOGNISE *LOTRO* AND *WOW* AS BASICALLY **MUDS**
- THEY'D FIND THE QUALITY OF THE **GRAPHICS** UTTERLY **BREATH TAKING**
- THEY WOULD BE **IMPRESSED** BY THE **SIZE** OF TODAY'S VIRTUAL WORLDS
- HOWEVER, THEY'D REGARD ALMOST EVERYTHING **ELSE** AS A **JOKE**

## EXAMPLES I

- HERE ARE JUST **SOME** OF THE THINGS THAT A TIME-TRAVELLING MUD PLAYER WOULD **RIDICULE** IN *LOTRO*
  - *LOTRO*, BECAUSE *WOW* PLAYERS ARE FAR MORE LIBERAL IN THEIR USE OF **DEATH THREATS**
- SO: IF I KILL SOME **ORC** AND IT WAS CARRYING A **SWORD**, WHY WAS IT HITTING ME WITH A **STICK**?
- WHY DOES EVERYONE WEAR THE **SAME** CLOTHES WHEN IT **RAINS** AS THEY DO WHEN IT'S **SUNNY**?
- THESE TROUBLESOME **ANIMALS** YOU WANT ME TO KILL DON'T **ACTUALLY** SEEM ALL THAT THREATENING...
- THE **ONLY** WAY TO BE A **SCHOLAR** IS IF I'M **ALSO** A FARMER AND A METALWORKER? UH?

## EXAMPLES 2

- HOW COME I MERELY SUFFER **MORALE** DAMAGE WHEN I FALL OFF **WEATHERTOP**? DID I SOMEHOW "FLEE IN FEAR" BEFORE I HIT THE GROUND?
- I CAN WALK **THROUGH** PEOPLE?
- DIDN'T I SEE YOU **DEPART** WITH THE FELLOWSHIP NOT **TEN** MINUTES AGO, LEGOLAS? WHY ARE YOU **HERE**?
- YOU CAN **DYE** METAL ARMOUR? BUT YOU CAN'T **PAINT** IT? BUT YOU **CAN** PAINT THE WALLS OF YOUR HOUSE? BUT **NOT** WALLS IN GENERAL?
- IN THE MIDDLE OF A FIGHT, **TIME** STOPPED AND THESE MID-AIR **BUTTONS** APPEARED. WHAT THE BLAZES?!
- SO... **ARRAGGORRNN** IS AN ALLOWED NAME?



### EXAMPLES 3

- FLOWERS APPEAR TO BE EVERY BIT AS OPEN AT **NIGHT** AS THEY ARE IN **DAYLIGHT**
- WHEN I **SALUTE**, IT SAYS I DO IT **SMARTLY** – BUT I WANTED TO SALUTE **SARCASTICALLY**
- WHAT'S WITH THIS "MAKE IT LOOK LIKE I'M WEARING **THESE** CLOTHES WHEN I'M ACTUALLY WEARING **THESE** CLOTHES" SYSTEM? EITHER YOU'RE **WEARING** PLATE MAIL AND CARRYING A SHIELD OR YOU'RE **NOT!**
- HOW COME THOSE **BAD GUYS** I CAN SEE **RIGHT THERE** AREN'T RUNNING TO **STOP** ME KILLING THEIR **BUDDIES**? ARE THEY BOTH DEAF **AND** BLIND?

## EXAMPLES 4



- THESE HALF-TIMBERED HOUSES IN **BREE** HAVE **WINDOWS IN SUPPORTING BEAMS**

*WOW*

- OH, AND JUST SO *WOW* PLAYERS DON'T FEEL **TOO** SMUG...



- DOES THAT PORTCULLIS WORK LIKE A **ROLLER BLIND** OR WHAT?

## REALISTIC

- WHAT THE MUD-PLAYERS OF YESTERYEAR WOULD BE **COMPLAINING** ABOUT IS THAT TODAY'S MMOS ARE NOT **REALISTIC**
- HOLD ON! ISN'T A **VIRTUAL** WORLD SET IN AN **IMAGINARY** MILIEU POPULATED BY **FANTASY** CREATURES "NOT REALISTIC" BY **DEFINITION?**
- NO! **REALISM** ISN'T **REALISTICNESS!**
  - *LOTRO* **WITH** ELVES LACKS REALISM
  - *LOTRO* **WITHOUT** ELVES LACKS REALISTICNESS



## UNREALISTIC

- BECAUSE PEOPLE **COMPLAIN** MORE THAN THEY **PRAISE**, THE USUAL FORM IS "UNREALISTIC"
  - IT MEANS "NOT **CONSISTENT** WITH HOW I **BELIEVE** THINGS **SHOULD** BE"
- AS TO HOW PEOPLE **DO** BELIEVE THINGS SHOULD BE, THERE ARE **TWO** COMPONENTS:
  - THE **FICTION**. THERE ARE ELVES AND MAGIC AND DEATH IS NOT A PERMANENT CONDITION AND ...
  - THE **NON-FICTION**. YOU CAN'T WALK THROUGH WALLS, AND THINGS FALL WHEN YOU DROP THEM AND THE SKY ON A SUMMER'S DAY IS BLUE AND ...

## DEFERMENT

- THE WAY THESE TWO COMPONENTS **WORK** IS THAT THE **FICTION** TAKES **PRECEDENCE**
  - ANYTHING THE FICTION HAS SOMETHING TO **SAY** ABOUT, THE FICTION **CONTROLS**
  - ANYTHING THE FICTION **DOESN'T** HAVE ANYTHING TO SAY ABOUT, IT **DEFERS** TO THE **NON-FICTION**
- ACTUALLY, MODERN MMOS ARE PRETTY **GOOD** AT BEING **FAITHFUL** TO THEIR **FICTION**
- IT'S WHAT THEIR FICTION **DEFERS** TO THAT IS THE PROBLEM...

## THE OLDE WAY

- TEXT MUDS DEFERRED TO **REALITY**
  - ONES IN WHICH BAGS COULD CONTAIN BAGS CONTAINING BAGS **DISPARAGED** ONES THAT DIDN'T EVEN **HAVE** BAGS
  - ONES IN WHICH BISCUITS TURNED TO **MUSH** WHEN **WET** WOULD **DISDAIN** ONES WHEREIN YOU COULD SWIM ACROSS A RIVER AND YOUR **CRACKERS** WOULD REMAIN **EDIBLE**
  - ONES IN WHICH **ICICLES** GRADUALLY MELTED ABOVE FREEZING POINT WOULD **MOCK** ONES IN WHICH THEY COULD SAFELY BE CARRIED ACROSS A **DESERT**
    - IN YOUR **COAT POCKET**

## WHY REALITY

- THEY DEFERRED TO REALITY FOR TWO REASONS:  
**PERSUASIVENESS AND EMERGENCE**
- HMM, I HAVE SOME FREE **SPACE** ON THIS SLIDE, SO HOW ABOUT A PICTURE OF A SPACE STATION?





## PERSUASIVENESS

- **PERSUASIVENESS** MEANS THE DEGREE TO WHICH THE VIRTUAL WORLD'S CONCEIT THAT IT'S **REAL** IS **CONVINCING**
- YOUR BRAIN IS **HARD-WIRED** TO MAKE SENSE OF THE REAL WORLD ALMOST INSTANTLY
  - IF SOMETHING DOESN'T **FIT**, YOU **NOTICE**
- IF IT'S PART OF THE **FICTION**, YOU HAVE TO **WILL** YOURSELF TO BELIEVE IT
- YOU WANT TO **MINIMISE** THESE OCCASIONS WHERE MISMATCHES ARE **NOTICED**, BECAUSE THEY ARE **OBSTACLES** TO **IMMERSION**

## IMMERSION

- IMMERSION IS THE SENSE THAT **YOU** ARE **THERE**, IN THE VIRTUAL WORLD
  - A VERY **HIGHLY** DESIRED STATE
  - ACCORDING TO THE **THEORY** I DIDN'T EXPLAIN TO YOU, THE VERY **AIM** OF PLAYING MMOS
- THEREFORE, IF THE FICTION **DOESN'T** HAVE ANYTHING TO SAY ABOUT SOMETHING, AN MMO SHOULD DEFER TO **REALITY** SO AS TO **PROMOTE** IMMERSION
  - IF **MOST** THINGS WORK AS THEY SHOULD, THE **REST** IS MORE EASILY **BELIEVABLE**

## BATON & BOW

- WHO'S REALLY IN **CHARGE** OF AN ORCHESTRA, THE **CONDUCTOR** OR THE **FIRST VIOLIN**?  
– IS IT THE **BATON** OR THE **BOW**?



## EMERGENCE

- EMERGENCE IS THE PROCESS BY WHICH INTERACTIONS BETWEEN **SUB-SYSTEMS** CREATE **NEW** SYSTEMS OF THEIR OWN
  - CAN BE **PLANNED-FOR** OR **UNPLANNED-FOR**
  - CAN BE **FEATURES** OR **EXPLOITS**
- **VERY** DESIRABLE BECAUSE IT GENERATES **CONTENT**
  - CONTENT IS OTHERWISE **EXPENSIVE** TO CREATE
- EMERGENT CONTENT ALSO TENDS TO BE MORE **MEANINGFUL** FOR INDIVIDUAL PLAYERS

## EXAMPLE

- EXAMPLE
  - SOME SURFACES CAN'T BE REACHED BY **CLIMBING**
  - IF YOU **JUMP**, YOU LAND ON THE NEXT SURFACE BELOW YOU
  - **RANGED** WEAPONS CAN HIT AT A **DISTANCE**
  - MONSTERS **WITHOUT** RANGED ATTACKS MUST FIGHT **HAND-TO-HAND** INSTEAD
- RESULT: JUMP FROM A HEIGHT ONTO A ROCK AND USE A BOW TO KILL THE MONSTERS BELOW YOU IN AN UNANSWERABLE **HAIL** OF ARROWS
  - AN UNPLANNED-FOR EXPLOIT

## DEPTH

- YOU GET EMERGENCE ALMOST FOR **FREE** IF YOU ADD **DEPTH**
- THE MORE **DETAILED** THE SUB-SYSTEMS, THE **GREATER** THE CHANCE THERE WILL BE INTERESTING **INTERACTIONS**
- REALITY IS **MORE** DETAILED THAN **ANYTHING** WE CAN IMPLEMENT VIRTUALLY
  - BECAUSE VIRTUAL WORLDS ARE **PART OF** REALITY
- THEREFORE YOU GET MORE **EMERGENCE** IF YOU **DEFER** TO **REALITY**

## WHY NOT?

- THE REASONS THAT TEXT MUDDS DEFERRED TO REALITY ARE STILL **VALID**
- SO **WHY** DO TODAY'S MMOS HAVE SUCH A **CAVALIER** ATTITUDE TO IT?
- IN *WOW*, IF I PUT A GLASS OF **MILK** IN MY **BACKPACK** THEN **FIGHT** STUFF FOR 30 MINUTES, IT'S **STILL** A GLASS OF MILK
  - IT **SHOULD** BE JUST AN EMPTY **GLASS**
    - IF IT'S A **BOTTLE** OF MILK, THEN AFTER A WEEK IT SHOULD BE A BOTTLE OF **SOUR** MILK
    - AFTER A **YEAR**, IT SHOULD BE A BOTTLE OF **CHEESE...**



## REASONS

- SOME REASONS **NOT** TO BE REALISTIC:
  - TO MAKE AN **ARTISTIC** POINT
    - *EG.* A PARODY
  - **REALISTIC** CAN GET IN THE WAY OF **FUN**
    - *EG.* BATHROOM TRIPS
  - TO **BALANCE** THE GAMEPLAY
    - *EG.* KILLING GIANTS WITH SWORDS OR ARROWS
  - IT CAN BE **EXPENSIVE** TO DO GRAPHICALLY
    - *EG.* WET HAIR
  - IT COULD **SCARE OFF** NEWBIES
    - IT SOUNDS COMPLICATED

## NO ANSWER

- **NONE** OF THESE ARE SHOW-STOPPERS
  - THEY'RE JUST **SPECIAL CASES**
- SO WHY **DO** MMOS SIMULATE REALITY SO LAZILY?
- THEY **DON'T** MESS WITH THE **FICTION** ("LORE") UNLESS THEY REALLY **HAVE** TO
- THE **LORE** DEFERS TO REALITY
- SO WHY WOULD THEY RISK **UNDERMINING** THE LORE BY DEFERRING TO SOMETHING **ELSE?!**

## WEIGHTLESSNESS

- **ASTRONAUTS:** YOU SEE THEM ON TV, FLOATING AROUND IN SPACE, DOING THINGS TO SATELLITES WITH EXOTIC TOOLS
- THEY'RE **WEIGHTLESS**, RIGHT?
  - OTHERWISE THEY'D **FALL!**
  - **EVERYONE** KNOWS THEY'RE WEIGHTLESS!
- EXCEPT THEY'RE **NOT**
  - THE **ISS** IS 350KM ABOVE THE EARTH'S SURFACE
  - IF YOU CLIMBED A 350KM-HIGH **TOWER**, YOU WOULD WEIGH **95%** OF WHAT YOU DO ON EARTH
  - THOSE ASTRONAUTS **ARE** FALLING!

## NAÏVE PHYSICS

- PEOPLE **EXPECT** WEIGHTLESSNESS IN SPACE
- IF THEY PLAYED AN MMO IN WHICH THEY CLIMBED TO THE TOP OF A **350KM TOWER** AND **WEREN'T** WEIGHTLESS, THEY WOULD **COMPLAIN**
  - IT WOULD INTERRUPT THEIR SENSE OF **IMMERSION**
- NOT **JUST** A PROBLEM FOR MMOS
  - **EXPLOSIONS** IN SPACE IN MOVIES
  - WORKING CLASS VICTORIAN EDUCATION IN **BOOKS**
- IT'S MUCH **WORSE** IN MMOS, THOUGH

## IN MMOS

- THE VALUE OF "REALISTIC" TO IMMERSION IS THAT YOU DON'T HAVE TO **THINK** ABOUT IT
- THEREFORE, IF BEING REALISTIC **MAKES** YOU THINK ABOUT IT, IT **UNDOES** ITS **OWN PURPOSE**
- THIS MEANS MMOS WANT TO DEFER NOT TO WHAT **IS** TRUE, BUT WHAT PLAYERS **EXPECT** TO BE TRUE
- IF IN THEIR **PREVIOUS** MMO THEY COULD TELEPORT FROM ANYWHERE TO THEIR HOME, THEY **EXPECT** THAT IN THEIR **CURRENT** MMO

## "REALITY"

- PLAYERS DO **NOT** COME TO AN MMO WITH EXPECTATIONS THAT IT WILL WORK LIKE THE **REAL** WORLD
- THEY COME WITH EXPECTATIONS THAT IT WILL WORK **LIKE MMOS**
- MMOS SUCH AS *WOW* AND *LOTRO* DEFER NOT TO **REALITY** BUT TO AN MMO **PARADIGM**
  - A PARADIGM IN WHICH WALK-THROUGH PEOPLE, DRY RAIN, FLOATING STEEL ARMOUR AND SHOPKEEPERS WHO **BUY YOUR JUNK** IS THE **NORM**

## WHENCE THE PARADIGM?

- HERE'S WHAT HAPPENS:
  - PLAYERS **ONLY** LOOK AT THE **SHORT** TERM, SO WILL PLAY MMOS THAT MAKE **BIG PROMISES**
  - SHORT-TERM **GOOD** IS OFTEN LONG-TERM **BAD**
    - EVENTUALLY THEY **QUIT** BECAUSE THE GAME **SUCKS**
  - THEY DON'T **REALISE** THAT THE FEATURES THAT **ATTRACTED** THEM ARE THE **VERY ONES** THAT CAUSED THEM TO **LEAVE**
    - THEY **SEEK** THOSE FEATURES IN THEIR **NEXT** MMO
  - MMOS **WITHOUT** THOSE FEATURES DON'T GET THE **NEWBIES**, SO THEY **WITHER** AND **DIE**
    - EVEN THOUGH THEY HAVE THE **BETTER DESIGN!**



## DANGER SIGNS

- THE PARADIGM IS CONSEQUENTLY GETTING **SHALLOWER AND SHALLOWER**
- GRAPHICS QUALITY IS **HIDING** THIS, BUT CAN ONLY GO **SO FAR**
- 2002: *ASHERON'S CALL 2* **FLOPPED** BECAUSE THE DESIGNER TOOK OUT ALL THE **BORING** PARTS
  - SADLY, THIS MADE THE **EXCITING** PARTS BORING
- MANY OF *AC2'S* EASE-OF-USE FEATURES ARE **NOW** BEING GRADUALLY ADOPTED BY **WOW...**

## ULTIMATELY

- THE MORE THAT **DETAIL** IS REPLACED BY **ABSTRACTIONS**, THE LESS OF ITS POTENTIAL AN MMO IS ABLE TO **DELIVER**
- EVENTUALLY, THEY'LL BECOME SO **SUPERFICIAL** THAT PEOPLE WILL WONDER **WHY** THEY WERE EVER CONSIDERED **FUN** AND **COMPELLING**
- AT THAT POINT, THERE'LL BE A **REALIGNMENT**
  - THE SIMPLE ONES WILL CARRY ON SUCCESSFULLY AS **CASUAL** GAMES
  - **NEW** MMOS WILL **REBOOT** THE PARADIGM

## NEW LOOK

- WHAT WILL THESE NEW MMOS **LOOK** LIKE?
- THEY'LL **HAVE** TO GO BACK TO THEIR **ROOTS**
- MMOS LET YOU **BE** AND **BECOME** WHO YOU **REALLY** ARE
- WHAT MMOS OFFER, **NOTHING** ELSE OFFERS
  - WELL, UNLESS YOU'RE **RICH** OR GET **SHOT AT**
- **NOT** EVERYONE **WANTS** OR **NEEDS** WHAT THEY OFFER, BUT IF THEY **DO** THEY **WON'T** GET IT FROM A FURTHER WATERED-DOWN PARADIGM

## AN ANECDOTE I

- MY 1985 WORLD, **MUD2**, HAS A **BATON** AND A **BOW**
  - IF YOU **WAVE** ONE, IT **TELEPORTS** YOU TO THE **OTHER**
- THESE **FLOAT** IN **RIVERS**, WHICH **FLOW**
- ONE PLAYER **DROPPED** THE BOW DOWN A **WELL**, WHEREUPON IT WAS **CARRIED** DOWNSTREAM AND **STUCK** ON A **GRATE** IN A **SECRET** ROOM
- HE WAVED THE BATON, **PICKED UP** THE BOW, AND REALISED HE WAS **SAFE** FROM ATTACK

## AN ANECDOTE 2

- *MUD2* ALSO HAS A **KEG OF GUNPOWDER**
  - FOR SHOOTING A CANNON AT A TREASURE ROOM DOOR
- ONE PLAYER PUT IT IN A **CORACLE** ALONG WITH A **BURNING BRAND** AND DROPPED IT IN THE **WELL**
- THE CORACLE **CAUGHT FIRE** FROM THE BRAND AS IT FLOATED DOWN THE RIVER TO THE GRATE
- **BEFORE** THE CORACLE SANK, THE FIRE **SPREAD** TO THE GUNPOWDER, WHICH **EXPLODED**
  - KILLING THE GUY WITH THE BATON SLEEPING “SAFELY” NEARBY

## EMERGENCE

- WHAT TODAY'S MMO PARADIGM IS MISSING IS **EMERGENCE**
  - THEY'VE CONCENTRATED ON **IMMERSION** SO MUCH THAT THEY'VE FORGOTTEN WHAT IT'S **FOR**
- THE **POWER** OF MMOS COMES FROM PEOPLE **CONSPIRING** TO BELIEVE THAT THE **VIRTUAL** WORLD IS **REAL**
- IF THEY CONSPIRE TO BELIEVE THAT IT'S AN **MMO**, THEY MISS HALF THE POINT
- EMERGENCE **ALSO** AIDS IMMERSION

## CONCLUSION

- IN THE PAST **DECADE**, VIRTUAL WORLDS HAVE BECOME **DECREASINGLY** DETAILED
  - THEY HAVE **BREADTH**, BUT NOT **DEPTH**
- THE **AIM** IS TO MAKE THEM MORE IMMERSIVE, BUT ULTIMATELY THIS IS **SELF-DEFEATING**
  - EVENTUALLY THEY WILL DEPART **SO FAR** FROM THEIR ORIGINS THAT THE CONNECTION WILL **SNAP**
- NEW VIRTUAL WORLDS **WILL** APPEAR THAT ONCE AGAIN DELIVER ON THEIR PROMISE
  - A PLACE WHERE YOU CAN BE **YOU**



## QUESTIONS?

- THIS IS WHERE I PAY FOR HAVING SPENT TOO LONG TALKING...