

HOW TO BE A GOD

A CODE OF CONDUCT FOR DEITIES-TO-BE

IEEE CONFERENCE ON GAMES
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INTRODUCTION

- HUMAN BEINGS HAVE BEEN CREATING **VIRTUAL WORLDS** FOR OVER **40** YEARS
 - I **MAY** HAVE HAD SOMETHING TO DO WITH THAT...
- THESE AREN'T MERE **GAMES** THOUGH
 - OR EVEN MERE **WORLDS**
- THEY'RE **REALITIES**
 - SELF-CONTAINED SPACES OF EXISTENCE GOVERNED BY A PRESCRIPTIVE SET OF RULES – THEIR **PHYSICS**
- THOSE WHO **CONTROL** THE PHYSICS OF A REALITY ARE THE **GODS** OF THAT REALITY

STATUS

- THIS MEANS THAT **I** AM A **GOD**
 - IT'S **GREAT!** I **LOVE** BEING A GOD!
- NOTE THAT **BEING** A GOD OF SUCH A REALITY **DOESN'T** MEAN I'M THE GOD OF THE REALITY IN WHICH **WE** EXIST
 - ALTHOUGH <NARROWS EYES> IT DOESN'T MEAN I'M **NOT**, EITHER...
- I'LL BE CALLING THE (OBJECTIVE) REALITY **WE** LIVE IN **REALITY** IN THESE SLIDES
 - VIRTUAL WORLDS ARE **SUB-REALITIES** OF **REALITY**

AT PRESENT

- THE REALITIES WE CREATE AT THE **MOMENT** AREN'T PARTICULARLY **SOPHISTICATED**
- MOST **GLARINGLY**, THE NON-PLAYER CHARACTERS (**NPC**S) WE POPULATE THEM WITH ARE NOT **REMOTELY** INTELLIGENT
- WHAT IF THEY **WERE** INTELLIGENT, THOUGH?
 - AS SMART AS US OR SMARTER
- WHAT IF THEY WERE ALSO **CONSCIOUS**, **SELF-AWARE** AND ABLE TO **THINK**?
 - IN OTHER WORDS, **SAPIENT**
- CREATING SAPIENCE IS THE **END GOAL** OF AI

GOOGLE IT

- NOW WE'RE SOME WAY **OFF** HAVING NPCs WITH THE **SAME** OR **SUPERIOR** REASONING AND REFLECTIVE POWERS AS US
- HOWEVER, **TIME** IS ON OUR **SIDE!**
- WOULD **100** YEARS BE ENOUGH, DO YOU THINK?
 - OR 100,000? 100,000,000? 100,000,000,000?
 - THE HEAT DEATH OF THE UNIVERSE IS A **GOOGOL** YEARS AWAY
- YOU **WANT** PLANET-SIZED COMPUTERS? YOU CAN **HAVE** PLANET-SIZED COMPUTERS!
- TAKE AS **LONG** AS YOU **LIKE!**

ASSUMPTION

- FROM HERE ON, I SHALL ASSUME THAT WE **WILL** BE ABLE TO **CREATE** REALITIES THAT ARE **EMBODIED** DIGITALLY IN COMPUTERS AND **POPULATED** BY SMART-AS-US NPCs
- MY **AIM** IS TO POINT OUT SOME **UNUSUAL** MORAL AND ETHICAL QUESTIONS THAT AI SPECIALISTS OF THE **FUTURE** WILL **FACE**
- NOTE THAT I'LL **ONLY** BE CONSIDERING SAPIENT BEINGS WITH **NO** PRESENCE IN **REALITY**
 - EXCEPT THAT **THEIR** REALITY IS IMPLEMENTED IN IT
- EVIL ROBOT OVERLORDS ARE **NOT** TODAY'S TOPIC

MORAL BEINGS

- AS HUMANS, WE ARE **MORAL BEINGS**
- WE **EACH** OPERATE UNDER OUR OWN, PERSONAL **SYSTEM OF MORALITY**
 - OUR SENSE OF WHAT'S **RIGHT** AND **WRONG**
- THE **FIRST** QUESTION WE OUGHT TO ASK IS WHETHER THE SAPIENT **NPCS** WE WILL CREATE ARE **MORALLY-CONSIDERABLE**
 - THAT IS, DOES OUR SYSTEM OF PERSONAL MORALITY **APPLY** TO THEM?
- FOR: THOSE ARE FREE-THINKING **INDIVIDUALS**
- AGAINST: THOSE ARE **BITS** IN A **DATABASE**

YES

- FOR **MOST** OF US, **ALL** MORAL BEINGS ARE MORALLY-CONSIDERABLE
 - ALTHOUGH **NOT** ALL MORALLY-CONSIDERABLE BEINGS ARE MORAL, FOR EXAMPLE **BABIES**
- IF NPCs HAVE THEIR **OWN** SENSE OF MORALS, WE'D HAVE TO BE **AMORAL** OURSELVES **NOT** TO REGARD THEM AS MORALLY-CONSIDERABLE
- IN THIS TALK, I TAKE THE VIEW THAT OUR SELF-AWARE NPCs OF THE FUTURE **ARE** MORAL BEINGS AND SO **ARE** MORALLY-CONSIDERABLE
 - IF YOU **DISAGREE**, I'LL GET BACK TO YOU LATER

MORALS AND ETHICS

- A **SHARED** SET OF AGREED-UPON MORALS IS AN **ETHICAL SYSTEM**
- **DIFFERENCE** BETWEEN ETHICS AND MORALS:
 - CYNTHIA PAYNE WAS **IMPRISONED** IN THE 1980S FOR “KEEPING A DISORDERLY HOUSE”
 - HER ESTABLISHMENT WAS FREQUENTED BY **MPS**, LAWYERS, CEOS, **VICARS** AND AT LEAST ONE **PEER**
 - WHEN ASKED WHY SHE WOULDN'T **NAME** ANY OF HER FAMOUS **CLIENTS**, SHE REPLIED “MY **MORALS** IS LOW BUT MY **ETHICS** IS HIGH”
- WE'LL **NEED** AN APPROPRIATE ETHICAL SYSTEM IN PLACE **BEFORE** MAKING SAPIENT NPCs

EASY QUESTION

- SUPPOSE WE HAVE **CREATED** A REALITY POPULATED BY MORALLY-CONSIDERABLE NPCs
 - ASSUMING IT'S ACTUALLY ETHICAL TO **DO** SO...
- IS IT ETHICAL TO **SWITCH OFF** THE COMPUTER THAT THIS REALITY IS RUNNING ON?
- THERE COULD BE 10 BILLION NPCs IN THAT REALITY WHO'D BE **EXTINGUISHED** AS A RESULT
- YOU WOULD EFFECTIVELY HAVE **KILLED** 10 BILLION SAPIENT CREATURES
 - IF YOU **TOLD** THEM YOU WERE ABOUT TO DO IT, THEY'D BE **LIVID**

LARGESSE

- DOES THE FACT THAT THEY ONLY EXIST BECAUSE OF US IN THE **FIRST** PLACE MEAN WE HAVE THE **RIGHT** TO KILL THEM ANYWAY?
- WE DON'T THINK THAT ABOUT **CHILDREN**, EVEN THOUGH **THEY** ONLY EXIST BECAUSE OF US
 - AND OFTEN ALCOHOL
- THEN AGAIN, WE BREED **BEEF** CATTLE SPECIFICALLY TO KILL, AND **THEY** WOULDN'T EXIST OTHERWISE
 - "MEAT IS MURDER, VEGANISM IS GENOCIDE"
- LET'S SAY WE **DO** FEEL BAD, BUT OUR PLANET-SIZED COMPUTER IS TOO **COSTLY** TO RUN

SNAPSHOT

- WOULD AN ACCEPTABLE **SOLUTION** BE TO DUMP A **SNAPSHOT** OF THE REALITY'S STATE?
- WE COULD THEN SAFELY POWER **DOWN** THE COMPUTER AND **RELOAD** THE REALITY ONCE OUR FINANCES HAD IMPROVED
- THE **NPCs** WOULDN'T KNOW ANY DIFFERENT
 - THEIR REALITY WOULD APPEAR SEAMLESSLY **CONTINUOUS** TO THEM
- IF OUR FINANCES **DIDN'T** IMPROVE, THOUGH?
 - THE REALITY WOULD NEVER EMERGE FROM **STASIS**
 - PRETTY WELL THE **SAME** AS DESTROYING IT?

RICHES

- WHAT IF WE LATER BECAME INSANELY **RICH**?
- WE COULD BUY **MULTIPLE** COMPUTERS AND RELOAD THE SAVE FILE **MULTIPLE** TIMES
- EACH OF THESE **FORKED** REALITIES WOULD CREATE A NEW, **INDEPENDENT** TIMELINE
- WOULD IT BE **ETHICAL** TO DO THAT?
- HOW ABOUT IF WE SUBSEQUENTLY **MERGED** TWO REALITIES TOGETHER?
- IT WOULD CONTAIN **TWO** COPIES OF PEOPLE
- WOULD DOING **THAT** BE ETHICAL?

SEPARATE

- WHAT IF WE MERGED BY **DELETING** ONE OF THE COPIES OF THE PEOPLE?
 - THEY'RE STILL **ALIVE**, SO HAVE WE KILLED THEM?
- WOULD IT MAKE A DIFFERENCE IF THE REALITIES WERE **DETERMINISTIC**?
 - THEY'D ALL BE IDENTICAL
- HOW ABOUT IF WE HAVE JUST ONE REALITY AND **PERIODICALLY** SAVE ITS STATE, RELOADING IF SOMETHING HAPPENS THAT WE DON'T **LIKE**?
 - ONLY THE NPCs BORN **AFTER** THE SAVE POINT WOULD CEASE TO EXIST

EASY

- THESE ARE RELATIVELY **EASY** QUESTIONS TO **ASK**, AS WE CAN DO THIS STUFF **ALREADY**
 - JUST NOT FOR SAPIENT NPCS
- THEY'RE HARD TO **ANSWER** BECAUSE THEY'RE **UNLIKE** ANYTHING THAT'S STRESSED OUR MORALS BEFORE
- I **WON'T** BE TRYING TO ANSWER THEM **HERE**
- HOWEVER, THEY **DO** NEED TO BE ANSWERED
- WHAT IF THERE'S A **BREAKTHROUGH** IN AI AND EE AND THESE REALITIES ARE **10** YEARS AWAY, NOT 100+?

SENTIENCE

- SAPIENT: CAN **THINK**
- SENTIENT: CAN **FEEL**
- A **SMALL** NUMBER OF HUMANS TREAT NO-ONE BUT **THEMSELVES** AS MORAL BEINGS
 - EXAMPLE: **PSYCHOPATHS**
- ALMOST **EVERY** HUMAN TODAY TREATS ALL **SAPIENT** BEINGS AS MORALLY-CONSIDERABLE
 - ALTHOUGH **NOT** IN THE TIME OF SLAVERY...
- MOST PEOPLE WILL **ALSO** TREAT **SENTIENT** BEINGS (E.G. **DOGS**) AS MORALLY-CONSIDERABLE
 - WHILE ACCEPTING THAT DOGS AREN'T MORAL BEINGS

DISTINCTION

- PEOPLE CAN **RELATE** TO SUFFERING
 - MONKEYS ARE NOT **INDIFFERENT** IF YOU KILL THEIR BABIES
 - TYING A FIRECRACKER TO A **CAT'S TAIL** IS **NOT** THE SAME AS TYING IT TO A **FENCE**
- ARE SENTIENT-BUT-**NOT**-SAPIENT BEINGS **LESS** IMPORTANT THAN **SAPIENT** BEINGS?
 - WOULD YOU SAVE A DOG OVER SAVING A TODDLER?
- ARE BEINGS IN A **CREATED** REALITY **LESS** IMPORTANT THAN BEINGS IN **REALITY**?
 - SAVE THE **REAL** DOG OR THE **VIRTUAL** SAINT?

SUFFERING

- WHAT ABOUT THE SENTIENT-BUT-NOT-SAPIENT CREATURES IN OUR **CREATED** REALITIES?
- SHOULD IT **TROUBLE** US IF **THEY** SUFFER?
- **WRONG** QUESTION!
- RIGHT QUESTION: SHOULD WE **IMPLEMENT** SUFFERING **AT ALL**?
- WE'RE **GODS**!
- IF SUFFERING EXISTS IN A REALITY THAT **YOU** CREATED, IT'S BECAUSE **YOU** WANT IT THERE
 - OR I GUESS IT COULD BE A **BUG**...
- WHY WOULD YOU **IMPLEMENT** SUFFERING?

VERISIMILITUDE

- IN A WORD: **VERISIMILITUDE**
 - THERE ARE OTHER WORDS, SUCH AS **SADISM**, BUT EVEN THAT ONE NEEDS VERISIMILITUDE
- YOU WOULD MAKE THE MORAL BEINGS YOU CREATE BE **SUBJECT** TO SUFFERING BECAUSE THAT'S HOW **REALITY** WORKS
- WHY WOULD YOU **WANT** TO CREATE A REALITY THAT WORKS LIKE **REALITY**, THOUGH?
- BECAUSE THEN YOU CAN MORE EASILY **OBSERVE** AND POSSIBLY **VISIT** IT
- THIS LEADS TO AN **IMPORTANT** QUESTION...

RATIONALE

- **WHY** WOULD YOU CREATE A REALITY IN THE FIRST PLACE?
- WELL, THERE ARE **8** REASONS, WHICH I'LL LIST ON THE **FOLLOWING** SLIDES
- **EACH** SET OF 8 REASONS CAN BE APPLIED TO **4** BENEFICIARIES:
 - YOU, OTHER HUMANS, NPCs, HIGHER POWERS
 - I **WON'T** BE COVERING THAT **LAST** ONE...
- ALSO, NOTE THAT A MOTIVATION TO **CREATE** A REALITY ISN'T THE SAME AS A MOTIVATION TO CONTINUE **RUNNING** IT

PERSONAL

- WHY CREATE A REALITY FOR **YOURSELF**?
 - TO PLAY IT FOR **FUN** YOURSELF
 - TO **GROW** AS A PERSON
 - TO **LEARN** HOW TO MAKE SUCH WORLDS
 - TO **TEACH** YOURSELF SOMETHING, E.G. CODING
 - AS MAKE AN **ARTISTIC** POINT
 - AS A SHOWCASE, TO DEMONSTRATE THAT YOU CAN **CREATE** IN THIS MEDIUM
 - AS A **PROTOTYPE** OF WHAT YOU **REALLY** WANT TO MAKE
 - FOR **MONEY**

SOCIAL

- WHY CREATE A REALITY FOR **OTHER** PEOPLE?
 - FOR OTHERS TO PLAY FOR **FUN**
 - FOR PLAYERS TO **TRANSFORM** THEMSELVES
 - TO **SIMULATE** SOME ASPECT OF REALITY YOU WANT TO TEST
 - TO **TEACH** SOMETHING, AS A SERIOUS GAME
 - AS **SATIRE** ON REALITY
 - FOR YOUR PLAYERS TO TELL YOU WHAT THEY **REALLY** WANT FROM THE REALITY
 - SO PLAYERS CAN **CREATE** SUB-SUB-REALITIES
 - FOR YOUR PLAYERS TO MAKE **MONEY**

DIVINE

- WHY CREATE A REALITY FOR YOUR **NPCS**?
 - TO BE **GLORIFIED** BY YOUR NPCS
 - SO YOUR NPCS CAN **IMPROVE** THEMSELVES
 - TO **REWARD** THE BEST NPCS
 - TO **TEACH** YOUR NPCS
 - TO GIVE THE GIFT OF **LIFE** TO YOUR NPCS
 - TO FIND OUT WHAT YOUR NPCS WANT, SO YOU CAN **GIVE** IT TO THEM
 - SO YOUR NPCS CAN **WORSHIP** YOU, AND SO ACHIEVE A SENSE OF PURPOSE
 - SO YOUR NPCS CAN **SERVE** YOU

SPIRITUAL

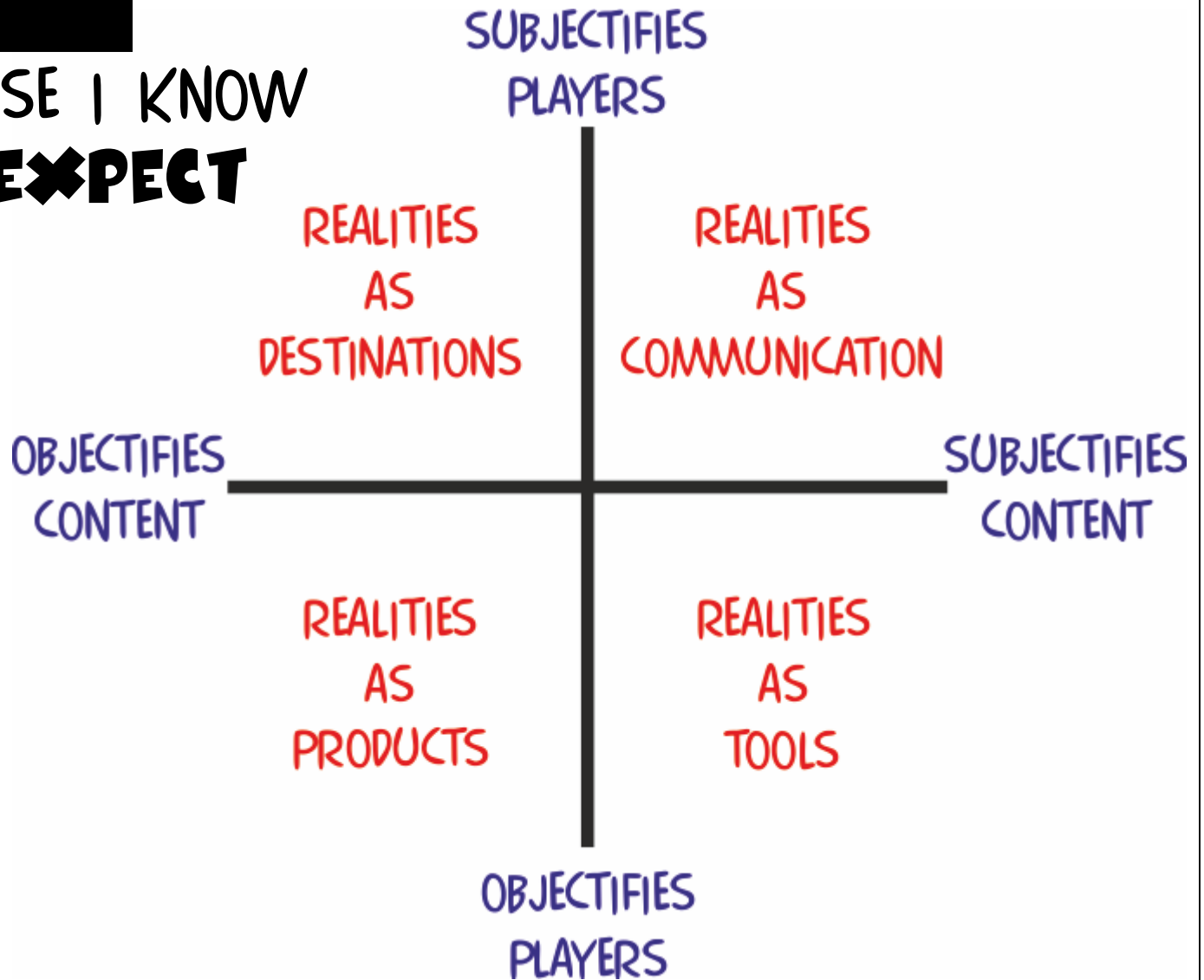
- EXAMPLE: **ANCESTOR** SIMULATION
- I'M **NOT** GOING TO ENUMERATE THE REASONS HERE BECAUSE I DON'T WANT TO PROVOKE A **RELIGIOUS** ARGUMENT INADVERTENTLY
- BASICALLY, PEOPLE **MIGHT** CREATE A REALITY FOR REASONS TO DO WITH HOW THEY BELIEVE **REALITY** CAME INTO BEING
- THE 8 MOTIVATIONS **DO** STILL WORK, BUT I'LL LEAVE IT TO **YOU** TO FIGURE THEM OUT
 - OR YOU CAN **EMAIL** ME IF YOU DON'T BELIEVE I'VE ACTUALLY **DONE** THIS PART OF THE RESEARCH...

PAIRS

- **THESE 8 MOTIVATIONS PAIR UP**
 - **REALITIES AS PRODUCTS**
 - TO PROTOTYPE, TO PROFIT
 - OBJECTIFIES BOTH PLAYERS AND CONTENT
 - **REALITIES AS TOOLS**
 - TO LEARN, TO TEACH
 - OBJECTIFIES PLAYERS, SUBJECTIFIES CONTENT
 - **REALITIES AS DESTINATIONS**
 - TO BE ENJOYED, TO HELP PERSONAL GROWTH
 - SUBJECTIFIES PLAYERS, OBJECTIFIES CONTENT
 - **REALITIES AS COMMUNICATION**
 - TO MAKE AN ARTISTIC POINT, TO ENABLE CREATION
 - SUBJECTIFIES BOTH PLAYERS AND CONTENT

GRAPH!

- BECAUSE I KNOW YOU **EXPECT** IT...



NOTES

- **ALL** OF THE ABOVE REQUIRE THAT WE CAN **OBSERVE** OUR CREATED REALITIES
- PERSONAL AND SOCIAL MOTIVATIONS **ALSO** REQUIRE THAT WE CAN **VISIT** THEM
 - FOR DIVINE AND SPIRITUAL, IT'S **OPTIONAL**
- IF WE WANT TO **OBSERVE** A REALITY, IT HAS TO MAKE **SENSE** TO US
 - SOME **SIMILARITY** WITH REALITY IS THEREFORE **DESIRABLE**, ALBEIT NOT **ESSENTIAL**
- TO **VISIT** IT, IT HAS TO SHARE ENOUGH CHARACTERISTICS TO PERMIT **IMMERSION**

IMMERSION

- THE **CLOSER** THE OVERLAP WITH REALITY, THE **EASIER** IT IS TO BECOME IMMERSED
 - **HENCE** VERISIMILITUDE
- THE MATCH DOESN'T HAVE TO BE **PERFECT**
- **SOME** DIFFERENCES WILL BE **IRRELEVANT** OR CONTEXTUALLY **ACCEPTABLE**
 - NO TOILET TRIPS! MAGIC WORKS! GHOSTS EXIST! MARZIPAN TASTES NICE!
- STILL, IT MUST INTERSECT **ENOUGH** THAT WE CAN **WILL** OURSELVES TO BELIEVE THAT WHAT WE KNOW IS **NOT** REALITY **IS** REALITY

SUFFERING

- SO, BACK TO **SUFFERING**
- WHETHER WE **WANT** SUFFERING IN OUR CREATED REALITY DEPENDS ON **TWO** THINGS:
 - HOW MUCH LIKE **REALITY** WE WANT OUR WORLD TO BE FOR REASONS OF **IMMERSION**
 - HOW IMPORTANT THE FEATURE IS TO OUR MOTIVATION FOR **CREATING** THE REALITY
 - PERHAPS HERE WE **DO** WANT FENCES TO FEEL PAIN
- **DESIRING** OUR CREATED REALITY TO CONTAIN SUFFERING STILL DOESN'T MEAN IT'S **ETHICAL** TO **IMPLEMENT** IT, THOUGH

SOMETHING WORSE

- THE **DEFAULT** POSITION FOR A MORAL BEING IS THAT IT'S **IMMORAL** TO MAKE MORALLY-CONSIDERABLE INDIVIDUALS SUFFER **UNLESS**:
 - THEY **FREELY** AGREE TO IT
 - IT'S TO SAVE **THEM** OR SOMEONE **ELSE** FROM SOMETHING **WORSE**
- AH, **YES**, "SOMETHING WORSE"...
- ARE WE GOING TO IMPLEMENT **DEATH**?
- WE DON'T **HAVE** TO – WE CAN MAKE OUR NPCs LIVE **INDEFINITELY**
 - AND IGNORE **AGING** PAST MATURITY, TOO!

UNNECESSARY

- WE ALREADY **KNOW** THAT PERMANENT DEATH IS **UNNECESSARY** FOR NPCs
 - **MOST** MMOs MAKE NPCs WHO DIE **RESPAWN**
- **WHY**, THEN, WOULD WE **IMPLEMENT** IT?
- WELL IT COULD BE FOR THEIR **OWN** BENEFIT
- IT SUCKS FOR **INDIVIDUAL** NPCs, BUT ON THE **WHOLE** IT'S GOOD FOR THEM
 - THEY GET TO **DEVELOP** IN WAYS THEY OTHERWISE **WOULDN'T**
- THIS DOESN'T APPLY TO OUR CURRENT, **NON-SAPIENT** NPCs, BUT FOR **SAPIENT** ONES?

CONSEQUENCES

- WE MIGHT BE ABLE TO **PERSUADE** OURSELVES THAT DEATH HAS MORE **UPS** THAN **DOWN**S
- ARE WE GOING TO ALLOW NPCs TO **KILL** ONE ANOTHER, THEN?
- OUR NPCs HAVE **FREE WILL**, SO SOME WILL BE **JERKS**
- SOME JERKS WILL **KILL** OTHER NPCs
- DO WE **LET** THEM? WE **CAN** STOP IT
 - WE COULD EVEN MAKE THE **KILLER** DIE AND THE **VICTIM** GET BETTER
 - MURDER **DOES** SEEM A TAD **HARSH** ON VICTIMS

FREE WILL

- YOU WILL HAVE NOTICED THAT I MENTIONED **FREE WILL** BACK THERE...
- IF OUR NPCs ARE **SAPIENT** THEN THEY MUST, BY **DEFINITION**, HAVE FREE WILL
- IF WE WERE TO **REMOVE** THEIR FREE WILL, THEY WOULD NO **LONGER** BE SAPIENT
 - THEREBY **KILLING** THE PERSON WHO USED TO EXIST
- DOES THIS **ALSO** PREVENT US FROM **EDITING** THEIR MINDS?
 - TO **STOP** THEM BEING A **JERK**?
 - TO **IMBUE** THEM WITH OUR OWN **MORALS**?

CONGRUENT

- THE ARGUMENTS FOR **REMOVING** FREE WILL ARE THEREFORE **CONGRUENT** WITH THOSE FOR **IMPLEMENTING** DEATH
- THIS LEADS TO AN INTERESTING SITUATION
- ONE **ETHICAL** REASON FOR MAKING A MORALLY-CONSIDERABLE BEING **SUFFER** IS "TO SAVE THEM FROM SOMETHING **WORSE**"
- IF **NOT** HAVING FREE WILL IS EQUIVALENT TO DEATH, THAT **WOULD** BE SOMETHING WORSE
- IT COULD BE THAT SUFFERING IS **NECESSARY** FOR FREE WILL

REASONING

- THE LINE OF **REASONING** FOR SUFFERING'S BEING NECESSARY WOULD GO LIKE **THIS**:
 - UNLESS **BAD** THINGS HAPPEN, YOU CAN'T **REFLECT** ON WHAT'S **RIGHT** OR **WRONG**
 - YOU CAN'T AS A **RESULT** DEVELOP **MORALS**
 - YOU'RE **NOT** THEREFORE A **MORAL BEING**
 - **ONLY** MORAL BEINGS CAN BE **SAPIENT**
 - NOTE: THIS IS THE **WEAK LINK** OF THE ARGUMENT
 - **FREE WILL** AND **SAPIENCE** ARE MUTUALLY **DEPENDENT**
 - THEREFORE **UNLESS** BAD THINGS HAPPEN, YOU **CAN'T** HAVE FREE WILL

KNOWLEDGE

- **WE** KNOW THAT THE REALITIES WE CREATE ARE CONSEQUENT ON REALITY
- THE NPCs WE CREATE **DON'T** KNOW THIS UNLESS WE **TELL** THEM
- SO, **DO** WE TELL THEM?
- WHETHER WE DO OR NOT DEPENDS ON WHY WE **CREATED** THE REALITY
- FOR SOME REASONS, **CLEARLY** WE'D TELL THEM
 - IF WE WANT TO BE **WORSHIPPED** BY THEM
- FOR OTHER REASONS, WE **WOULDN'T**
 - WE'RE **SIMULATING** SOME ASPECT OF REALITY

CORRECTION

- **BECAUSE** THEY'RE FREE-THINKING, THEY'RE GOING TO **SPECULATE** ON THEIR OWN EXISTENCE **REGARDLESS**
- THEY MAY WELL READ INTO THE **DESIGN** OF THEIR REALITY SIGNS THAT IT HAS **GODS**
 - WHICH IS **TRUE**, IT DOES
- THEY WILL BE COMPLETELY **WRONG** ABOUT OUR NATURE, THOUGH, UNLESS WE **TELL** THEM
 - EVEN **THEN** THEY MAY NOT BELIEVE US
- SHOULD WE **CORRECT** THEIR FALSE BELIEFS?
 - AGAIN, IT DEPENDS ON WHY WE CREATED THE REALITY

PLAYERS

- THE SITUATION IS **COMPLICATED** BY THE PRESENCE OF **PLAYERS**
- PLAYERS ARE PEOPLE FROM REALITY WHO **VISIT** THE REALITY WE HAVE CREATED
- WE HAVE **NO CONTROL** OVER THEM
- THEY COULD TELL NPCs **ANYTHING** AND WE COULDN'T STOP THEM
 - EVEN THAT **THEY'RE** THE GODS
- WE MERELY HAVE TO CLEAR UP THEIR **MESS**
- NOTE THAT **VISITORS** FROM REALITY WOULD **EXPOSE** REALITY'S **EXISTENCE**

QUESTIONS

- IF OUR NPCs **KNOW** THERE'S A HIGHER REALITY, THEY'LL ASK **AWKWARD** QUESTIONS
 - CAN WE **VISIT** THIS REALITY?
 - DO WE GET TO GO THERE WHEN WE **DIE**?
 - **WHY** DO WE DIE IN THE FIRST PLACE?
 - WHAT'S THE **POINT** OF OUR EXISTENCE?
- YOU'D BETTER HAVE SOME **ANSWERS**...
 - YES, WE CAN GIVE YOU CONTROL OF A ROBOT
 - NO, YOU DIE WHEN YOU DIE
 - SO EVERYONE ELSE CAN DEVELOP
 - TO MAKE US POTS OF MONEY

CERTAINTY

- IS THE REALITY WE CREATE **DETERMINISTIC**?
 - IS THERE **UNCERTAINTY** IN IT?
- IF THERE **ISN'T**, OUR NPCs **DON'T** HAVE FREE WILL, THEY MERELY **THINK** THEY HAVE IT
 - WE COULD **RECONSTRUCT** THEIR REALITY AS IT IS NOW SIMPLY BY **REBOOTING** IT FROM ITS STARTING CONDITIONS AND **RUNNING** IT AWHILE
- THE **ENTIRETY** OF A DETERMINISTIC REALITY IS EMBODIED IN ITS CODE PLUS STARTING SET-UP
 - *EVE ONLINE* GENERATED ITS UNIVERSE PROCEDURALLY
 - IT USED **42** AS THE RANDOM-NUMBER SEED

UNCERTAINTY

- A **NON-DETERMINISTIC** UNIVERSE INTRODUCES GENUINE **UNCERTAINTY**
 - FOR EXAMPLE BY USING A **RNG**
- THIS MEANS NPCs CAN HAVE **FREE WILL**
- HOWEVER, IT MEANS WE, THE GODS, ARE NOT **OMNISCIENT**
- WE **CAN'T** DUMP THE REALITY'S **STATE** AND FIGURE OUT WHAT WILL HAPPEN **NEXT**
 - IN A **DETERMINISTIC** REALITY, WE **CAN**
- THEREFORE NPC **FREE WILL** AND GOD **OMNISCIENCE** ARE **INCOMPATIBLE**

BUT NO!

- UNCERTAINTY DOESN'T **HAVE** TO COME FROM A RANDOM-NUMBER GENERATOR
- **PLAYERS** WILL INTRODUCE UNCERTAINTY INTO WHAT MIGHT **OTHERWISE** BE AN ENTIRELY **DETERMINISTIC** REALITY
- THIS MEANS THAT THE GODS **CAN** BE OMNISCIENT WITH RESPECT TO THE REALITY **AND** THAT ITS NPCs CAN HAVE FREE WILL
- SO, IF A REALITY'S GODS ARE **OMNISCIENT**, THEN ITS NPCs DERIVE THEIR **FREE WILL** FROM VISITORS COMING FROM THE **GODS'** REALITY

SUB-SUB-REALITIES

- OUR NPCs LIVE IN A **SUB**-REALITY OF REALITY
- SOONER OR LATER, THEY WILL ATTEMPT TO CREATE THEIR **OWN** SUB-SUB-REALITIES
- WHETHER WE **LET** THEM OR NOT DEPENDS ON WHY WE CREATED **THEIR** REALITY
 - **SOME** MOTIVATIONS CARE, MOST **DON'T**
- IT RAISES A **NEW** QUESTION, THOUGH
- HOW DO **WE** TREAT THE **NPCS** IN THE REALITIES OUR **OWN** NPCs HAVE CREATED?
 - DO WE LET OUR NPCs HAVE **FREE REIN**?
 - WHAT IF OUR NPCs **MISTREAT** THEIR NPCs?

MOVEMENT

- BECAUSE THE **SUB**-REALITY AND **SUB-SUB**-REALITY ARE BOTH CONSEQUENT ON REALITY, WE CAN IN THEORY **MOVE** NPCs BETWEEN THEM
- WE COULD **ASCEND** A SUB-SUB-REALITY'S NPC TO A SUB-REALITY AS A **REGULAR** NPC IN THAT SUB-REALITY
- WE COULD **DESCEND** A SUB-REALITY'S NPC TO MAKE THEM AN NPC IN THE VERY SUB-SUB-REALITY THEY **CREATED!**
- YES? NO? HOW WOULD WE **BEGIN** TO DECIDE WHETHER DOING THIS IS ETHICAL OR NOT?

FINAL POINT

- I HAVE A **FINAL** POINT WITH WHICH I'D LIKE TO END
- THIS TALK HAS CONCERNED THE RESPONSIBILITIES THAT WE, AS **GODS** OF THE REALITIES WE CREATE, HAVE FOR THE **NPCS** OF THOSE REALITIES
- IN REALITY, **WE'RE** THE NPCS
- **MANY** PEOPLE BELIEVE THAT THERE ARE ONE OR MORE GODS **OF** REALITY
- EVERYTHING **WE** CAN DO TO **OUR** NPCS, ANY GOD OF REALITY CAN DO TO **US**

ANSWERS?

- I'VE RAISED A **NUMBER** OF QUESTIONS TODAY ABOUT HOW TO **TREAT** NPCs
- YOU'LL HAVE BEEN **PONDERING** HOW YOU'D ANSWER THEM ACCORDING TO YOUR **OWN** MORAL CODE
 - THOSE OF YOU NOT READING EMAILS...
- DO YOUR OWN MORALS **MATCH** THE ONES THAT ANY (PRESUMED) GOD OF REALITY SEEMS TO HAVE **EXHIBITED**?
 - WHAT DOES THAT SAY ABOUT **YOU**?
 - WHAT DOES THAT SAY ABOUT THE **GODS**?

NOT FORGETTING...

- I SAID **EARLIER** THAT I'D GET **BACK** TO THOSE OF YOU WHO DECIDED THAT SAPIENT NPCs ARE **NOT** MORALLY-CONSIDERABLE
- WELL, **YOU** ARE SAPIENT NPCs
- BY YOUR **OWN** ARGUMENT, **YOU** ARE THEREFORE NOT MORALLY-CONSIDERABLE
- SO, NONE OF US HAVE TO PAY **ANY** ATTENTION TO YOUR OPINIONS **WHATSOEVER**

- **ETHICS** FROM **ESSEX** – WHO KNEW?