

THE PAST, PRESENT AND FUTURE OF GAMES

STOCKHOLM UNIVERSITY

19TH MAY, 2016

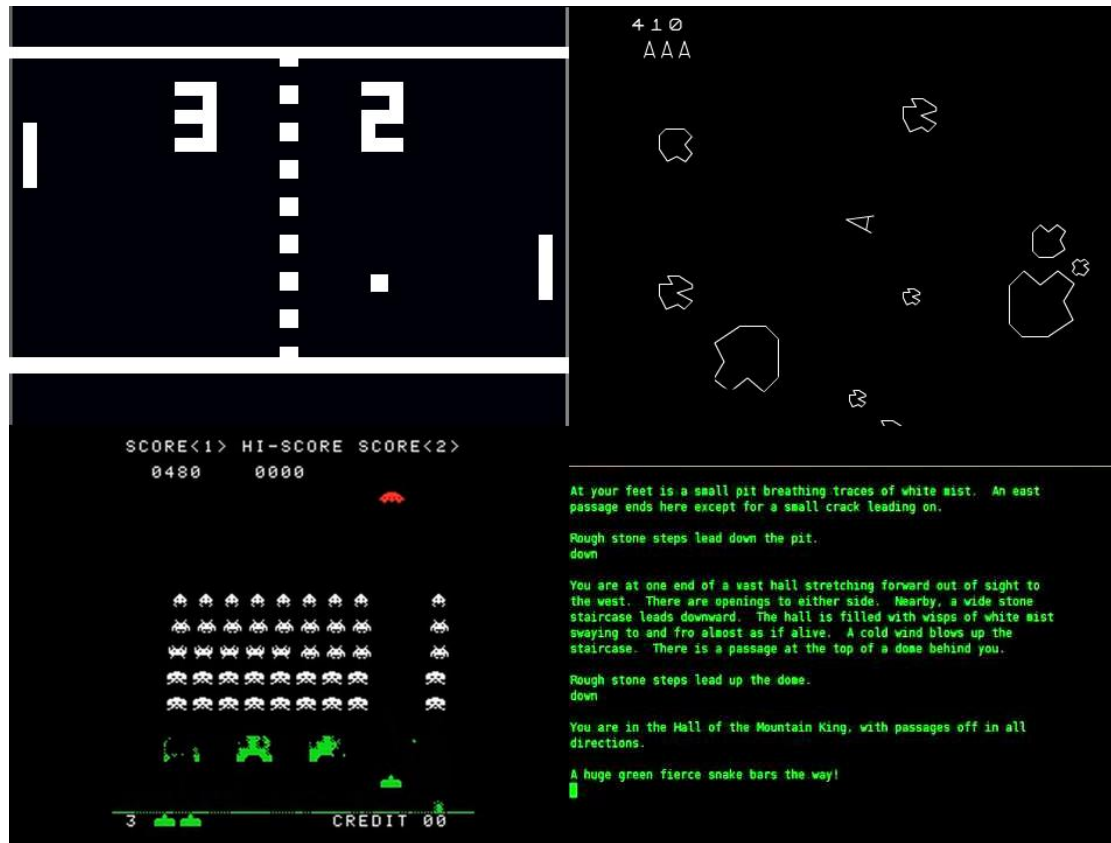
PROF. RICHARD A. BARTLE

INTRODUCTION

- SO, I WAS TOLD TO EXPECT A **MIXED** AUDIENCE TODAY
 - MEMBERS OF THE GENERAL **PUBLIC**
 - RESEARCHERS
 - GAMES STUDENTS
- I WAS ALSO GIVEN A VERY **BROAD** AND VERY **DEEP** TOPIC ON WHICH TO SPEAK
 - “THE PAST, PRESENT AND FUTURE OF GAMES”
- FRANKLY, THIS IS AN **IMPOSSIBLE** TASK, SO I’M GOING TO FAIL **MISERABLY**

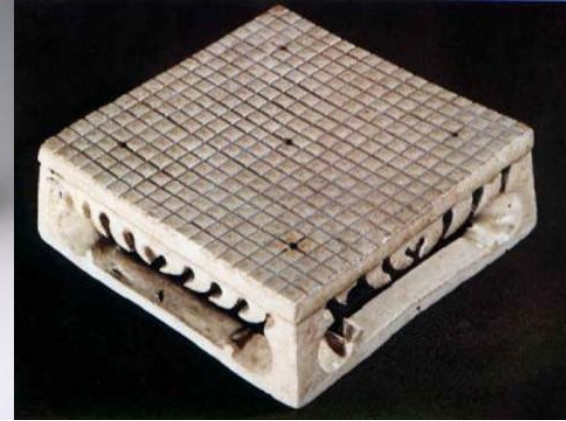
THE PAST

- WHEN I ASK MY **STUDENTS** TO SUGGEST SOME **OLD** GAMES, **THIS** IS WHAT THEY SAY:



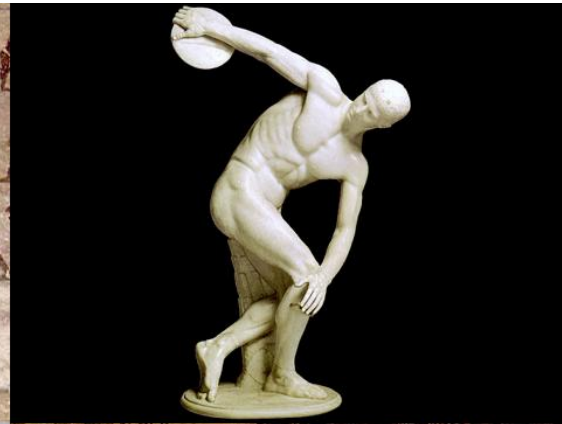
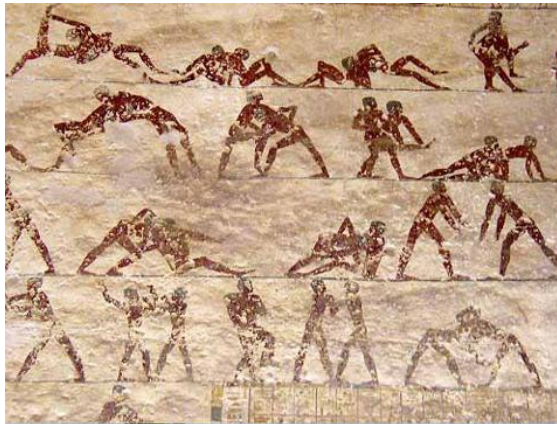
THE PASTER

- GAMES ARE MUCH **OLDER** THAN THAT, THOUGH!
 - “OH, YOU INCLUDE **NON-COMPUTER** GAMES?”



THE PASTEST

- NO, **OLDER** THAN **THAT**, TOO
 - “**SPORTS** ARE GAMES, THEY’RE **REALLY** OLD!”



THE PRE-PAST

- NO, NO, NO! **THIS** IS HOW OLD GAMES ARE:



OLD

- FAR FROM BEING A **MODERN** PHENOMENON, GAMES ARE **OLDER** THAN **HUMANITY**
- OF THE **OTHER** ARTS, ONLY **MUSIC** AND **DANCE** CAN MAKE THE SAME CLAIMS
 - EAT **THAT**, LITERATURE!
- NOW YOU **MAY** HAVE NOTICED THAT I SNEAKED IN A **NOTION** THERE THAT GAMES ARE **ART**
- WELL YES: GAME **DESIGN** IS AN ART FORM AND GAMES THEMSELVES ARE **WORKS** OF ART
 - EXCEPT EVOLVED FOLK GAMES SUCH AS TAG

OLD GAMES

- OBVIOUSLY, HUMANS DESIGN **BETTER** GAMES THAN DO ANIMALS
- ARE OUR GAMES **TODAY** BETTER THAN THOSE OF THE **PAST**, THOUGH?
- WE'VE ADVANCED **TECHNOLOGICALLY**, BUT HUMANS IN THE PAST WERE EVERY BIT AS **CLEVER** AS WE ARE
 - THEIR **BRAINS** WERE THE SAME AS OURS
- THEY DID WHAT THEY **COULD** WITH THE TECHNOLOGY **AVAILABLE** TO THEM

- HERE'S AN **EXAMPLE** OF WHAT I MEAN
- SIR *GAWAIN AND THE GREEN KNIGHT* IS ONE OF THE GREATEST WORKS IN MEDIEVAL **ENGLISH**
 - TO **SURVIVE** TO THE **PRESENT** DAY, THAT IS
 - IT WAS PROBABLY ONLY THOUGHT OF AS A **MINOR** PIECE WHEN IT WAS WRITTEN IN THE 14TH CENTURY
- ITS **EXTRAORDINARILY** WELL STUDIED
- ITS A POEM **2,530** LINES LONG GROUPED AS **101** STANZAS (PARAGRAPHS) COLLECTED AS **FOUR** FITTS (CHAPTERS)

ROMANCE

- *SIR GAWAIN AND THE GREEN KNIGHT* IS A MIDDLE ENGLISH ALLITERATIVE **ROMANCE**
 - ROMANCE AS IN **HEROIC QUEST**
- THE STANZAS **END** WITH A FIVE-LINE "BOB AND WHEEL" THAT **COMMENT** ON THE OTHER LINES
- THE WAY IT WAS **USED**, EACH EVENING THE AUDIENCE WOULD BE READ A **FITT**
- THEY HAD THE **NEXT** DAY TO DISCUSS WHAT **HAD** HAPPENED AND WHAT THEY THOUGHT **WOULD** HAPPEN

PLOT

- THE PLOT CONCERNS THE **GREEN KNIGHT**
 - þE KNYȝT IN þE GRENE
- HE CHALLENGES THE KNIGHTS OF THE ROUND TABLE TO **CHOP** HIS HEAD OFF, ON CONDITION HE GETS TO DO THE **SAME** IN A YEAR AND A DAY
- SIR **GAWAIN** VOLUNTEERS TO DO THE DEED
- HE **DECAPITATES** THE GREEN KNIGHT, WHO THEN **PICKS** UP HIS **HEAD** AND RIDES OFF
- WHEN THE ANNIVERSARY APPROACHES, GAWAIN GOES TO MEET HIS **FATE**

CASTLE

- HE COMES ACROSS A **CASTLE** WHERE HE IS MADE A WELCOME **GUEST**
- THE **LORD** OF THE CASTLE PROPOSES AN **EXCHANGE**
- HE'LL GIVE GAWAIN WHAT **HE** KILLS WHILE OUT HUNTING IF GAWAIN GIVES **HIM** WHATEVER HE **RECEIVES** WHILE THE LORD IS AWAY
 - GAWAIN, A LITTLE PUZZLED, AGREES
- ONLY, **WHEN** THE LORD GOES OUT HUNTING, HIS WIFE **KISSES** GAWAIN

REPETITION

- THIS HAPPENS **THREE** TIMES, WITH THE EVENTS OF THE HUNT **REFLECTING** GAWAIN'S EXPERIENCE WITH THE LORD'S WIFE
- **FINALLY**, SHE GIVES HIM A **CHARM** TO DEFEND AGAINST DECAPITATION
 - HE **ACCEPTS** IT BUT DOESN'T **DECLARE** IT
- ON THE DAY HE **MEETS** THE GREEN KNIGHT, HE READIES HIMSELF TO BE **KILLED**
- YET THE GREEN KNIGHT ONLY **NICKS** HIM!
- **HE** WAS THE LORD AND IT WAS ALL A **TEST**

CHEAT

- SO WHY AM I **MENTIONING** THIS?
- THE STORY IS ABOUT A **GAME**
 - THE **BEHEADING** GAME
 - ITS A **COMMON** GAME IN MEDIEVAL LITERATURE
- IT ALSO HAS THE **EXCHANGE** GAME
- GAWAIN **CHEATS** AT THE EXCHANGE GAME TO **CHEAT** AT THE BEHEADING GAME
- THIS IS WHY HE GETS A **NICK**
 - OUTWARD **SCARS** WERE SEEN AS SYMBOLS OF INNER **CORRUPTION**

WOW!

- THE MIDDLE ENGLISH WORD FOR **GAME** IS **GOMEN**
 - ITS USED **18** TIMES IN THIS POEM
- THE MIDDLE ENGLISH WORD FOR **MAN** IS **GOME**
 - IT APPEARS **21** TIMES, 15 IN REFERENCE TO THE GREEN KNIGHT
- THIS **ISN'T** FOR ALLITERATIVE PURPOSES
 - ITS **NEVER** USED WITH GAWAIN
- IT TELLS US THE GREEN KNIGHT IS **PLAYING**

WORDPLAY

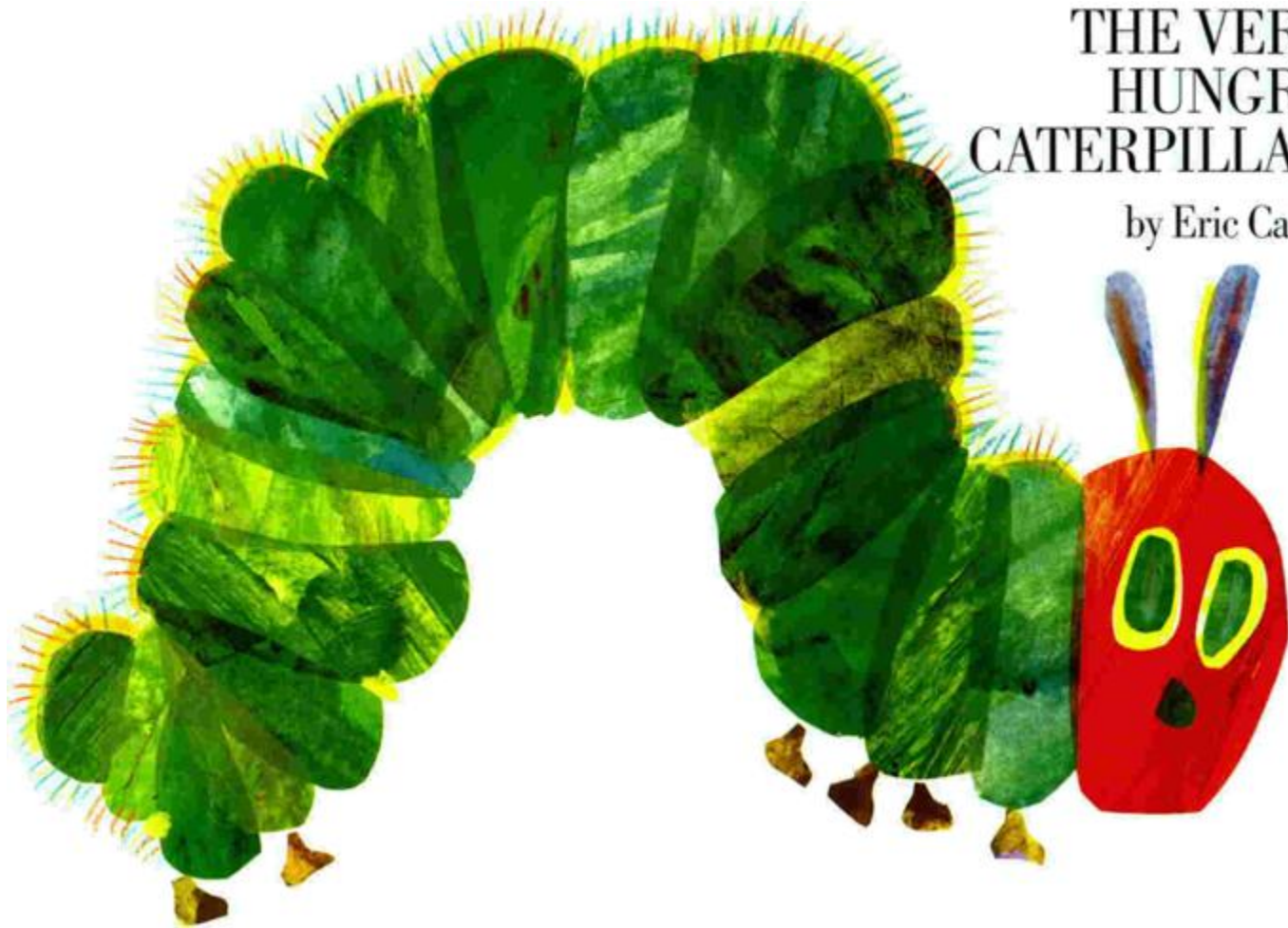
- THE POEM CONTAINS MUCH **WORDPLAY**
 - IT'S PACKED **FULL** OF **PUZZLE** ELEMENTS
 - WORDS WITH DOUBLE AND **TRIPLE** MEANINGS
- IT'S A **GAME** BEING PLAYED BY THE **NARRATOR** ON THE **AUDIENCE**
 - WHAT'S MORE, THE AUDIENCE **REGARDED** IT AS SUCH AT THE **TIME**
- AS FOR WHAT IT'S **SAYING?**
- PEOPLE **TREAT** LIFE AS A GAME, BECAUSE LIFE **IS** A GAME

TVHC

- THIS IS A VERY HUNGRY CATERPILLAR

THE VERY
HUNGRY
CATERPILLAR

by Eric Carle



- SIR GAWAIN AND THE GREEN KNIGHT HAS BEEN STUDIED IN INCREDIBLE DETAIL AS **LITERATURE**, BUT NOT AS A **GAME**
- GAMES **ARE** STUDIED, BUT NEVER **AS GAMES**
 - THEY'RE ALWAYS STUDIED AS SOMETHING **ELSE**
- HERE'S A ROUGH LIST OF THE **ORDER** IN WHICH GAMES HAVE BEEN STUDIED
 - **NOT** THE ORDER IN WHICH THEY WERE INVENTED
 - NOTE: THE FIRST TWO WERE PROBABLY STUDIED IN **ANCIENT** TIMES, BUT WE'VE LOST THE THEORIES

GAMES AS

- GAMES HAVE BEEN STUDIED:
 - AS PHENOMENA OF **PROBABILITY** (GAMBLING – JACOB BERNOULLI, EARLY-18TH CENTURY)
 - AS **SIMULATIONS** (WARGAMES – PRUSSIAN GENERAL STAFF, EARLY-19TH CENTURY)
 - AS **APPLICATIONS** (EDUCATION – FRIEDRICH FRÖBEL, MID-19TH CENTURY)
 - WITHIN THE **CONTEXT** OF **RULE** SETS (CRICKET AND BASEBALL STATS – HENRY CHADWICK, MID-19TH CENTURY)
 - AS **PSYCHOLOGICAL** PHENOMENA (SPORTS – NORMAN TRIPLETT, LATE-19TH CENTURY)
 - (CONTINUED NEXT SLIDE)

CONTINUED

- AS **CONTENT-CREATION** SYSTEMS (STORY GENERATION
 - WILLIAM WALLACE COOK *PLOTTO*, EARLY-20TH CENTURY)
- AS **CULTURAL** PHENOMENA (ALL GAMES – HUIZINGA, MID-20TH CENTURY)
- AS **COMPETITION** (GAME THEORY – JOHN VON NEUMANN, MID-20TH CENTURY)
- AS **SOCIOLOGICAL** PHENOMENA (SPORTS SOCIOLOGY – NORTH AMERICAN SOCIETY FOR THE SOCIOLOGY OF SPORT, LATE 20TH CENTURY)
- AS OBJECTS OF **CRITICAL** STUDY (GAME STUDIES – ESPEN AARSETH, LATE 20TH CENTURY)
- NONE OF THESE STUDY GAMES **AS GAMES**

WHY NOT?

- NOW THAT **MAY** SEEM A LITTLE **UNFAIR**
 - PARTICULARLY ON GAME STUDIES
- THERE'S NOTHING EVEN IN **THAT** ABOUT GAME **DESIGN**, THOUGH
- THERE ARE **BOOKS** APLENTY ON GAME DESIGN, BUT NO MATCHING **THEORY**
- THIS IS BECAUSE **WIDER** CULTURE HAS YET TO **MOVE** ENOUGH TO CONSIDER GAMES AS **ART**
- WE ONLY GET TO STUDY THEM AT **ALL** BECAUSE COMPUTER GAMES MAKE SO MUCH **MONEY**

NEGATIVE

- UP UNTIL **RECENTLY**, GAMES RESEARCH WAS DRIVEN BY A **NEGATIVE** ATTITUDE TO GAMES
- ACADEMICS WHO BUILT THEIR CAREERS ON AN **ANTI-GAMES** PLATFORM ARE NOW SEEING THAT **HEWN** FROM BENEATH THEM
- **PSYCHOLOGISTS** WHO FOR TWO DECADES HAVE SAID **VIOLENT** GAMES MAKE PEOPLE **AGGRESSIVE** ARE AT PARTICULAR RISK
- LET'S LOOK AT **CORRELATIONS**
 - $R=0$ NO CORRELATION; $R=1$ 100% CORRELATION

EXAMPLE 1

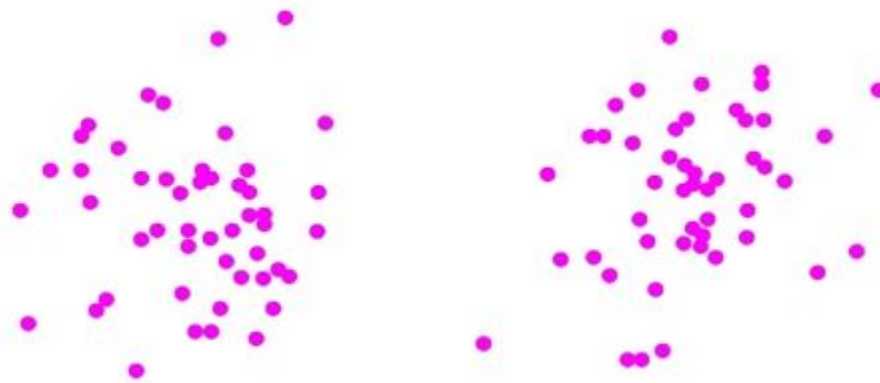
- HERE'S WHAT A **PEARSON** PRODUCT-MOMENT CORRELATION COEFFICIENT **LOOKS** LIKE FOR **SCATTER** DIAGRAMS:



- THE LEFT ONE IS FOR **$R=0.99$** , THE RIGHT FOR **$R=0.9$**
 - FOR $R=1$, THE DOTS WOULD ALL BE ON THE $X=Y$ LINE

EXAMPLE 2

- NOW LET'S LOOK AT **SMALLER** VALUES:



- THE LEFT HAS **$R=0$** , THE RIGHT HAS **$R=.3$**
 - HARD TO TELL WHICH IS WHICH IF I HADN'T **SAID**
- THE CORRELATION BETWEEN PLAYING VIOLENT GAMES AND SHOWING AGGRESSIVE BEHAVIOUR IS **CONSISTENTLY** AROUND **$R=.15$**

PRESENT

- THE TIDE IS **TURNING**, BUT WE HAVE YET TO GET TO THE POINT WHERE PEOPLE ROUTINELY **TALK** ABOUT GAME DESIGN AS AN ART FORM
- IT **HAS** TO **BE** ONE, BECAUSE HOW COULD IT **NOT** BE?
- ASIDE, **NON-GAMER** ART TYPES WILL OFTEN ASK, QUITE **PATRONISINGLY**: "BUT CAN A **GAME** EVER MAKE YOU **CRY**?"
- THERE'S A ONE-WORD **ANSWER** TO THIS
- **PERMADEATH**

SLOW PROGRESS

- PART OF THE **REASON** FOR SLOW PROGRESS IS THAT GAME DESIGNERS LACK A COMMON **VOCABULARY** FOR DESCRIBING GAMES
 - THEY HAVE **WORDS** BUT NO **FORMALISM**
- WORSE, **NEW** WOULD-BE DESIGNERS ARE OFTEN **MIS-TAUGHT** BY PEOPLE WHO KNOW **NOTHING** ABOUT GAME DESIGN
 - IF YOUR UNDERSTANDING OF THE TERM “MECHANICS” COMES FROM THE **MDA** FRAMEWORK, **DON'T** USE IT IN FRONT OF PROFESSIONAL DESIGNERS

FORMAL

- DESIGNERS **NEED** A **FORMAL** SYSTEM FOR ANNOTATING GAMEPLAY
- MUSIC, DANCE, **POETRY** AND ARCHITECTURE HAVE SUCH SYSTEMS
- WHY CAN'T **WE** HAVE ONE?
- THE **BEST** WE HAVE ARE:
 - GAME DESIGN **PATTERNS**, THAT HELP WANNABE DESIGNERS BUT CONSTRAIN ACCOMPLISHED DESIGNERS
 - SOME ATTEMPTS AT GAME **GRAMMARS**, WHICH ONLY WORK FOR LIMITED MECHANICS

FUTURE

- WHEN DISCUSSING THE *FUTURE* OF GAMES, PEOPLE TEND TO THINK **HARDWARE**
- THIS IS BECAUSE THEY PLAY **VIDEO** GAMES AND HAVE BEEN **TRAINED** OVER THE YEARS TO VALUE **GRAPHICS** OVER **GAMEPLAY**
- **INTERFACE** IS NOT **GAMEPLAY**
- GAMES ARE GAMEPLAY, **NOT** INTERFACE
 - THERE'S NO **NIGHT** IN *SW:TOR* BECAUSE CUT SCENES
 - NIGHT WOULD HAVE ADDED **GAMEPLAY**

RELATIONSHIP

- A **BAD** INTERFACE CAN **DESTROY** GAMEPLAY, BUT A **GOOD** INTERFACE CAN'T **CREATE** IT
- [TELL THEM THE FUTURE OF VR?]
- THE FUTURE OF **GAMES** WILL COME FROM THEIR **GAMEPLAY**
- THAT **SAID**, SOME GAMEPLAY-TO-COME MAY ONLY BE **ENABLED** BY BETTER HARDWARE
 - TALKING TO NPCs FREEFORM IN NATURAL LANGUAGE, FOR EXAMPLE
- SO WHAT **IS** THE FUTURE OF GAMES?

MIXED

- I SAID AT THE **BEGINNING** THAT THIS IS A **MIXED** AUDIENCE
- THE FUTURE OF GAMES FOR **YOU** DEPENDS ON THE SUB-AUDIENCE OF WHICH YOU'RE PART
 - MEMBERS OF THE GENERAL **PUBLIC**
 - RESEARCHERS
 - GAMES STUDENTS
- YOU WON'T NECESSARILY **STAY** IN THAT GROUP **INDEFINITELY**, THOUGH
 - SO PAY ATTENTION TO THE FUTURES OF THE OTHERS!

GENERAL PUBLIC

- PEOPLE WHO PLAY GAMES **DEVELOP** IN THEIR UNDERSTANDING OF THEM
- **30,000,000** COPIES OF *THE VERY HUNGRY CATERPILLAR* HAVE BEEN SOLD, BUT ADULTS AREN'T READING MORE **CATERPILLAR** BOOKS
- THEY'RE READING MORE **BOOKS**
- LIKEWISE, ALTHOUGH PLAYERS MAY **START** WITH **CASUAL** GAMES, THEY'LL MOVE **ON**
 - THEY WON'T NECESSARILY ALL MOVE ON IN THE SAME **DIRECTION**, THOUGH

ANALOGY

- JUST BECAUSE PEOPLE **START** WITH *THE VERY HUNGRY CATERPILLAR*, THEY DON'T ALL HAVE TO **END** AT THE SAME PLACE
- **SOME** END WITH TOLSTOY'S *WAR & PEACE* OR SHAKESPEARE'S SONNETS OR GARCÍA MÁRQUEZ'S SHORT STORIES
- **MOST** ARE GOING TO BE HAPPY WITH DAN BROWN OR E.L. JAMES OR JEFFREY ARCHER
- A SMALL **FEW** WILL TURN TO WRITING THEIR **OWN** FICTION (GAMES, IN OUR CASE)

BROAD OR DEEP

- WE'RE ALREADY **SEEING** THIS HAPPEN
 - EG. A MOVE FROM **CASUAL** GAMES TO LIGHT MANAGEMENT SIM GAMES
- SOME **SIMPLE** CASUAL GAMES HAVE GONE **FRIGHTENINGLY** DEEP
 - EG. FIND-THE-HIDDEN-OBJECT GAMES
- THIS IS **FINE** IF THE **GATEWAY** GAMES ARE STILL SHALLOW, BUT CAN BE SELF-DEFEATING
 - ADVENTURE GAMES WENT **TOO** DEEP AND DIED
 - [TELL THEM ABOUT *GABRIEL KNIGHT 3?*]

DIVISION

- GAMES NOW HAVE **CLOUT** THEY DIDN'T BEFORE
- BECAUSE OF THIS, THEY'LL BECOME MORE **NICHE AND MORE SOPHISTICATED** (LIKE BOOKS)
- YOU **WILL** GET BETTER GAMES
 - AS IN, BETTER FOR **YOU**
- YOU **WILL** HAVE A GREAT DEAL OF **CHOICE**
- IT'S ALL LOOKING **GREAT!**
 - THE ONLY **WORRY** IS THAT THE **REVENUE** MODEL HAS TO BE WORKED OUT SO PEOPLE CAN AFFORD TO **MAKE** GAMES

RESEARCHERS

- RESEARCHERS WILL GET TO PLAY GAMES **TOO**, BUT THEY'LL **ALSO** GET TO **STUDY** THEM
- THEY CAN DO **ALL** THE THINGS THEY WERE DOING **BEFORE**, BUT ON **BETTER** GAMES
 - APPLYING GAMES TO YOUR **FIELD** (EG. ECONOMICS)
 - APPLYING YOUR FIELD TO **GAMES** (EG. AI)
 - PLAYING GAMES FOR **FUN** AND PRETENDING IT'S **RESEARCH** (EG. GAMES STUDIES)
 - CREATING TOOLS TO HELP **MAKE** GAMES
 - CREATING TOOLS TO HELP **ANALYSE** GAMES

OPEN DOOR

- THAT **LAST** ONE IS AN OPEN DOOR TO **UNEXPLORED** TERRITORY
- GAME ANALYSIS PROMISES HUGE **REWARDS** YET IS ALMOST ENTIRELY **UNEXAMINED**
- IF YOU GET IN **EARLY**, YOU COULD HAVE A **THEORY** NAMED AFTER YOU!
 - [TELL THEM YOUR DIJKSTRA ANECDOTE?]
- GAMES PROMISE TO OPEN UP **AMAZING** NEW AREAS OF RESEARCH
 - ONCE THEY BECOME ACADEMICALLY **RESPECTABLE...**

GAME STUDENTS

- YOU'LL GET TO **MAKE GAMES!**
- PEOPLE WILL **KNOW** YOUR **NAME!**
- OK, SO FEW PEOPLE KNOW THE NAMES OF GAME DESIGNERS **NOW**, BUT THAT WILL CHANGE
 - HOLLYWOOD LOST ITS STUDIO SYSTEM BEFORE EVEN I WAS BORN, AND GAMES WILL GO THE SAME WAY
- AH, BUT **WHY** DO YOU WANT TO MAKE GAMES INSTEAD OF WRITING BOOKS, SCREENPLAYS, **OPERAS**, BATTLE PLANS, GREETING CARDS..?
 - “EVER SINCE I WAS A SMALL CHILD...”

HOUSES

- I **LOVE** LIVING IN HOUSES!
- THEY KEEP THE **WEATHER** OUT AND STOP WILD **ANIMALS** FROM **ATTACKING** ME IN MY **SLEEP**
- HOUSES ARE **GREAT!**
- THAT DOESN'T MEAN I WANT TO BE AN **ARCHITECT** OR A **CONSTRUCTION** WORKER, THOUGH
- WHY DO **YOU** WANT TO MAKE **GAMES?**

EXPRESSION

- WELL, GAMES ARE VEHICLES FOR PERSONAL **EXPRESSION**
- YOU CAN **SAY** THINGS IN GAMES THAT YOU **CAN'T** SAY ANY OTHER WAY
- **SOME** PEOPLE SAY THINGS THROUGH MUSIC OR PAINTING OR SCULPTURE OR DANCE OR ...
- **YOUR** MEDIUM IS **GAME** DESIGN
- ITS A **NEW** MEDIUM, TOO
 - **GAMES** ARE OLD, BUT GAME **DESIGN** IS NEW

OPPORTUNITY

- NOW IS A **WONDERFUL** TIME TO BE A GAME DESIGNER!
 - IT'S LIKE BEING AN ARTIST IN THE RENAISSANCE
- YOU HAVE THINGS TO SAY – SO **SAY** THEM!
- **DON'T** JUST MAKE GAMES BECAUSE MAKING GAMES IS **FUN**, THOUGH
 - SO'S PUSHING OVER SMALL **CHILDREN**, BUT YOU CAN'T MAKE A CAREER OUT OF **THAT**
- **MAKE** GAMES BECAUSE WHATEVER IT IS YOU **WANT** TO SAY, GAMES LET YOU **SAY** IT

YOU

- LET'S RETURN TO THAT **MIXED** AUDIENCE...
- THE **PAST** OF GAMES IS THE **SAME** AS THE PRESENT AND THE SAME AS THE FUTURE
 - THE GENERAL **PUBLIC** ALWAYS **HAS** PLAYED GAMES AND ALWAYS **WILL** PLAY THEM
- THE **PRESENT** OF GAMES **DEFINES** THE FUTURE OF GAMES
 - RESEARCHERS CAN UNDERSTAND GAMES AS THEY **WERE** AND **ARE**, AND SO SHAPE WHAT THEY WILL **BECOME**

FUTURE

- THE FUTURE OF GAMES **IS** THE PEOPLE WHO WILL **MAKE** THEM
 - IT'S THE SAME FOR **EVERY** ART
- THE GAME **STUDENTS** AMONG YOU WILL USE GAMES TO **SPEAK** TO PEOPLE
 - TO **REACH** PEOPLE IN WAYS THAT HAVEN'T BEEN **SEEN** BEFORE
- TO FIND OUT WHO YOU ARE **YOURSELVES**
- TO **TAKE** WHAT THE **PRESENT** TELLS YOU ABOUT THE **PAST** AND **MAKE** THAT **FUTURE**

CONCLUSION

- WE'RE GOING TO GET **BETTER** GAMES
 - WE'RE GOING TO UNDERSTAND **WHAT** MAKES THEM BETTER
 - WE'RE GOING TO UNDERSTAND **HOW** TO MAKE THEM BETTER
 - WE'RE GOING TO UNDERSTAND **THAT** THEY ARE AN ART FORM WITH A **POWER** UNLIKE ANY OTHER'S
- GAMES HAVE THE POTENTIAL TO **FREE** HUMANITY
- PEOPLE **TREAT** LIFE AS A GAME, BECAUSE LIFE **IS** A GAME