

INFORMATION RECONSTRUCTION

UNPICKING THE GAMIFIR CALL FOR PAPERS

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GAMIFIR

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INTRODUCTION

- ONCE, I WAS AT A CONFERENCE ON **GAMES** AND **ARTIFICIAL INTELLIGENCE**
- THE **KEYNOTE** SPEAKER BEGAN: "I KNOW **NOTHING** ABOUT GAMES – I DON'T **PLAY** THEM, I DON'T **LIKE** THEM"
- HE CONTINUED: "HOWEVER, I **DO** KNOW ABOUT AI, AND I'VE BEEN TOLD SOME OF THIS **STUFF** **MAY** BE OF **INTEREST** TO YOU"
- NEEDLESS TO SAY, HE WASN'T EXACTLY **POPULAR** AMONG THE **GAMERS** PRESENT...

TODAY

- I AM **NOT** THAT MAN
- I AM **WORSE** THAN THAT MAN
- NOT ONLY DO I **NOT KNOW** ABOUT **INFORMATION RETRIEVAL**, I DON'T KNOW ABOUT **GAMIFICATION** EITHER
- I'M HERE BECAUSE SOME OF GAMIFICATION'S **CORE PRINCIPLES** ARE BASED ON MY WORK WITH **GAMES** (SPECIFICALLY MMOS)
 - THAT, AND I'M **CHEAP**
- SO, WHAT CAN I **TALK** ABOUT THAT WILL STOP YOU WANTING TO **LYNCH** ME?

MCDONALD'S

- HERE'S A PICTURE OF A **MCDONALD'S**



- SADLY I **DON'T** GET ANY MONEY FOR ADVERTISING THEM...

SUBJECT

- AS I DON'T KNOW ABOUT YOUR SPECIALISATION, I THOUGHT I'D BETTER **FIND OUT**
- TO **DO** THIS, I LOOKED AT THE **CALL FOR PAPERS** FOR THIS CONFERENCE
- THIS WAS ACTUALLY VERY **INFORMATIVE!**
- IT TOLD ME THAT **YOU** DON'T KNOW MUCH ABOUT GAMIFICATION **EITHER!**
 - OR, INDEED, **GAMES**
- I'M THEREFORE GOING TO **UNPICK** THE CFP, AS A WAY TO FIGURE OUT WHAT **CENTRAL** PROBLEMS YOU HAVE THAT NEED **FIXING**

- **THIS IS THE CALL FOR PAPERS:**
- Gamification is the application of game mechanics, such as leader boards, badges or achievement points, in non-gaming environments with the aim to increase user engagement, data quality or cost effectiveness. A core aspect of gamification solutions is to infuse intrinsic motivations to participate by leveraging people's natural desires for achievement and competition. While gamification, on the one hand, is emerging as the next big thing in industry, e.g., an effective way to generate business, on the other hand, it is also becoming a major research area. However, its adoption in Information Retrieval (IR) is still in its infancy, despite the wide ranging IR tasks that may benefit from gamification techniques. These include the manual annotation of documents for IR evaluation, the participation in user studies to study interactive IR challenges, or the shift from single-user search to social search, just to mention a few.

BREAKING IT UP

- OK, SO IT'S RATHER A **LOT** TO DO AT ONCE, SO I'LL GO THROUGH IT **PIECE BY PIECE**
 - RATHER **FINICKILY**, BUT I'M A PROGRAMMER...
- Gamification is
- IT IS **NOW**, IT DIDN'T **USED** TO BE
- IT USED TO MEAN MAKING THINGS THAT **WEREN'T** GAMES INTO **GAMES**
 - I HAVE EMAILS FROM 2002 USING IT IN THIS SENSE
- **NOW**, IT'S MAKING **GAMES** INTO THINGS THAT **AREN'T** GAMES
 - YOU **STOLE** OUR WORD!

MECHANICS

- the application of game mechanics, such as leader boards, badges or achievement points
- THOSE ARE **NOT** MECHANICS!
 - **NO** GAME DESIGNER WOULD CALL THOSE MECHANICS!
- MECHANICS ARE **MOVING PARTS**
 - LIKE **CODE**, AS OPPOSED TO **DATA**
- GAMES ARE **SYSTEMS** COMPRISED OF INTERACTING, **DYNAMIC** PROCESSES
- **INDIAN LOTTERY** IS A **MECHANIC**
- **BADGES** ARE A **TECHNIQUE** OR **TOKENS**

GAMING

- in non-gaming
- THE TERM "GAMING" REFERS TO **GAMBLING**
- SLOT MACHINES, ROULETTE AND BETTING ON **HORSES** ARE EXAMPLES OF **GAMING**
 - THERE ARE **GAMING** LAWS OVERSEEN BY **GAMING** BODIES THAT REFER TO THESE
 - THEY **DON'T** REFER TO *DUNGEONS AND DRAGONS* OR *GRAND THEFT AUTO 5*
- THAT SAID, GAMING LIES ON THE **BORDER** BETWEEN GAME **RULES** AND REAL **LAWS**
- SO THIS **IS** AN AREA OF INTEREST FOR YOU

ENVIRONMENTS

- environments
- WHY THE EMPHASIS ON **NON-GAME** ENVIRONMENTS?
- THESE TECHNIQUES CAN BE USED **WITHIN** GAME ENVIRONMENTS
 - GAMES **CAN** AND **DO** HAVE LEADERBOARDS, BOTH IN-GAME AND OUT-OF-GAME
- YOU SEEM TO WANT TO USE GAME-**DERIVED** TECHNIQUES FOR NON-GAME PURPOSES
- THAT **DOESN'T** MEAN YOU CAN'T USE THEM IN **GAMES**, THOUGH

TURF WAR

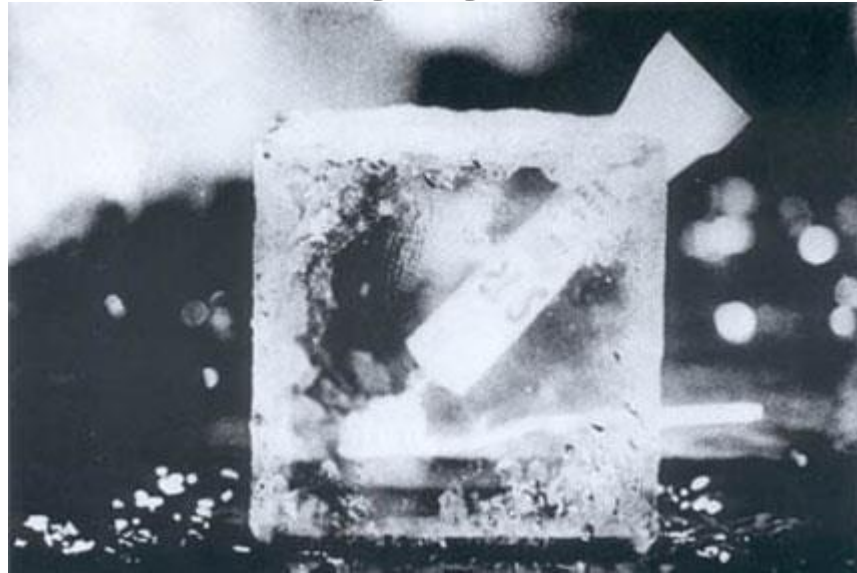
- GAMIFICATION SEEMS TO BE BEING DELIBERATELY **DISTANCED** FROM SERIOUS GAMES
 - OR GAMES FOR A PURPOSE, TRANSFORMATIONAL GAMES, WHATEVER THE IN-VOGUE TERM IS TODAY...
- IS THIS BECAUSE GAMIFICATION **IS** DIFFERENT AND **DISTINCT**, OR BECAUSE SERIOUS GAMES ARE **PASSÉ**?
- YOU **COULD** ARGUE THAT SERIOUS GAMES FORM A MERE **SUBCLASS** OF GAMIFICATION
- WHY IS IT YOU EXPLICITLY **RULE OUT** USING GAMES, THEN? WHAT DOES THAT **BUY** YOU?

AIMS

- with the aim
- PEOPLE USE GAMIFICATION FOR MANY **OTHER** REASONS, TOO
- A **LOT** OF EFFORT HAS GONE INTO USING IT FOR **MARKETING** AND **TEAM-BUILDING**
- GETTING A **GOLD STAR** AT MCDONALD'S DOESN'T MAKE YOU MORE **ENGAGED**, IT MAKES YOU MORE **RESPECTED**
 - AT LEAST BY MCDONALD'S EMPLOYEES...
- YOU'RE LIMITING YOUR **HORIZONS** BY FOCUSING ON JUST A FEW **KEY** USES

FRESH BREATH!

- HERE'S AN ADVERT FOR **GIBBS S R** TOOTHPASTE



- THE **FIRST** COMMERCIAL TO BE BROADCAST ON BRITISH TV
 - 8:12PM ON SEPTEMBER 22ND, 1955
- NO, **THEY** DON'T PAY ME EITHER...

EXAMPLES

- to increase user engagement, data quality or cost effectiveness.
- FINE, BUT CONSIDER THEIR **OPPOSITES** TOO
- EXAMPLE: IF I WANT TO **LOSE WEIGHT**, I'M **ALREADY** ENGAGED WITH THE SUBJECT
- GAMIFICATION ALLOWS ME TO **PREVENT** THE **LOSS** OF THE ENGAGEMENT I ALREADY **HAVE**
- **COULD** GAMIFICATION BE USED TO **MITIGATE** DETERIORATING DATA QUALITY?
 - **I** DON'T KNOW, BUT IF SO, IT'S **NOT** THE SAME AS INCREASING DATA QUALITY

SENTENCE 2

- A core aspect of gamification solutions
- UNFORTUNATELY, IT'S THE **SAME** CORE ASPECT FOR **ALL** APPLICATIONS
- PEOPLE ARE **EXTREMELY** GOOD AT **PATTERN-MATCHING**
- IF THEY SEE **YOUR** GAMIFICATION, THEY'LL **NOTICE** IT'S THE SAME AS EVERYONE **ELSE'S**
- PROBLEM: YOUR BADGES ARE **WORTHLESS**
 - AT LEAST WITH **SHOE SHOP** GAMIFICATION, YOU CAN GET **DISCOUNTS** ON SHOES...

MOTIVATION

- is to infuse intrinsic motivations to participate
- THERE ARE **TWO** RELEVANT INTRINSIC MOTIVATIONS **INVOLVED** HERE
 - **FUN** – THEY PARTICIPATE BECAUSE THEY THINK THEY'LL **ENJOY** IT
 - **WORTHINESS** – THEY PARTICIPATE BECAUSE THE SUBJECT OR OUTCOME **INTERESTS** THEM
- THIS IS **GOOD**, AS MOST **COMMERCIAL** GAMIFICATION USES **NEITHER**
 - THEY USE EXTRINSIC MOTIVATIONS, I.E. **BRIBERY**

DESIRES

- by leveraging people's natural desires for achievement
- AHA! THIS IS WHERE I **AM** AN EXPERT!
- ACHIEVEMENT **IS** A NATURAL DESIRE, BUT NOT FOR **EVERYONE**
- IN **MMOS**, WE KNOW THERE ARE **FOUR** MAIN TYPES OF PEOPLE WHO PLAY FOR **FUN**
 - ACHIEVERS
 - SOCIALISERS
 - EXPLORERS
 - KILLERS

INTERACTION

- YOU NEED **ALL 4** TYPES FOR A HEALTHY MMO
– EVEN KILLERS!
- IF YOU CONCENTRATE **ONLY** ON ACHIEVERS,
YOU'LL GET **NOWHERE**
- ACHIEVERS **LIKE** ACCOMPLISHING TASKS, BUT
THOSE TASKS HAVE TO BE **CHALLENGING**
- THEY NEED TO **BELIEVE** THAT TASKS ARE **TOO**
CHALLENGING FOR **SOME** PEOPLE
- **THOSE** PEOPLE MUST **NOT CARE** IF THEY FAIL
– **SOCIALISERS** FIT THE BILL PERFECTLY

MANAGEMENT

- and competition.
- PEOPLE LOVE COMPETITION **IF THEY WIN**
- IF THEY **DON'T** WIN, THEY **HATE** IT
- LEADERBOARDS **ALWAYS** HAVE THIS PROBLEM
 - “**IMAGINE** WHAT IT MUST BE LIKE TO BE NUMBER **1** OUT OF A **MILLION** PEOPLE!”
 - NO, IMAGINE WHAT IT MUST BE LIKE IF YOU'RE **OUT** OF THE **TOP 100** AND HAVE **NO CHANCE** OF **EVER** BEING NUMBER 1...
- SOLUTION: PERIODICALLY **CLEAR** LEADERBOARDS OR **PARTITION** THEM

NEXT BIG THING

- While gamification, on the one hand, is emerging as the next big thing in industry,
- ITS A **BANDWAGON**
- THIS KIND OF THING HAS BEEN GOING ON FOR **DECADES**, ONLY NOW IT HAS A **LABEL**
- WHEN I WAS AT **SCHOOL**, TEACHERS GAVE OUT **GOLD**, SILVER AND **OTHER-COLOUR** STARS
 - INTERESTINGLY, **MISSING** THE POINT THAT SOME KIDS WHO GOT **GOLD** WERE **UPSET** BY IT
 - THEY WANTED THE SAME COLOUR AS THEIR FRIENDS...

EFFECTIVE

- e.g., an effective way to generate business,
- THIS WILL BE TRUE **ONLY** UNTIL GAMIFICATION BECOMES **UBIQUITOUS**
- ONCE IT **DOES**, APPLICATIONS WILL HAVE TO BE **CREATED** TO WORK
- IT'S LIKE **ADVERTISING**
- THE **FIRST** TV ADVERTS COULD **DOUBLE** SALES
- AFTER A WHILE, THEY HAD MUCH **LESS** OF AN IMPACT BECAUSE PEOPLE GOT **USED** TO THEM
- NOW, THEY HAVE TO BE **DIFFERENT** TO WORK

RESEARCH

- on the other hand, it is also becoming a major research area.
- I DON'T KNOW ABOUT "**MAJOR**", BUT IT IS **INDEED** BECOMING A RESEARCH AREA
- IN MANY WAYS, IT ALREADY **IS** ONE, THOUGH!
- GAME DESIGNERS HAVE A **TECHNICAL** TERM THEY USE TO DESCRIBE THE USE OF **EXTRINSIC** METHODS TO MAKE PEOPLE PLAY
- "**CHEAP PSYCHOLOGICAL TRICKS**"
- GAMIFICATION IS, FUNDAMENTALLY, **PSYCHOLOGY**

GOOD NEWS

- However, its adoption in Information Retrieval (IR) is still in its infancy,
- THIS **IS** A VALID POINT
- INTERESTINGLY, THOUGH, IR IS **AHEAD** OF MOST OTHER FIELDS HERE
 - GAMIFICATION **COULD** BE APPLIED IN MANY OTHER AREAS, BUT PRACTITIONERS DON'T **REALISE** IT YET
- IT **MAY** BE THAT THERE'S SOMETHING **ABOUT** IR THAT MAKES IT PARTICULARLY **SUITABLE**
 - IT **COULD** BE WORTH WORKING OUT **WHAT...**

WIDE RANGE

- despite the wide ranging IR tasks that may benefit from gamification techniques.
- I DON'T KNOW WHAT IR TASKS **INVOLVE**
 - EXCEPT THAT THEY INVOLVE **PEOPLE**, OTHERWISE THEY'D BE **DATA-MINING** TASKS
- I WOULD EXPECT THERE **IS** A LOT THAT CAN BE DONE WITH **GAMIFICATION**, THOUGH
 - AS INDEED THERE IS WITH **GAMES**
- MORE PEOPLE **WILL** TAKE UP GAMIFICATION IF THE PIONEERS – **YOU!** – SHOW ITS EFFICACY

INCLUDING

- These include the manual annotation of documents for IR evaluation, the participation in user studies to study interactive IR challenges, or the shift from single-user search to social search, just to mention a few.
- OK, SO THE **REST** OF THE CFP IS GIVING EXAMPLES OF **EXISTING** USES, SO PEOPLE CAN TELL IF THEIR WORK WILL **FIT**
 - FAIR ENOUGH!
- THERE **DOES** SEEM TO BE SCOPE FOR A LOT **MORE** HERE, SO YOU'RE IN A **GOOD** PLACE

LESSONS

- SO WHAT HAVE I **LEARNED** FROM THIS EXERCISE?
- IR INVOLVES PEOPLE **DOING** THINGS THAT THEY MIGHT NEED **ENCOURAGEMENT** TO DO, SO GAMIFICATION **CAN** HELP FIX THAT
- IR IS **AHEAD** OF THE CURVE HERE
 - **POSSIBLY** BECAUSE IT HAS A **SYNERGY** WITH GAMIFICATION AT SOME LEVEL
- YOU CAN USE GAMIFICATION TO DO **MORE** THAN YOU'RE DOING WITH IT AT PRESENT
 - THERE IS **MUCH** AS-YET UNDISCOVERED TERRITORY

CONCLUSION

- I HAVE THESE **FURTHER** OBSERVATIONS...
- GAMIFICATION WILL **LOSE** EFFECTIVENESS WHEN EVERYONE DOES IT **UNLESS** YOU'RE CREATIVE
- THERE'S A **DISTINCTION** BETWEEN **GAMIFICATION** AND **GAMES**
 - YOU **MAY** FIND THAT FOR SOME APPLICATIONS YOU NEED A **GAME**, NOT GAMIFICATION
- GAMIFICATION IS A BRANCH OF **PSYCHOLOGY**, NOT **GAME DESIGN**
 - GAME DESIGNERS ARE **ARTISTS**, NOT MANIPULATORS
- THERE **ARE** GREAT OPPORUNITIES HERE!