Emerging Opportunities & Risks in Massively Multiplayer Online Role Playing Games

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Agenda

- Introduction
- Evidence Base
- Key Findings
- Context
- Emerging Risks
- Future Work
- Questions
Introduction

Aim:

‘To gain a clear evidence based understanding of opportunities and risks to vulnerable individuals in Massively Multiplayer Online Role Playing Game (MMORPG) environments’

Scope:

Content – Participants interaction with the gaming environment

Contact – Interaction in a situation predominately driven by others

Conduct – Interactions in which he/she is the initiator
Massively Multiplayer Online Role Playing Games

• Highly immersive, highly social arenas

• Global communities of like minded people

• Avatar representations, different identities

• Structural characteristics = new dimensions of social interaction
Evidence Base

• Review of current literature

• Two online surveys
  – EU participants (n=357)
  – Asian participants (n=188)

• Semi structured interviews
  – EU/UK participants (n=71)
  – Classified as addicted to online gaming

• Ethnographical study
  – 20 participants
  – 14 day participant observation study
  – 6696 minutes (~111 hours) self recorded video - World of Warcraft
Surveys

• Addiction
  – Game Addiction Scale
• Basic psychological needs satisfaction
  – Self Determination Theory
• Social connections and player behaviour
  – Impression Management Scale
• Lifestyle impact
• Social impact
• Privacy risk
• Potential for harm
EU Semi Structured Interviews

- Motivations
- Perceptions
- Reasons for engagement
- In-game behaviour
- Positive consequences
- Negative consequences
Ethnographic Study

• Explore and identify emerging opportunities and risks through:
  – **Content** – Participants interaction with the gaming environment
  – **Contact** – Interaction in a situation predominately driven by others
  – **Conduct** – Interactions in which he/she is the initiator

• Compare player perceptions with ethnographic observations
Survey - Key Findings

Addiction

– 20% (EU) and 20% (Asian) openly admitted to being addicted

– 23% (EU) and 24% (Asian) classified as addicted in line with the GAS

– 63% (EU) spend increasing amounts of time playing online games

– 29% attempted (unsuccessfully) to cut down on the amount of time spent playing
Survey - Key Findings

Average time spent playing MMORPG

- EU
  - 5.37 days per week
  - 4.37 hours per weekday
  - 5.72 hours per weekend

- Asian
  - 4.69 days per week
  - 4.42 hours per weekday
  - 4.48 hours per weekend
Survey - Key Findings

Social impact (EU)

– 84% believe online gaming has negatively effected their real world social life

– 53% prefer socialising in the online gaming environment to conversing with real world friends

– 80% formed particularly close friendships

– 96% discussed personal issues in game with fellow players
Survey - Key Findings

Lifestyle impact

- 53% (EU) and 31% (Asian) would prefer to live in the online gaming environment

- 52% (EU) found playing MMORPGs more exciting than going out with friends
Survey - Key Findings

Psychological needs satisfaction

– Self Determination Theory (SDT)

• Autonomy (high 83%, low 17%)
• Relatedness (high 52%, low 48%)
• Competency (high 52%, low 48%)

– 60% reported high levels of psychological needs satisfaction
Survey - Key Findings

Social connections and player behaviour

– Impression Management Theory

• Self promotion (high 34%, low 66%)
• Ingratiation (high 45%, low 55%)
• Intimidation (high 26%, low 74%)
• Supplication (high 15%, low 85%)
Survey - Key Findings

Potential for harm

- 38% (EU) and 67% (Asian) previously met online gamers in person
  
  - 20% (EU) and 13% (Asian) found the experience completely different than expected

- 16% previously encountered one or more incidents of inappropriate behaviour
  
  - Account hijacking
  - Cyberbullying
Survey - Key Findings
Emerging factors influencing data disclosure

– Positive correlations (Asian)

- Hours of game play per week and data disclosure
  \( r (N =188) = .150 \) \( p < .040 \)
- Relatedness and data disclosure
  \( r (N =188) = .432 \) \( p < .001 \)
- Competence and data disclosure
  \( r (N =188) = .294 \) \( p < .001 \)
- Self promotion and data disclosure
  \( r (N =188) = .347 \) \( p < .001 \)
- Initmidation and data disclosure
  \( r (N =188) = .257 \) \( p < .001 \)
- Addiction and data disclosure
  \( r (N =188) = .257 \) \( p < .001 \)
Ethnographic Study

Method
• 14 day participant observation
• ~111 hours self recorded video

Objective
• Compare player perceptions with ethnographic observations

Analysis
• Thematic analysis
• Constant comparison
Emerging Opportunities and Risks

Quantitative

- EU Survey
- Asian Survey

Qualitative

- Semi Structured Interviews
- Ethnographical Study

EMERGING OPPORTUNITIES & RISKS
Context

Mediation & Monitoring (Parents, teachers, press, game company)

Game Feature Change

External Influences

Individual Influences

Access

Opportunities

Risks

Time

External Variables & Predispositions

Motivations

Avatar Characteristics

Gender
Age
Culture
Socio Economic Status

Skills, Gender, Level & Experience
## Emerging Risks

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<thead>
<tr>
<th>Content</th>
<th>Contact</th>
<th>Conduct</th>
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<tbody>
<tr>
<td>Tracking &amp; harvesting personal data</td>
<td>Unwanted intrusion, data disclosure</td>
<td>Creating and distributing malicious add-ons and plug-ins</td>
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<td>Software vulnerabilities. Loss of information and avatar assets</td>
<td>Misplaced trust. Stealing of virtual assets. Ownership and legal redress issues.</td>
<td>Intentionally exploiting others for personal gain</td>
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<tr>
<td>Desensitisation to violent, gruesome, harmful scenes</td>
<td>Victim of grieving, trolling, cyber bullying</td>
<td>Harassing, cyber bullying another</td>
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<tr>
<td>Liberal age restrictions, violent behaviour, reliance on self-regulation</td>
<td>Inappropriate use of power from more experienced players. Performance related peer pressure</td>
<td>Undermining and pressuring other players. Conflict in leadership approaches between players</td>
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<tr>
<td>Desensitisation to sexual scenes</td>
<td>Unwanted contact and predatory behaviour. Being groomed</td>
<td>Erotic role play. Inappropriate sexual conduct</td>
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<tr>
<td>Encouraging inappropriate promiscuous behaviour</td>
<td>Sexual exploitation, psychological damage and physical harm</td>
<td>Causing psychological damage to a minor</td>
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<tr>
<td>Behavioural (operant) conditioning</td>
<td>Pathological gaming, behavioural addiction</td>
<td>Encouraging inappropriate, unhealthy behaviour</td>
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<td>Rewards and incentives to encourage prolonged continuous play</td>
<td>Negative effect on values, norms, lifestyle and responsibilities</td>
<td>Providing misleading advice and information</td>
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Future Work – The Next Step

• Taxonomy of opportunities and risks in MMORPG environments

• Technological tool to support professional risk assessment

• Evaluation of risk assessment tool
Questions?

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