Social Systems in Virtual Worlds

Building a better looking raid loot system in World of Warcraft using the IAD framework

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Outline

The environment
Looking For Raid (LFR) in *World of Warcraft*

The phenomenon
Perceived rampant greedy behavior vs. self-reported behavior

The framework
Game theory and Institutional Analysis and Design (IAD)

The study
Focus groups and a survey

The results
???
LFR Phenomenon

Ethnographic observations

November 29, 2011: Raid Finder released in *World of Warcraft*

- Collaboration between 25 unknown players from different servers
- Exploitation of pre-established loot rules
- Effect on player behavior
Loot System Basics

Players enter the raid tagged by role
- tank, DPS, healer

Loot also tagged for role and class

Players can roll "Need", "Greed", "Pass"
- Only players who match the loot tag can roll "Need"
How to exploit the system

Loot items can be traded among raid members

- Bring a friend in your same class or role.
- Both of you roll on items that one can use, and trade with each other.

52% of players responded four or more.

Mean = 3.57
Std. Dev. = 2.3
N = 332

I run with friends because it improves my chances of getting an item that I want.
How to exploit the system

If you're alone:
- roll "Need" on everything you can
  * hope that you win *something* whether you actually need it or not

  * use that item to trade later for something you do need

![Histogram showing distribution of item rolls](image)

Mean = 5.74
Std. Dev. = 1.6
N = 329

![Histogram showing distribution of item rolls](image)

Mean = 5.97
Std. Dev. = 1.412
N = 329
Focus Groups

Two focus groups conducted with a total of 10 players and an ethnographer.

Insights from focus groups confirm ethnographic observations.
- Players are angry about the behavior of unknown others.
- There is always somebody being a jerk about loot.
- Players fight back by gaming the system, and do so because "everybody else does it".
Focus Groups

Players generally report "rampant greed" in LFR

SC: "I just expect everybody to need on everything and that’s pretty much going to be the case whether it’s need, whether it’s offspec, whether they’re just being jerks about it."

Does this cause players to change their behavior?

DG: "...to be honest, the only reason I [trade items with friends] is because I just get pissed off so much that other people are needing on stuff when they obviously have 397 [better gear]. Which again, it’s probably the same way, they might be doing this too, but I can’t know that for sure, so I do it. I do it to help my friend out, give him a chance to get gear."

...smells like Game Theory.
IAD Framework

Context/Physical Rules
- Provisioning a Good
- Lottery = CPR

Figure 2. The Internal Structure of an Action Situation. Source: Adapted from E. Ostrom (2005, p. 33).
The Survey

54 questions constructed based on observations and focus groups.
- expectations of others' behavior, your own behavior, happiness, demographic information.

333 survey responses gathered from a convenience sample.

- Survey link posted in WoW-related forums (Blizzard forums, WoWhead, Ten Ton Hammer, Allakazham, TankSpot, WoW-ladies)
Discrepancy between "self" and "others" when rolling 'need' on items that won't ever be used:

**self:**

![Histogram for self]

- Mean = 1.99
- Std. Dev. = 1.904
- N = 333

**others:**

![Histogram for others]

- Mean = 5.74
- Std. Dev. = 1.6
- N = 329
Preliminary Results

Similar discrepancy in reports of needing to trade.

self:

Mean = 2.42
Std. Dev. = 2.057
N = 333

others:

Mean = 5.97
Std. Dev. = 1.412
N = 329

I roll on items with the intention of trading them for something I need later:

It is common for other players to roll need on items just so they can trade them later:
More Preliminary Results

A simple model:

Do expectations of others change behavior?

Do players who expect greed become more greedy?
Myself vs. Others

How likely am I to need an item that is not an upgrade?

How likely are others to need an item that is not an upgrade?
Myself vs. Others

Adj. $R^2 = .20$

How likely to need on a Boss Item or Tier Token.
Expertise effect

Significant Main Effect: Expertise

$F (3) = 3.133$

$p = .026$

N Values
4 = 48
5 = 162
6 = 99
7 = 20
Significant Main Effect: 
**Expertise**

\[ F(3) = 3.55 \]

\[ p = .015 \]
Future Directions

New WoW expansion = New LFR system
- No longer a mixed motive game.
- Removes opportunities for player interaction
- Natural experiment:
  - Are players happy?
  - Do they have more fun?
  - Has behavior changed?
  - Does the avoidance of "loot greed" justify the lack of social interaction?
Future Directions

Using Mixed Motive games in multiplayer games

Predictions from IAD:
- Have sanctions for greedy behavior
- Keep social interaction possible
References


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