THE SOCIAL JUSTICE OF EVERYDAY PRIORITY QUEUES

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Bypass traffic. Use FasTrak.
Operational Implications of Priority Queuing

- Wait Times for Fast Pass customers are lower
- Reduces arrival variability of customers
- Average wait time increases assuming resources are constrained and dedicated to F.P.
- Customer Satisfaction?
  - Increases for F.P.
  - Decreases for others
Procedural Justice

Fairness and Transparency of the process by which decisions are made.

What is the Process of Wait Line Management?
Reservation or line skipping? What is going on here?
WHAT IS THE PERCEIVED FAIRNESS OF PRIORITY QUEUES?

Two Methods: Field Study and Controlled Experiment
Study #1: Field Study - True Aggie Night
How many minutes do you think you will wait tonight?

- Regular Line: 56.65 minutes
- Fast Pass Line: 29.95 minutes
RESEARCH QUESTIONS

- Do people in different lines perceive fairness differently?
Survey Results

Demographics:

n = 141

78 Fast Pass, 63 Regular Line

Average Age: 20.6

Gender: 50% Female

Class: 43% Freshman
Describe your feelings concerning the waiting time you have experienced at tonight's True Aggie Night line.
How fair do you consider the system of priority lines or Fast Passes in the following contexts?

**True Aggie Night – Did not Purchase a Fast Pass**

- Did not know there was a Fast Pass: 2.7
- Knew there was a Fast Pass: 2.4
Describe your feelings concerning the waiting time you have experienced at tonight's True Aggie Night line.

**Did not Purchase a Fast Pass**

- Did not know there was a Fast Pass: 4.1
- Knew there was a Fast Pass: 3.7
How fair do you consider the system of priority lines or Fast Passes in the following contexts?

- Toll Lanes: 2.6 (Regular Line), 2.5 (Fast Pass Line)
- Amusement Parks: 2.7 (Regular Line), 2.7 (Fast Pass Line)
- Security Checks: 2.7 (Regular Line), 2.9 (Fast Pass Line)
PERCEPTION OF FAIRNESS CHANGES BASED ON MEMBERSHIP

Observation #1
IGNORANCE IS BLISS

Observation #2
Study #2: Controlled Experiment

- Queue to take the survey

<table>
<thead>
<tr>
<th>Standard Waiting Line</th>
<th>Fastpass Waiting Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 17</td>
<td>Student 27</td>
</tr>
<tr>
<td>Student 19</td>
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<tr>
<td>Student 20</td>
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<td>Student 21</td>
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<td>Student 22</td>
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<td>Student 23</td>
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<td>Student 26</td>
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<td>Student 28</td>
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<td>Student 29</td>
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<tr>
<td>You</td>
<td></td>
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<tr>
<td>Student 31</td>
<td></td>
</tr>
</tbody>
</table>
Thank you for your participation so far. This next study involves taking a survey; however before taking the survey you will be asked to wait in a line.

On the next screen you will see your place in a virtual waiting line.

The waiting line is NOT a simulation, the other people in the virtual line are actually other people in the room waiting to take the survey.

You will be automatically sent to the survey once it is your turn.

Please click the button below to enter the waiting line.

Click Here to Enter the Waiting Line
RESEARCH QUESTIONS

Does perception of wait differ in the presence of Priority Queues?

Hypothesis:
Priority Queue members under-estimate the wait in regular line
Regular Queue members under-estimate the wait in Priority Queue
Pilot Results

Demographics:

- n = 70
- 27 Fast Pass, 43 Regular Line
- Average Age: 20.8
- Gender: 67% Male
- Undergraduate Students

Study Parameters

- Next into survey priority: alternate between Regular and Fast Pass
- Delay between survey: 120 Seconds
- % placed in Fast Pass: 35%
- Both Queues Visible to All Participants
How long do you think the wait was for participants in each line?

<table>
<thead>
<tr>
<th></th>
<th>Wait in Standard Line</th>
<th>Wait in Fast Pass Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Queue</td>
<td>13.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Fast Pass Queue</td>
<td>11.9</td>
<td>8.7</td>
</tr>
</tbody>
</table>
Observation 3

PRIORITY QUEUE MEMBERS UNDERESTIMATE WAIT TIME IN REGULAR QUEUES
PRIORITY QUEUE
MEMBERS
OVERESTIMATE
THEIR RELATIVE SIZE
Observation 5

**PRIORITY QUEUE SYSTEMS MAY BE MORE IMPORTANT THAN ACTUAL WAITS**
Other mechanisms influencing perceived fairness

- Different percentage of Fast Pass members
- Transparency of queues
- Paying for Fast Pass access
- Being paid more to be in regular queues
QUESTIONS?

Thank you