




## Participating in Competitive Online Games: Analyzing Competitive and Hedonic Decision Elements

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## Agenda

- Research Background and Question
- Research Approach
- Data Collection and Analysis
- Results
- Conclusion

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## Research Background


Participation in competitive online gaming:  
 By definition with *competitive* and *hedonic* decision elements

**BUT**  
 Not aware of decision models that include  
 hedonic and competitive elements

Literature on modeling online gaming

- Cooperation and dependency among players and
- Role of experience

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## Research Question

Which *competitive* and *hedonic* decision elements  
 drive play time in competitive online games?

'Play time' as dependent variable  
 [in hours per day]


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## Research Approach

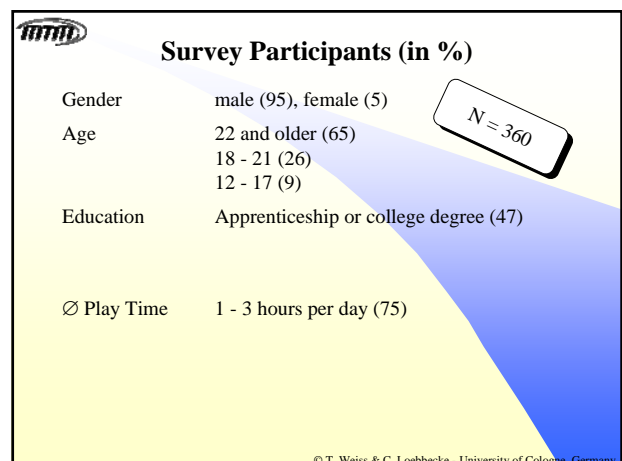
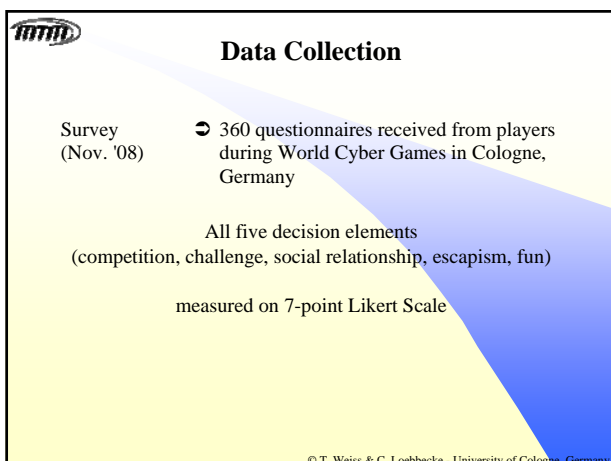
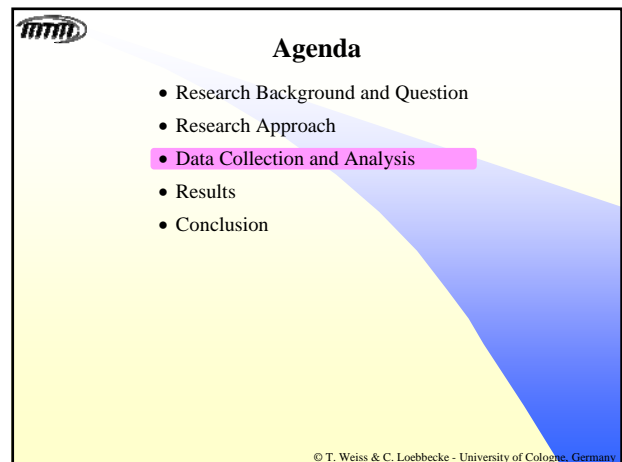
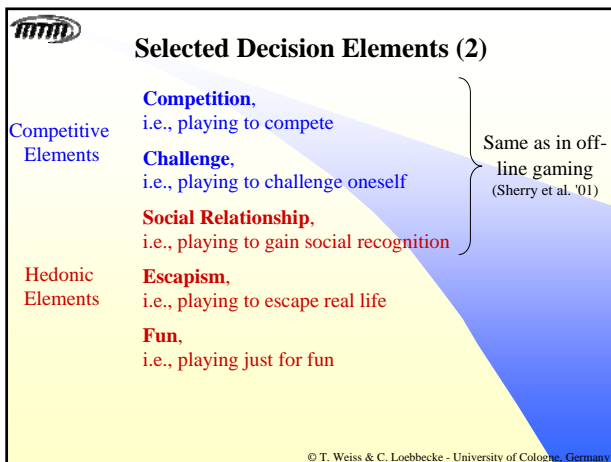
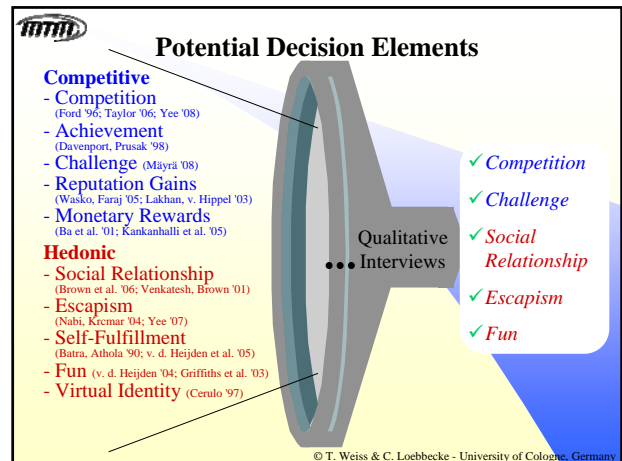
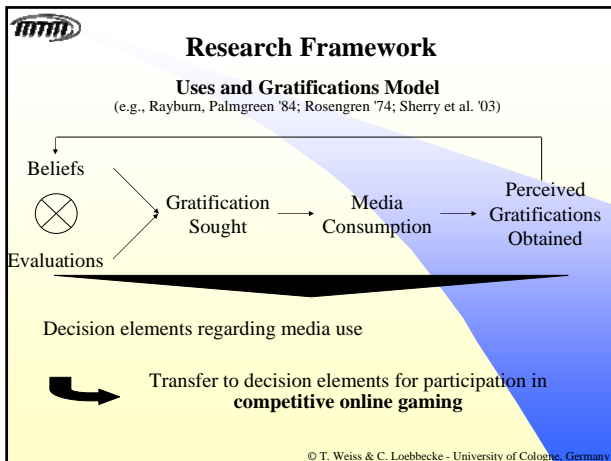
Exploratory Survey ➔ 10 qualitative interviews with ESL players,  
 (March '08) (e.g., Humphreys et al. '96 for extracting decision  
 elements via field research)

Content Validity Tests ➔ 35 of 60 questionnaires received from ESL  
 (March '08) players (incl. prior 10)

Pre-Test ➔ 60 of 80 questionnaires received  
 (April / June '08)

➔ Survey

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**Data Analysis**

PLS Regression

Average Game Time =  
 $\alpha + \beta_1 * \text{Competition} + \beta_2 * \text{Challenge} + \beta_3 * \text{Social Relationship} + \beta_4 * \text{Escapism} + \beta_5 * \text{Fun}$

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**Results: PLS-Regression (N=360)**

F-value: 5.982      p-value: 0.000 [ $< 0.001$ ]  
R<sup>2</sup>: 0.084      f<sup>2</sup>: 0.092  
VIF: 1.092 [ $< 10.0$ ]      Sample size: 360 [ $> 91$  (req.)]

PLS-Regression model: Model Fit ✓

|                     | Standard. $\beta$ | t-value | p-value | Sig.     |
|---------------------|-------------------|---------|---------|----------|
| Competition         | -0.140            | -2.373  | 0.018   | $< 0.05$ |
| Challenge           | -0.142            | -2.125  | 0.034   | $< 0.05$ |
| Social Relationship | -0.038            | 0.047   | 0.963   | $> 0.05$ |
| Escapism            | -0.084            | -1.556  | 0.121   | $> 0.05$ |
| Fun                 | 0.026             | 1.370   | 0.175   | $> 0.05$ |

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**Results: PLS-Regression** Back Up

| Sample              | N               | R <sup>2</sup> | Sig. Decision Elements   | p-value                          | Sig. |
|---------------------|-----------------|----------------|--------------------------|----------------------------------|------|
| All                 | 360 ( $> 91$ )  | 0.084          | Competition<br>Challenge | 0.018 $< 0.05$<br>0.034 $< 0.05$ |      |
| Age 12-17           | 32 ( $> 30$ )   | 0.240          | Fun                      | 0.009 $< 0.05$                   |      |
| Age 18-21           | 94 ( $> 64$ )   | 0.118          | Competition              | 0.044 $< 0.05$                   |      |
| Age $\geq 22$       | 234 ( $> 77$ )  | 0.110          | Competition              | 0.019 $< 0.05$                   |      |
| w/o college degree  | 191 ( $> 152$ ) | 0.054          | Model Fit not given      |                                  |      |
| with college degree | 169 ( $> 59$ )  | 0.147          | Competition              | 0.027 $< 0.05$                   |      |

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**Conclusion**

Competitive Online Gaming:  
*Competition and Challenge* main decision elements driving participation  
 ↪ Competitive elements outweighing hedonic elements

Importance of competition in hedonic gaming participation  
 (Ford '96)

Importance of striving for power  
 (Taylor '06)

Future modeling / investigation:  
**Competitive elements of assumingly 'hedonic' social networks !**

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.... Questions, Comments, Complaints ?

**Thanks for your attention !**

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