Skill and Progression in Forza Motorsport 4

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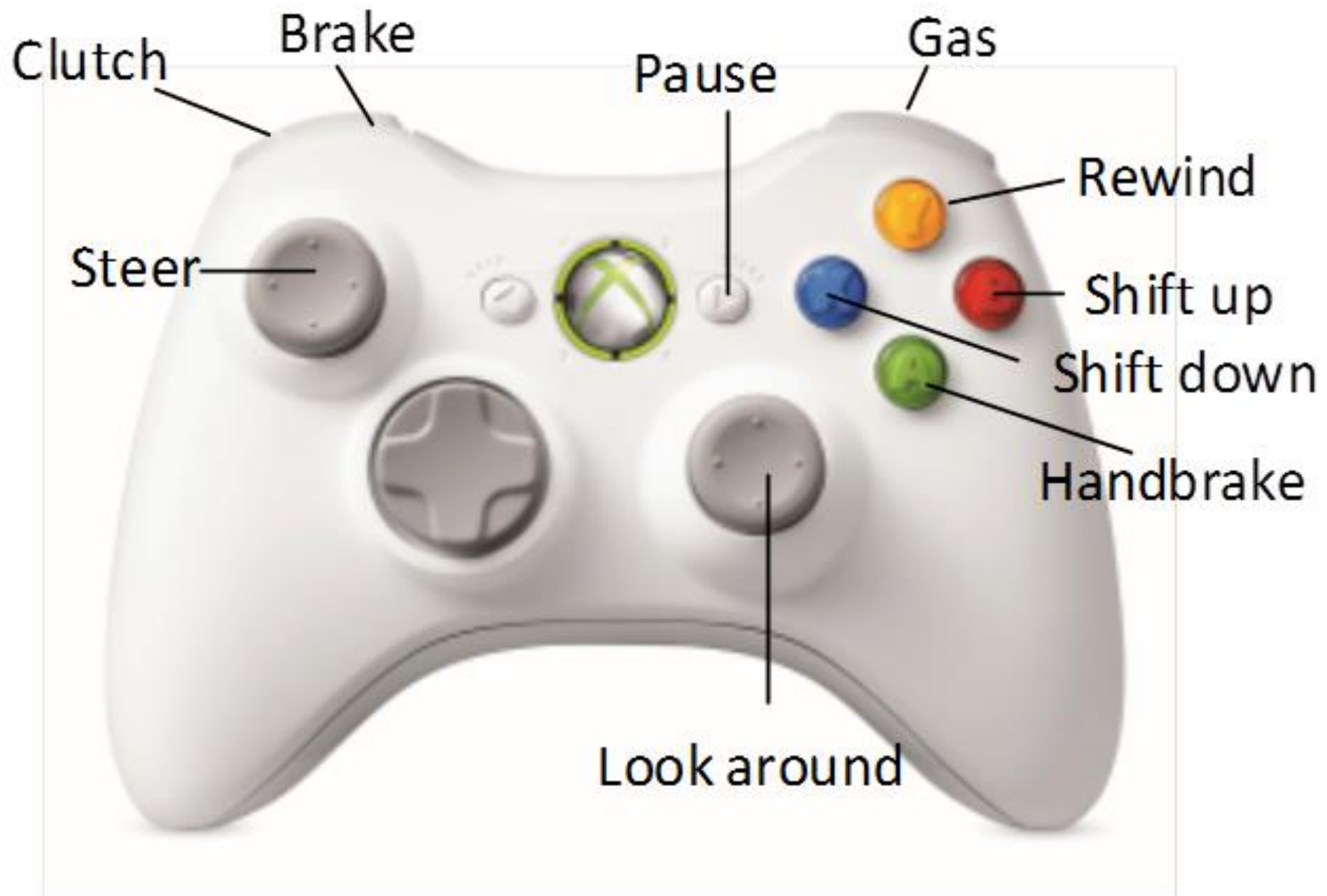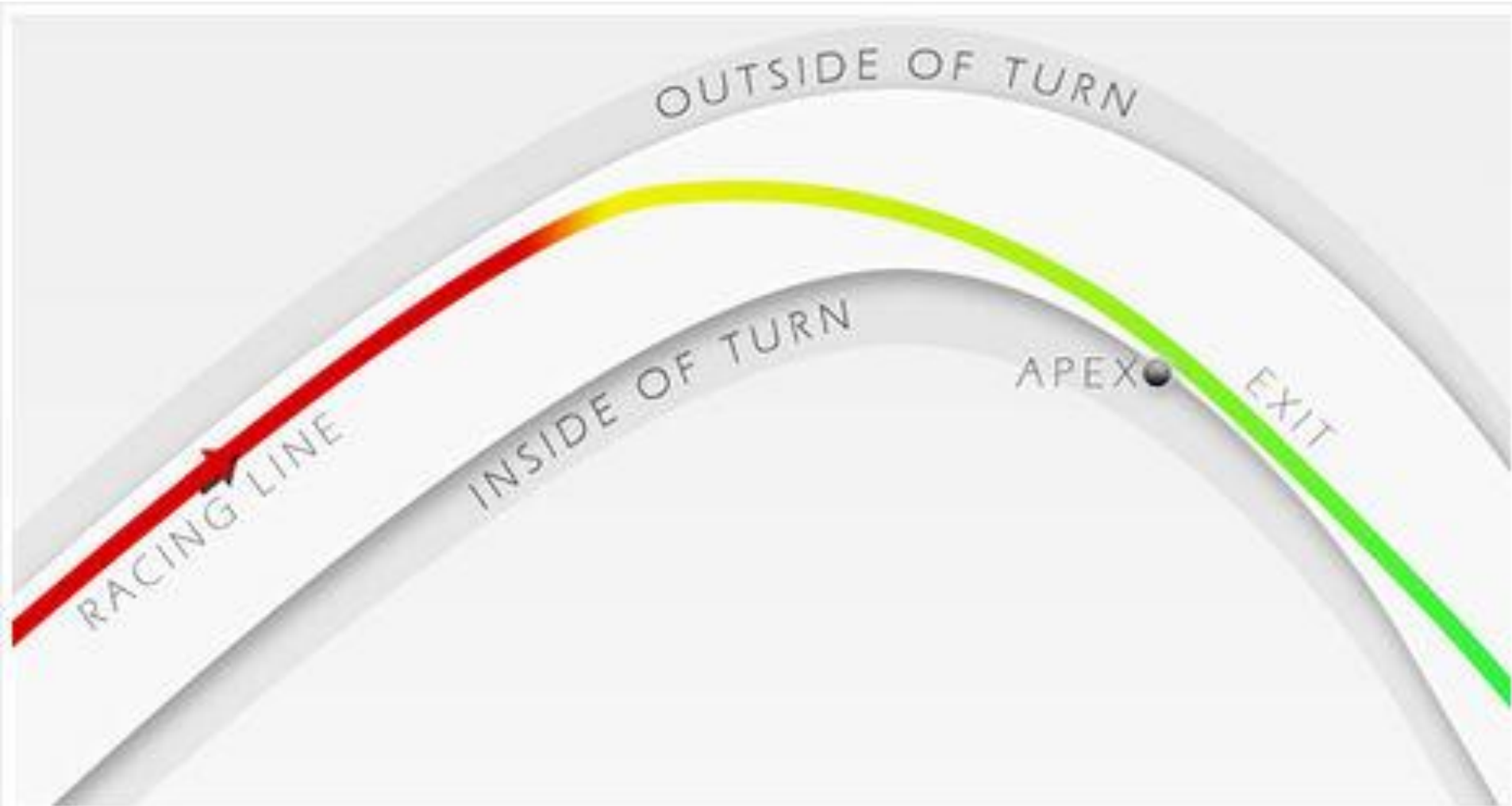
Ryan Cooper
Kevin Carter
Dan Greenawalt
Tyson Soldberg

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Outline

- Introduction
- Quick-and-dirty mining
- Drilling down

Clutch
Brake
Pause
Gas
Steer
Rewind
Shift up
Shift down
Handbrake
Look around

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Braking

Stability

Trajectory Line

Dataset

- 200k players
- 24M race entries
- October 2011 (launch) – July 2013

QUICK AND DIRTY MINING

(PICKING DESCRIPTIVE METRICS)

http://www.dirtycarart.com/grime-scene/

Segmentation

- Metric: number of races played

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- Step 1:
  - Average = 120

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  - Average = 120
  - Median = 30

Segmentation

- Metric: number of races played
- Step 1:
  - Average = 120
  - Median = 30
- Step 2:
  - Top 5 percentile > 400
  - Top 5% account for half of all races

Segmentation
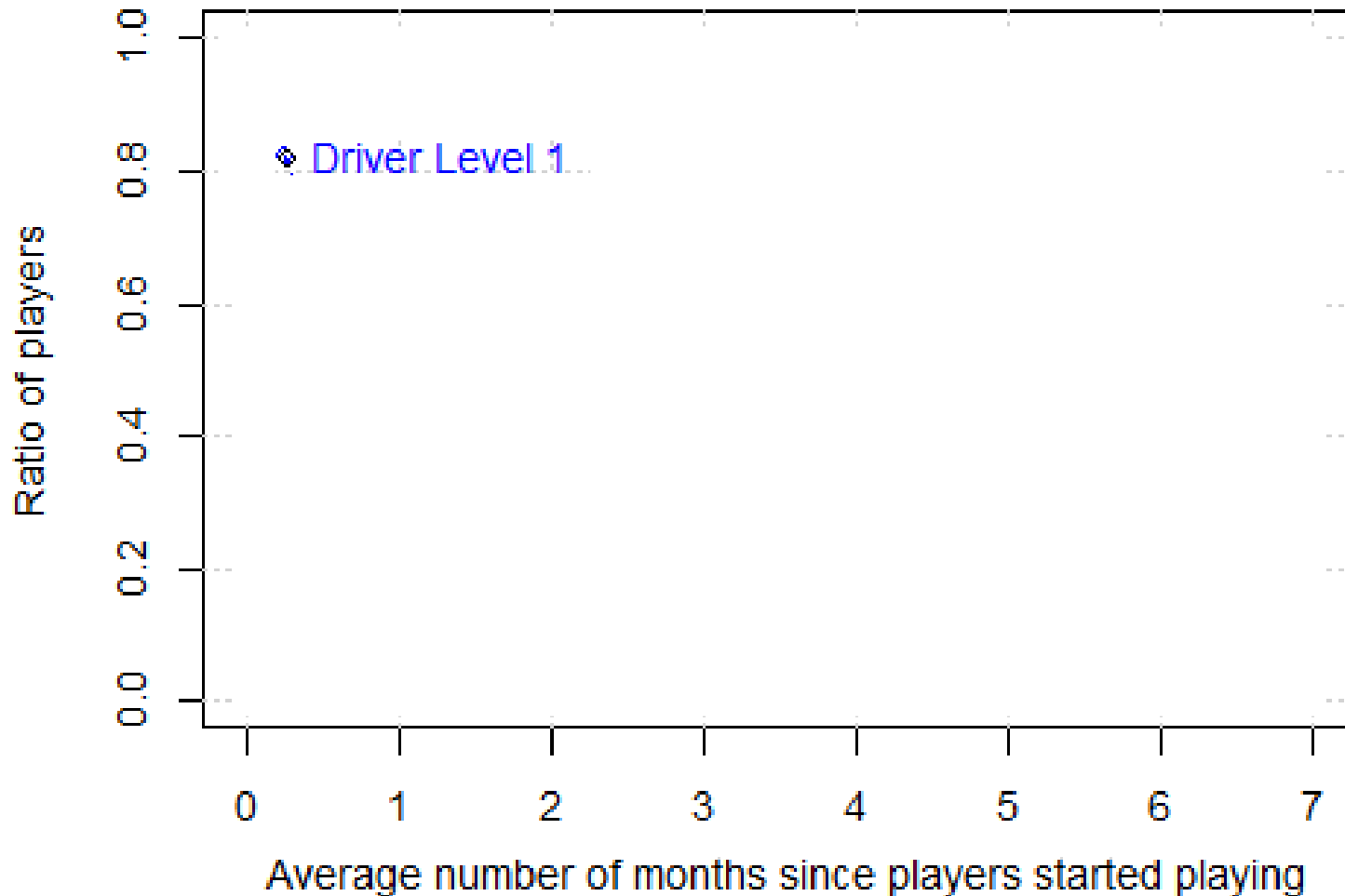
- Metric: number of races played
- Step 1:
  - Average = 120
  - Median = 30
- Step 2:
  - Top 5 percentile > 400
  - Top 5% account for half of all races
- Step 3: races per day, races win ratio, ...
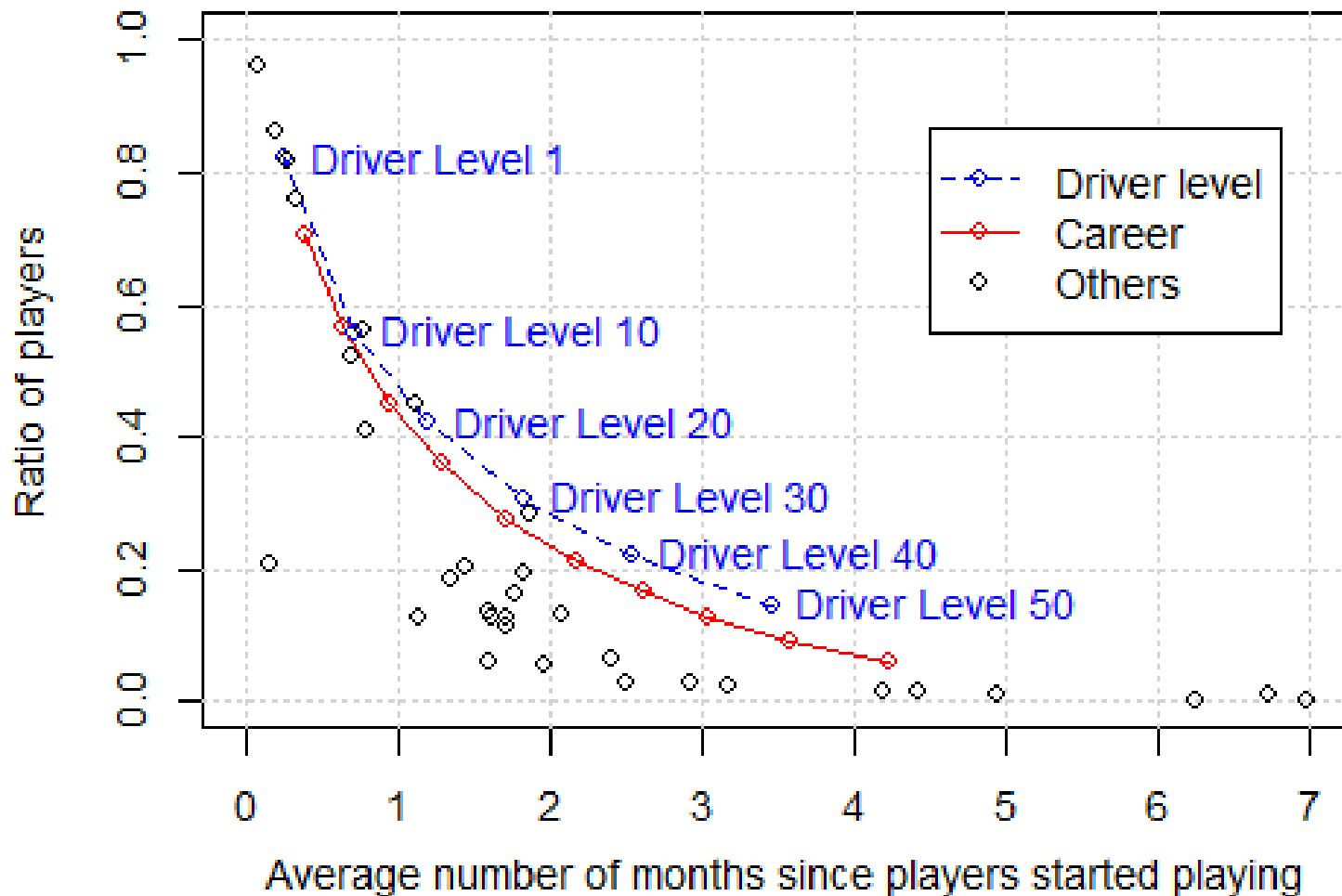
Progression and Churn

Metric: time to unlock achievement

Driver Level 1

Ratio of players (y-axis: 0.0, 0.2, 0.4, 0.6, 0.8, 1.0)

Average number of months since players started playing (x-axis: 0, 1, 2, 3, 4, 5, 6, 7)

Progression and Churn

Metric: time to unlock achievement

Bruce Phillips, GDC 2010

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Platform Achievements

- iOS Game Center, PS trophies, Xbox, Steam
- First-party studios: easy
- Third-party studios: REST APIs, sometimes …

Take-aways

- Play the game …
- … To find descriptive metrics/achievements
- … To quickly glance at player behavior

DRILL DOWN
(ANSWERING A QUESTION)

Forza 4 bundles

	Easy	Medium	Hard	Advanced	Expert
Stability	ON		OFF		

Forza 4 bundles

	Easy	Medium	Hard	Advanced	Expert
Stability	ON		OFF		
Traction	ON			OFF	
Braking	Assisted with ABS		ABS	OFF	
Shifting	Automatic w/o clutch			Manual w/o clutch	Manual w/ clutch
Line	Full		Brake		OFF
Damage	Cosmetic	Limited		Simulation	

Forza 4 bundles

	Easy	Medium	Hard	Advanced	Expert
Stability	ON		OFF		
Traction	ON			OFF	
Braking				FF	
Shifting	Automatic w/o clutch			Manual w/o clutch	Manual w/ clutch
Line	Full		Brake		OFF
Damage	Cosmetic	Limited		Simulation	

Adequate?
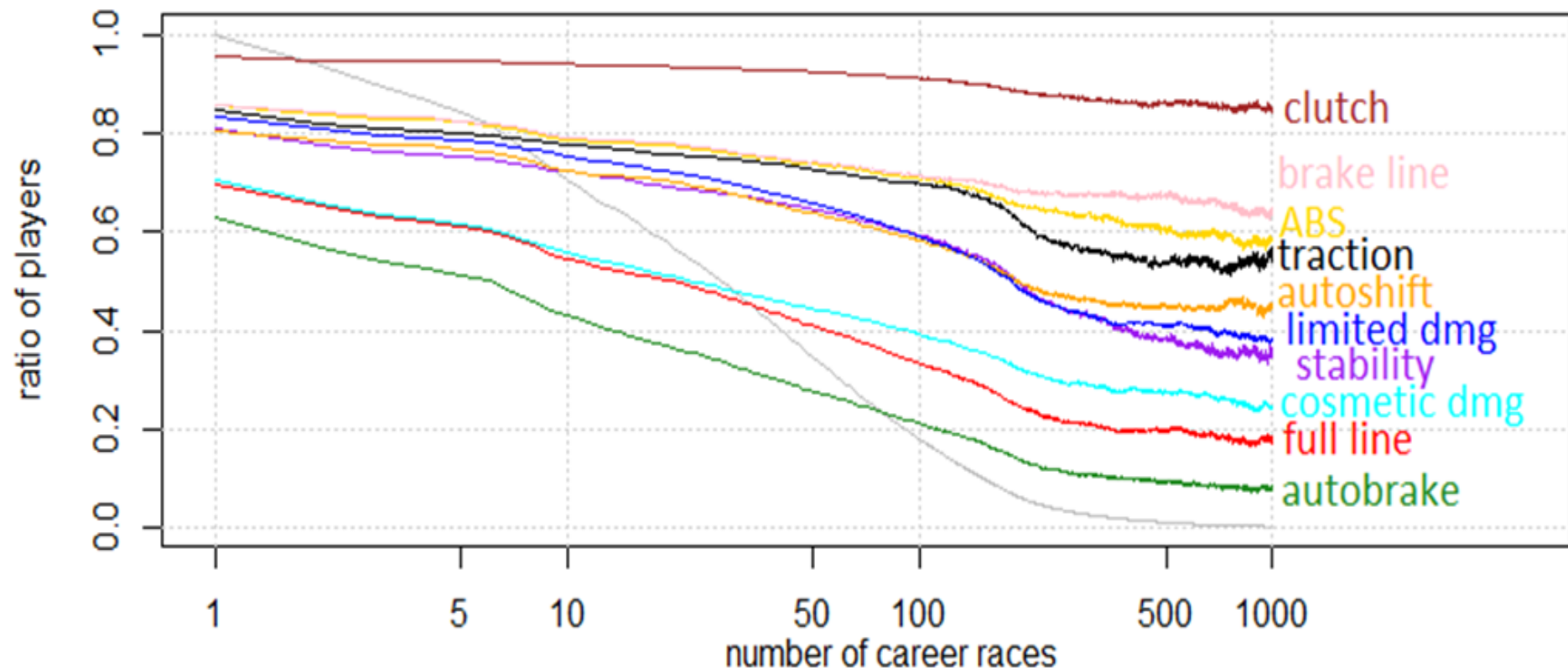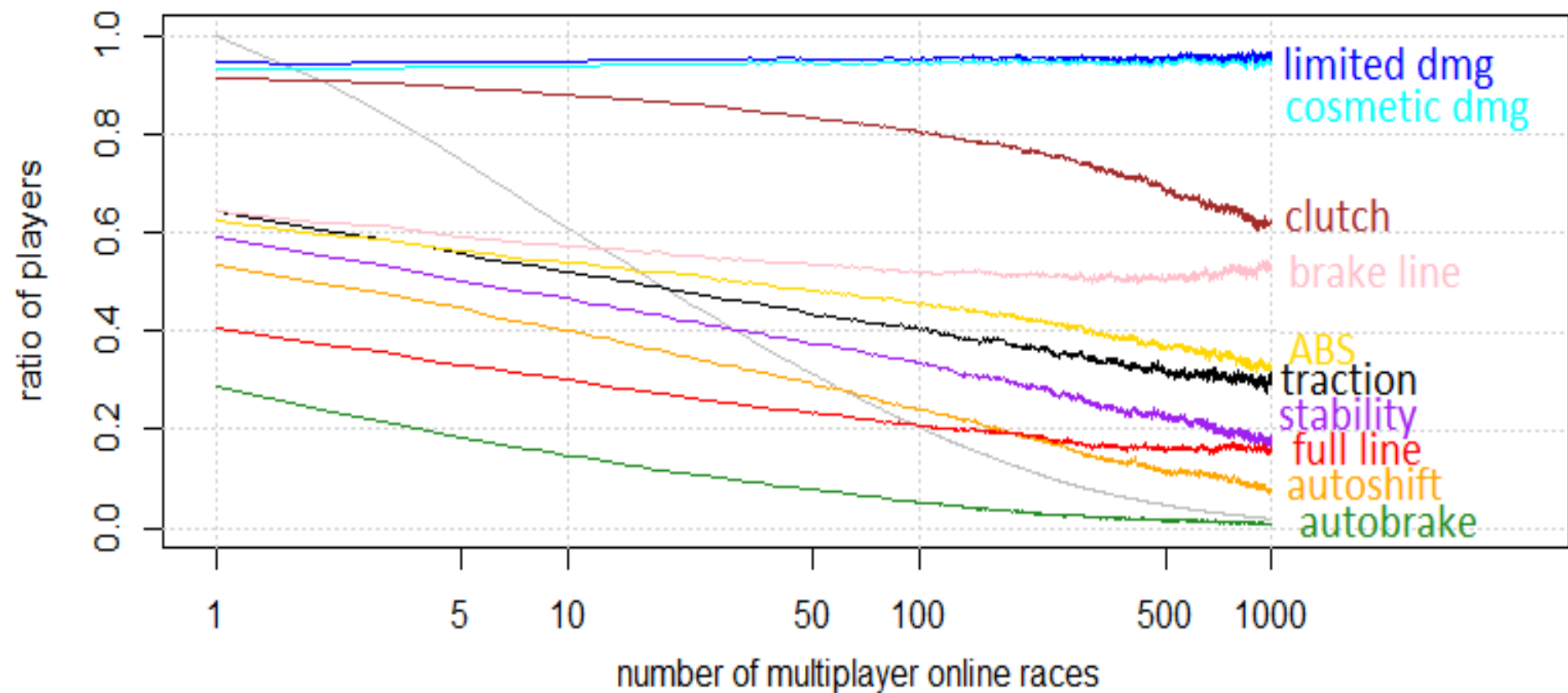
Forza 5 bundles

	Easy	Medium	Hard	Advanced	Expert
Stability	ON		→	OFF	
Traction	ON			→	OFF
Braking	Assisted with ABS			ABS only	→
Shifting	Automatic w/o clutch			→	Manual w/ clutch →
Line	Full			Brake	→
Damage	Cosmetic		→	Simulation	

Take-aways

- Simpler is better (damage types)
- Double check across modes (solo vs online)
- Push expert options in their own menu

- What is the default experience? For whom?

QUESTIONS
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