

CS/INFO 4154:

Analytics-driven Game Design

Class 12:

Incentives

Mon

Wed

Fri

9/20
Incentives

9/27
Alpha Testing 1

9/29
Alpha Testing 2

10/2
Alpha Testing 2

Alpha

- three functioning levels: easy, medium, hard
- core game mechanics for these levels
- minimal art/UX integration
- a list of input keys

Review: Flow



Now: Achievement



Outline

1. Setting the stage
2. A brief history of video game incentives
3. Experiments regarding incentives
4. Group activity: *incentives*

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Pair activity: quick discussion

- Pick your favorite game (again)
 - How many hours have you played it?
 - What motivated you to play that long?
 - What were you *doing* for most of that time?

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1. Setting the stage
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In the beginning, there were arcades



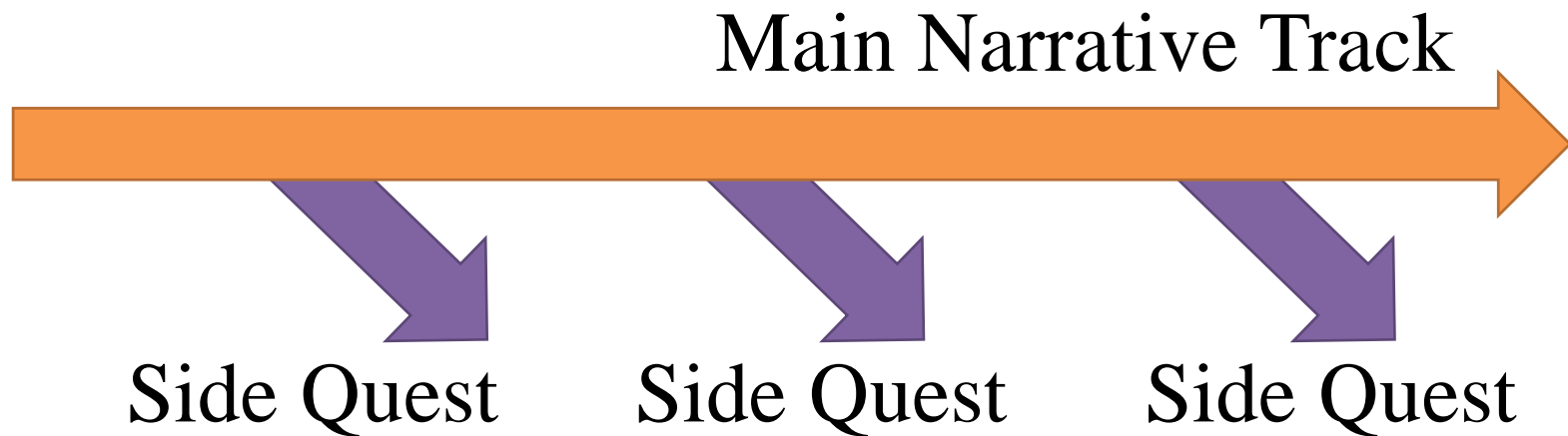
Pacman (1980)

In the beginning, there were arcades



Pacman (1980)

Then there were side quests...



Then there were side quests...



Elder Scrolls IV: Oblivion (2006)

Then there were achievements...



Achievement unlocked

Then there was busy work...

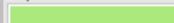


Assassin's Creed (2007)

Progress Quest

Progress Quest - Drumxez


Character Sheet	
Trait	Value
Name	Drumxez
Race	Battle-Finch
Class	Mu-Fu Monk
Level	5
Stat	Value
STR	11
CON	12
DEX	14
INT	16
WIS	15
CHA	16
HP Max	29
MP Max	46

Experience 

Spell Book	
Spell	Level
Slime Finger	I
Good Move	II
Gyp	II
Rabbit Punch	I
Magnetic Orb	I
Sadness	I
Invisible Hands	I
Aqueous Humor	I
Cone of Annoyance	I

Equipment	
Weapon	-1 Shortsword
Shield	Carapace
Helm	Flannel
Hauberk	Canvas
Brassairs	-1 Holey Pleathers
Vambraces	Patched Chamois
Gauntlets	-2 Pleathers
Gambeson	-1 Chamois
Cuisses	Flannel
Greaves	-1 Chamois
Sollerets	-2 Holey Leathers


Inventory	
Item	Qty
Gold	43
griffon nest	1
cockatrice wattle	1
pirate booty	1
stun bear tooth	1
brass dragon pole	1
unicorn blood	1
yeti fur	1
anhkhveg chitin	1
hogbird curl	1

Encumbrance 

Plot Development	
<input checked="" type="checkbox"/> Prologue	
<input type="checkbox"/> Act I	

Quests	
<input checked="" type="checkbox"/> Seek the Previous Emblem	
<input checked="" type="checkbox"/> Exterminate the Trolls	
<input checked="" type="checkbox"/> Seek the Mythic Gimlet	
<input checked="" type="checkbox"/> Exterminate the Maneses	
<input checked="" type="checkbox"/> Deliver this towel	
<input checked="" type="checkbox"/> Seek the Lucky Laurel	
<input checked="" type="checkbox"/> Fetch me an anvil	
<input checked="" type="checkbox"/> Seek the Gleaming Candelabra	
<input checked="" type="checkbox"/> Placate the Pixies	
<input checked="" type="checkbox"/> Deliver this carrot	
<input checked="" type="checkbox"/> Fetch me a hat	
<input checked="" type="checkbox"/> Exterminate the Manticores	
<input checked="" type="checkbox"/> Placate the Monodlonii	
<input checked="" type="checkbox"/> Deliver this toothpick	
<input checked="" type="checkbox"/> Seek the Proverbial Sphere	
<input checked="" type="checkbox"/> Placate the Grid Bugs	
<input checked="" type="checkbox"/> Deliver this writ	
<input checked="" type="checkbox"/> Placate the Balors	
<input type="checkbox"/> Fetch me a writ	

Executing Mrs. Yoobkraez the Enchanted Motorcycle...



(2002)

Farmville



(2009)

Cow Clicker



Ian Bogost (2010)

Clicker Heroes



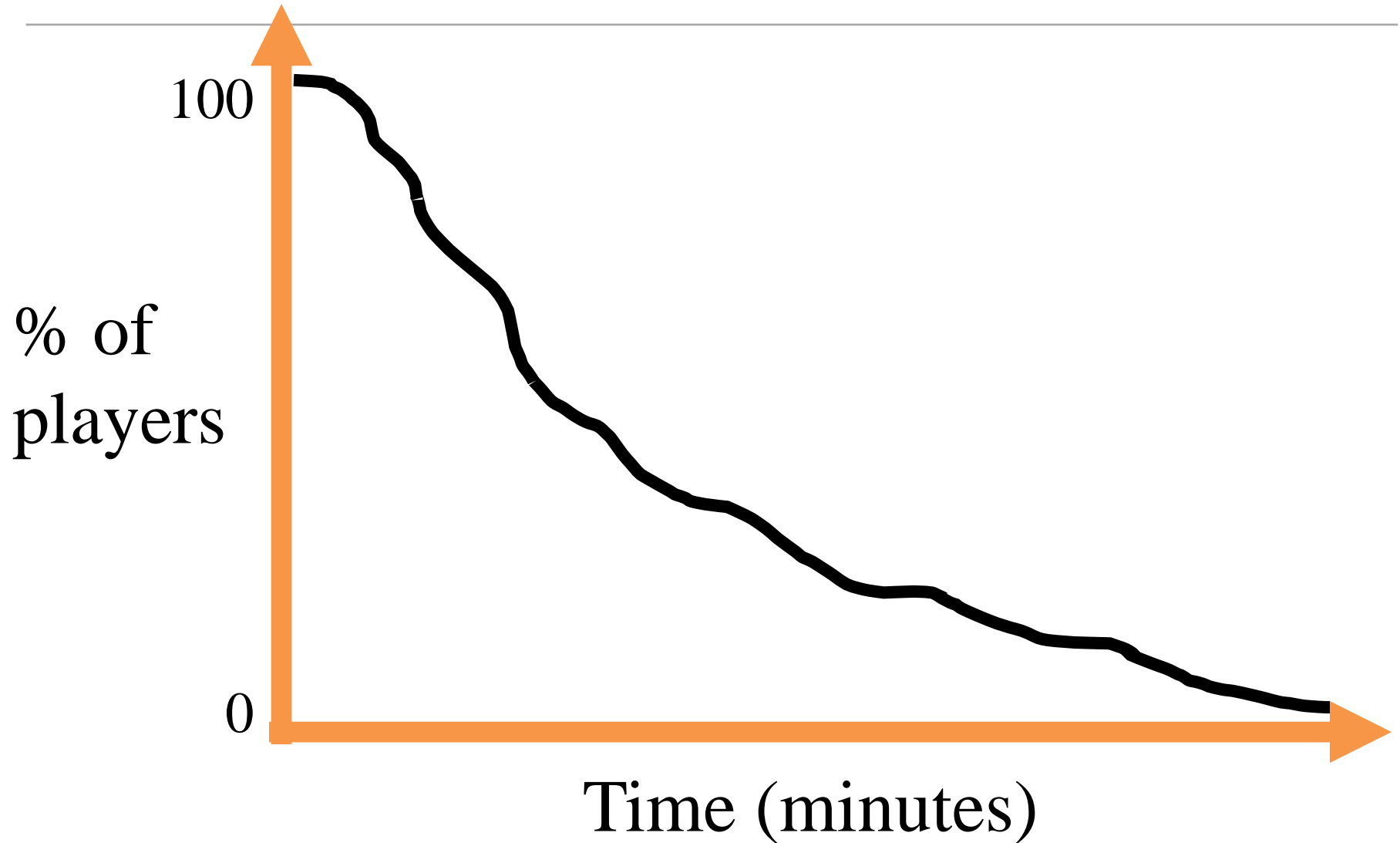
Outline

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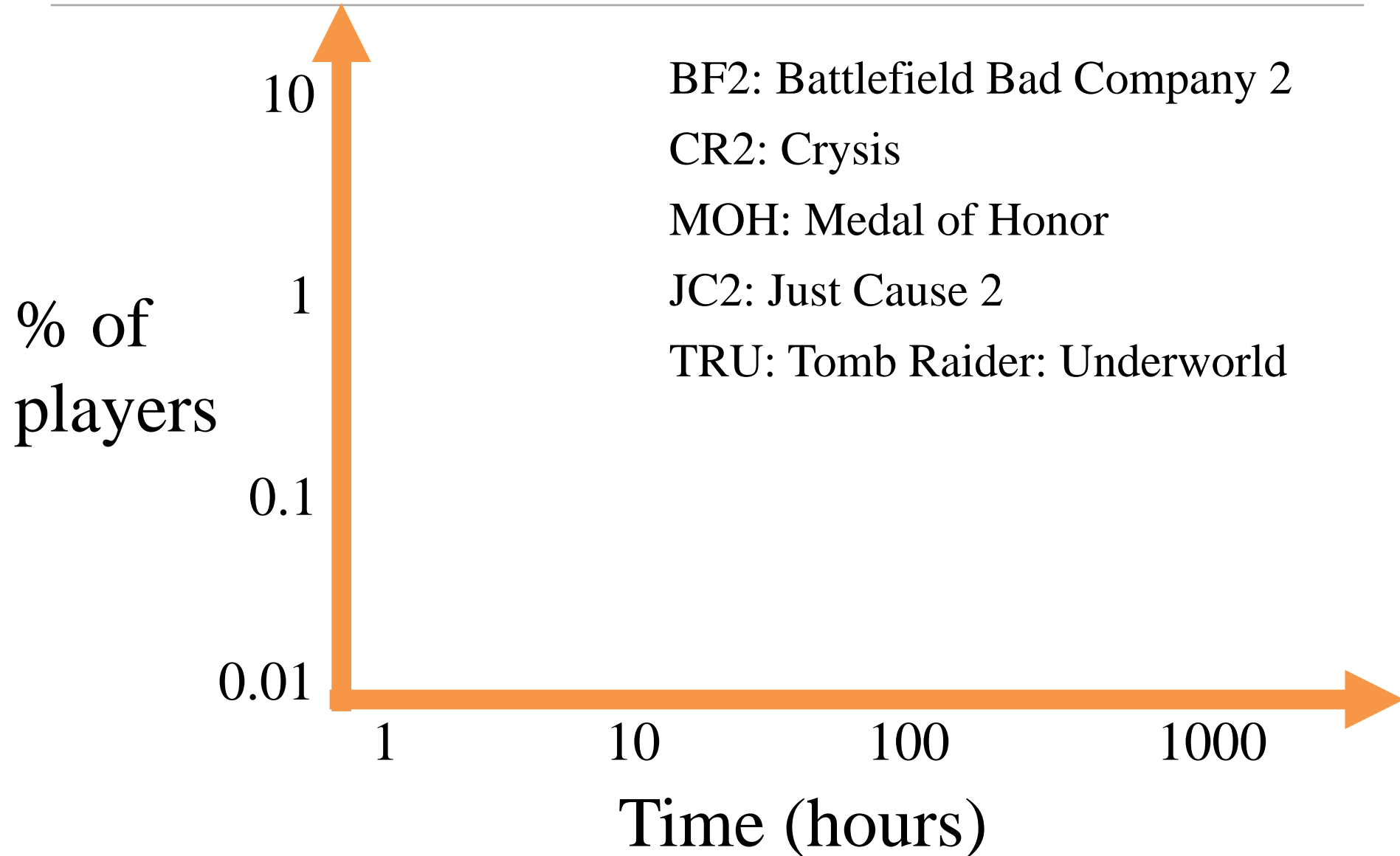
Distribution of Play Time

	#players observed	observation period		
		start date	end date	#months
Just Cause 2	5,331	03-23-2010	10-07-2010	7
Tomb Raider: U.	146,233	12-01-2008	01-31-2009	2
Battlefield B.C. 2	87,126	03-14-2010	12-26-2011	21
Crysis 2	4,364	04-13-2011	11-23-2011	6
Medal of Honor	12,328	11-03-2010	12-18-2011	14

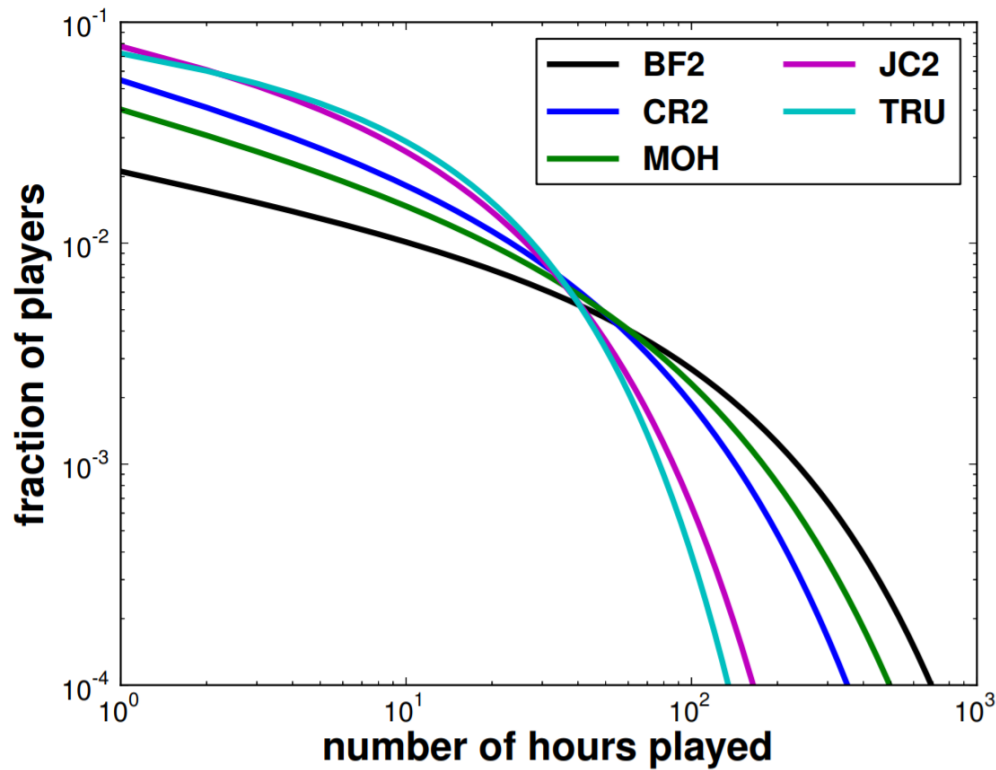
Visualizing Engagement



Pair Activity: pick *one* game and plot



Distribution of Play Time



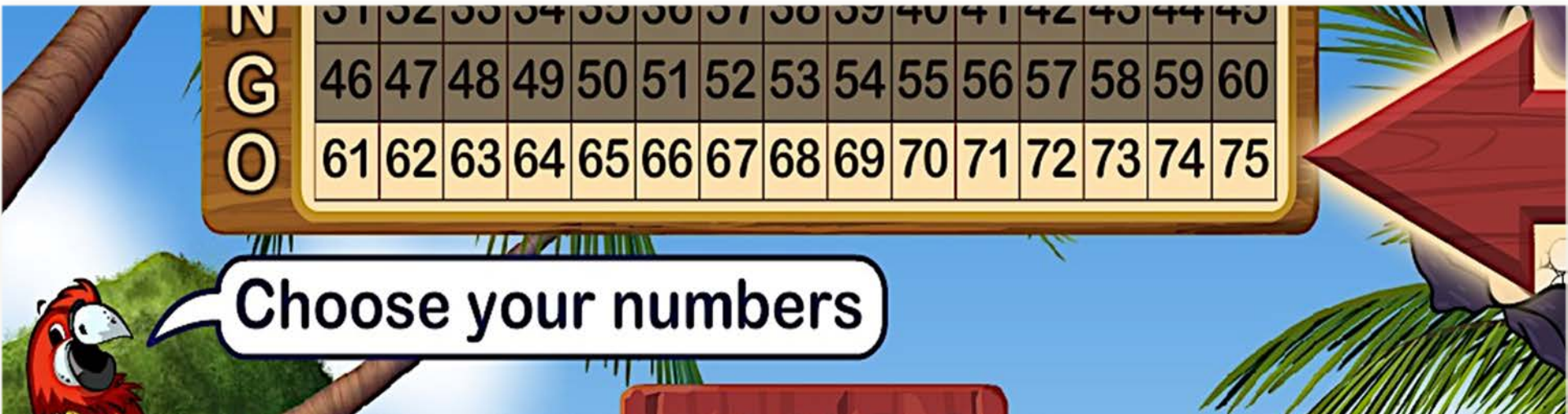
BF2: Battlefield Bad
Company 2
CR2: Crysis
MOH: Medal of Honor
JC2: Just Cause 2
TRU: Tomb Raider:
Underworld

GSN Games: Video Bingo



Revenue +13.9%

GSN Games: Video Bingo



Revenue +11%

GSN Games: Video Bingo



GSN Games: Video Bingo



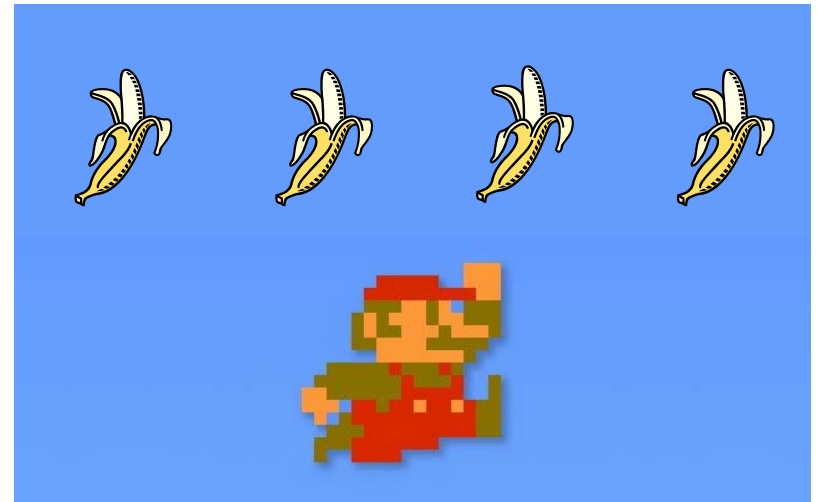
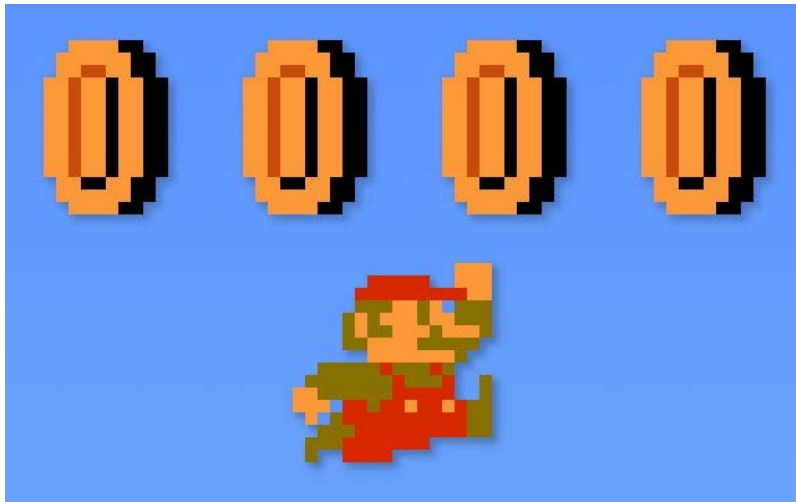
GSN Games: Video Bingo



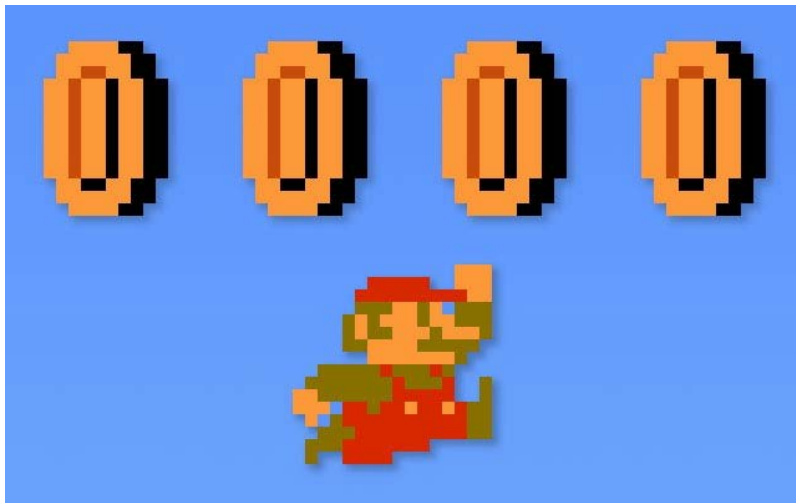
Revenue +12.3%

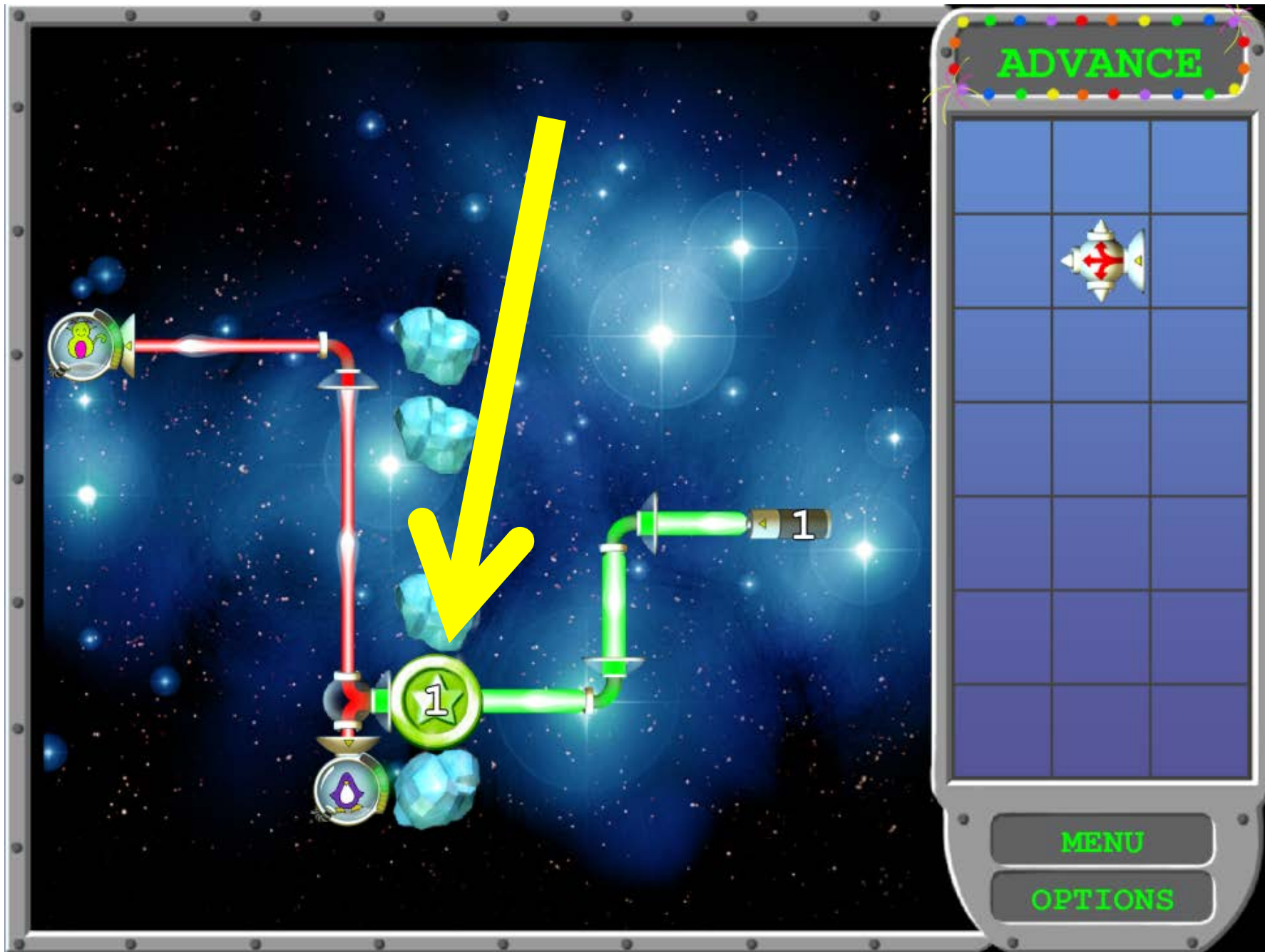
Bounce Rate -25.8%

Returning to this question...



Returning to this question...





ADVANCE

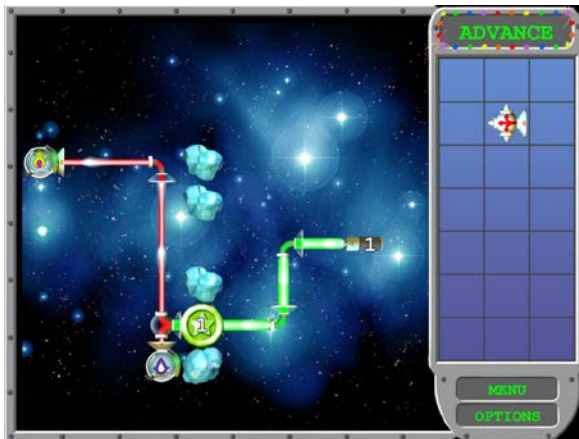


MENU

OPTIONS



Players

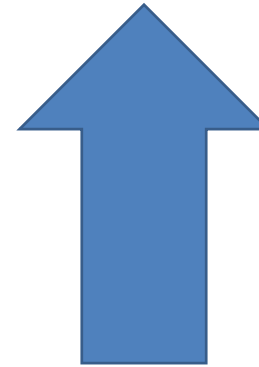
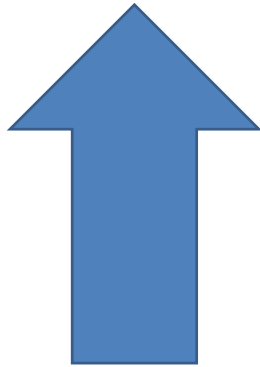
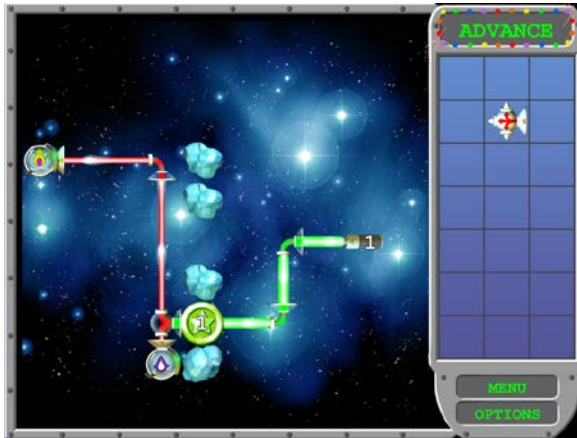


24,000 players

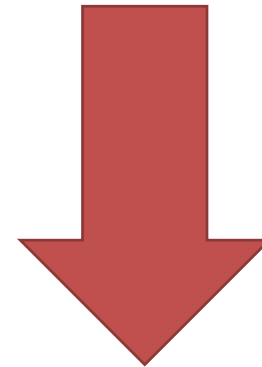
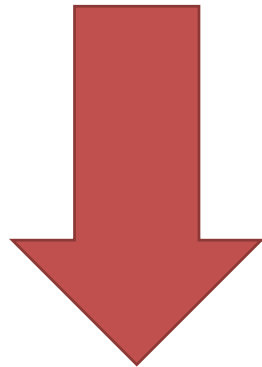
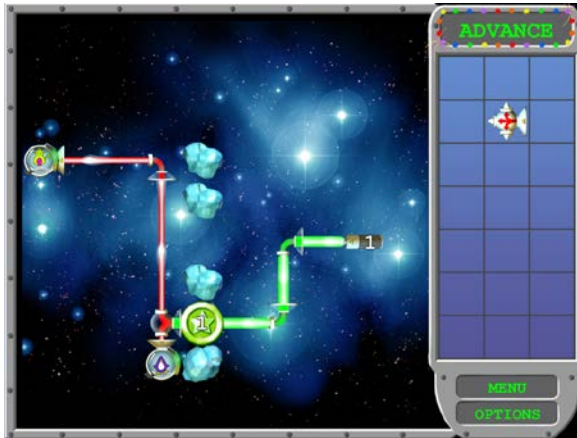


3,000 players

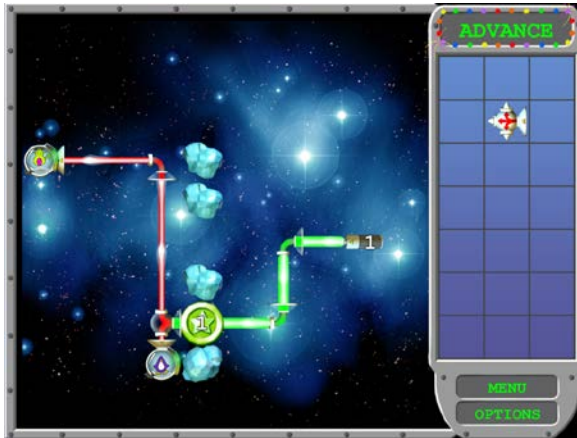
With coins, engagement...



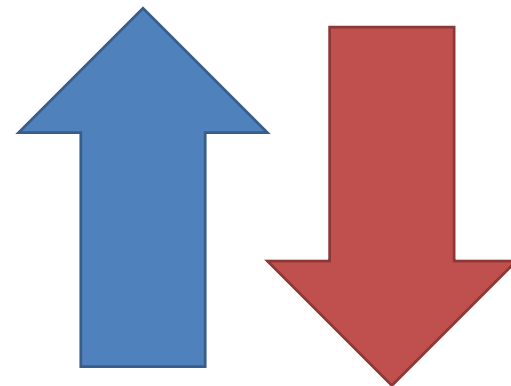
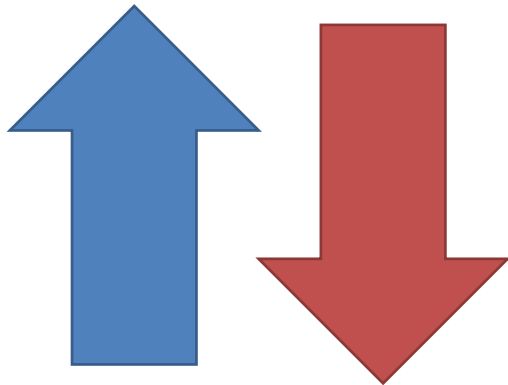
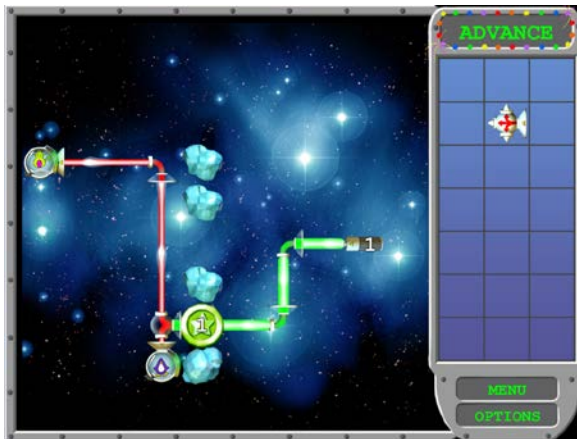
With coins, engagement...



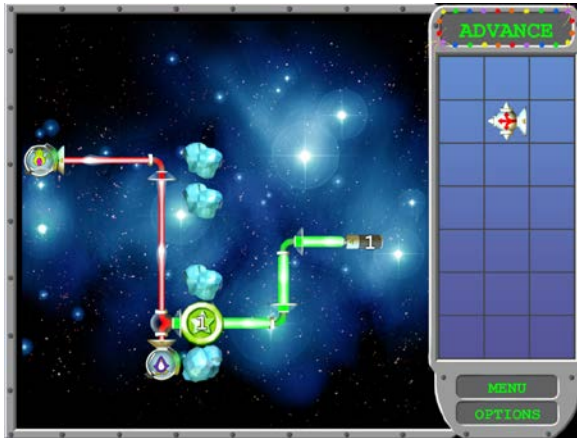
With coins, engagement...



With coins, engagement...



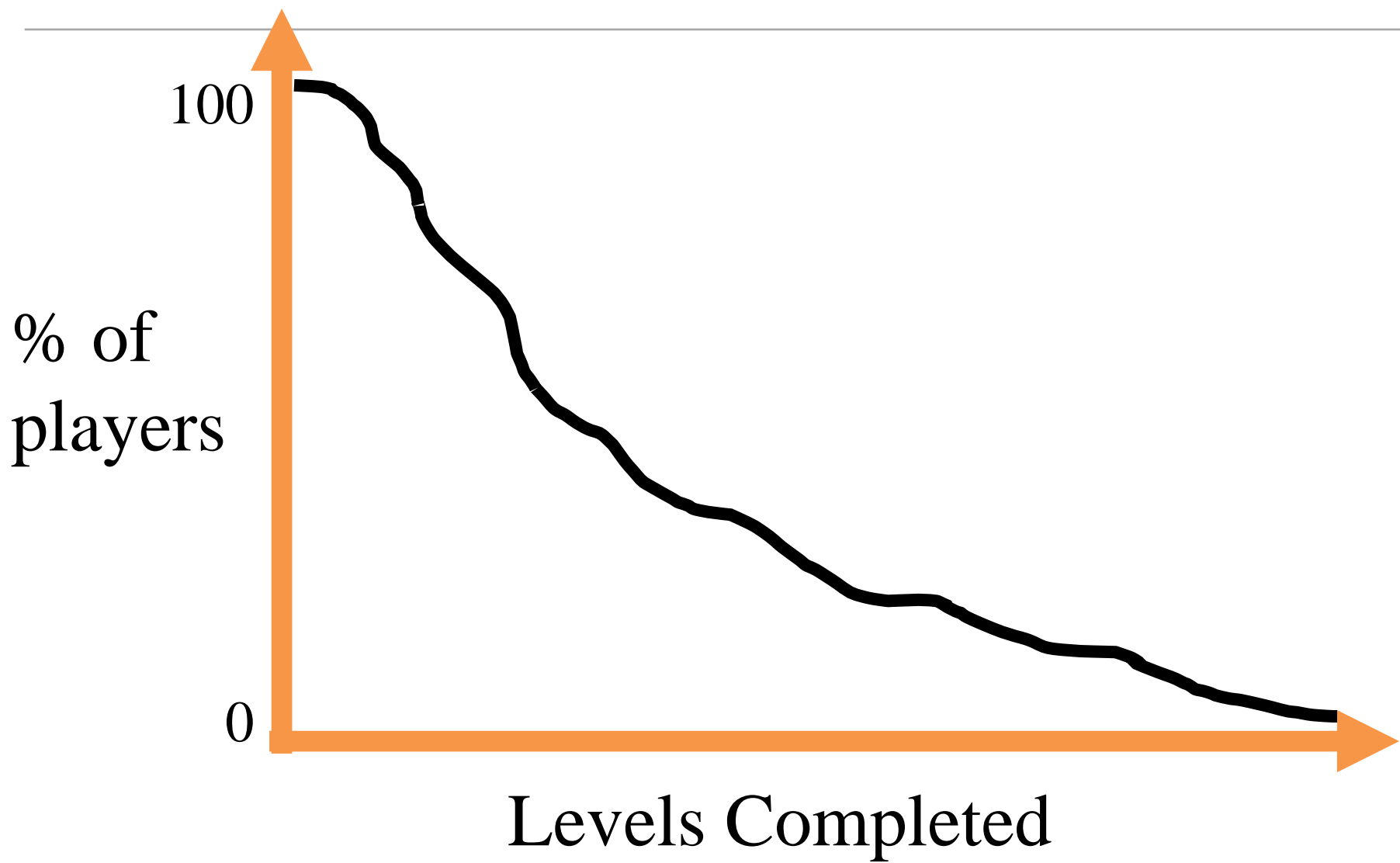
With coins, engagement...



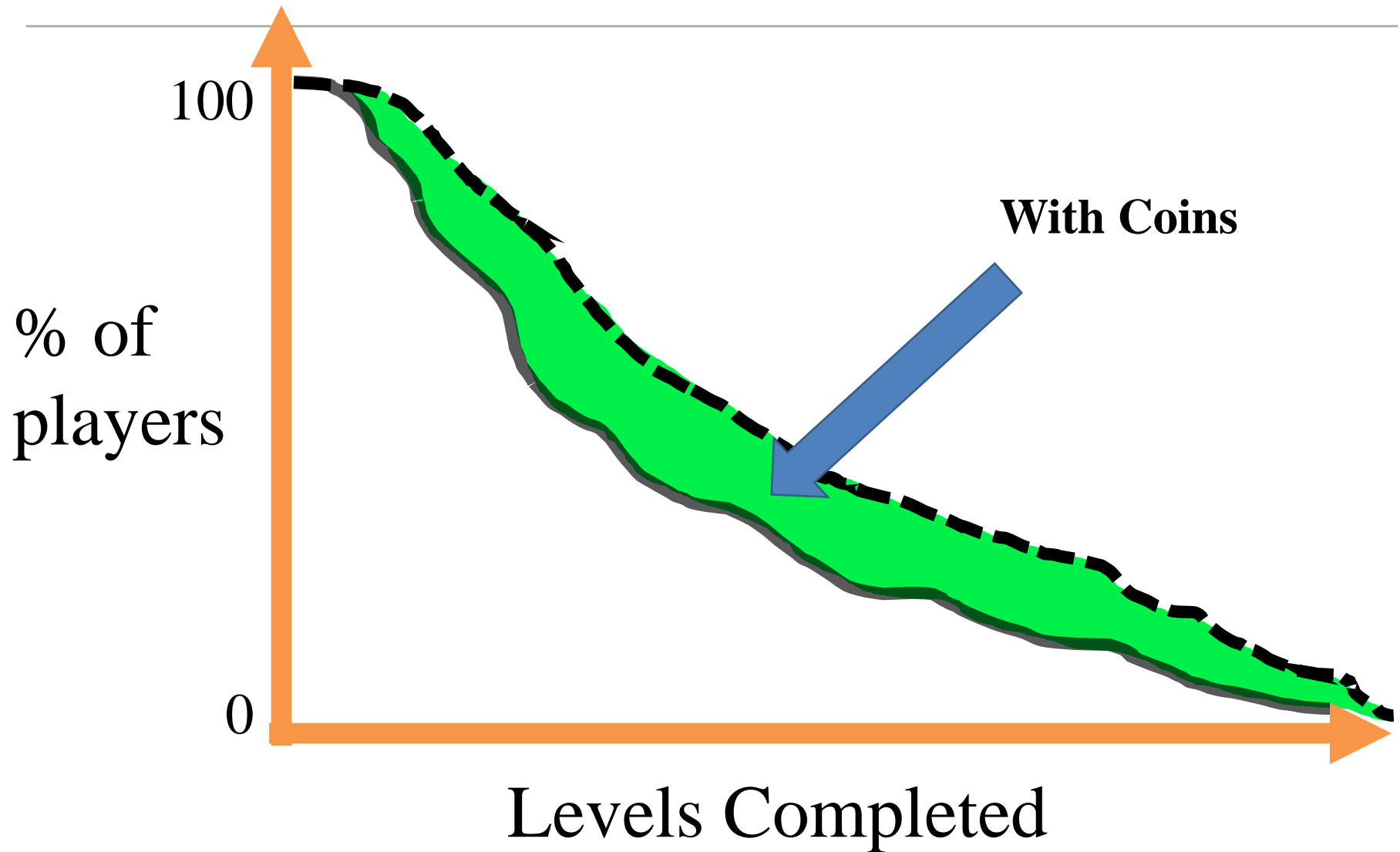
no change



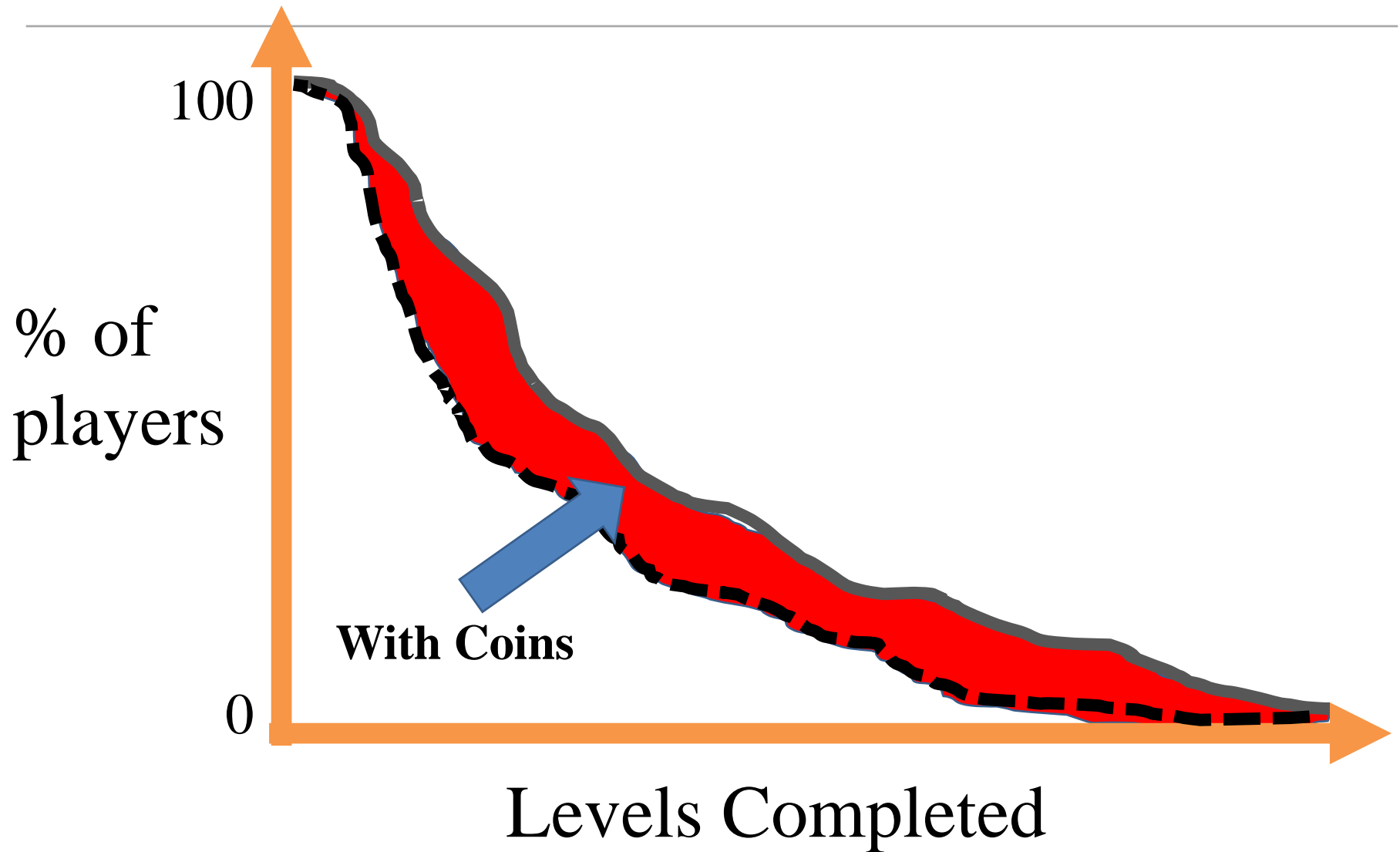
no change



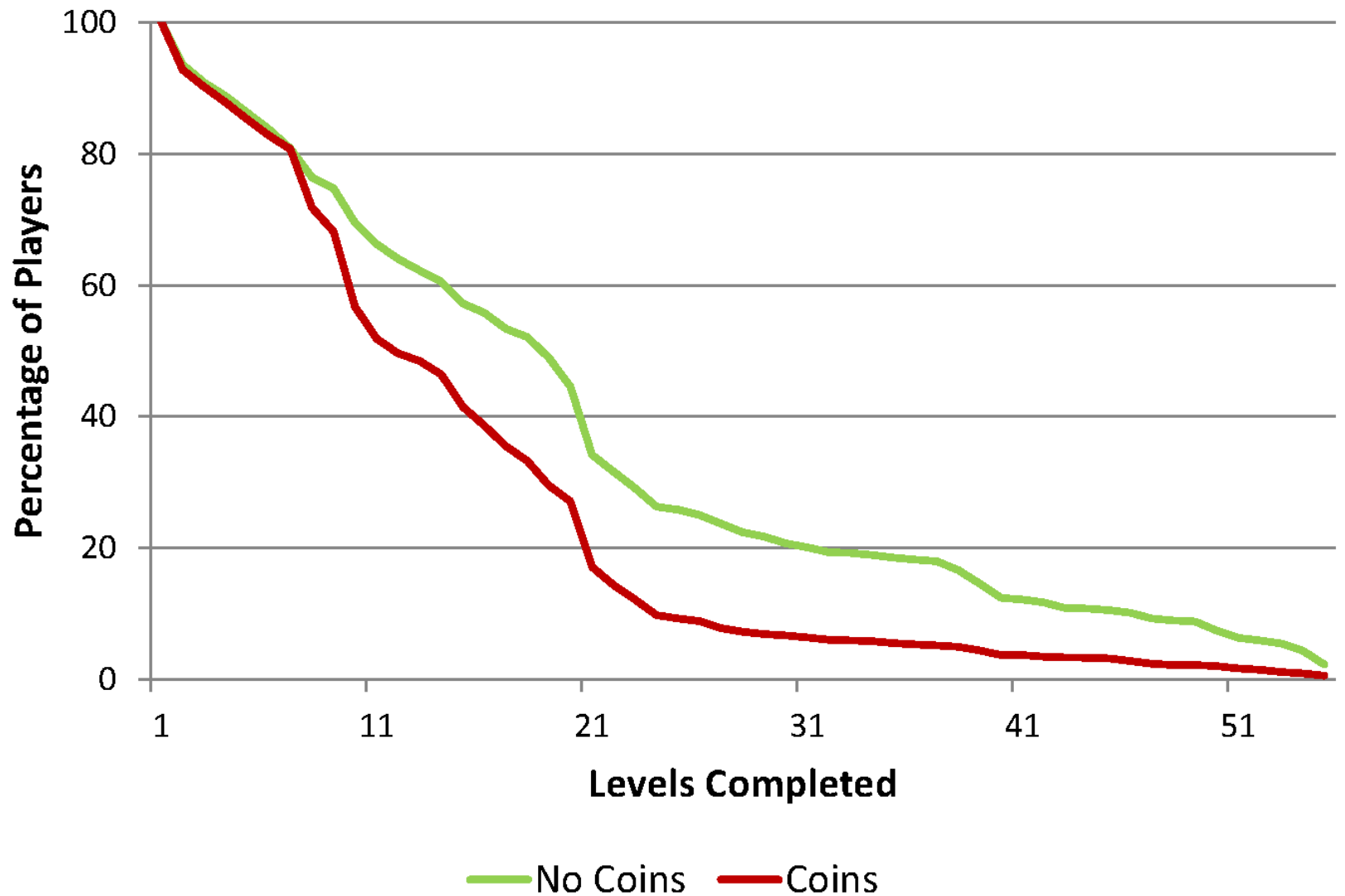
The Hope: people play longer



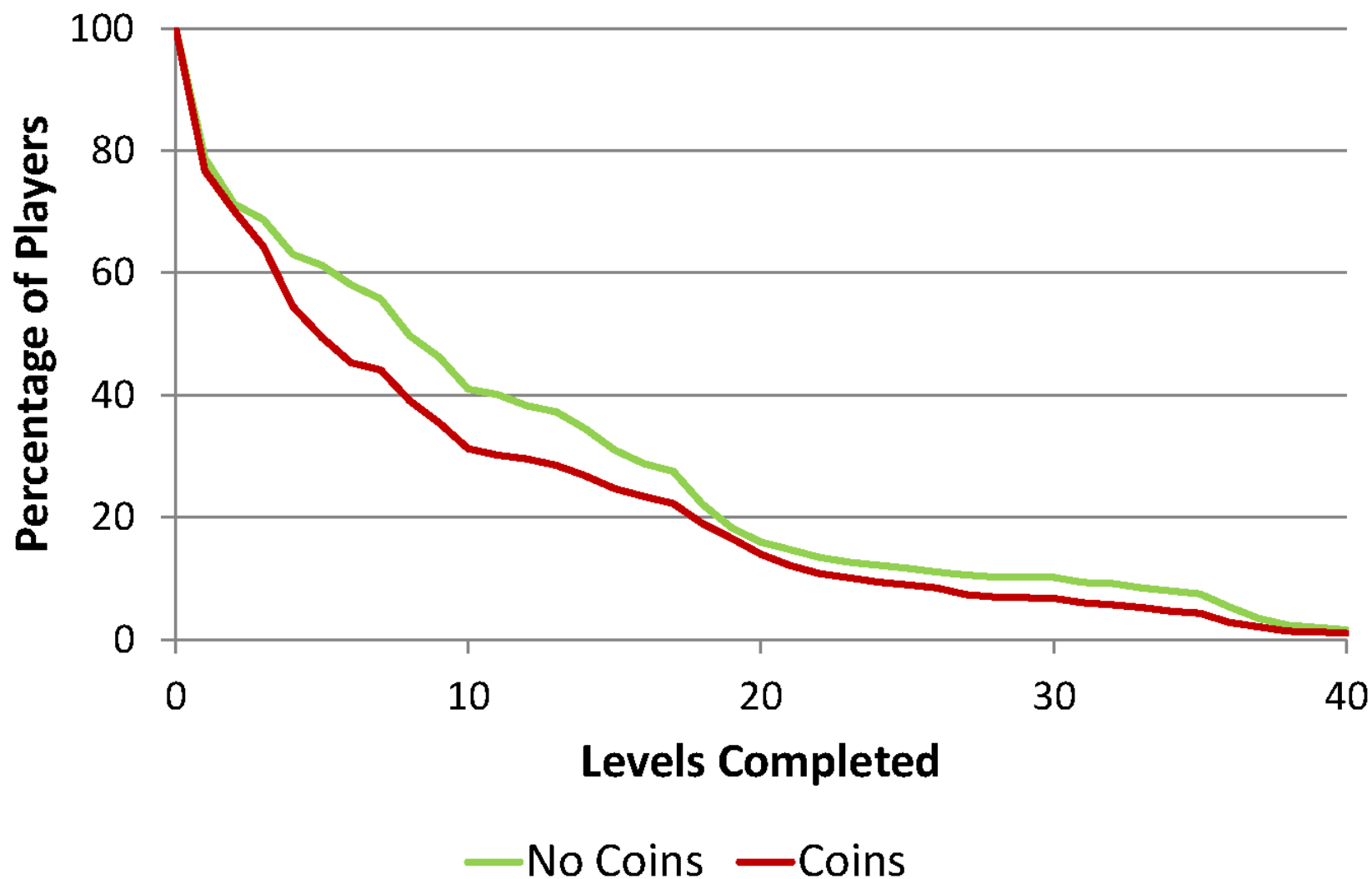
Reality: coins distracted players



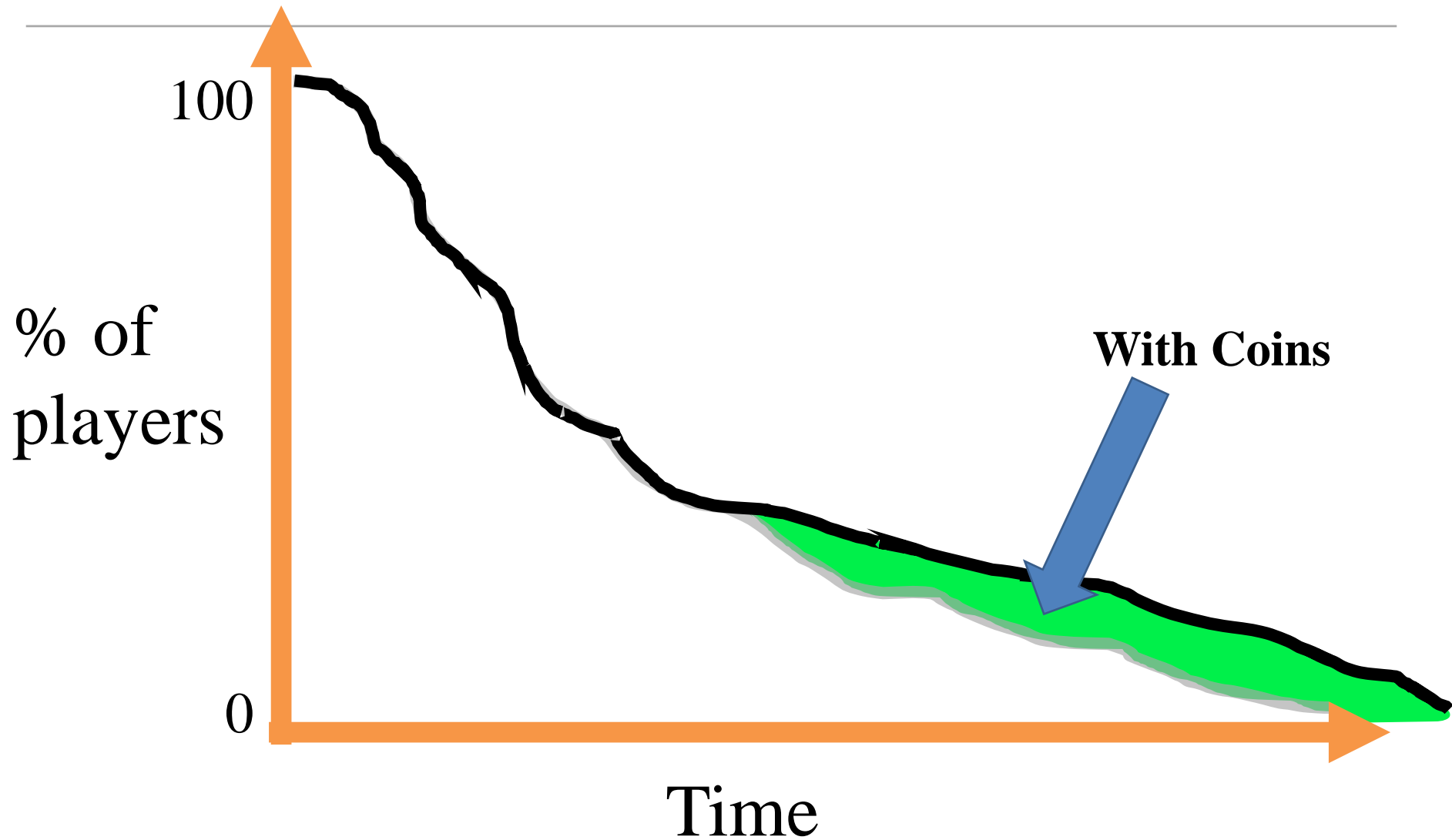
Distribution of Levels Completed in Refraction



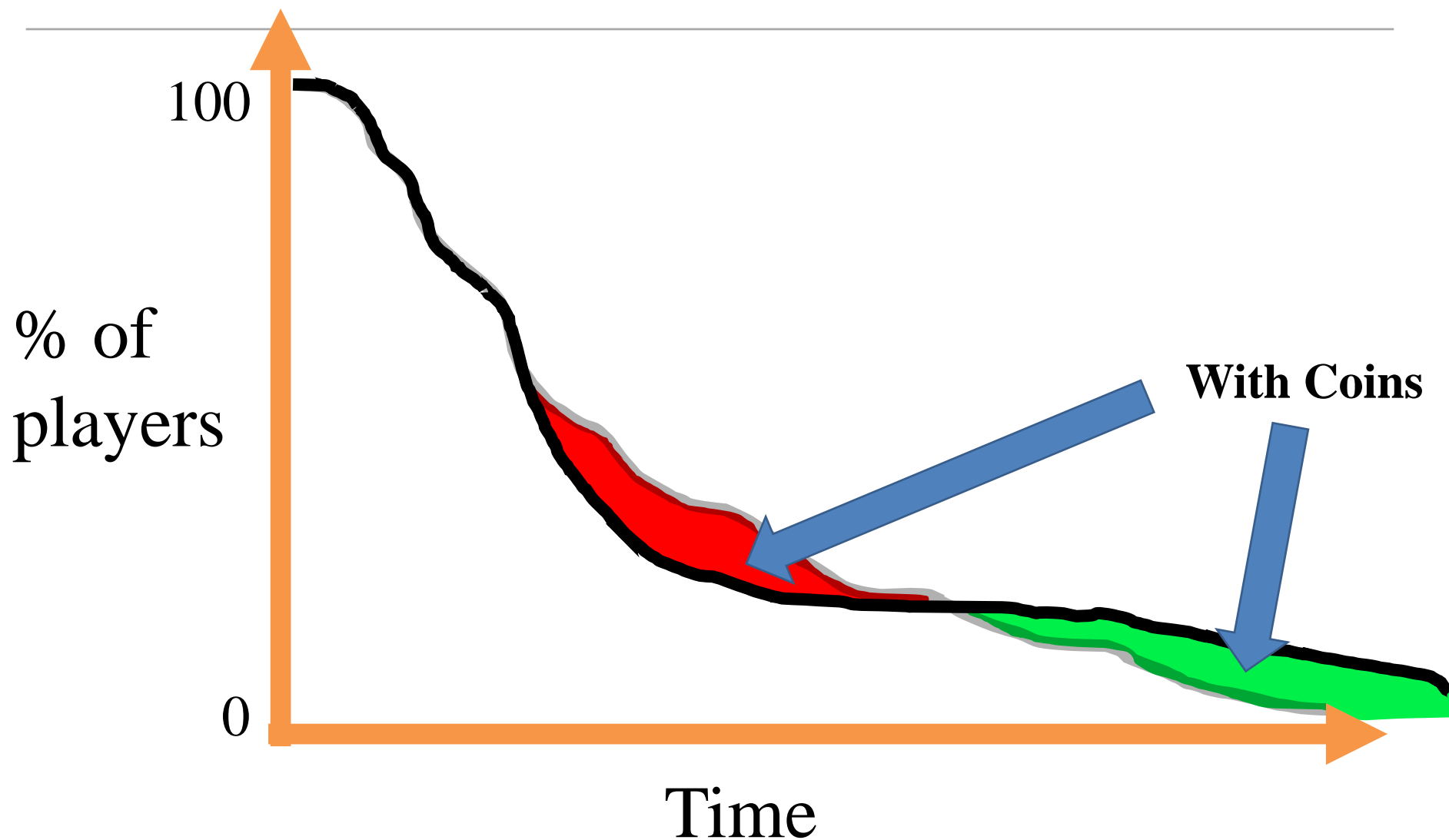
Distribution of Levels Completed in Hello Worlds



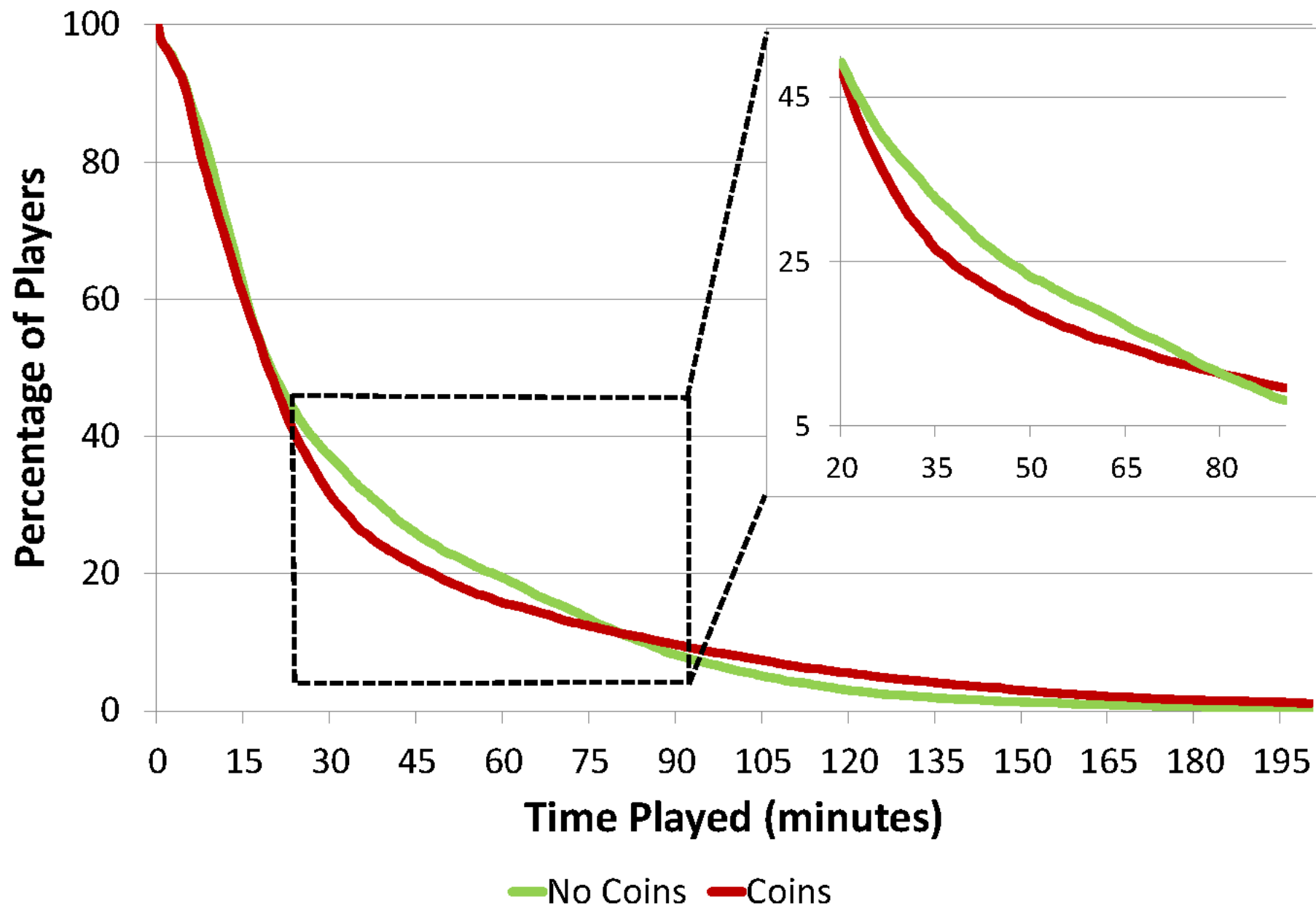
The Hope: people play longer



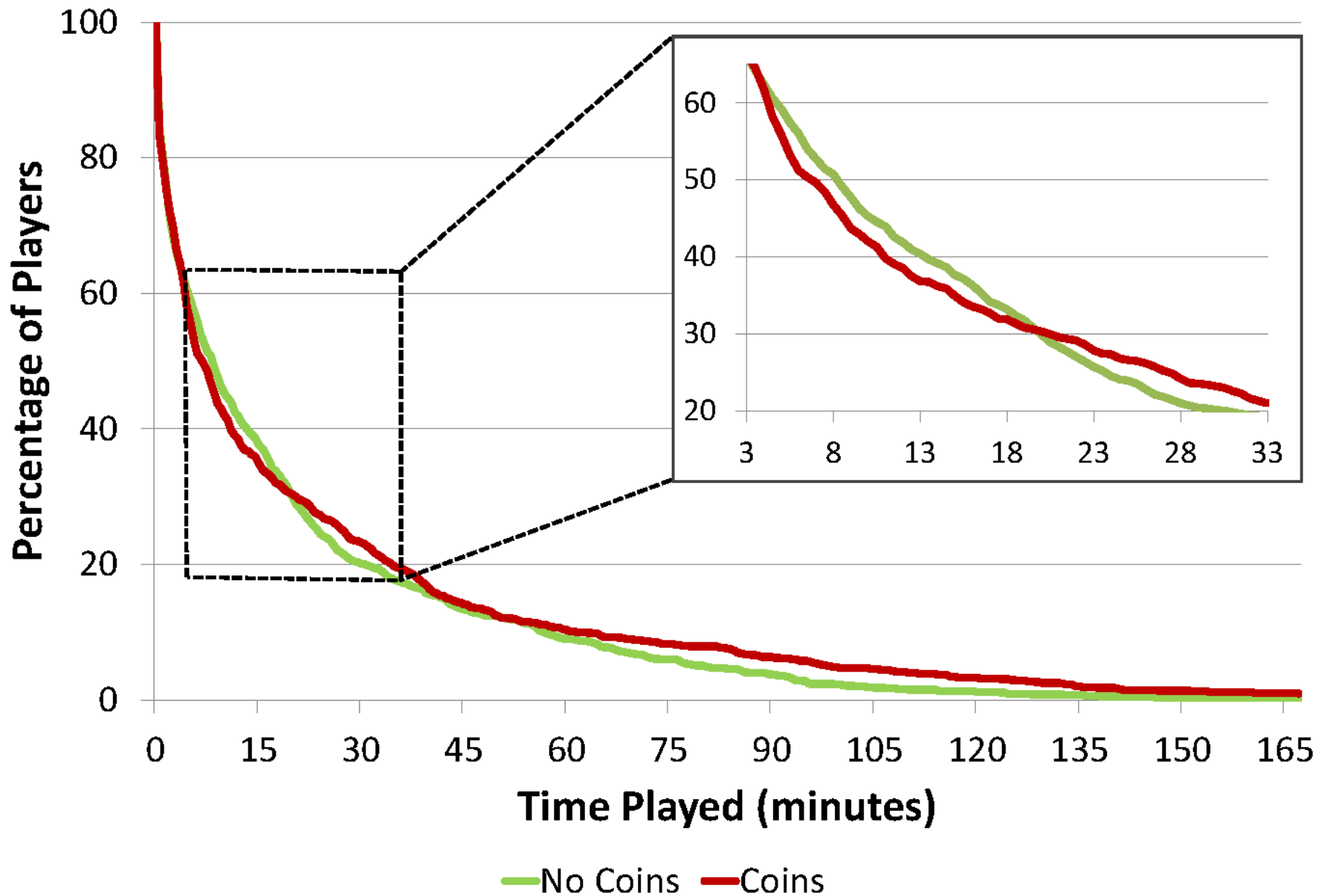
Reality: some do, some do not



Distribution of Time Played in Refraction

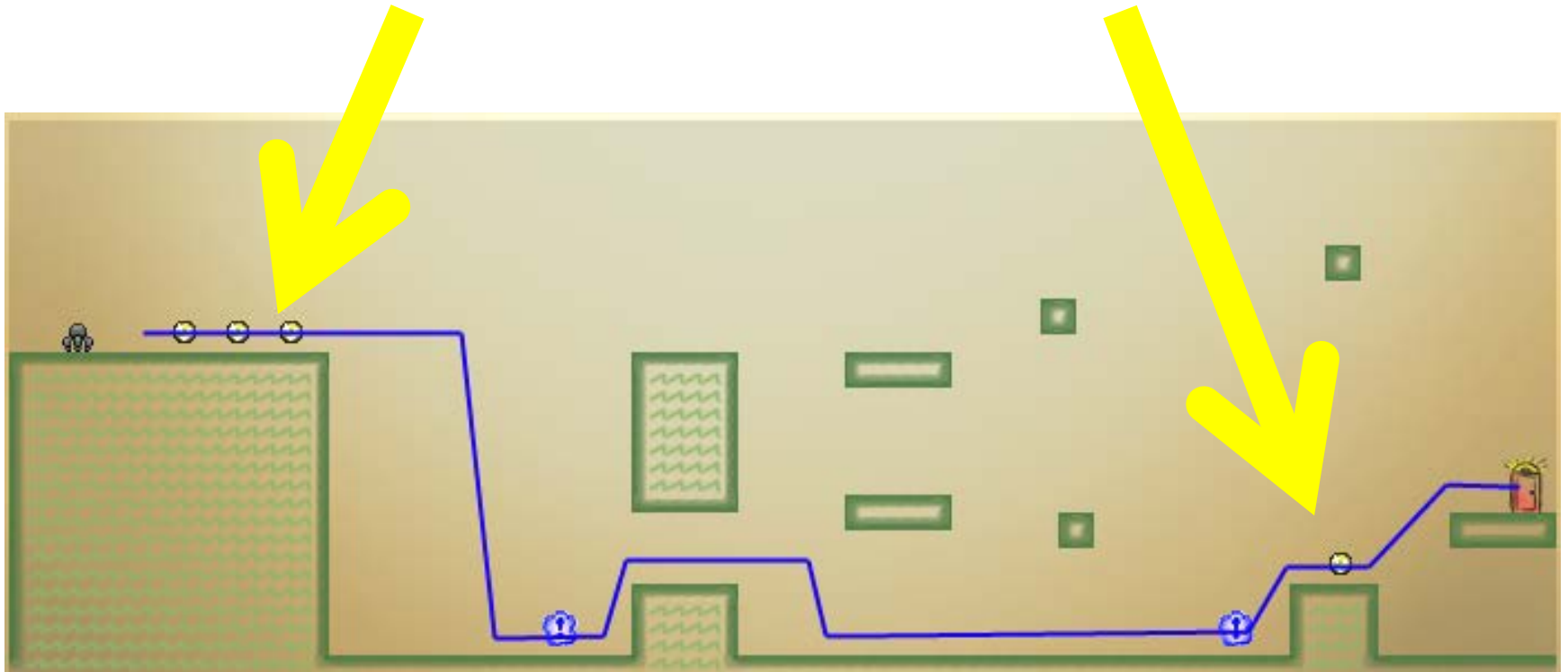


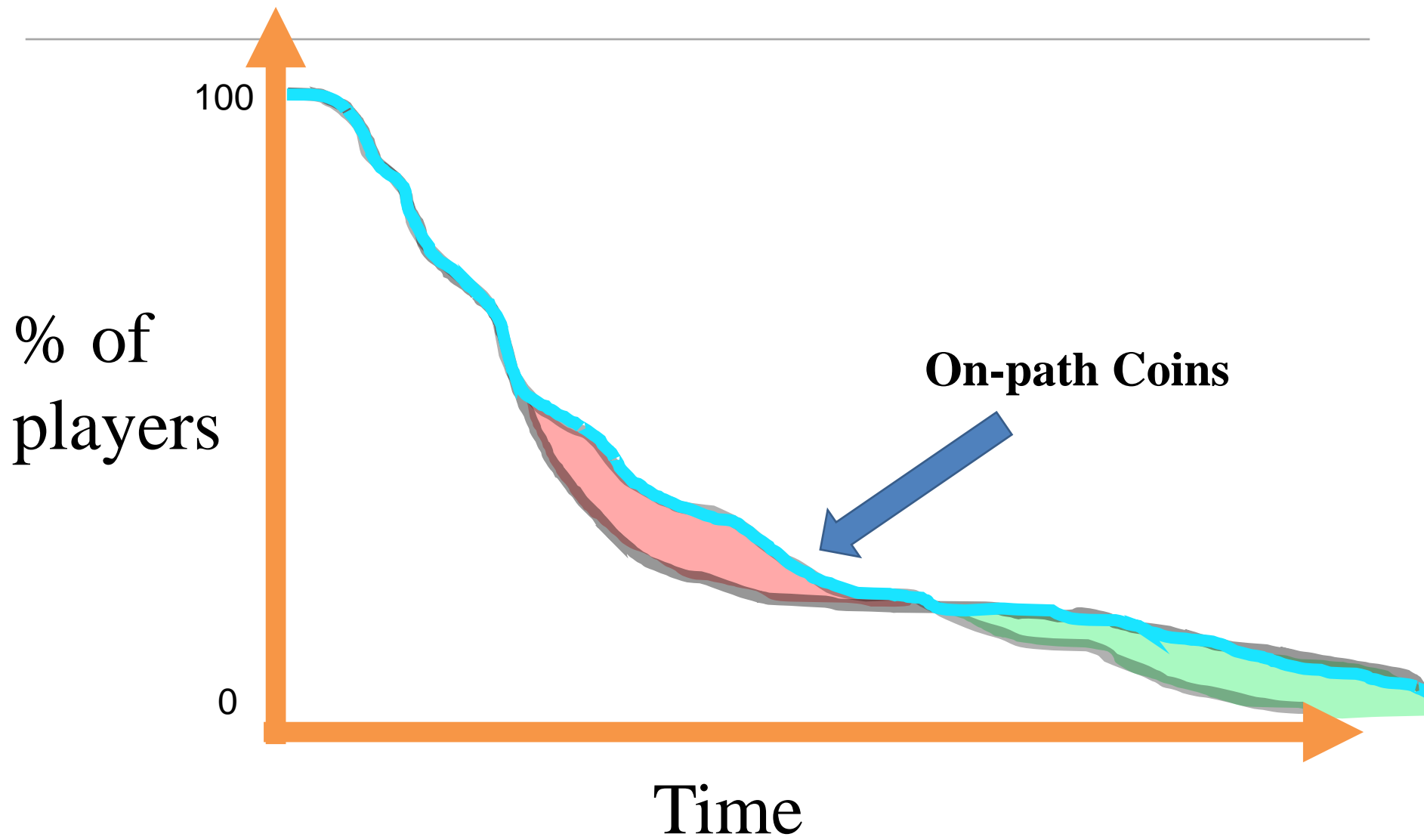
Distribution of Time Played in Hello Worlds



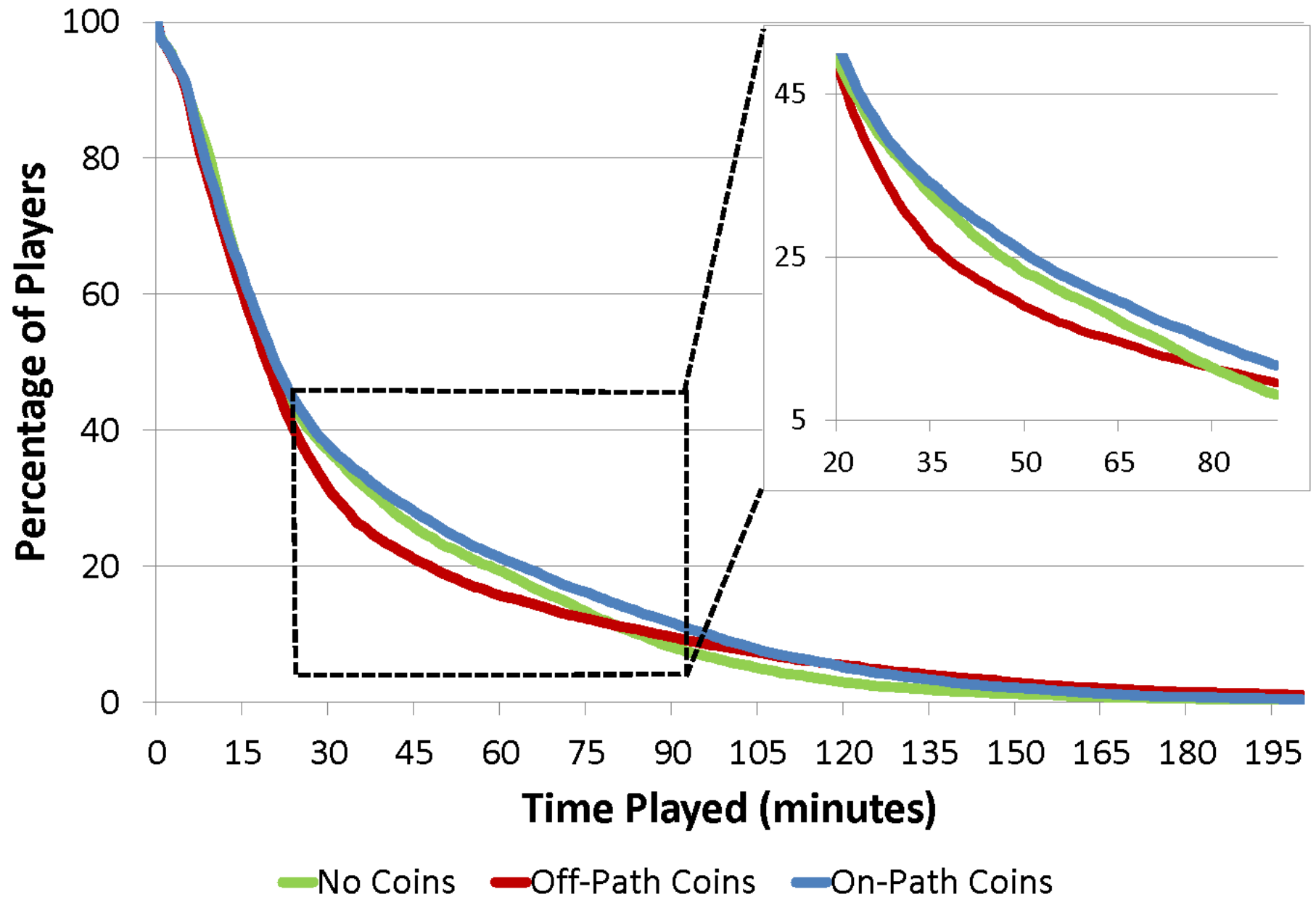


Making things easier

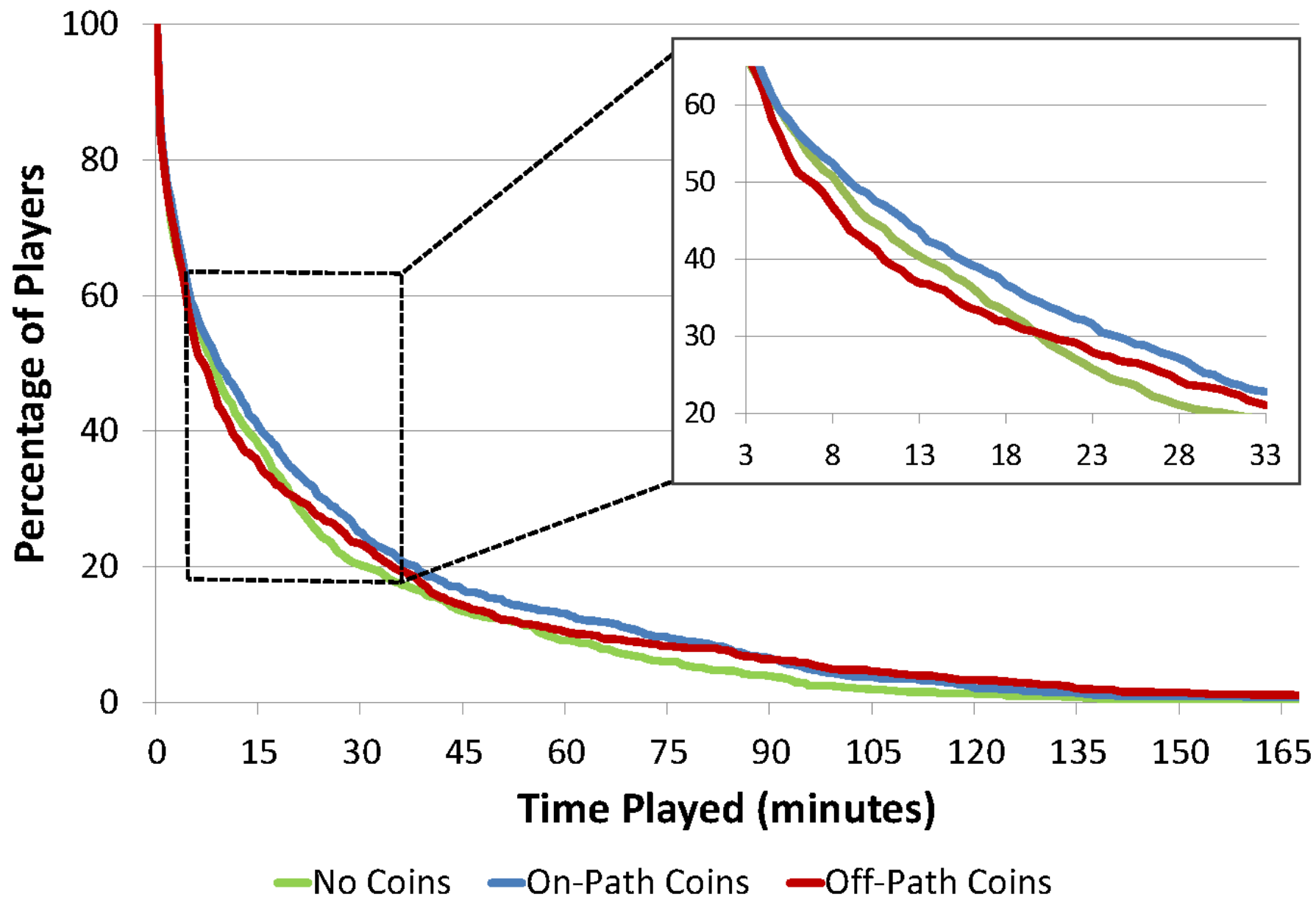




Distribution of Time Played in Refraction



Distribution of Time Played in Hello Worlds



Israeli Daycare

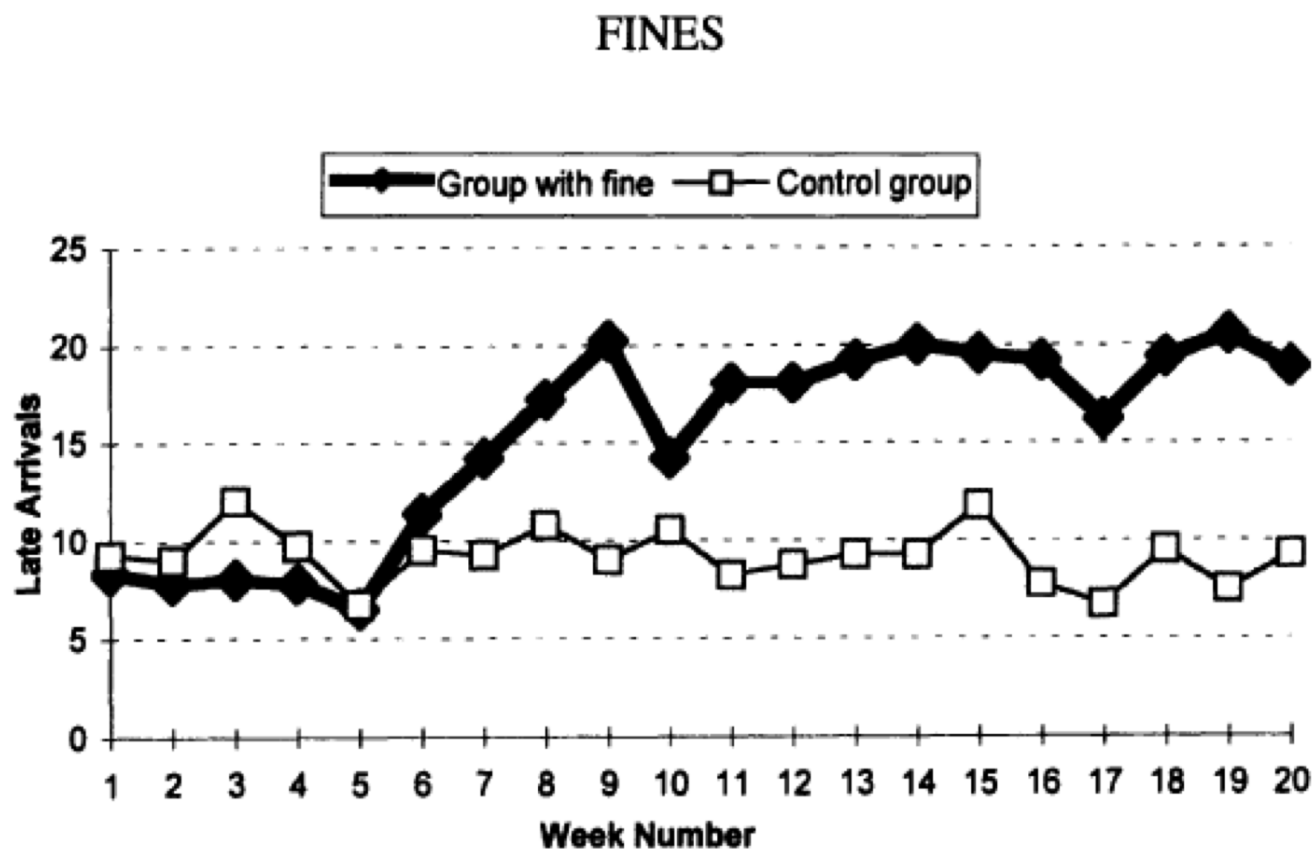
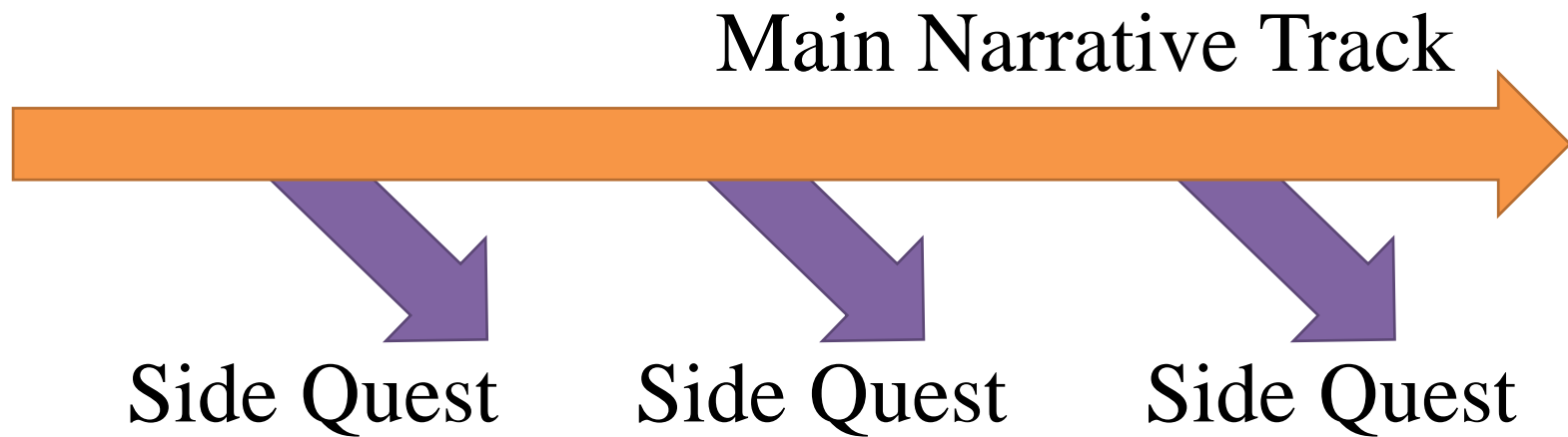
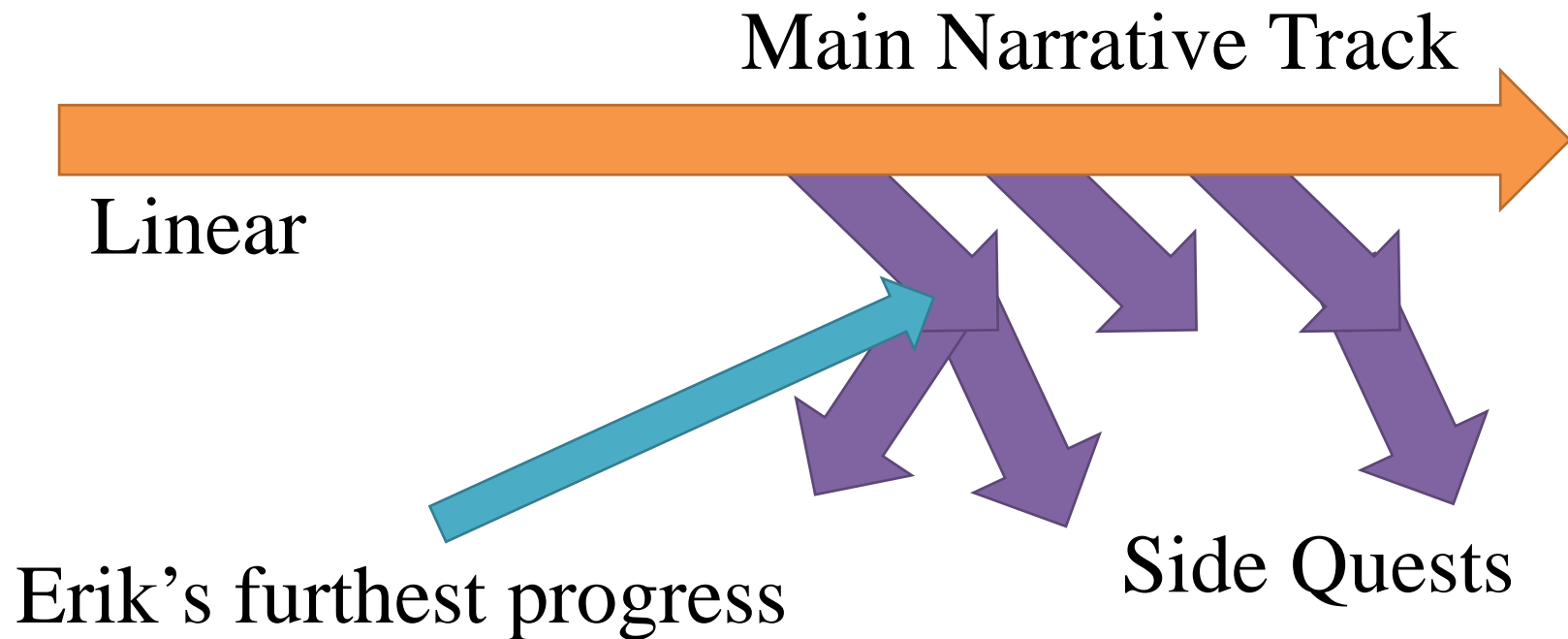


FIGURE 1.—Average number of late-coming parents, per week

Normal Side Quests



Final Fantasy XIII (2009)



Key Lesson of this Class #4

incentive design is tricky

Braid's Slow-moving Cloud



Outline

1. Setting the stage
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Group Activity

- Consider incentive design for your game
 - Extra points?
 - Score?
 - Side quests?
 - Badges?
 - Achievements?
- How do you prevent them from distracting the player?