GDC Europe
Game Developers Conference™ Europe 2011
August 15-17, 2011 | Cologne, Germany
www.GDCEurope.com

The Evolution of RPG Mechanics: From Die Rolls to Hit Volumes

J.E. Sawyer
Project Director, Obsidian Entertainment

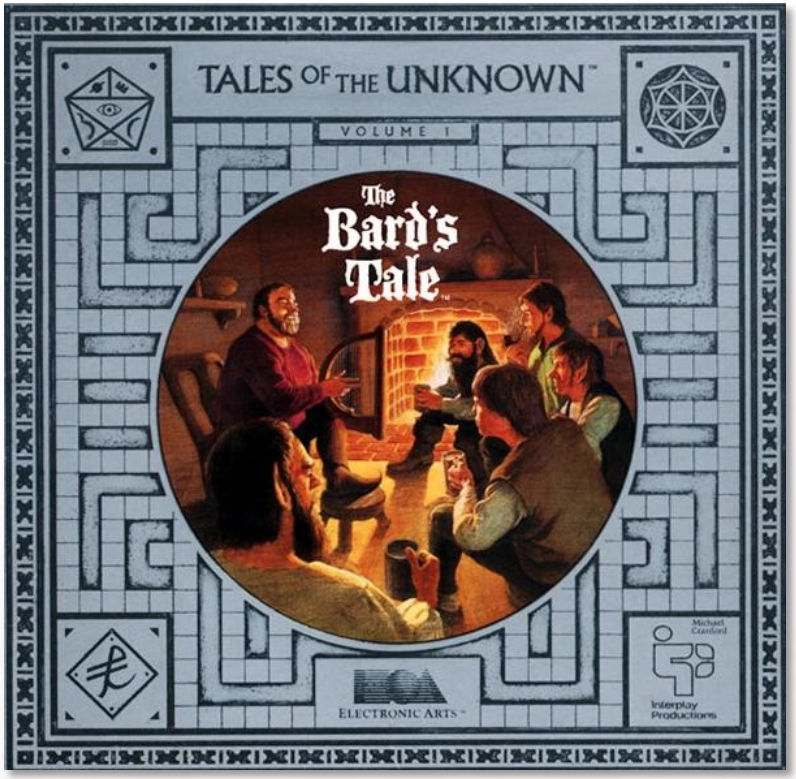
Fun = Enjoyment of Experience

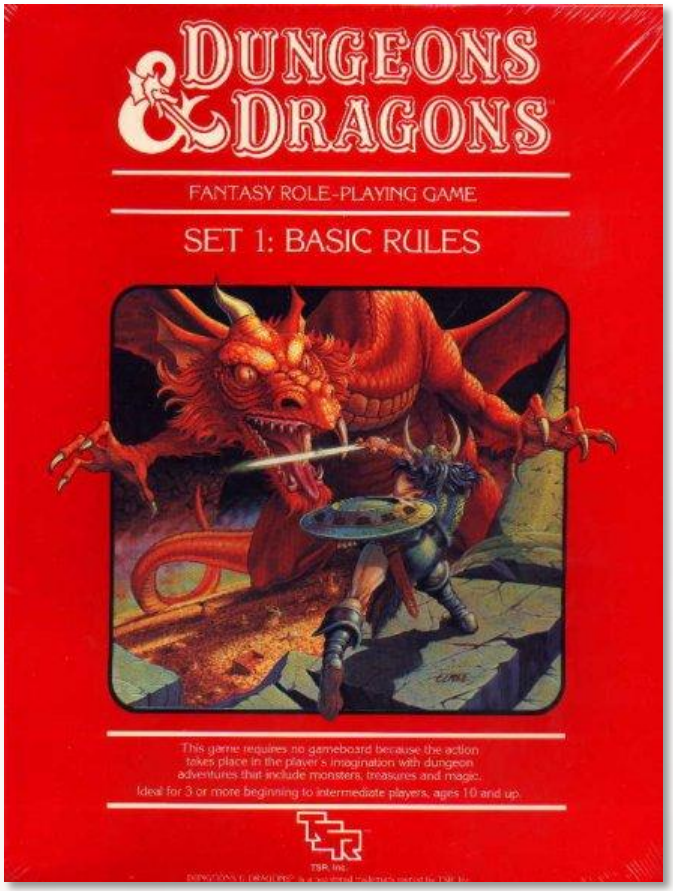
Game Designer = Engineer of Experience

Who Is This Guy?

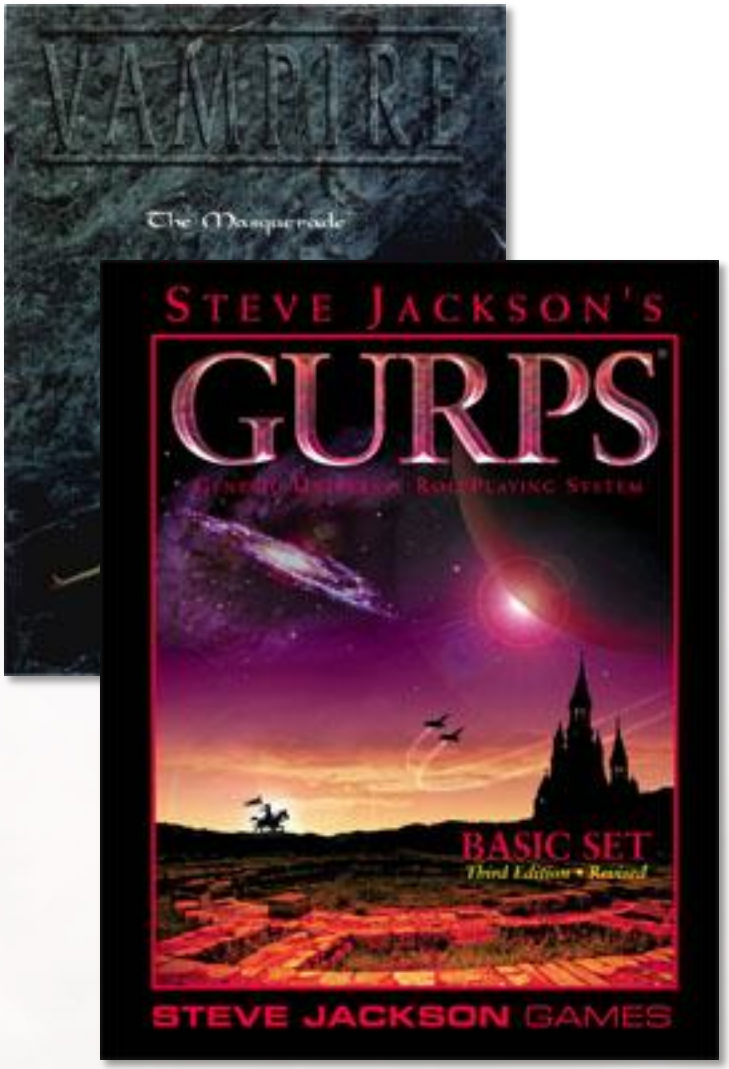
- Grew Up in Wisconsin, USA
- B.A. History, Lawrence University ‘98
- Black Isle Studios, Midway
- Project Director, Obsidian Entertainment, Irvine, California
- System Designer
- System *Adapter*
- Tabletop RPG and CRPG Player
- General Console and PC Gamer

Where It All Began...

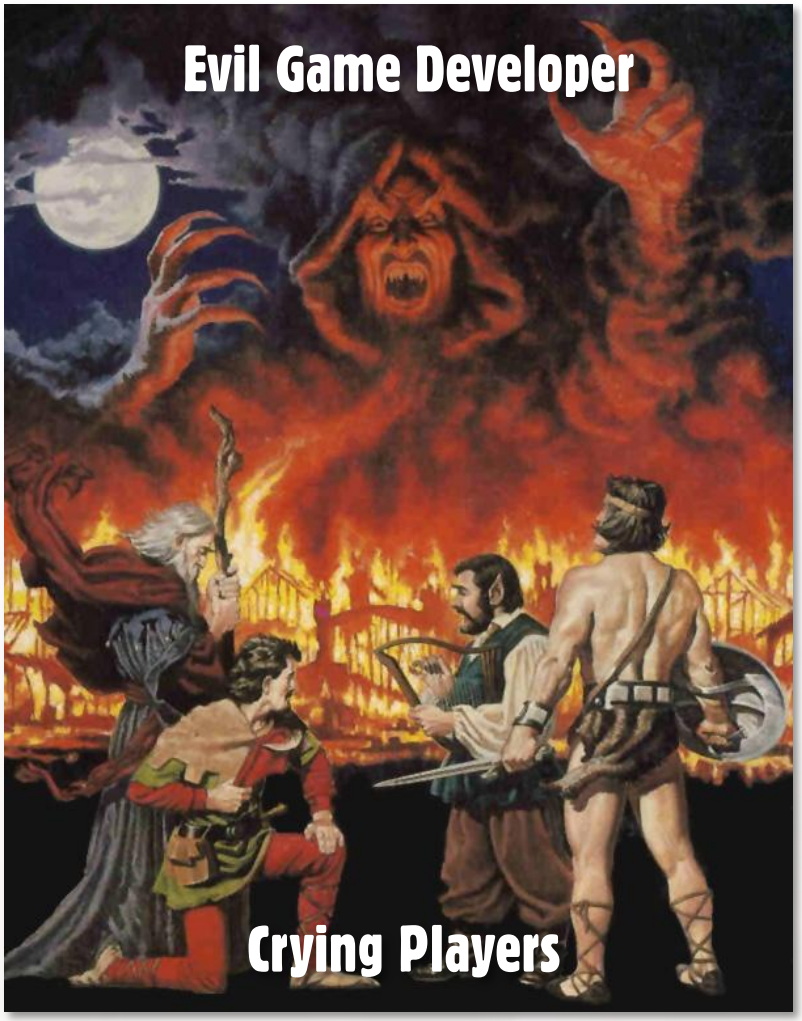




Gateway to Game Development



"[Mechanic] is Pretty Good... For an RPG"



Whyyyyyyyyy?

- Repeat errors despite feedback
- Ignore established mechanics
- Disregard smart players
- Attend to "vocal" players
- ***We do not consider the player's experience to be more important than a design idea or an audience expectation***

Five Hard Lessons

- Part 1: Mechanical Chaos Is Frustrating
- Part 2: What You Perceive Matters Most
- Part 3: Strategic Failures Feel Terrible
- Part 4: Player vs. Character Is a False Dichotomy
- Part 5: Good Gameplay > Ideas & Expectations

Caveat Audiens

- We *All** Make Mistakes
- Strategy and Tactics
- Not Anti-Turned Based, Not Even Anti-Randomization
- RPG Definitions: Take 'Em or Leave 'Em
- … But no MMORPGs
- "Nobody" = Somebody, Probably **

*mostly other guys, though.

** probably you

Part 1: Mechanical Chaos is Frustrating

Randomized Accuracy

WARNING: NO ACTUAL HUMAN BEING LIKES THIS!

Randomized Lockpicking / Hacking / Speech / Crafting

Case Study: F:NV Casino Gambling

Problems

- Player Expectation of Casino
- Real Casino Games are Ho[illegible]
- Results Can Be Avoided V[illegible]load
- Potential Economy Breaker
- Negative Reaction to Limits

Solutions

- Three Low-Impact Casino Games
- Luck Stat Only Improves Odds
- A[illegible] Cheating Measures On Load
- [illegible] Accept Max Winnings
- Reward Hitting the Limits

Elder Scrolls, Deus Ex : Combat Evolved

"If you want to make enemies, try to change something."

Mass Effect 1 vs. 2: Combat *More* Evolved

Mass Effect 3 : Even Better?!

Part 2: What You Perceive Matters Most

The Not-So-Good

The Good

Case Study: Companion Power

Fallout: New Vegas vs. Dungeon Siege 3

Case Study: F:NV – 9mm SMG

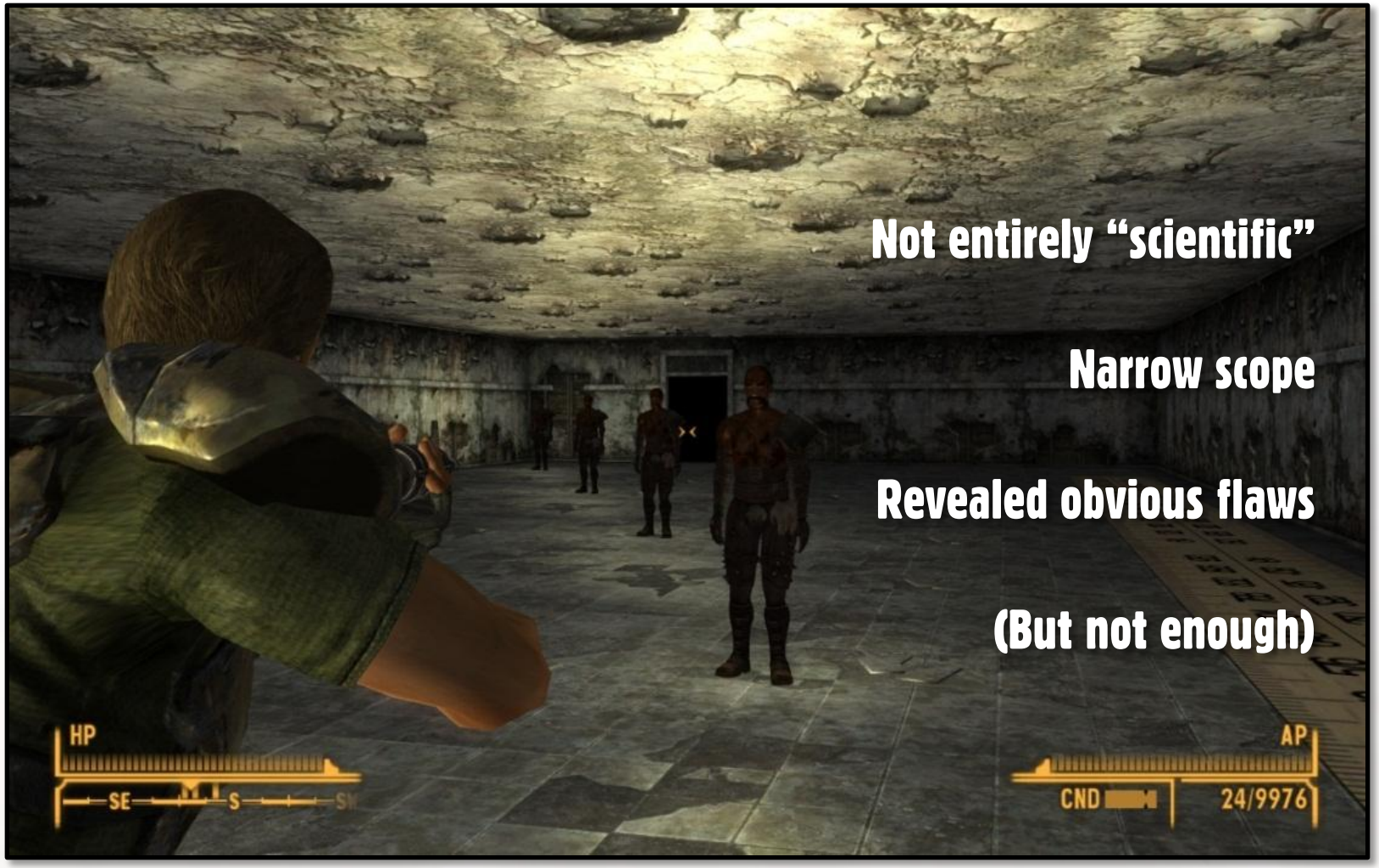
Design Methodology: Theoretical

		Base Damage	W/ Medium DT	W/ Max DT
	5mm	12	8	4
	5.56mm	32	28	24
	.45-70 Gov't Rifle	70	66	62
	.50 MG	125	121	117
	.308 Cal	65	61	57
	.44 Mag Handgun	28	24	20
	.44 Mag Rifle	53	49	45
	.357 Handgun	14	10	6
	.357 Rifle	28	24	20
	10mm	14	10	6
	9mm	9	5	1.8
	.22LR	6	2	1.2
	20 Ga. Birdshot	8	4	1.6
	20 Ga. Slug	50	46	42
	.45-70 Gov't Handgun	45	41	37

Weapon	Ammunition	RoF	Max Range Hit Rate	All Hit (0 DT)	All Hit (Med
.357 Revolver	.357 Mag Handgun	1.75	0.8	24.5	
9mm Pistol	9mm	3.125	0.7	28.125	
Single Shotgun	20 Ga. Birdshot	4.5	0.6	36	
Single Shotgun	20 Ga. Slug	0.5	0.6	25	
Caravan Shotgun	20 Ga. Birdshot				
Battle Rifle	5mm	5	0.7	60	
9mm SMG	9mm	10	0.25	90	
Cowboy Repeater	.357 Mag Rifle	1.4	0.9	39.2	
10mm Pistol	10mm	2.7	0.7	37.8	
.44 Revolver	.44 Mag Handgun	2.1	0.5	58.8	
10mm SMG	10mm	9	0.25	126	
Silenced .22LR SMG	.22LR	13	0.5	78	
Hunting Rifle	.308 Cal	0.85	1	55.25	
Hunting Revolver	.45-70 Gov't	1.8	0.7	81	
Trail Carbine	.44 Mag Rifle	1.5	0.9	79.5	
Assault Carbine	5mm	15	0.5	180	
Sniper Rifle	.308 Cal	1.3	1	84.5	

	A	B	C	D	E	F
1	Tier 3					
2						
3	**Small Guns**			125 HP Raider, 16% DR		
4						
5	**.44 Revolver**					
6	**Distance**	**Trial 1 Time**	**Trial 2 Time**	**Trial 3 Time**	**Average Time**	
7	512u	2	2	2	2	
8	1024u	1.9	1.9	2	1.933333333	
9	1536u	3.3	9	6.9	6.4	
10	2048u	7.9	8	8.1	8	
11				**All Distance Average**	**4.583333333**	
12						
13	**10mm Submachinegun**					
14	**Distance**	**Trial 1 Time**	**Trial 2 Time**	**Trial 3 Time**	**Average Time**	
15	512u	1.3	1.9	1.7	1.633333333	
16	1024u	2.6	2.6	2	2.4	
17	1536u	7.5	2.3	4.3	4.7	
18	2048u	7	7.3	3.7	6	
19				**All Distance Average**	**3.683333333**	
20						
21	**Lever-Action Shotgun**					
22	**Distance**	**Trial 1 Time**	**Trial 2 Time**	**Trial 3 Time**	**Average Time**	
23	512u	1.5	1.4	1.3	1.4	
24	1024u	2.5	2.5	1.3	2.1	
25	1536u	3	3.2	2	2.733333333	
26	2048u	7.7	3.3	6.2	5.733333333	
27				**All Distance Average**	**2.991666667**	
28						

Design Methodology: Practical-ish



HIGHER NUMBER = BETTER THAN

DAM: 32
DPS: 69
Spread: 0.04

DUH!!

DAM: 11
DPS: 121
Spread: 2.2

9mm SMG: Before and After

Before:

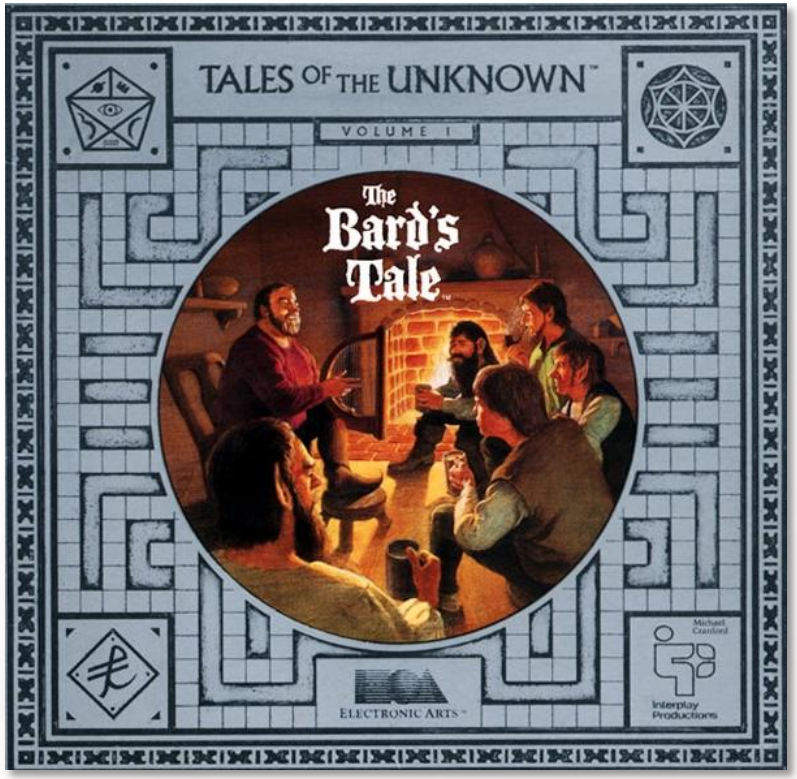
- Low DAM (11)
- High DPS (121)
- Terrible Spread (2.2)
- High Ammo Consumption (11/sec.)

After:

- Low-ish DAM (14)
- High DPS (154)
- Fair Spread (1.5)
- High Ammo Consumption (11/sec.)

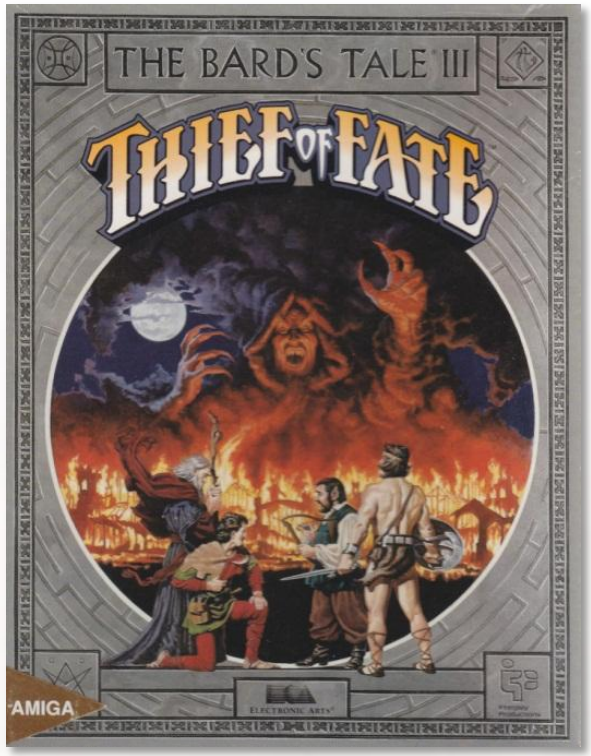
Part 3: Strategic Failures Feel Terrible

Extreme Examples



(YOU NEED A BARD TO WIN THIS GAME)

(YOU NEED A THIEF TO WIN THIS GAME)

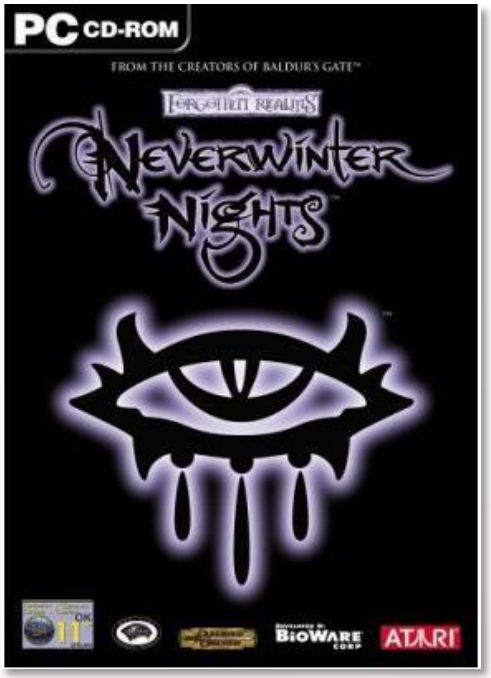


D&D = No Country for Strategic Newbs

- 2nd/3E/3.5 D&D Rules +
- Full Character Party Creation +
- Tuned for D&D Veterans +
- Broad Level Range =

Limitless Ways to Make Strategic Errors!

Neverwinter Nights: Pretty Forgiving



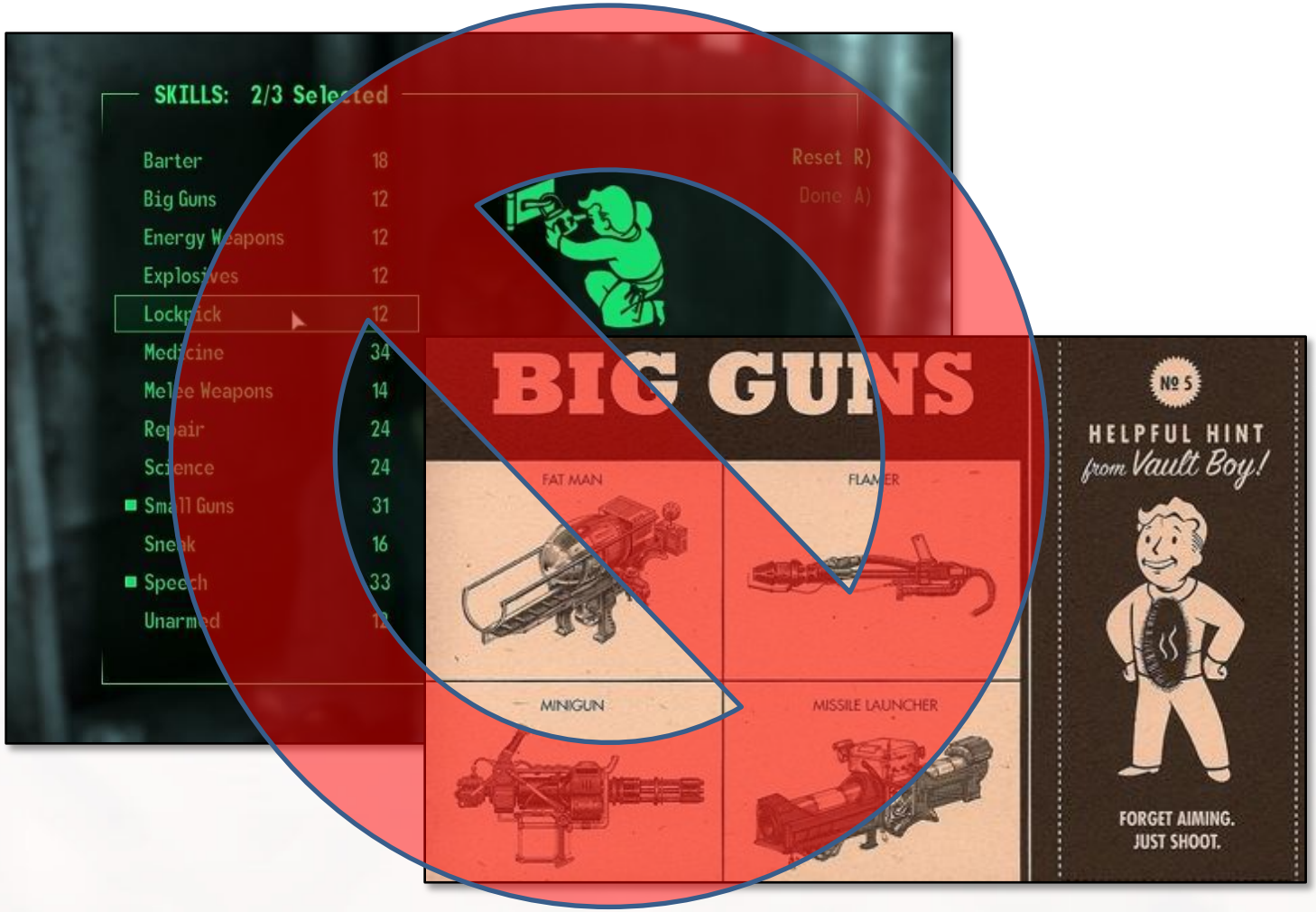
- 1 Character
- Simple Companions
- Streamlined Rules
- Streamlined UI

Limited Ways to Make Strategic Errors

Fallout: Don't Tag Big Guns

(You Won't Find Any For A Long Time)

Fallout 3



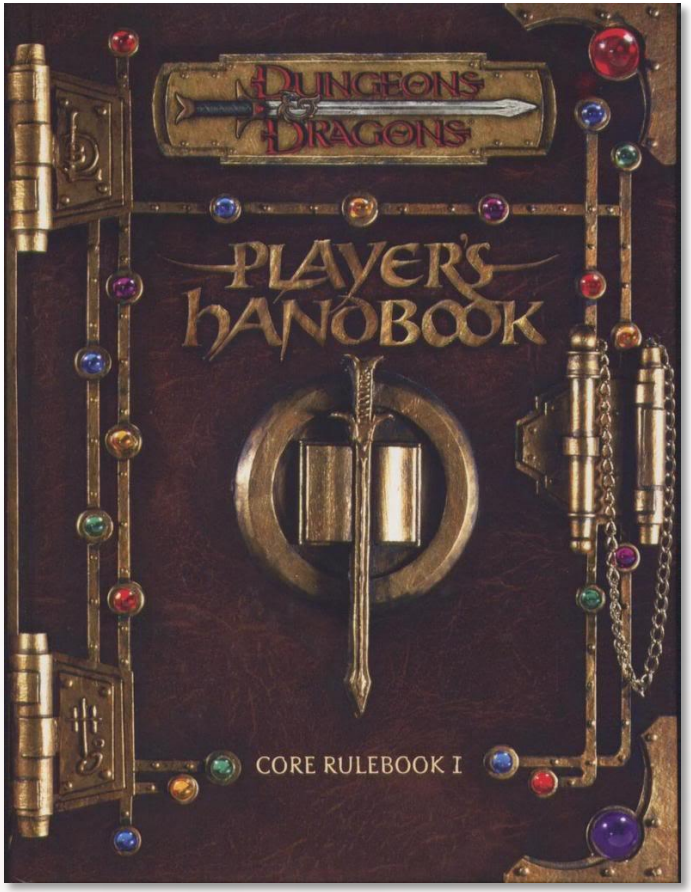
… Nope, Still Don't Tag Big Guns

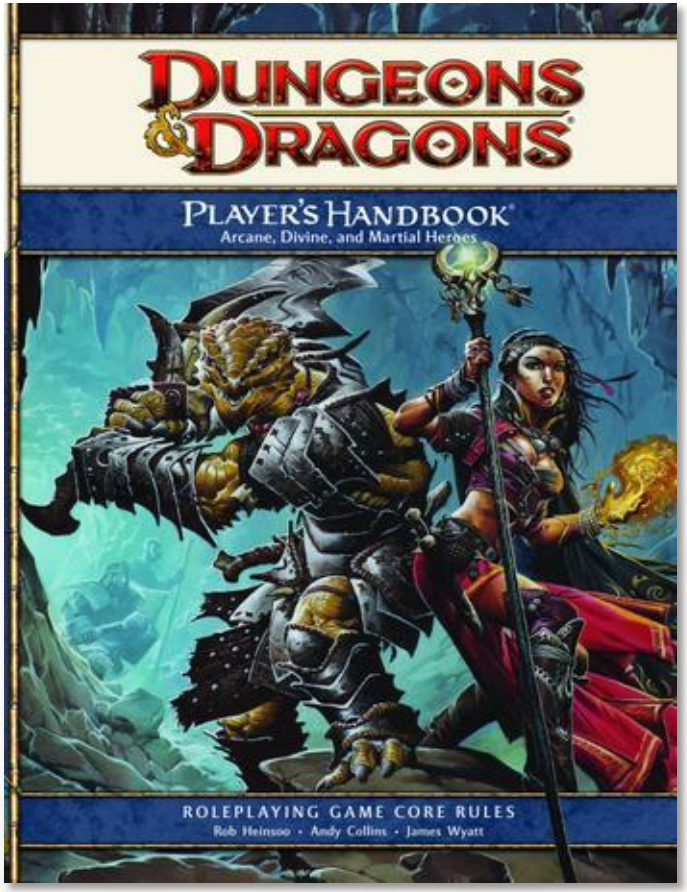
The Great Big Guns Migration of F:NV

MMORPGs Get It

(Even Brink Gets It)

Tabletop Gets It, Too





Part 4: Player vs. Character is a False Dichotomy

Mental and Physical Demands

Be Cognizant of What You Demand

Don't Demand Too Much

... Of Any Resource

There Can Be Range Within Genre

... And Not Just Combat

Part 5: Good Gameplay > Ideas & Expectations

DEUS EX
HUMAN REVOLUTION™

Questions, Praise, Insults, Declarations of Kanly

Thanks To:

Jim Rivers

Jeff Husges

Frank Kowalkowski

Scott “ScottE” Everts

Jorge “Oscuro” Salgado

Feargus “Dear Leader” Urquhart

Obsidian: http://www.obsidian.net

E-Mail: jsawyer@obsidian.net

Twitter: @jesawyer