

Nicely Done Gaming

Gaming Math & Casino Game Design



OVER WEIGHTING

I am surprised at the eagerness of many in the industry to use non-uniform weighting. While it may initially appear that this allows one to have cake (reasonable RTP) and eat it too (e.g. big award values), I don't think it takes many desert spoons for players to figure out that their bonus is a low-fat, low-sugar substitute for the real thing.

The more money one saves by heavy-handed weighting, the more obvious it will be to players. But how else can one offer excitingly big bonus award opportunities while maintaining a reasonable RTP budget? I am big fan of using sequential series which allows players to see the larger values without setting up unreasonable expectations. For a pick-one bonus, I would prefer to have several possible levels. Player starts on the Bronze level. Maybe 1 in 10 times the player's pick brings them to the Silver level with larger awards. 1 in 10 times from that, the player makes it to the Gold level. If the odds of a top award win in the Gold level are 1 in 10, we have basically provided a 1 in 1000 event that might not require any weighting at all.

On the other hand, there is one situation where I **love** applying weights whenever legally possible: the *under*-weighting of the lowest possible award(s). A player is less likely to be upset at a 7x bonus pay if it looks like they could have gotten an even crappier 4x pay. I have designed games with all values being equally weighting except for the lowest "sacrificial" value which gets $1/10^{\text{th}}$ or even $1/100^{\text{th}}$ the weights of all the other values.

Similarly, for games with extensive weighting, I avoid forming a ramp distribution with win probability always going up as value goes down. Instead, I try to make 3rd lowest award the most likely to be awarded.

If a game seems to be paying lower than nominal, players will be quick to blame unfair weighting. On the other hand, if the game is paying higher than expected, well, that's because the player is skillful and lucky, right?