

Keeping It Simple

Efficiency in Game Design

by James Ernest

*Note: This article was written in 1997 and was printed in **Chief Herman's Holiday Fun Pack** in 1999. The author still agrees with most of it.*

Let's say you've got a block of marble, and you want it to look like a horse. There are essentially two ways to do this: you can add enough clay to build the marble up into the shape you want, or you can take a chisel and chip away everything that doesn't belong, until nothing is left but the horse.

The nature of these two sculptures is going to be quite different. The large clay horse will preserve all of the original marble inside, though the marble may be hard to see. It will be bulky, and require a lot of space to display. People will need to take extra time to appreciate the big horse, but when they do, they will find it replete with detail and subtlety.

The small marble horse, on the other hand, will certainly have less detail, and it will require less time for people to take it in. As a result, they may find it wanting. However, the marble horse will set up and move easily, fit into smaller display spaces, and it will retain all the texture of the original marble block, even though part of the marble is gone.

Now, it's possible to compromise, adding a little clay here and chipping away a little stone there. You'll wind up with something in between the two extremes, with enough clay to finish the horse, and enough marble to remind you what you started with. Of course, nobody really makes sculptures like this, but for some reason it's a good metaphor for game design.

The marble slab you start with represents your preconceived notions about the finished "game," both conscious and unconscious. It's the back story of the game, it's the way you want the players to interact, it's the tools you want to give them. And it's the unconscious definition of "game" you bring to the table.

The clay represents the rules you must add to your core ideas to make the essential elements into a functional whole. And for most people it always seems easier to add more clay than to cut away what's already there.

If you've ever tried to design a game with any degree of depth, you've probably caught yourself adding a little more clay than you wanted, either to improve the shape of your original marble, or to cover imperfections in the clay which was already there. Maybe you gave up when the game got too unwieldy to play, or maybe you decided it was finished because it just couldn't sustain any more "fixing." Either way, most beginners will try to fix problems in one rule by adding another.

Yet some of your favorite games, and many of the "classics" you grew up with, seem to have almost no rules at all. The rules for Chess fit inside the box lid. So why are there so many volumes about how to play it? In my opinion, the deep strategy in Chess is a product of the simplicity of the rules. Chess has

evolved through generations of playtesting, and so these aren't just any rules, they are exactly the right rules and nothing else. Can you say that about your latest game?

As you develop your game, keep asking yourself: is this rule carrying its weight? Am I asking people to remember this rule just because it fixes another rule? Or does it add strategic depth to the game? You need to ask the same questions about your first principles; are you assuming something unnecessary, without even knowing it? Deep inside that marble slab are rules you don't even have to write down, like "players are trying to win" and "cheating is against the rules." Yet there are designers who have tunneled far enough to chip away even those preconceptions.

In any case, if your rules aren't pulling their weight, it's time to get out that chisel.

Let me give you an example. I'm working on a game called "Spree!" in which the players are looting a shopping mall. They are all carrying stun guns, because I want to make this a quasi-wargame, with missile fire being a major vehicle for player interaction. If you shoot someone, you get some reward, and if you miss, they get some reward instead (or you get punished, or something). That basic intent, along with some other conditions and my preconceived understanding of "games," is the marble slab on which I begin.

The original shooting rule worked like this: Taking a shot is the last action in your turn. If you shoot someone, they fall down. If you miss, you fall down. While players are lying down, they can't play cards. Specifically, this prevents them from playing defensive cards when people walk over and try to rob them. Fallen players also can't be shot at. On their next turn, players stand back up, and proceed. All of this is pretty intuitive; once you've heard it, you don't have too much trouble remembering it, which makes the basic shooting rules fairly lightweight.

After a little development, I encounter this problem: when I shoot someone, they are going to have the chance to get up and run away before I can come and steal anything from them. Shooting that player has only made them easy prey for the players who go after me, but before the victim. This is hardly enough incentive to use my weapon, which is going to make me wonder what it's for.

The first solution: well, suppose if you've been shot, you lose a turn. That gives the player who shot you a chance to come and hit you before you move. Still, the other players get the same chance, and those who got one chance at the victim's stuff under the old rules now get two. Plus, it gives rise to an ugly loop in which one player shoots another, runs around during the lost turn, and comes back and shoots him again. There's no escape for that victim.

So, we invented "dizziness" to prevent people who were in the process of losing a turn from being shot at again. If you're dizzy, you can't be shot. This broke the infinite loop, but still failed to address the nagging central problem, which was that shooting someone is always better for the other players than it is for you. So there's still no real incentive to use your gun, unless everyone else is so far away from the action that they can't take advantage of your victim.

Now the fixes started to get so ridiculous that I noticed a core problem. We were suggesting things like, “only you can steal stuff from the guy you shot.” (a bookkeeping nightmare); “the victim can only play response cards during the round after he loses his turn, but not on the round immediately after being shot.” (a cognitive anvil); and my favorite: “There’s a special card in the deck that allows you to (insert overcomplicated patch for rules here).”

As you can see, there are a lot of counterintuitive, bulky rules piling up, and shooting people still doesn’t function like it should. Rules which were added to compensate for the deficiencies in earlier rules are failing to do so, and the game is becoming more complicated without really improving. This chunk of rules is growing so big that it will probably fall off by itself, leaving me with a broken game I don’t want to finish.

But the real problem in this horse is a big bump on the marble, a preconceived notion which says “players shouldn’t be allowed to earn extra turns.” This is an insidious aspect of my design principles, because I don’t even realize that it’s there. I’m just convinced that players should never get extra turns. I don’t know, after working on collectible card games for so long, I have somehow become convinced that the extra-turn scenario leads to infinite regression, degenerate game conditions, and hundred-dollar trading cards.

Now, ignore the fact that I’ve played Monopoly and a dozen other board games with “roll again” conditions. Forget that I wrote Kill Doctor Lucky, in which players can easily earn three turns in a row. I’m still just convinced that extra turns are bad bad bad.

I suggest to my playtesters that shooting someone should earn you an extra turn. And when I suggest it, their first reaction is pretty much the same as mine: “Ooh, we don’t know, isn’t that dangerous?” But with a little testing we realize that breaking that “meta-rule” and rethinking my original notions lets me chip away almost all of the extra shooting rules, and also makes the game work better. You shoot somebody, they fall down, they can’t play cards, and you take an extra turn. That’s it.

The clay we cut away? The victim doesn’t lose a turn. We don’t have to keep track of who’s “dizzy.” There are no more extra rules about who can do what to whom when. And no special card in the deck that lets you blah blah blah. We also exorcised all the game problems which arose from those rules, including the overwhelming fact that shooting someone just wasn’t useful. And as it happens, this particular extra turn rule doesn’t lead to an infinite loop, because the engine quickly runs out of fuel. Once you’ve shot someone, they fall down, and you can’t shoot them again until they stand up.

When I’m done with Spree, it’ll be a smallish clay horse, with a good amount of marble showing through, which is about the best I can hope for. It’s just complex enough to make people think, but not too bulky to be learned on the first pass. It’s not Chess, but then it was never supposed to be. For one thing, Chess isn’t very funny. For another, you never get to shoot anyone.

Spree! was published in 1997 shortly after this article was written. It had three print editions including the “Hong Kong” and “Classic” editions, and is [now available for free](http://cheapass.com) from cheapass.com.