



, December 2, 2010 [<http://howtonotsuckatgamedesign.com/?p=1473>] by Anjin Anhut.

This tweet is filed under [game semantics](#).

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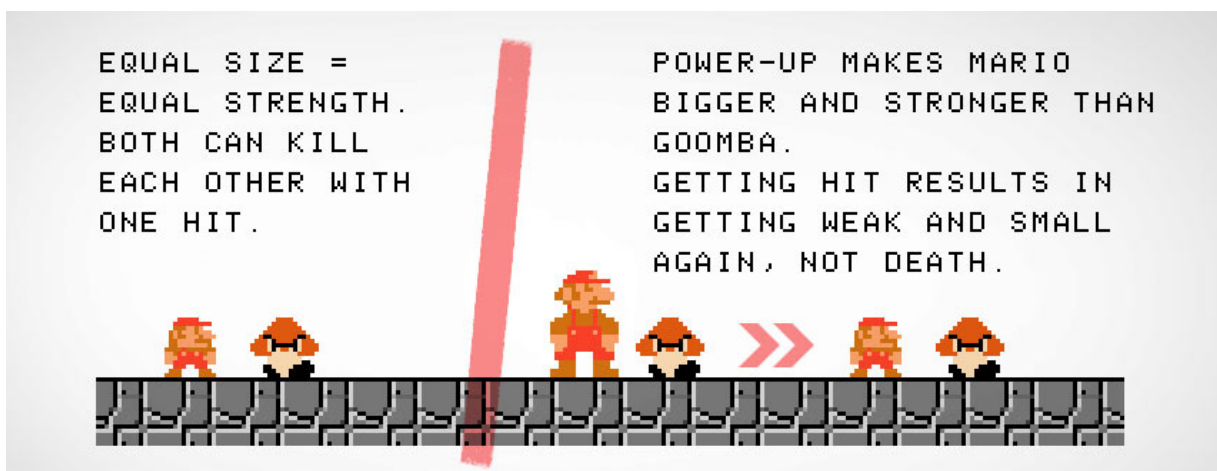


## Feeling And Understanding

While “make it big” seems to be the obvious approach, there is more to consider and to achieve by structuring the sizes of protagonists, enemies, items and environmental elements in a clever way. The basic conventional concept of size representing power can be an awesome tool to help players instinctively understand a game situation and also trigger the desired emotional reaction. Let’s check out some ways how this is achieved.

The conventional idea of bigger=stronger is not manmade, it is based in nature. A common defense mechanism for many animals is to appear bigger. Some four-legged animals stand up and birds spread their feathers to provide a bigger silhouette and hopefully appear to be too dangerous to attack for their opponents and predators. Also large horns, antlers, tusks, manes or overall physique often help establish the status of the dominate male in herds, packs and animal families.

Man comes into play when tackling the idea from the physics side and cultural side. From a physics perspective, it is roughly understandable that large objects easily move small objects, but not vice versa. You know, like your body can easily be crushed by a tank. But the tank can’t be crushed by your body. (I would like to see the Myth Busters disprove that one.) Anyway, culturally the analogy of size and strength is commonly used in narration and language. For example: “Why don’t you pick on someone your own size?”, which basically means “why don’t you pick on someone as strong as yourself?”.



## Stacking Doll Food Chain

To start with the simplest and clearest form of the idea, let’s have a look at stacking dolls. Using the engulfing/swallowing as representation for all sorts of dominance, it helps to illustrate a simple concept. Whatever is bigger than me, is superior in strength, power to me. Everything smaller is inferior in those regards. One could also extract that idea from the principle of food chains, where it is usually the bigger animal eating the smaller one. But there are so many exceptions to the principle there, that I rather came up with the very consistent stacking dolls analogy.

The stacking doll model takes nothing into account, except size itself. No weapons, no superpowers or other factors.



### Organize By Size

The stacking doll analogy can be applied in various forms to various games. Structuring entities by size to help the player instinctively understand strength relations is quite effective and already used well. In professional chess several conventions assign relative values to the pieces regarding their offensive qualities on the board. This represents the strength of the pieces in the imaginary combat situation depicted in a round of chess. Various sources assign values like this: pawn=1/knight=3/bishop=3/rook=5/queen=9 (king not included, since he is not meant to join the battle). This hierarchy is roughly represented by the size relations of traditional chess pieces.

In Gears of War 1+2 it becomes also quite obvious that relative size is used to hint at relative offensive power or level of threat. While most enemy creatures actual offensive power is determined by the weapon they are carrying, the physical appearance of the enemy is always matched. Except boss-like enemies, unarmed creatures are smaller than the Gears (human soldiers). Enemies with equal weapons to the Gears (sniper rifles, shotguns, assault rifles) are human-sized. Slightly more powerful weapons and special abilities (Torque-Bow, summoning Tickers) are used by enemies either slightly bigger than Gears (Kantors) or by enemies with the same size, that wear big hats to appear bigger (Theron Guards). The really heavy weapons are held by so called Boomers, which are big in size and have a massive physical appearance.

Please note that the difference in size of all those enemy creatures is not a logical consequence of the weight or usability of the weapons they are handling. Making the physique and weapon power of the Locusts match in size is just a visual cue for the player. Gears can pick up and use all of the weapons described above and do not need to vary in size to do so.



### Huge Threat

So, keeping the stacking dolls in mind, let's have a look at how the player characters from Bioshock 1 and 2 are ranking amongst the other characters and creatures from the respective games. Please note, that the mannequin is just a stand-in for the faceless protagonist from Bioshock 1. We can clearly see, that in both line-ups, the Little Sisters are way smaller than the player characters, which perfectly suits the concept of them being at the player's mercy. Also in Bioshock 1 the enemy creatures are either the same size or noticeably bigger than the player character, successfully providing a sense of threat.

In Bioshock 2, the player is the biggest stacking doll, with maybe only the Brute Splicer or other Big Daddies equal in size. This made me feel very safe and comfortable while fighting the regular Splicers. Even the Big Sister was very spooky but did not appear to be equally matched with my powers. If we just take the stacking doll principle into account, the player in Bioshock 2 had very little to actually fear, while in Bioshock 1 he was under the constant threat of being swallowed by bigger matryoshkas.

Maybe this issue is more tricky, than some game developers treat it.

## BIOSHOCK SIZE RELATIONS APPROPRIATELY THREATENING:

PLAYER  
▼



## BIOSHOCK 2 SIZE RELATIONS WEIRDLY COMFORTING:

PLAYER  
▼



### Float Like A Butterfly, Sting Like A Bee

There is something weird happening, when the difference in size passes a certain threshold. The payoff is satisfying. Taking down a titan as big as a house is quite an accomplishment. But the fight itself can feel less physically tense and dangerous, than fighting enemies, closer to the protagonist's height. Simply put, when the enemy is too big, he can become less frightening and the player character suddenly becomes the palpable threat.

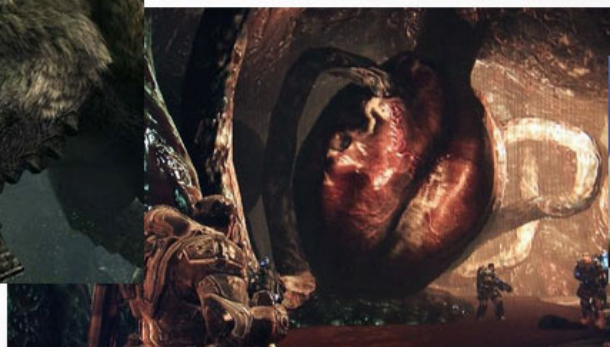
I think, this impression is caused by several factors. One is the depiction of physical pain. Instant death is always looming, but normally there is little pain involved for the player. When the protagonist loses against the giant, he is getting completely crushed, swallowed whole or ripped to shreds. Total instant destruction. The giant enemy, whenever critically hit, gets hurt pretty bad and it takes multiple painfully articulated hits to finally end him. The protagonist mutilates hands, rips out eyes, cuts out tongues and the giant enemy creature dies a slow painful death.

Then there is giant enemies becoming so big, that they are treated as part of the environment. Fighting giants often feels like and is structured like a sequence of avoiding environmental hazards. All strategic elements of armed and hand-to-hand combat gameplay usually don't apply to taking down titans. There is no blocking, no quick kills, no juggling, no counter attacks, no splatting head shots. Climbing on titan creatures or crawling around in their innards, circling them on horseback and systematically damaging their weak spots often is more akin to toppling a tower, derailing a train or wrecking a building than to fighting.

Lastly, to return to the narrative perspective, the giant enemy creatures are often engaged by the protagonist in games. The giants are either hunted or are placed as bosses of their own realm. The player character usually moves thru an area to reach the giant, not the other way around. This also enhances the feeling of the insect-sized protagonist being the offensive force.



BE THE BEE, BE THE VIRUS,  
YOU ARE THE THREAT!!

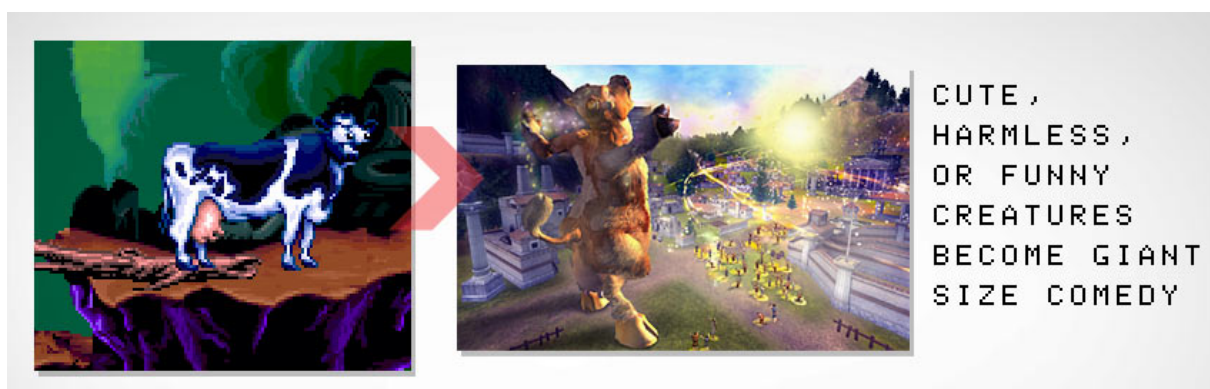




## Supersized

Size can also be used as a multiplier for emotional effects. In horror literature and films supersizing things and creatures has a long tradition. Think of King Kong, Tarantula, the US version of Godzilla, Attack Of The 50ft Woman. But the multiplier also works on a smaller scale. We do not need the sense of being physically overpowered here. Know somebody who shudders at the sight of spiders? Have ever seen a camel spider or seen what it's bite can do? Use supersizing to multiply the dread and fear small terrors give us.

On the other hand, making things supersized can also result in big comedic effects, when funny and harmless things get blown out of proportion.



## Size Matters

Now let's have a look at dead things. Props, weapons, armor, tools. I already mentioned large horns, antlers and so forth visually establishing the status of being strong. This can be directly translated into the size of manmade tools and weapons. Where it gets interesting, when you consider weapons and tools as extensions of your body. This concept is already extensively explored by various writers (for example Steve Swink – Game Feel or Scott McCloud – Understanding Comics) and especially powerful in video games, where the tools we pick up in a game actually allow us to interact. The power of the weapon or tool is projected onto the character by making the weapon or tool an extension of the characters physique.

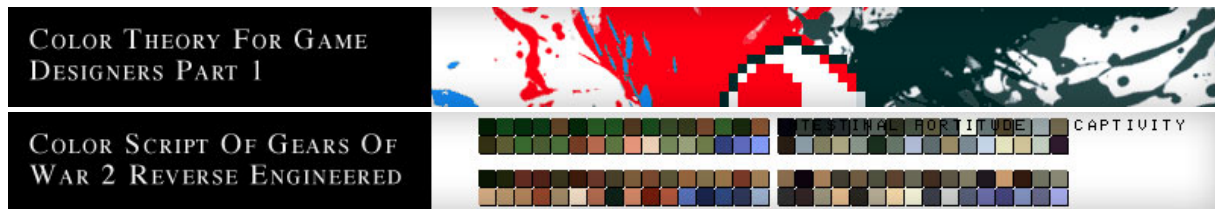
This concept allows us to give great physical strength to a skinny boy, have a baby be a heavy force in hand-to-hand combat or apply the destructive power of a tank to a single person.



## Conclusion

I know my observations are incomplete and subject to discussion and there is so much more to explore. There is a lot of depth to the ways size and size relations can work for gameplay, narration or emotionally. And I always enjoy, when I recognize game developers tackled this issue with consideration and concept.

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