

GAME DESIGN, ART, RESOURCES, RESEARCH,  
CRITICISM, TUTORIALS & STUFF BY ANJIN ANHUT.



, April 9, 2011 [<http://howtonotsuckatgamedesign.com/?p=2676>] by Anjin Anhut.

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Immersion is a big factor, when it comes to creating virtual spaces to be in and events for the player to participate. First person view seems to be the first choice for maximum immersion. But does it really belong on top of the list? I evaluate five different types of camera perspectives for their immersive qualities.

### Picking A Camera Perspective For A Project

Checking what a camera angle can and cannot do regarding artistic expression and mechanics is one thing. But there are at least two other aspects to consider. Camera defines genre. There are first person shooters and third person shooters for example, all with their special traditional features and mechanics. When you pick a view, you group yourself together with previous game, that use similar angles.

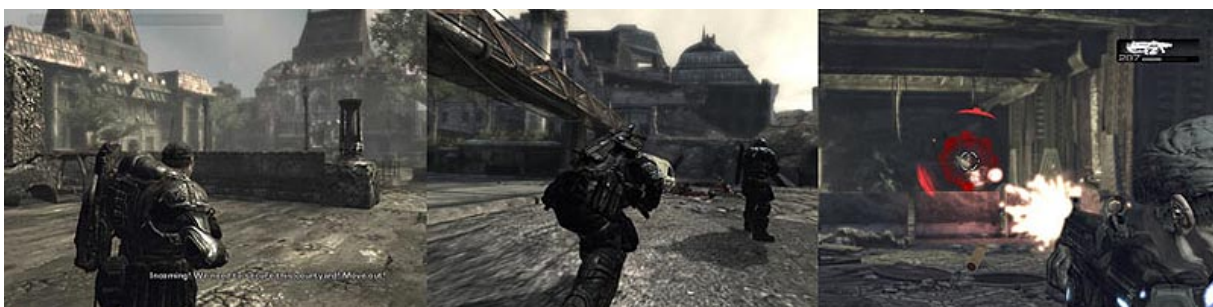
Also time and budget are factoring in. 2D views, like side-scrolling or top-down, even when realized with 3D engines, don't need fully build levels, since you always just look at the environments from one direction. Anyways, these two factors are not subject today. I just wanted to mention them.

### Shifting Camera Perspectives

Even when settled on one genre defining camera perspective, shifting it during gameplay can have great effect on the immersion of special ingame moments. My precious Gears Of War series constantly pushes the camera either slightly towards a first person view or cleverly around in other ways to enhance combat sequences, aiming and more.

Starbreeze Studios' first person shooters, The Darkness and Chronicles Of Riddick switch to a third person view whenever their characters are doing acrobatics, are climbing ladders or similar activities. This works as a neat reminder of who we are actually playing and dodges the weird bodyless feeling of many first person shooters, when the player is climbing up ladders.

A prime example of great camera shifting is Batman: Arkham Asylum. We get first person view, over the shoulder, 2D side scrolling, classic third person, whatever makes any gameplay moment most engaging and offers the best usability. While most of the time we trail behind Batman in classic third person, when he enters air ducts, we get a first person view. So we actually see where we are going and get a bit claustrophobic. In complex platforming sequences, mainly meaning the Scarecrow acid trips, Rocksteady locks us into a fixed 2D side scrolling view for maximum oversight and spacial awareness.



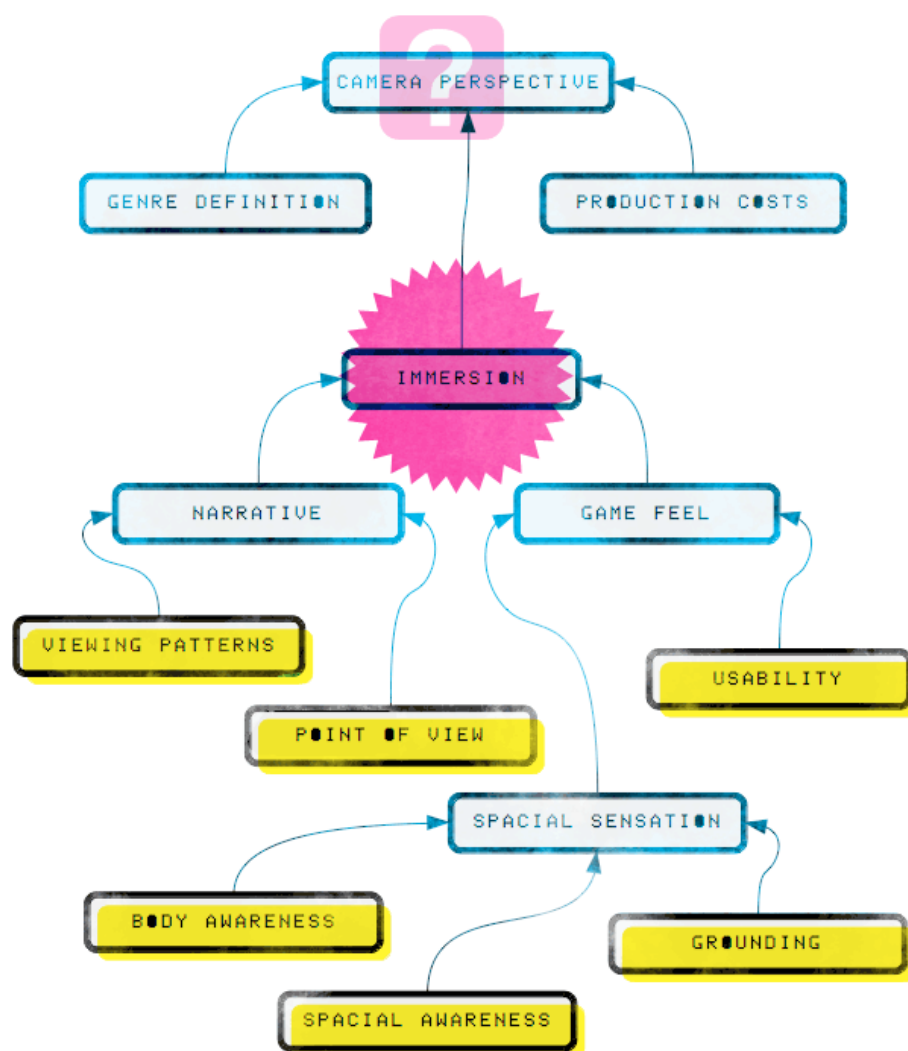
## Immersion Atoms

Now, let's get down to business. Immersion can be split up in a wide arrangement of parts and the parts I defined here are not meant to be a complete list of ingredients. But I think they will serve us well for this article. Immersion can be bisected into the area of the narrative and game feel.

The narrative covers everything from the sequence of events, the places and characters present to the overall context. Perspective reminds the player of things he has already seen, like games from the same genre and presentations from other media (viewing patterns). Also is the camera angle a way of putting the player into the scene or supporting the emotional impact of scenes with proper cinematography (point of view).

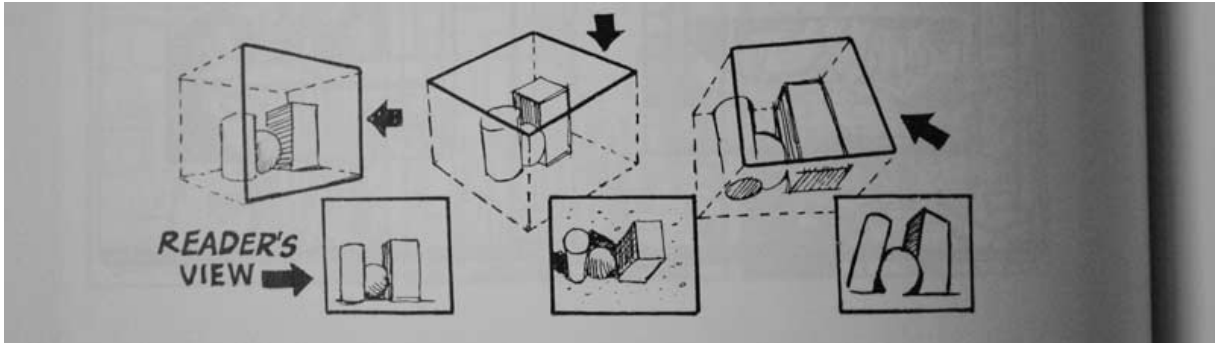
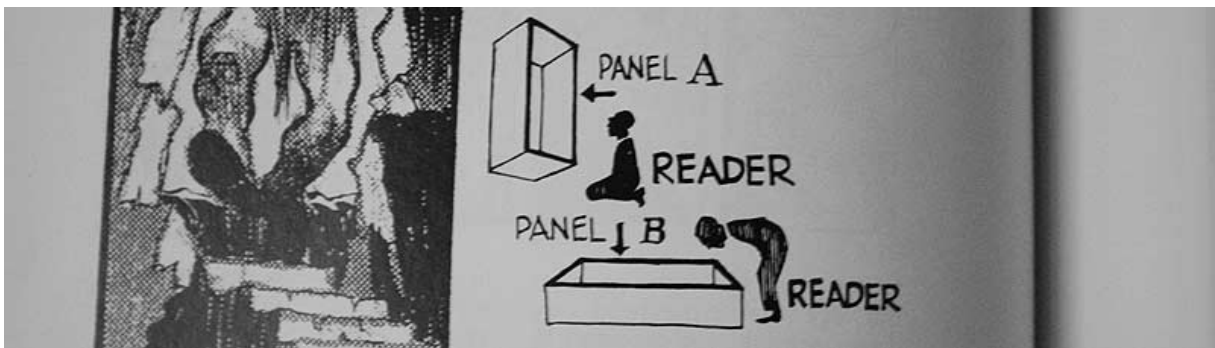
On the other side we got game feel. How does the game feel when I play it. Speed, momentum, space, depth, impact and all that jazz need to be signaled to the player just by glowing pixels and sound (yeah, force feedback too). Important for proper game feel is smooth usability. So camera needs to show everything the player needs to see, giving oversight over the areas and close-ups on the details.

The other key component is spacial sensation. How well does the player recognize or even empathize with his avatar body (body awareness) and how well does he recognize and measure the virtual space around him (spacial awareness)? And finally, how well do go both awarenesses together, making the player feel truly physically present in the game (grounding)?

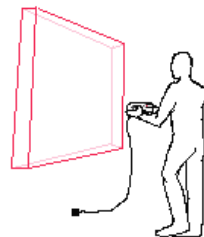


## A Look Inside

Viewing patterns, point of view, usability, body awareness, spacial awareness and grounding get a closer look today. Additional to the immersion atoms I use a box model, that I originally found in a book by comic master Will Eisner. In a section of *Comics & Sequential Art* he uses the idea of comic panels being boxes, to illustrate the relation between the viewer and the image. I found this model to be working quite well for games too. I understand, the way I used this model here is fairly debatable, but it helped me to understand how different angles shape the perception of the player.



### Side Scrolling



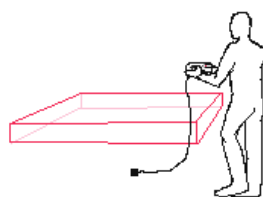
**SIDE SCROLLING**  
LOOKING AT A SCENE FROM THE SIDE  
PROTAGONISTS MOVES ON 2D LAYERS

This view in general is more about displaying than simulating. The player is physically completely detached from the agent (the player's avatar or the protagonist, if you will) and never fooled into believing he is actually immersed in the scene. His point of view is that of a complete outsider, that isn't even meant to be present in the game space, resulting in poor grounding. Usually 2D side scrolling view gives a solid oversight over everything in proximity to the agent, but fails at providing long distance information. If game designers work with that limitation properly, a strong usability can be achieved. Since body awareness has to come from a clear view off the agent body, side scrolling scores high on that one. Spatial awareness is high also, since the player only has to read x-axis and y-axis and can measure distances against the agent's body height.

Spatial sensation is very mechanical and abstract and point of view basically pushes the player out of the scene, so why is the immersion factor of 2D side scroll sufficient enough for generations of gamers? Viewing patterns to the rescue!!! Nostalgic gaming aside, the way we look at side scrolling games is analog to a lot of media or forms of presentation we enjoy. Paintings, stage plays, children's books, comic strips, puppet theatre, etc. they all often force us into a static view from the side and we as the audience already have learned as kids to embrace it. We don't need to be fooled into immersion, we suspend our disbelief and place ourselves actively into the machine.

One of the benefits of this game-player-relation is that, the player delivers a lot of the immersive elements himself and game designers don't have to uphold the immersion all by themselves over the course of the game. On the other hand, not all players can immerse themselves enough and will experience the game on a superficial level only.

### Top Down // Isometric



**TOP-DOWN // ISOMETRIC**  
LOOKING AT THE SCENE FROM ABOVE

Top down or isometric view suffers and benefits from the same sense of physical detachment like side scrolling does. But there are a few things to note here.

The view places the player far above the action. This doesn't only look like being above what's happening it also feels that way. The wide oversight over the areas, sometimes enhanced with zooming functions, gives the player maximum control over what is happening with his agent or army of agents. Viewing patterns remind the player of board games or

toys spread around his kids room floor or of maze puzzles and crosswords.

The immersion strength is very similar to side scrolling angles, whenever top down games have one relatable agent for the player to project himself on (Legend of Zelda). If there are multiple agents or lets say units for the player to command, the view from the sky provides a even higher immersion in a sick kind of way. The player feels to be in full control but almost completely physically and emotionally detached from the poor souls he is pushing around or the areas he is building up and burning down. Next to the almost GUI-like usability, this is what makes this angle so perfect for strategy and god games, I think.

### General Third Person View



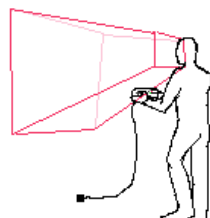
GENERAL THIRD PERSON VIEW  
SLIGHTLY TOP-DOWN ANGLE

The slight angle from above that comes with most third person games detaches the player from the ground, giving solid oversight about gameplay elements close to the agent and more distant elements in front of him and providing a solid view on the agent's body. Usability only gets diminished by the agent's model obscuring the view or environmental Objects being in the way. Thanks to the invention of the second analog stick to move the camera around, the player gets more grounded and connected to the agent, by actually feeling like he is physically present. This also helps with spacial awareness, because the player can look at objects, or gaps or whatever from different angles and can measure anything against the agent's body height.

I find it to be very funny that the third person camera view in Super Mario 64 is actually given to us by a flying third person with a camera (Lakitu Bros). What I don't find funny is that the N64 (which I recently got via ebay and never originally owned) has no second analog stick to control the camera. Those face buttons are a pain in the ass and I die much more often from not being able to measure distances than from actual enemies or hazards. I have no understanding whatsoever how game developers, making third person games with a fixed camera angle (God of War, Dante's Inferno ect) AND platforming segments can sleep at night. No, seriously.

When it comes to viewing patterns, there isn't much out there next to games. Maybe remote controlled cars? I dunno. The player gets fooled into feeling like being in the same place as the agent but needs to add a lot himself to also feel as being in the agents body. Third person, because of its rather weak grounding, let's the player dive into the virtual worlds but keeps him distant from the agent, hovering about everything like a Lakitu.

### First Person



FIRST PERSON  
THROUGH THE EYES OF PROTAGONIST

First person is widely regarded to be the most immersive way to play a game. Well, what could be more immersive than to actually be placed inside the agents body, right? I know I'm in the minority with this, but I have to disagree. You see, while the point of view gives the player maximum grounding, the first person view has two major faults that break it.

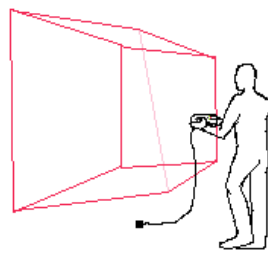
First, the body awareness is generally terrible. In real life we feel our body and to translate that into a game we at least need to see it. Due to a lack of peripheral vision the player can't see his own body, nor can he see the ground in front of him. For all the player knows, he could be surfing on a hover board instead of making foot steps, which game designers sometimes try to fix by adding an unnatural bobbing effect. Even nowadays some developers don't use a model for the agent and when the player pans down, there is actually no body. Not cool.

Ever wondered why we get to hold the gun in front of our face the whole time, like we were having a cramp or something? We need this gun so we have anything physical to navigate through the environments. If it would just be the camera, we wouldn't know if we were moving forward or zooming in, we wouldn't know how we are in relation to the environment. There would be nothing to give us the minimum spacial awareness. Kudos to Infinity Ward for their massive efforts to offset the shortcomings of first person view in the Modern Warfare games. They stopped the camera from being tilted all the way down, so we never see our missing feet, they made cover magnetic, so we get a sense of our body slamming against solid objects and more tweaks to makes the players feels as embodied as possible.

Second and a total killer in my opinion is the question of viewing patterns. First person shooters (or Ego-Shooter, how they are called here in Germany) attempt to resemble the players true perception of space and his body and are doomed to fail at that. With other angles game developers are aware of its limitations, aware of the fact that the player is sitting on a sofa and is not actually free-roaming Hyrule. And therefore the devs can make a deal with the player to share the responsibility of achieving immersion. The game shows a coherent image of the events unfolding and the player actively suspends his disbelief to dive in.

In first person view the player is not asked to close gaps in the presentation with his imagination or to project himself onto an onscreen character. This leaves almost all the immersion work on the shoulders of game designers and demands perfection. With the current available technology, trying to equal the sensations and believability of the real world perception of players without the help of the individual player is a losing battle. Forcing the player to do the comparison only serves to make the him see the seems.

### Over The Shoulder



OVER THE SHOULDER  
THIRD PERSON VIEW  
ON EYE LEVEL WITH PROTAGONIST

Since this is just a variation of general third person views and shares a lot of the same qualities, I get straight to the qualities that made me give over the shoulder view its own spot here. The player is completely grounded, walking on the same floors as the agent and looking into the same directions as the agent. The player gets fooled into feeling to be almost close enough to the agent to actually be him or at least be stuck in the same situation with him.

Whenever the agent moves around in a room, the player directly moves with him, since the camera is attached to the agent model not to the Lakitu. The usability is weaker than in classic third person, since we can't see what's behind the agent. But that makes sense in a body awareness kind of way and only enhances the player's feeling of vulnerability. And we can perform actions like aiming from close to the agent's point of view. This is why this view is so popular with survival horror games nowadays.

I consider the over the shoulder view to be amongst the most immersive, being a hybrid between classic third person and first person perspective and taking the best of both worlds.

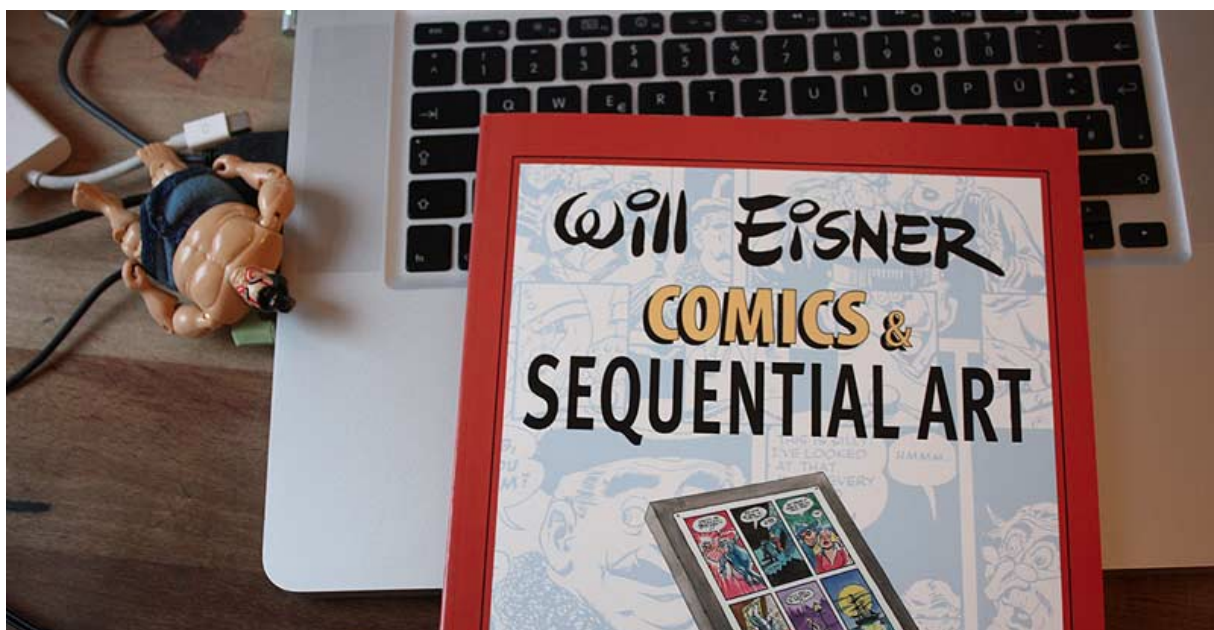
### Conclusion

There are many ways to offset each angle's individual weaknesses and to support their strengths, but game designers need to be aware of those strengths and weaknesses. Especially in the world of first person games I feel that there is some sort of taken-for-grantedness that there would be maximum immersion coming with the camera perspective. But it's not that easy.

As always my observations are incomplete and my conclusions debatable. I hope you got something to debate and to apply out of this article.

Finally for me there is only left to recommend this book to you:

If you are into game design or visual narrative and you got a kick out of Scott McCloud's books, you should check this book out. Will Eisner was a comic giant, giving name to the most important comic industry award and writing extensively about the medium. Will Eisner – Comics & Sequential Art, published by Poorhouse Press. ISBN 0-9614728-1-2.





Erlend "Rogue"

on **July 7, 2013 at 12:45 am** said:

hey thanks alot for all the help i want to make a Isometric Game. but didnt know what it was call :) hope you doing Greate and keep it cool

Your Brother in Arm's: Rogue



Xantomen

on **April 10, 2011 at 9:55 pm** said:

Ooops sorry, re-read and I saw you included it in the Isometric one. My mistake.



Xantomen

on **April 10, 2011 at 2:40 pm** said:

This is what I was talking about! \*applauds silently\*. You didn't talk about the Top perspective some games (mostly arcade) use tough, and I happen to see a discussion between two postures:

-A real top view, normally with lack of detail on the character and objects and poor vertical-spacial awareness (if jumping or different height floors are involved). (some Tower Defense games and puzzles and first/second GTA, these ones I admit did a really good job making sprites interesting from that point of view).

-Different angle of view for different things that will blow your mind if you try to think about it with your spacial-by-nature brain. For example, almost Top View for the scene but a Side View for the player, power ups or/and enemys. (Bomberman, Super Smash TV and many many arcade casual games). The strange thing about this is that you end up thinking that point of view is the natural way to look at things out of habit, like "More real than reality", and I personally found myself in trouble with this assumption while making my own games or animations.

Anyway, hope this intervention is of any use and keep 'em coming!