



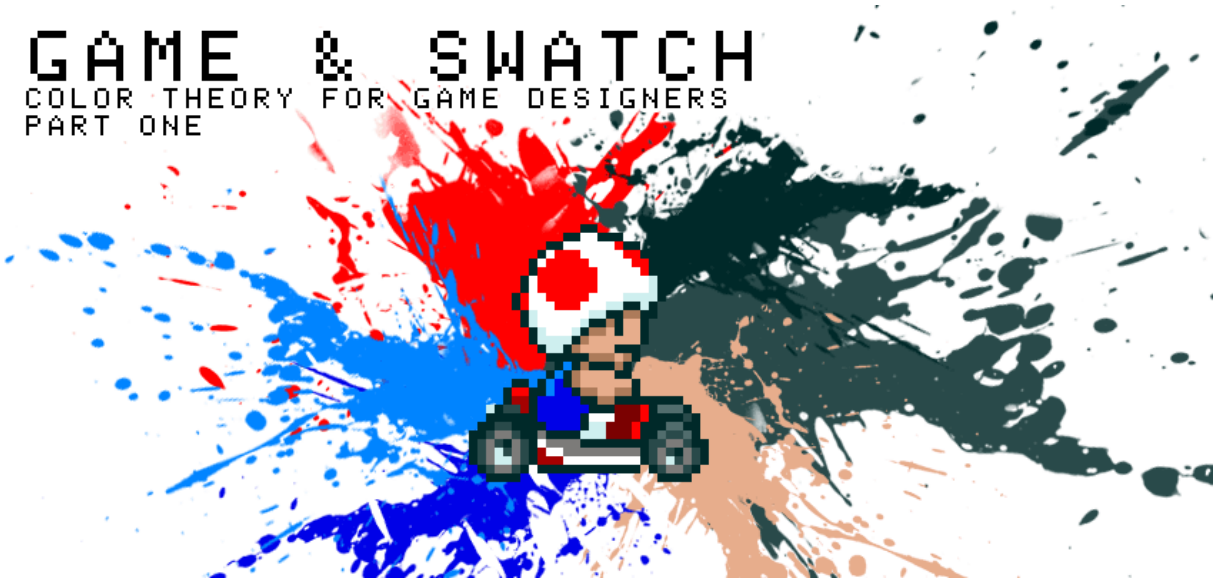
, January 13, 2011 [<http://howtonotsuckatgamedesign.com/?p=1669>] by Anjin Anhut.

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GAME & SWATCH

COLOR THEORY FOR GAME DESIGNERS

PART ONE



In a medium as visual as video games currently are, working with color is a key element of design. It might appear that color design is best left to the game artists, but in fact game designers can use proper color management to their advantage, to create strong narratives and clear gameplay. There are many books about this subject, many observations to make and there will be a ton of stuff unmentioned my article here. But still I hope you get some inspiration and arguments for a more conscious use of color in whatever stage, level, world, section or area your are creating. Here is a rough write down of stuff I discuss with my game design students at Games Academy, when it comes to working with colors in video games.

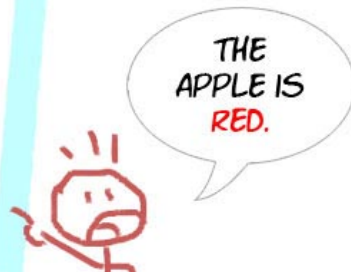
Two Levels Of Communication With Color

In this article I'm going to tackle communication with colors on two levels, which I labeled distinct colors and color situations.

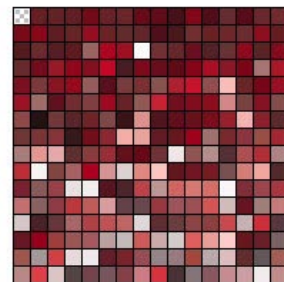
WHAT COLOR IS
THIS APPLE?



DISTINCT COLOR:



COLOR SITUATION:

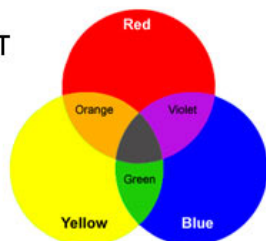


Distinct colors are colors that have a commonly known name. As simple as that. Colors, which can instantly and without ambiguity be labeled, are as powerful in communication as any spoken or written word. From an very early age on we are told by our parents, children books, teachers, games and toys to simplify the way we recognize and talk about colors. While in fact there are many variations of hue and brightness and complex mixtures of colors surrounding us, in verbal communication we have learned to settle on the most dominant colors and describing them in the most simplistic and general way. The sky is blue, fire trucks are red, frogs are green, eggs are white and so forth. Maybe adding the quality of "light" or "dark", if necessary. If you are not thinking in design, art or styling terms, this is how you consciously process how things are colored.

On the color wheel, primary and secondary colors are easily named and therefore distinct. Red, blue, yellow, green, purple, orange. Tertiary colors and even more complex mixtures can be described by their color recipe, but lack distinctive names. Those complex mixtures of color are stuck between their distinct color components, with no identity of their own. In conversations, those colors are usually labeled with the name of a related primary or secondary color. An orange color, with 2/3 yellow and 1/3 red is usually still simply described as orange. Other distinct colors, commonly used in conversations are brown, pink, flesh color (or skin color), silver, gold, turquoise and rainbow color (primary and

secondary colors in sequence), sepia and khaki maybe. Then there are distinct colors, that are often described to be colorless, depending on the context: black, grey, white and black-and-white (which is a simple term to describe the absence of colors in media).

A FEW
DISTINCT
COLORS:
CAN YOU
NAME
THEM?



DISTINCT
COLORS
MARKING
AND ALSO
GIVING
NAMES TO
THE
HEROES:



To process colors on a subconscious level, we use another simplification. Color Situations. The mixture of colors, the lighting and irregularities due to texture, just the actual colors that hit our eye in all their complexity are summed up into one manageable overall color situation. These situations have a subconscious impact on the viewer, connecting to our primal instincts. To us as animals/early humans color was instrumental for survival. Rich green plant life signals an inhabitable environment with plenty of water, fruits and animals life to live from. Low saturated greasy and browns suggest the opposite, making environments harsh and hostile. Spots of bright reds signal danger, physical damage and pain, since this is how blood looks like in the open. These kind of associations are branded into our subconsciousness and make color situations an effective tool to trigger moods and emotions.

THE SILENT HILL GAMES
USE COLOR SITUATIONS
TO MAKE PLAYERS
UNCOMFORTABLE AND
TRANSFORM LOCATIONS
INTO SOMETHING EVEN
SCARIER BY FADING IN
NEW TEXTURES AND
COLOR SITUATIONS.



Of course as kids we also learned to identify and describe some color situations verbally and on a conscious level. But this is more about naming the emotional impact a color situation has, instead of naming the colors themselves. So for the sake of clear argumentation in this article, I'd like to make the following hard split:

DISTINCT COLORS
HIT THE
BRAIN



COLOR SITUATIONS
HIT THE
GUTS

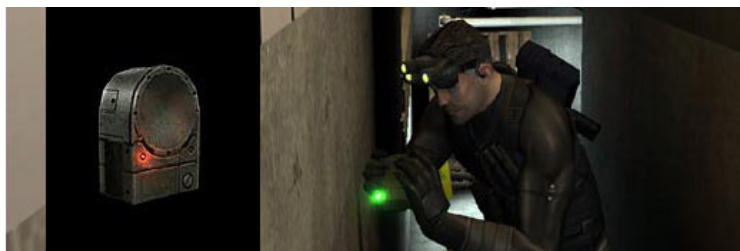
Divide and Conquer

To effectively aim at the brain or aim at the guts, you need to clearly separate distinct colors from color situations in your color compositions. There are a few principles, that work quite fine to help the player recognize colors as distinct or as color situations. They of course work best, when used in combination.

Purpose

The player understands, that some things have been given a specific color for a specific purpose. Traffic lights are red or green to tell us something, clothing is colored for a purpose, colors are used as labels and so on. The player also understands, that there are some things that just happen to have a certain color without a purpose behind it. A rock is grey, just because he is and the sky is blue because of the weather. The player learned from real life to give more attention to colors, when they have been put there by humans for the purpose of communication. If you ask for the player to watch out for red markings on walls, he always will prioritize the purposely placed red graffiti over the accidental blood splatters. This one is actually the strongest principle to make the player recognize, that he is suppose to consider the distinct colors you throw at them.

WE RECOGNIZE RED
AND GREEN LIGHTS TO
BE SIGNALS.
THIS HELPS THE
PLAYER TO RECOGNIZE
WALL MINES AS
INTERACTION POINTS
IN SPLINTER CELL.



Contrast

This has something to do with controlling the focus of the player. Effective contrast can be light vs dark, low saturation vs high saturation, reddish vs greenish, reddish vs blueish. Those contrast are commonly used in real life. Think of the brightness and high saturation of yellow police tape or of warning lights, where distinct colors are often displayed by an own light source. The eye registers contrast in compositions and in sequences. The player can recognize the contrast between a color, which the object currently has and the color, which the object will have next.

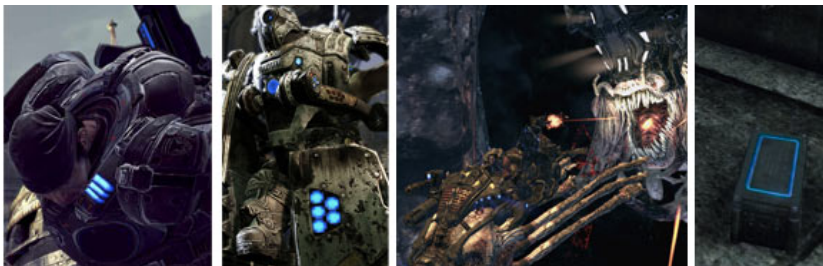
THE BRIGHT BLUE AND ORANGE PORTAL IN CONTRAST TO THE LOW SATURATED ENVIRONMENTS, PROVIDES CLEAR INTERACTION POINTS. SO DOES THE BRIGHT GREEN TIBERIUM IN COMMAND&CONQUER.



Uniqueness/Rarity

This one is simple. If you want the player to consciously process everything that is blue, make sure that nothing else is actually colored blue. That's how it is done in Gears Of War, where the color blue is exclusive for the COG armor and weaponry. The silly lights on the Gear's armor, the signals on ammo boxes, the aiming aid when throwing grenades and the sight of the sniper rifle all appear in distinct blue, while everything not COG related consequently isn't. Epic even goes as far as giving blue lights to now "friendly" hijacked Reavers and Brumaks. Of course the strong saturation contrast to the environments comes into play also.

BLUE IS EXCLUSIVELY USED TO MARK PLAYER-FRIENDLY ELEMENTS IN THE GEARS OF WAR SERIES



Conclusion Part One

Now that we got the two buckets of colors separated and cleared up, let's check on how to utilize them to full effect in part 2 soon.

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2 THOUGHTS ON "GAME AND SWATCH – COLOR THEORY FOR GAME DESIGNERS

PART 1"



Gadorian

on **December 7, 2012 at 8:25 pm** said:

Very interesting, thanks for good reading.

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