- Chapter 1 Why study color?
- Chapter 2 Color Basics


## Color Theory



## From the Self-

 Intro Survey...

- What difference does good color make in your field?
- Why should your client's care about your color-design skills?


## From the Self-

 Intro Survey...

- What makes one design's color use better than another?
- What is "excellence" in color design?


## From the SelfIntro Survey...



Describe some current design trends or issues in your field today.

What's happening in the field you're going into?
Who are the leading artists/designers?

## From the SelfIntro Survey...



- What artist or designer is your hero... and why?
- Who is your personal favorite?

Whose work do you like to see over and over?
Whose work would you most like your work to be like? (or better than!)
What impressed you about their work?
What is it that draws you back to them?

## Basic terms \&

 concepts:- Color as communicationt
- Color as expression
- Color influence
- 3-Dimensions of Color
- Color models


## Chapter 1 - Why Study Color?

- Color is a powerful stimulant of emotion - basically, people respond to color.
- In art, design, marketing and communication, color effects the viewer-it has impact.


## Chapter 1 - Why Study Color?

- Color is complex and subtle.
- Despite extensive study over many centuries, there is no one grand, unifying theory to explain how color works, why it works as it does, or how to fully anticipate what it will do.


## Chapter 1 - Why Study Color?

- Color is one of the ongoing personal choices we each make - we select our clothes, the color of our car, our house, our furnishings and so forth. We respond to the labels of products, in part, according to their colors.
- We each have personal color preferences. There is something personal about color.


## Chapter 1 - Why Study Color?

- Color is far more available than it ever has been.
- Technology over the past 150 years, and particularly over the past 15 years, has radically amplified the choices of color and the presence of color in our lives.
- Color production is both more affordable and more expected-designers must deliver.
- What color is it available in?
- Henry Ford: Any color they want... as long as its black.


- What color is it available in?
- Today. Not so much.
- Order your car color online.




## Color is an aspect of culture - we

 distinguish who we are by our color.Every culture, every generation and every event has some color associationscolors that are right in that context.


- Korean Dancer
at the Mayor of London's Thames River Festival 2007
- Australian Aboriginal


Native Americans...

- Traditional inter-tribal Native American dancers...the extremely ornate regalia includes custom beaded arm bands and moccasins, jewelry, feathers, beaded and feathered headdress and vests, buckskin and cloth fringe that comes to life in brightly colored tribal art motifs..


Native
Americans...

- (a multi-cultural ritual dancer on cellphone.)















Federal Reserve, Chicago


Federal Reserve, Chicago

Parthenon, Athens



## Parthenon, Athens - original colors...






A bride in Chinese traditional wedding costume (known as ' Qi Pao') seen during a wedding photo shoot.










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## ODars of ODublin



- In Ireland, hospitality is a must.
- What better way to greet a guest than with a brilliant, colorful, welcoming door?

- On the other hand, what happens when you change your mind?
(a Dublin door)









Albania's capitol city of Tirana
has been transformed by mayor-artist Edi Rama.
"Rama's Return to Identity project rid the city of many illegally constructed buildings on municipal lands such as local parks and the banks of the Lana. His Clean and Green project in 2000 resulted in the production of 96,700 square metres of green land and parks in the city and the planting of nearly 1,800 trees." WikiP

"He also ordered the painting of many old buildings in what has come to be known as Edi Rama colours (very bright yellow, green, violet). Rama's critics claim that he is focusing too much attention on cosmetic changes without fixing any of the major problems such as shortages of drinking water and electricity." WikiP




Imagine these buildings without color. What kind of home, neighborhood, or building would these be?









## Color as fashion or trend

- In advertising, fashion design and interior design color trends are anticipated and, to some extent, planned for marketing purposes.
- Yet the trends of popular colors are, to some extent determined by what customers will buy - and that cannot be reliably



## Color itself is big business

- Color-related decisions are often made many months, even years in advance.
- Commitments to fabrics, paints and inks all come with a cost -misjudge customer preferences and millions of dollars of product may sit on the shelves.
- Many industries pay a great deal to anticipate color demand.



## Color Forecasting

- Pantone and other major color management services, sell subscriptions to forecasts of color palettes that will prevail in fashion design, interior design, graphic design and industrial design.
- Manufacturers, designers and retailers must select colors long before customers make final product selection...to buy or not to buy.



## Color as fashion or trend

- Advertisers and marketing folks work very hard to persuade customers to follow trends rather than lead the trends.
- Each year professionals announce the colors they believe will be the popular colors for the coming season or year.
- Do a journal search on "color trends" and see what's current.



## Color Forecasting

 home colors 2002Urban Oasis: Urban oasis reflects all that speaks of the big city at dusk. The cool, "metallic" colors of the waning light, of concrete, cement and stone. Of the blues and grayed lavenders of descending night shot with threads of cognac and pale gold. It is an intimate, sophisticated palette, a group of elegant shades meant for those who revel in the rhythm of big city life, yet seek a calming respite at the end of the day.

provencal sicily palmsprings rio aqueous illusion urbanoasis

## Color Forecasting

## PANTONE <br> Where color comes from. <br> home colors 2002

Sicily: An homage to traditionalism, but with an Italian touch of diversity and color that results in rococo meeting rustic. The hot new place to visit on the continent, Sicily inspires palettes that celebrate its history spiced with the colors of the region. Shades such as rich wines, olive green, rosewood, mineral yellows and mocha conjure up the spirit of the country: its antiquity, vistas and vineyards.


Sherwin-Williams Color Forecasts: http://www.sherwinwilliams.com/pro/paint colors/paint color trends/ $2006 \quad 2007 \quad 2008$

> '08 Around the World



## Forecasts:

## 2010



Rooted
It's human instinct to seek the safety of the tribe. In today's complicated world, there's something deeply satisfying about re-exploring the world's oldest, most enduring cultures. African, Aboriginal and Native American influences are converging to create a new tribal style with a drumbeat all its own. The colors are rich and earthy, with a hint of mystery. The appeal is as natural as the elements.


Nomadic Desert
SW 6107


Foothills
SW 7514


Rookwood Amber
SW 2817


Red Tomato
SW 6607


Oceanside
SW 6496


Darkroom SW 7083

## Sherwin-Williams Colon <br> Forecasts:

## 2010


colornix'm two-thournmoter


A throwaway society? That's so yesterday. We're now making savyy, resourceful use of what we have, discovering untold stories in exposed, painted layers. From flea-market finds to artisan-made pieces, imperfection can lend rich character to our ervironments. The palette reflects the beauty of natural aging, mellowing and weathering, evoking quality materials that have stood the test of time and become heirlooms.


Interactive Cream SW 6113


Sequin
SW 6394


Gallery Green SW 0015


Smoky Blue SW 7604


Caribbean Coral SW 2854


Sturdy Brown SW 6097

Sherwin-Williams Color

## Forecasts:

## 2010



## Simplified

"Simplicity is the ultimate sophistication." That timeless wisdom from Leonardo da Vinci is now a modern mantra. Less is clearly the new more. But the aesthetic is artful rather than austere, with well-tailored lines and sheer, translucent materials that reveal shape and structure. Clarity and integrity are critical. We need to know and trust what we're bringing into our environments. The hues are calm, subtle and nuanced, with undertones that shift according to their surroundings, for easy versatility.


Whitetail
SW 7103



Butter Up
SW 6681


Enigma SW 6018


Magnetic Gray SW 7058

## Forecasts:

## $\underline{2010}$


co

Tropical blooms. Sunny days. Playful exploration. It's time to take a vacation and let our cares melt away. Happy spaces are here again, bringing fresh florals, bright juicy colors and exuberant combinations. It's the kaleidoscopic spirit of the'60s married to the jewel tones of the ' 805 , with a global twist. Cultural influences and motifs mingle freely, creating a bohemian mosaic that sings in perfect harmony.


Fun Yellow SW 6908


Pickle
SW 6725


Summer Day SW 6662


## Sapphire

 SW 6963

Animated Coral SW 6878


Verve Violet SW 6979


- Color can quickly communicate helpful information by representing or suggesting things that the user/viewer is already experienced with - a red light on a stovetop can communicate that the surface is hot - like a red fire.

Color communicates symbolically and by association.

## Color-Coding/Communication

- Color blindness worldwide.
- Color code communicates incidence and pattern.



I:20


1:50

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$(6 \%-8 \%) \quad\left(4 \%-6{ }_{0}{ }_{0}\right)$
$\left(2^{\circ} 0^{-}-4_{0}^{\circ}\right)$
$(0 \%-2 \%)$


## Color-Coding/Communication



## Color-Coding/Communication

- CAD drawings differentiate meaning by color. Objects of different function or material can be rendered in (false) color that conveys meaning, but


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| Pen |  | Style |
| $\square$ Color1 |  | Steady |
| $\square$ Color2 |  | None |
| $\square$ Color3 |  | Wavy |
| $\square$ Color 4 |  | None |
| Color5 |  | Sketch |
| $\square$ Color6 |  | None |
| Color7 |  | Dashed |
| $\square$ Color9 |  | None |
| $\square$ Color11 |  | None |
| $\square$ Color 12 |  | None |
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## Color-Coding/Communication

- For instance, in an elementary school, the boy's bathroom and locker room doors could be painted blue and the girl's painted pink.
- This is terribly politically incorrect, but it is a simple statement of meaning - this room is for boys, and that one is for girls.
- That's color coding.


## Color-Coding/Communication

- The sales tags in a retail store may be colorcoded according to the current discount on prices. Items at full price have no sticker. Items at $15 \%$ off may be green, and items at $25 \%$ off might be orange. Items at 50\% off might be marked red.
- In this way, the shopper very quickly learns what to look for and how to evaluate what they see - after a brief introduction, color-coding saves time and allows more information to be conveyed with fewer words.


## Color-Coding/Communication

- London Underground/Subway map.
- Color untangles the knot of rail lines.

The London Underground


## Color-Coding/Communication

- Scientists use color to study the vast quantities of data generated by current research technologies.
- Each region of color "means" that some condition is present -- it does NOT mean that the cloud is actually that color to the naked eye.


## Color-Coding/Communication

- Galactic photos are color coded so that patterns of particular gasses/substances can be discerned by the astronomer.


## Color-Coding/Communication

- The images we see from the Hubble telescope of the most distant reaches of our galaxy are not, usually in their "natural" color, but are colored by computers according to other factors.
- In particular, our telescopes look for other characteristics than the naked eye can see - we can discern the presence of particular gasses even though those gases would not be visible to our eyes even if we were closer.


## Color-Coding Geological Data

- Geologists and ecologists study satellite photos of the earth's surface.
- The photos are not colored naturalistically, but are altered by computers according to surface temperatures, magnetic characteristics or whatever data is of interest.
- In this way, the geologist can far more quickly recognize patterns in the colors than would be possible any other way.
- The human eye and mind is attuned to visual patterns, and so color coding visual data highlights the very patterns the human mind can interpret.


## Color-Coding/Communication

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- Satellite photos are often not colored naturalistically, but are color-altered by computers according to surface temperatures, magnetic characteristics or whatever data is of interest.



## Color-Coding/Communication

- Lake Chad, Africa
- Color enhanced
- Areas of color enable researchers to quickly identify patterns.



## Color-Coding/Geological Data

- Ganges delta
- Color enhanced



## Geology of the Gunpowder Watershed

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$\checkmark$ Reservior <br> Gunpowder Watershed Sub-sheds York, PA <br> Baltimore Gabbro Complex <br> Baltimore Gneiss <br> Cockeysville Marble <br> Gunpowder Granite <br> James Run Gneiss <br> Lower Pelitic Schist <br> Lowland Deposits <br> Marburg Schist <br> $\square$ Muscoviye Quartz Monzonite Gneiss <br> Port Deposit Gneiss <br> Potomac Group <br> Sams Creek Metabasalt <br> Setters Formation <br> Iltramafic Rocks <br> Upland Deposits (Western S hore)Wakefield Marble <br> Wissahickon Formation Undivided <br> | 3 | 6 | 9 | 12 Miles |
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}

Each color represents a distinct type of rock or mineral.


## Color-Coding

 Weather- Mean surface temperature around the world in January,
- July...
- \& "July-January"?

MRI Surface Air Temperature


## Color-Coding

 Weather- January



## Color-Coding <br> Weather

- July




## Color-Coding Population vs.



## Color-Coding Medical Data

- Physicians and radiologists no longer rely solely on black-and-white X-rays, but use many computer aided diagnostic technologies to assess the fluids and tissues within a patient's body.


## Color-Coding Medical Data

- The color of an MRI might be modified according to how hard or dense a substance, or how warm or cool, or how magnetic dyes have shifted within the MRI's great magnets.

In short, medical diagnostic techniques use color to highlight meaningful data - to reveal the tissues and conditions that help diagnose a patient's condition.

## Color-Coding Medical Data

- The color of an MRI might be modified according to how hard or dense a substance, o how warm or cool, or how magnetic dyes have shifted within the MRI's great magnets.

MRI (magnetic resonance imagery)

## Color-Coding/Communication

- In summary, color is an effective tool for communicating because viewers can quickly and intuitively understand wellapplied color as a meaningful, distinguishing characteristic.

