
Oh... I'm seeing!

Ver para crer.

Evangelho segundo S. Tomé

Oh... I'm seeing!

Longe da vista , longe do coração.

Oh... I'm seeing!

MOTHER

Herbert Lubalin.

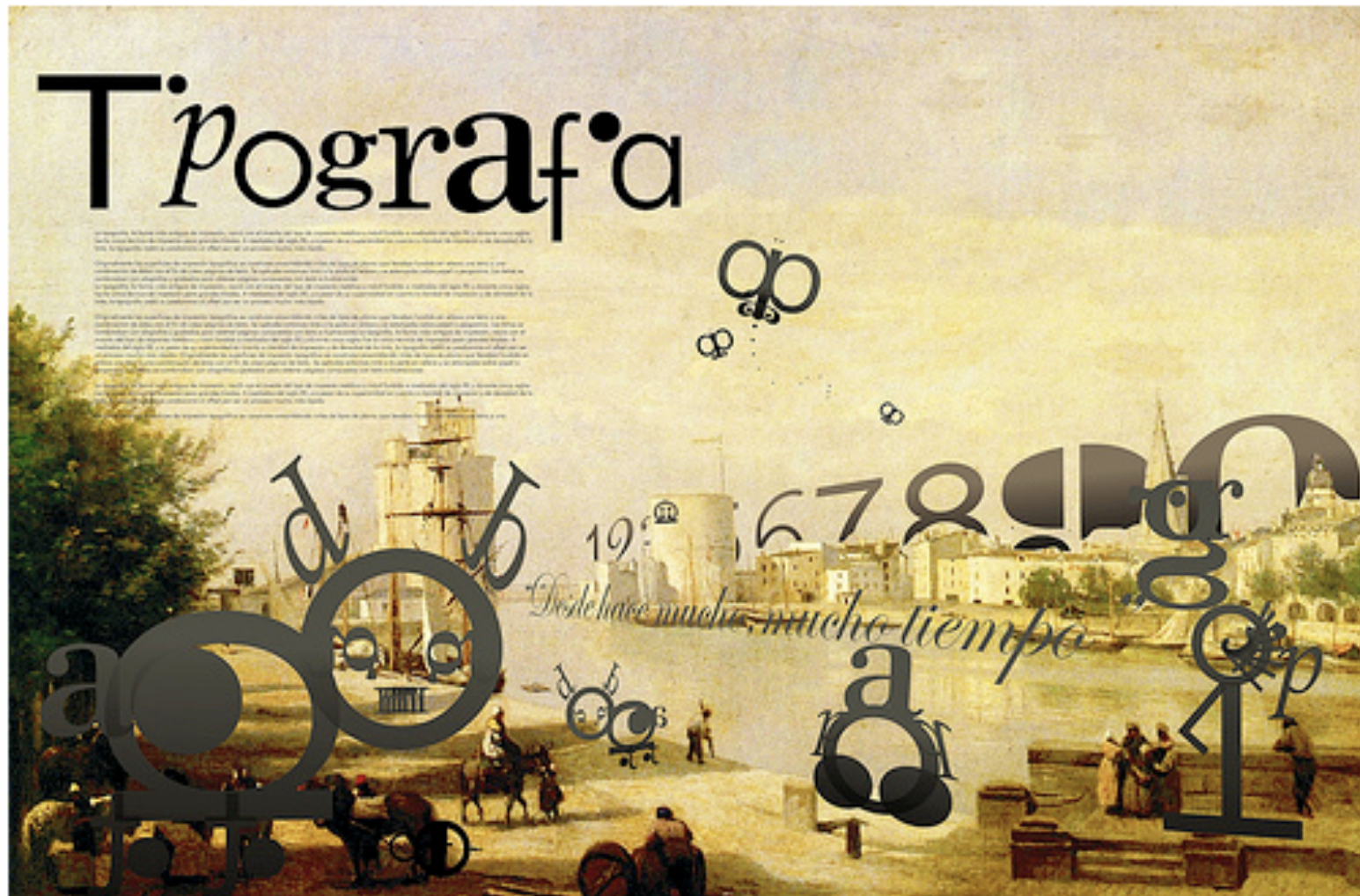
Oh... I'm seeing!

I ♥ NY



Milton Glaser.

Oh... I'm seeing!



Oh... I'm seeing!

4 3 6 7 9 8 1 2 5 5 1 1 5 6 1 1 5 8 1 3 4 1 5 9 1 5
1 5 3 4 5 1 1 5 2 5 1 3 1 9 2 5 1 2 1 8 9 1 4 1 1 6
5 2 1 6 1 1 6 1 2 4 1 8 1 6 1 5 8 2 4 1 4 1 5 1 9 1
1 4 1 8 1 9 5 1 2 8 1 9 1 1 5 1 1 5 1 6 1 8 2 6 1 2
2 6 1 9 1 5 1 2 2 1 4 1 1 8 2 1 4 1 2 4 4 1 1 9 1 2
3 1 2 5 1 1 6 1 5 3 1 8 2 1 3 8 1 1 8 1 4 1 3 1 6 1

Fonte: Alberto Cairo

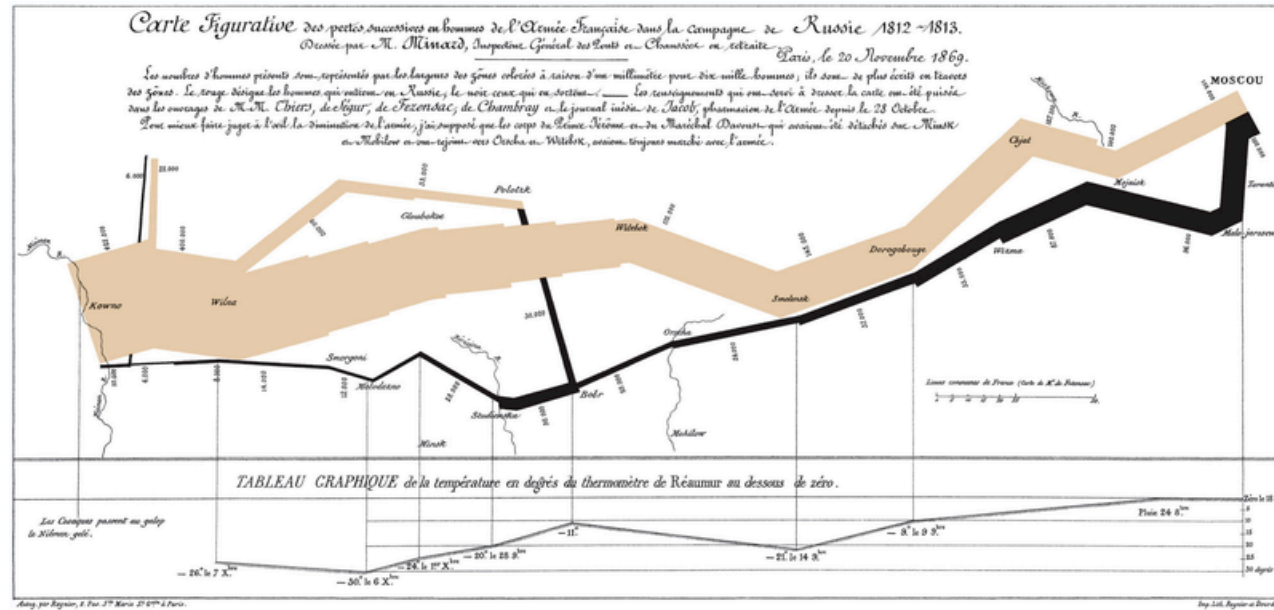
Oh... I'm seeing!

4 3 6 7 9 8 1 2 5 5 1 1 5 6 1 1 5 8 1 3 4 1 5 9 1 5
1 5 3 4 5 1 1 5 2 5 1 3 1 9 2 5 1 2 1 8 9 1 4 1 1 6
5 2 1 6 1 1 6 1 2 4 1 8 1 6 1 5 8 2 4 1 4 1 5 1 9 1
1 4 1 8 1 9 5 1 2 8 1 9 1 1 5 1 1 5 1 6 1 8 2 6 1 2
2 6 1 9 1 5 1 2 2 1 4 1 1 8 2 1 4 1 2 4 4 1 1 9 1 2
3 1 2 5 1 1 6 1 5 3 1 8 2 1 3 8 1 1 8 1 4 1 3 1 6 1

4 3 6 7 9 8 1 2 5 5 1 1 5 6 1 1 5 8 1 3 4 1 5 9 1 5
1 5 3 4 5 1 1 5 2 5 1 3 1 9 2 5 1 2 1 8 9 1 4 1 1 6
5 2 1 6 1 1 6 1 2 4 1 8 1 6 1 5 8 2 4 1 4 1 5 1 9 1
1 4 1 8 1 9 5 1 2 8 1 9 1 1 5 1 1 5 1 6 1 8 2 6 1 2
2 6 1 9 1 5 1 2 2 1 4 1 1 8 2 1 4 1 2 4 4 1 1 9 1 2
3 1 2 5 1 1 6 1 5 3 1 8 2 1 3 8 1 1 8 1 4 1 3 1 6 1

Fonte: Alberto Cairo

Oh... I'm seeing!



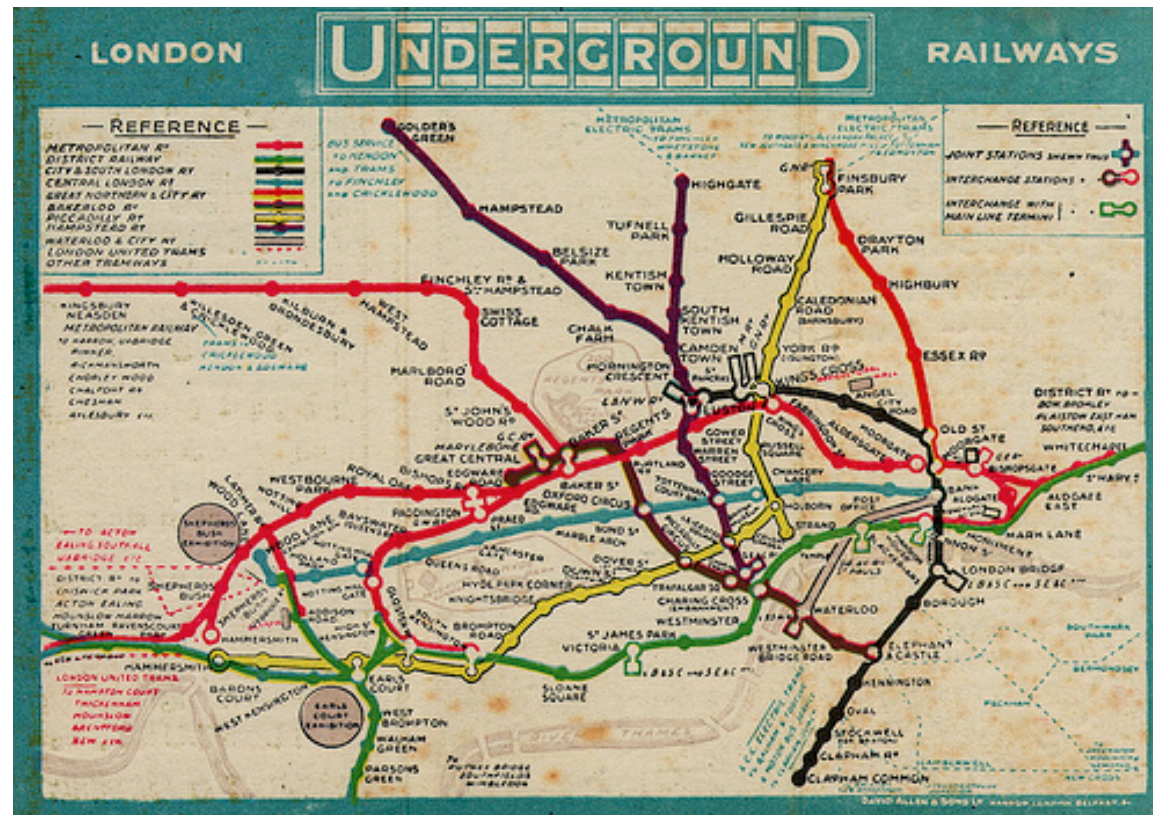
Charles Minard (1869)

Oh... I'm seeing!

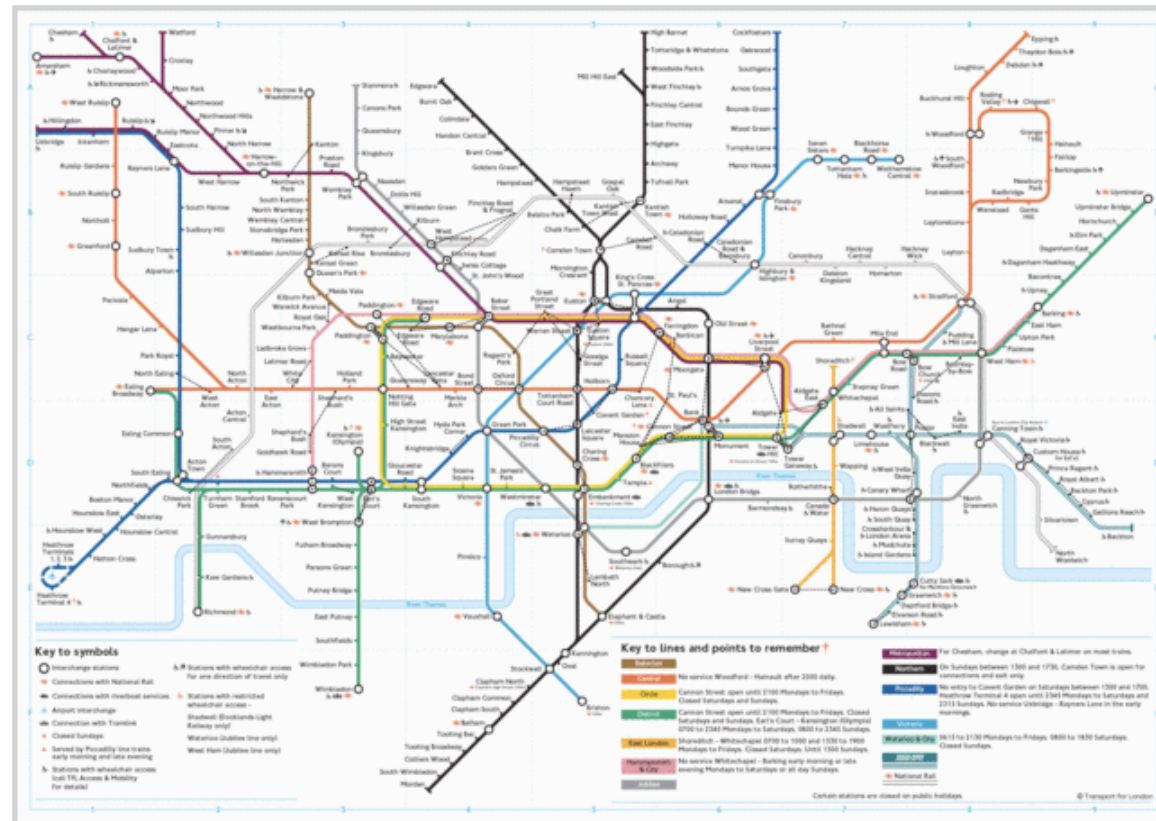


Dr. John Snow (1855)

Oh... I'm seeing!



Oh... I'm seeing!



Harry Beck (1931)

Oh... I'm seeing!

Função do artefacto de design.

Função prática.

- Responde a uma necessidade do utilizador.

Oh... I'm seeing!



Função prática

Função do artefacto de design.



Oh... I'm seeing!

Função do artefacto de design.

Função estética.

- Caracteriza-se, antes, pela relação psicológica que estabelecem com as pessoas.
- A dimensão estética do objecto de design interage de modo positivo ou negativo sobre as pessoas, dando origem a um sentimento de aceitação ou de recusa.

Oh... I'm seeing!



Função estética

Função do artefacto de design.



Oh... I'm seeing!

Função do artefacto de design.

Função simbólica.

- A função simbólica reside no valor emocional que o sujeito atribui à imagem.
- Quando está para além do objecto.

Oh... I'm seeing!

Função do artefacto de design.

Função simbólica



Oh... I'm seeing!

“Some people find this moment – before creativity begins – so painful that they simply cannot deal with it.

They get up and walk away from the computer, the canvas, the keyboard; they take a nap or go shopping or fix lunch or do chores around the house.

They procrastinate. In its most extreme form, this terror totally paralyzes people.”

Twyla Tharp

(in “The Creative Habit)

Oh... I'm seeing!

LINE



A line is a mark between two points. There are various types of lines, from straight to squiggly to curved and more. Lines can be used for a wide range of purposes: stressing a word or phrase, connecting content to one another, creating patterns and much more.

SHAPE



Height + width = shape. We all learned basic shapes in grade school - triangles, squares, circles and rectangles. Odd or lesser seen shapes can be used to attract attention.

There are three basic types of shape: **geometric** (triangles, squares, circles etc), **natural** (leaves, animals, trees, people), and **abstracted** (icons, stylizations, graphic representations etc).

VALUE



Value is how light or how dark an area looks. A gradient, shown above, is a great way to visualize value - everything from dark to white, all the shades in-between, has a value. Use value to create depth and light; to create a pattern; to lead the eye; or to emphasize.

COLOR

Color is used to generate emotions, define importance, create visual interest and more. CMYK (cyan/magenta/yellow/black) is **subtractive**; RGB (red/green/blue) is **additive**.

Some colors are warm and active (orange, red); some are cool and passive (blue, purple).

There are various **color types** (primary to analogous) and **relationships** (monochromatic to triad) worth learning more about as well.

TEXTURE



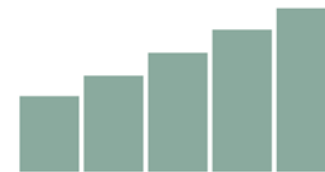
Texture relates to the surface of an object; the look or feel of it. Concrete has a rough texture; drywall has a smooth and subtle texture. Using texture in design is a great way to add depth and visual interest. Printed material has actual, textile texture while screen material has implied texture.



Space is the area around or between elements in a design. It can be used to separate or group information. Use it effectively to: give the eye a rest; define importance; lead the eye through a design and more.

SPACE

SIZE



Size is how small or large something is: a small shirt vs. an extra large shirt, for example. Use size to define importance, create visual interest in a design (via contrasting sizes), attract attention and more.

created by Paper Leaf Design. www.paper-leaf.com

Oh... I'm seeing!

COLOR THEORY

QUICK REFERENCE SHEET FOR DESIGNERS

SUBTRACTIVE

CREATED WITH INK;
START WITH WHITE, ADD COLOR.
CMYK



COLOR TYPES



ADDITIVE

CREATED WITH LIGHT;
START WITH BLACK, ADD COLOR.
RGB



COLOR RELATIONSHIPS



MEANINGS

	INTENSE, FIRE & BLOOD. ENERGY, WAR, DANGER, LOVE PASSIONATE, STRONG.		ROYALTY, POWER. NOBILITY, WEALTH, AMBITION DIGNIFIED, MYSTERIOUS.		SUNSHINE, JOY. CHEERFULNESS, INTELLECT, ENERGY ATTENTION-GETTER.
	SKY, SEA. DEPTH, STABILITY, TRUST MASCULINE, TRANQUIL.		WARM, STIMULATING. ENTHUSIASM, HAPPINESS, SUCCESS CREATIVE, AUTUMN.		NATURE, GROWTH. FERTILITY, FRESHNESS, HEALING SAFETY, MONEY.

TERMS

- CHROMA: How pure a hue is in relation to gray
- SATURATION: The degree of purity of a hue
- INTENSITY: The brightness or dullness of a hue
- LUMINANCE/VALUE: A measure of the amount of light reflected from a hue
- SHADE: A hue produced by the addition of black
- TINT: A hue produced by the addition of white

*designed by Paper Leaf Design, with thanks & credit to work.com & color-wheel-pro.com

Oh... I'm seeing!

CONTRAST

COLOR Unique elements in a design should stand apart from one another. One way to do this is to use contrast. Good contrast in a design – which can be achieved using elements like color, tone, size, and more – allows the viewer's eye to flow naturally.

TO NE/VALUE

SIZE/SHAPE To the left, you can see 4 ways to create contrast in your design.

DIRECTION

REPETITION

Repetition breeds cohesiveness in a design. Once a design pattern has been established – for example, a dotted border or a specific typographic styling – repeat this pattern to establish consistency.

The short version?

Establish a style for each element in a design and use it on similar elements.

ALIGNMENT

Proper alignment in a design means that every element in it is visually connected to another element. Alignment allows for cohesiveness; nothing feels out of place or disconnected when alignment has been handled well.

PROXIMITY

Proximity allows for visual unity in a design. If two elements are related to each other, they should be placed in close proximity to one another. Doing so minimizes visual clutter, emphasizes organization, and increases viewer comprehension.

Imagine how ridiculous it would be if the proximity icons on this graphic were located on the other side of this document.

PRINCIPLES of DESIGN
quick reference poster

a handy *paper leaf* resource

Oh... I'm seeing!

ELLE

lwi

Oh... I'm seeing!

LUI

elle

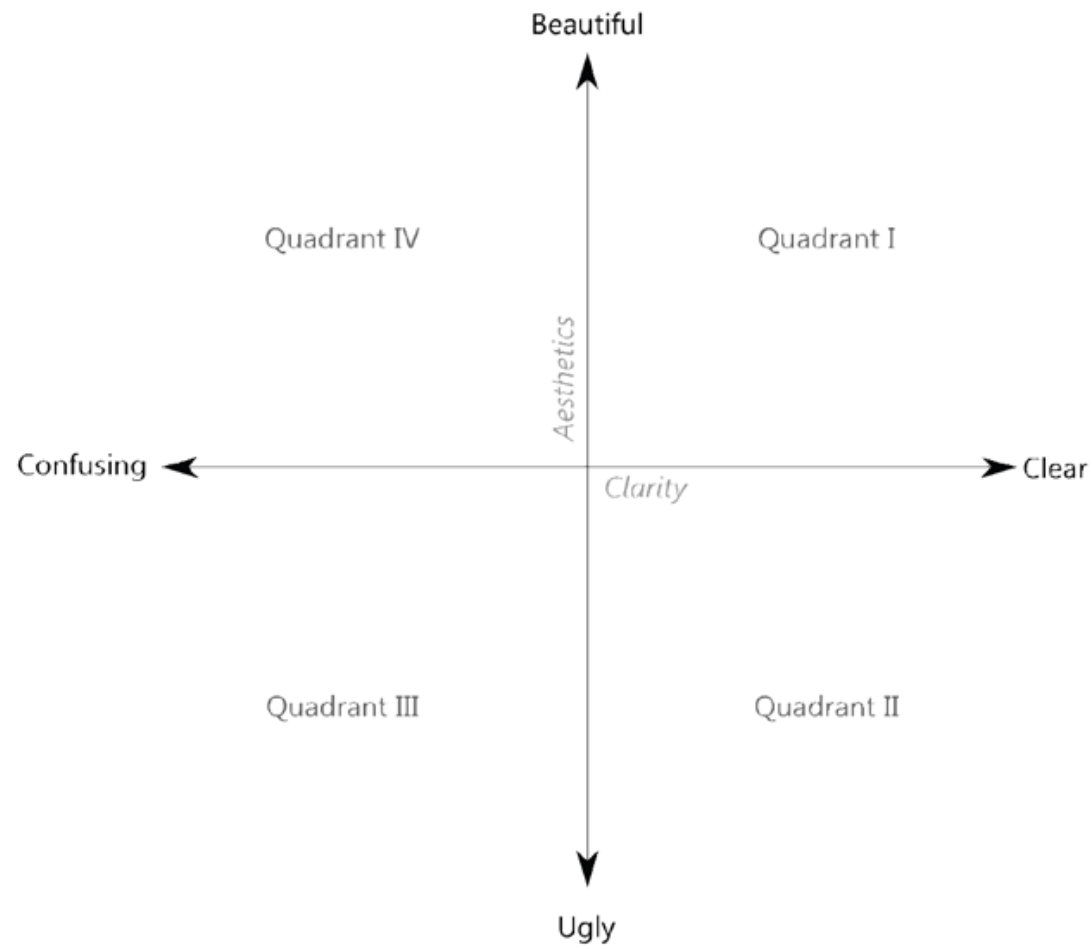
Oh... I'm seeing!

Visualização de Dados
Cartaz Científico
Interfaces

Oh... I'm seeing!

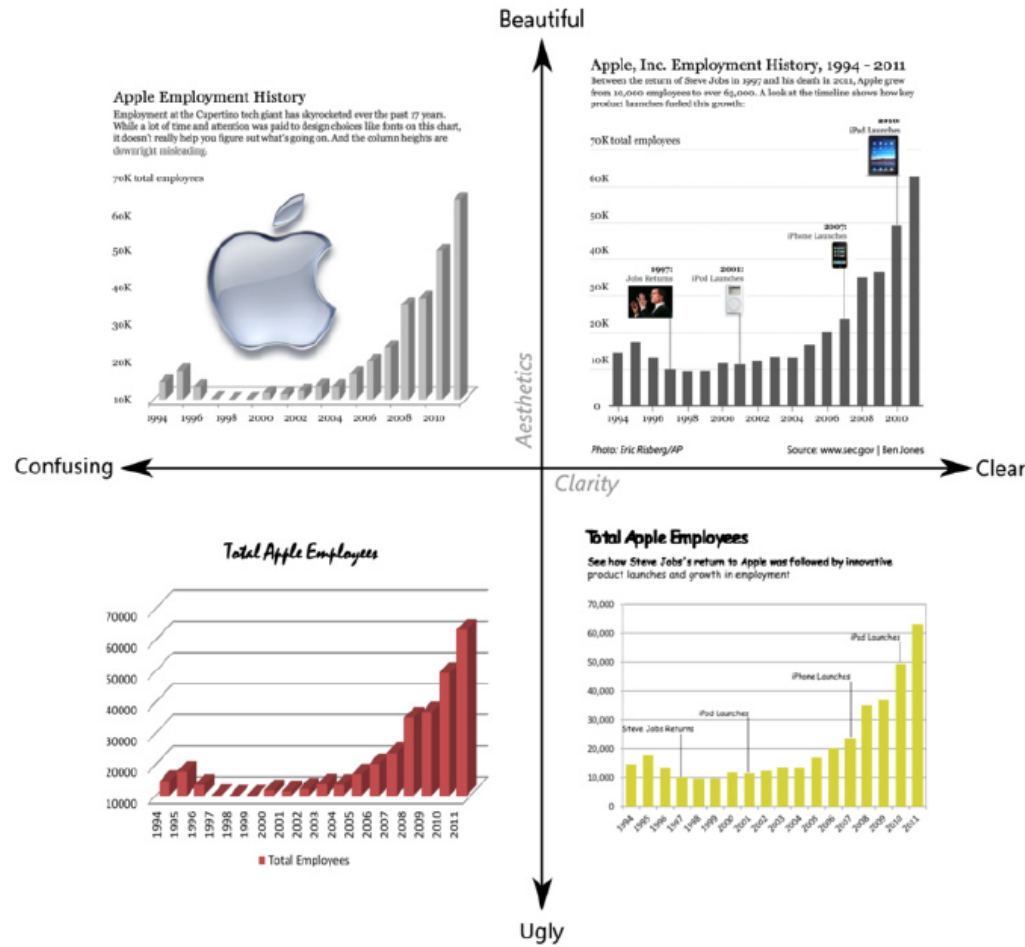
Visualização de Dados

Oh... I'm seeing!



Fonte: Alberto Cairo

Oh... I'm seeing!

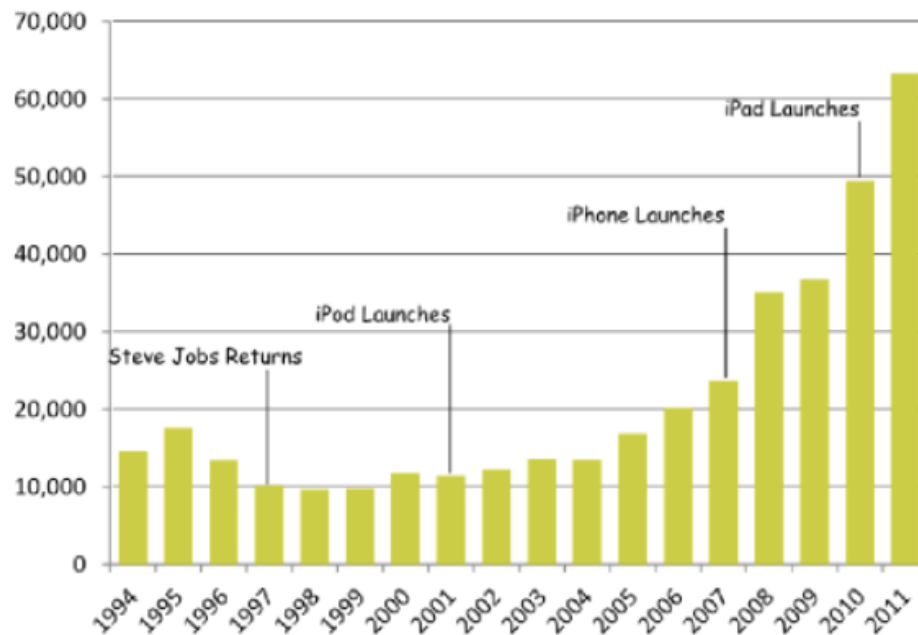


Fonte: Alberto Cairo

Oh... I'm seeing!

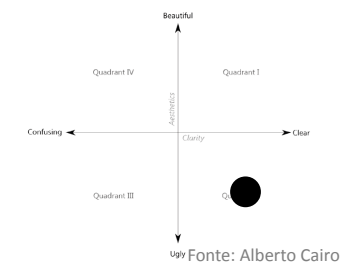
Total Apple Employees

See how Steve Jobs's return to Apple was followed by innovative product launches and growth in employment

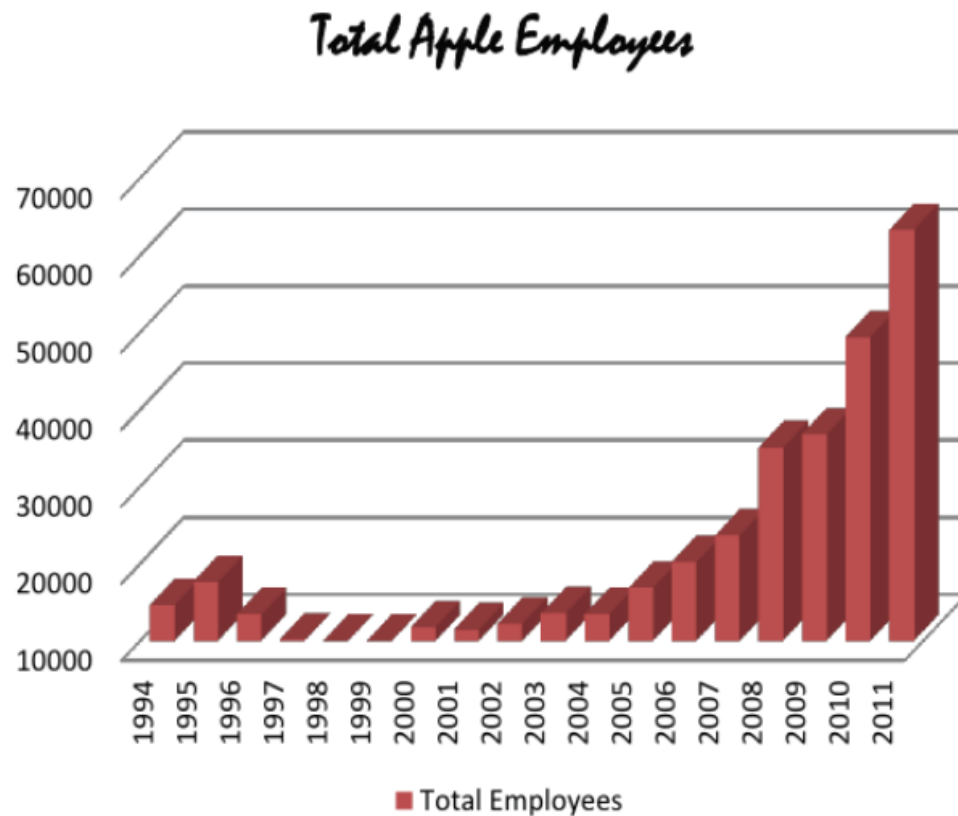


- Péssima escolha de tipografia (Comic Sans).
- Má articulação entre tipos.
- Linhas de referência muito pesadas.

- O eixo Y começa em 0.
- As colunas 2D são fáceis de comparar.
- Foram inseridas marcas relevantes na linha de tempo.
- O lead é realmente informativo.

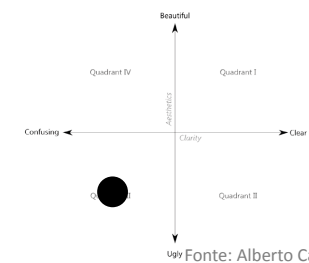


Oh... I'm seeing!



- Péssima escolha de tipografia para o título.
- Má articulação entre tipos.
- Grafismo dos eixos e base sem unidade.
- Linhas de referência muito pesadas.

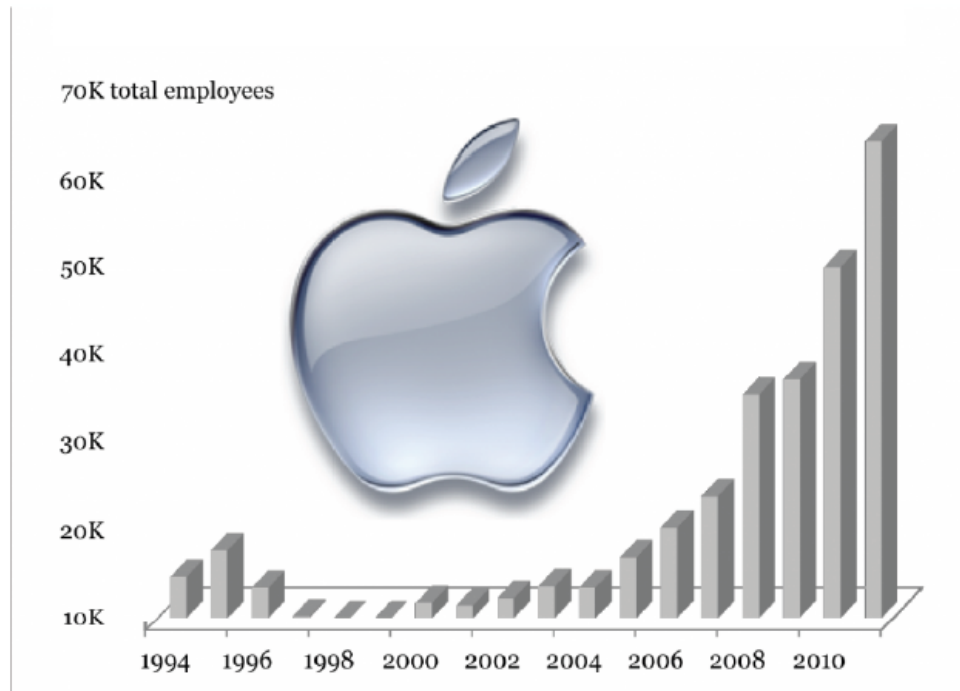
- Sem lead que determine o contexto.
- O efeito 3D dificulta a comparação da altura das colunas.
- O eixo Y não começa em 0.



Oh... I'm seeing!

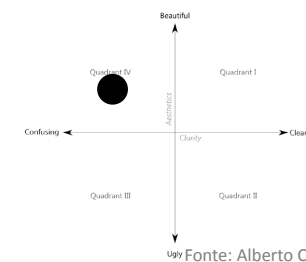
Apple Employment History

Employment at the Cupertino tech giant has skyrocketed over the past 17 years.



- Título e lead bem colocados e alinhados.
- Atenção e detalhe na escolha da tipografia.
- Cuidada utilização de imagem.

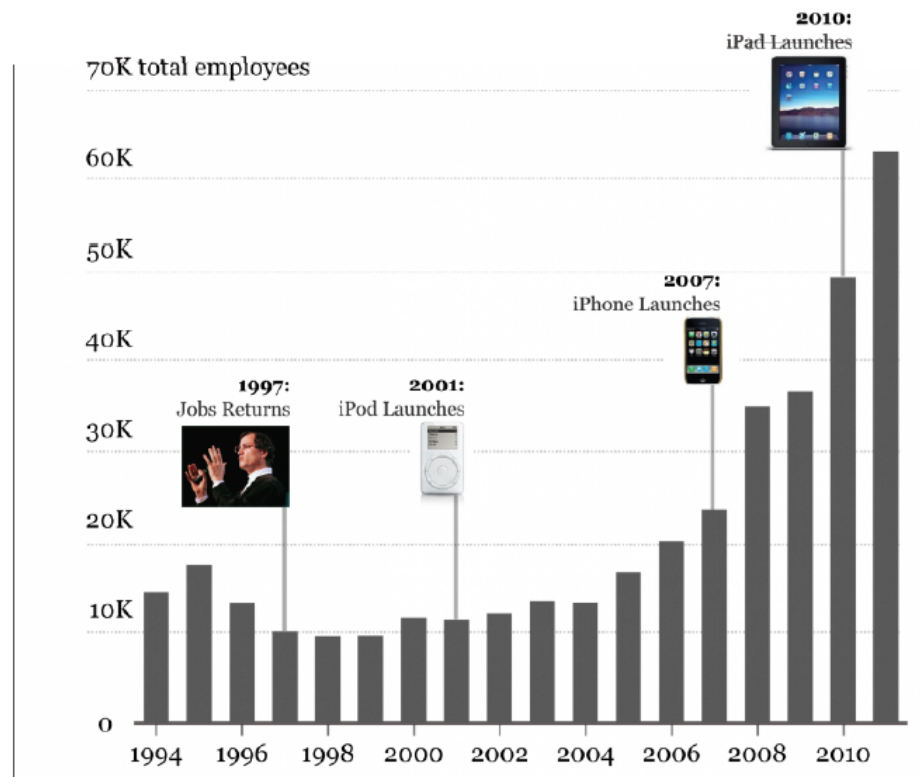
- O eixo Y começa em 10K, o que torna a altura da coluna “enganosa”.
- O efeito 3D dificulta a comparação da altura das colunas.
- Título e lead pouco explicativos.



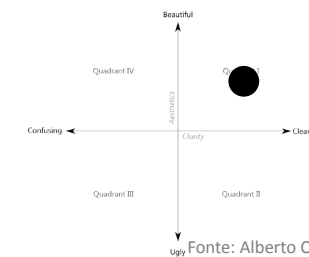
Oh... I'm seeing!

Apple, Inc. Employment History, 1994 - 2011

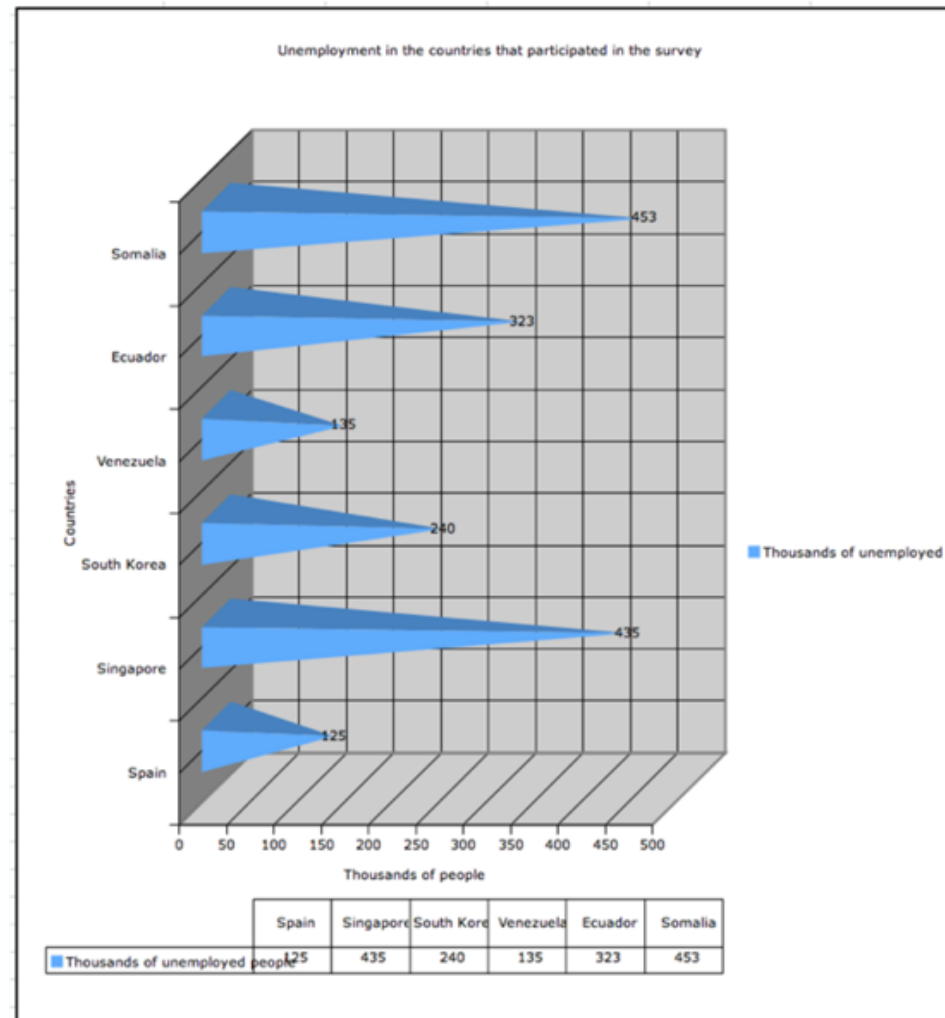
Between the return of Steve Jobs in 1997 and his death in 2011, Apple grew from 10,000 employees to over 63,000. A look at the timeline shows how key product launches fueled this growth:



- Correcta escolha tipográfica.
 - Escolha de cor adequada.
 - Linhas de referência leves, não “pesam” visualmente e não distraem.
 - Grande rigor no alinhamento e do espaçamento.
 - As imagens são bem tratada.
-
- O eixo Y começa em 0.
 - As colunas 2D são fáceis de comparar.
 - Foram inseridas imagens de significado relevante na linha de tempo.
 - O lead, informativo, proporciona elevada elucidação.

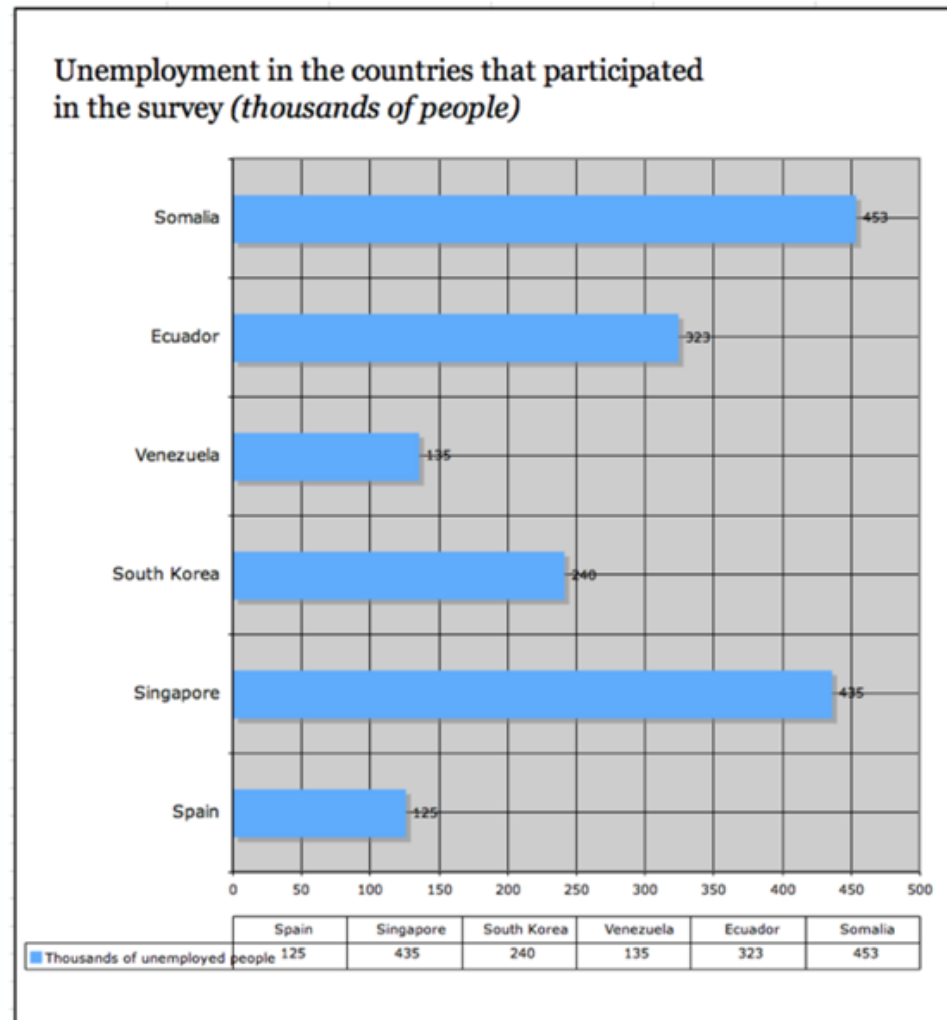


Oh... I'm seeing!



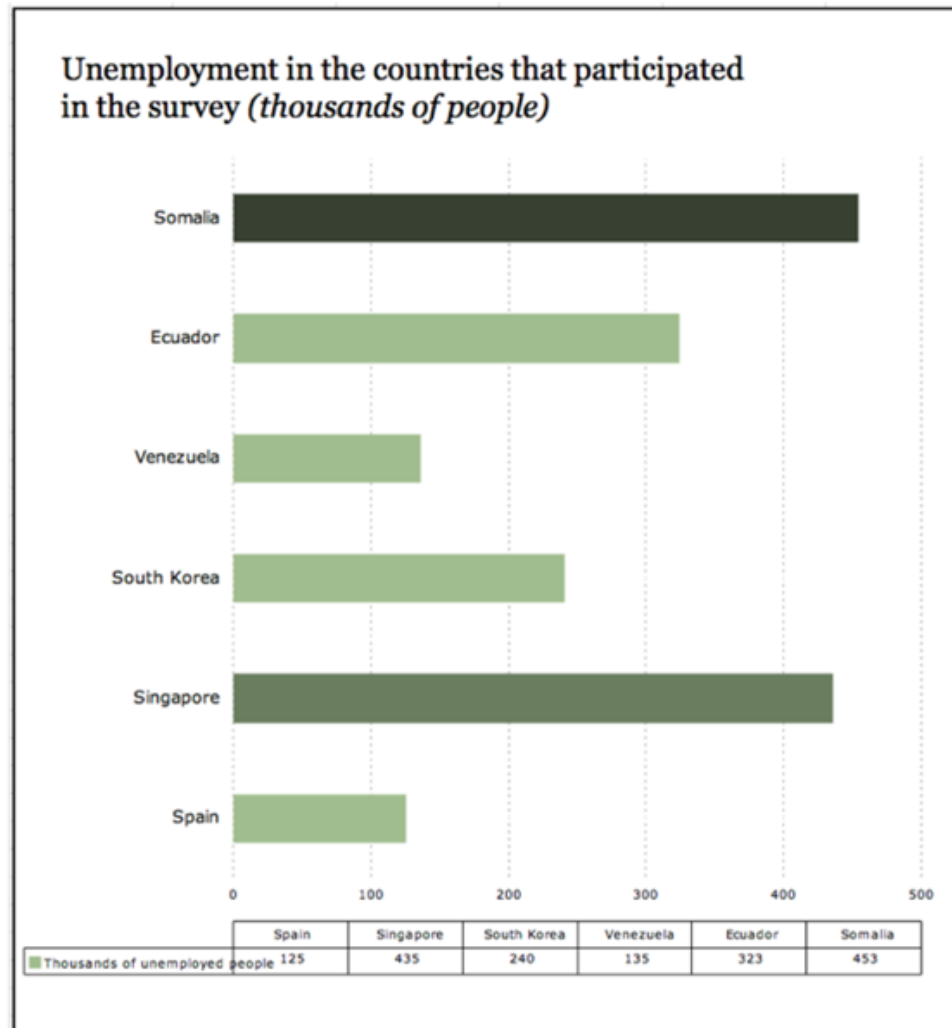
Fonte: Alberto Cairo

Oh... I'm seeing!



Fonte: Alberto Cairo

Oh... I'm seeing!

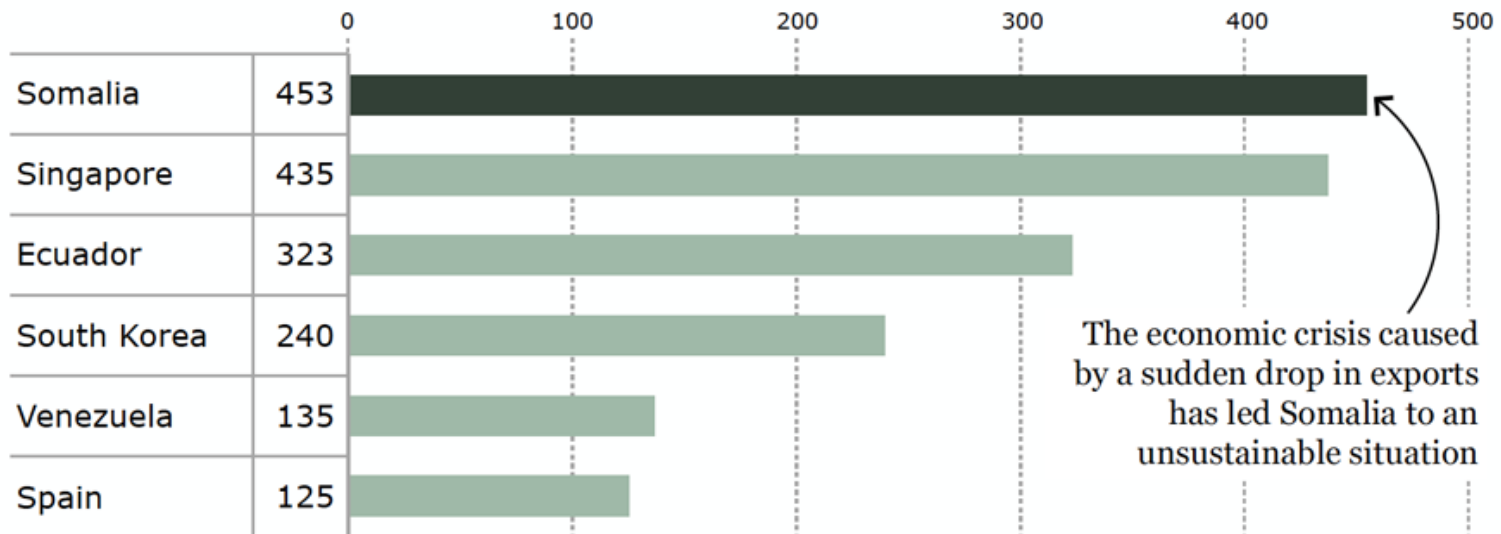


Fonte: Alberto Cairo

Oh... I'm seeing!

Somalia leads the countries that participated in the survey

Thousands of unemployed people



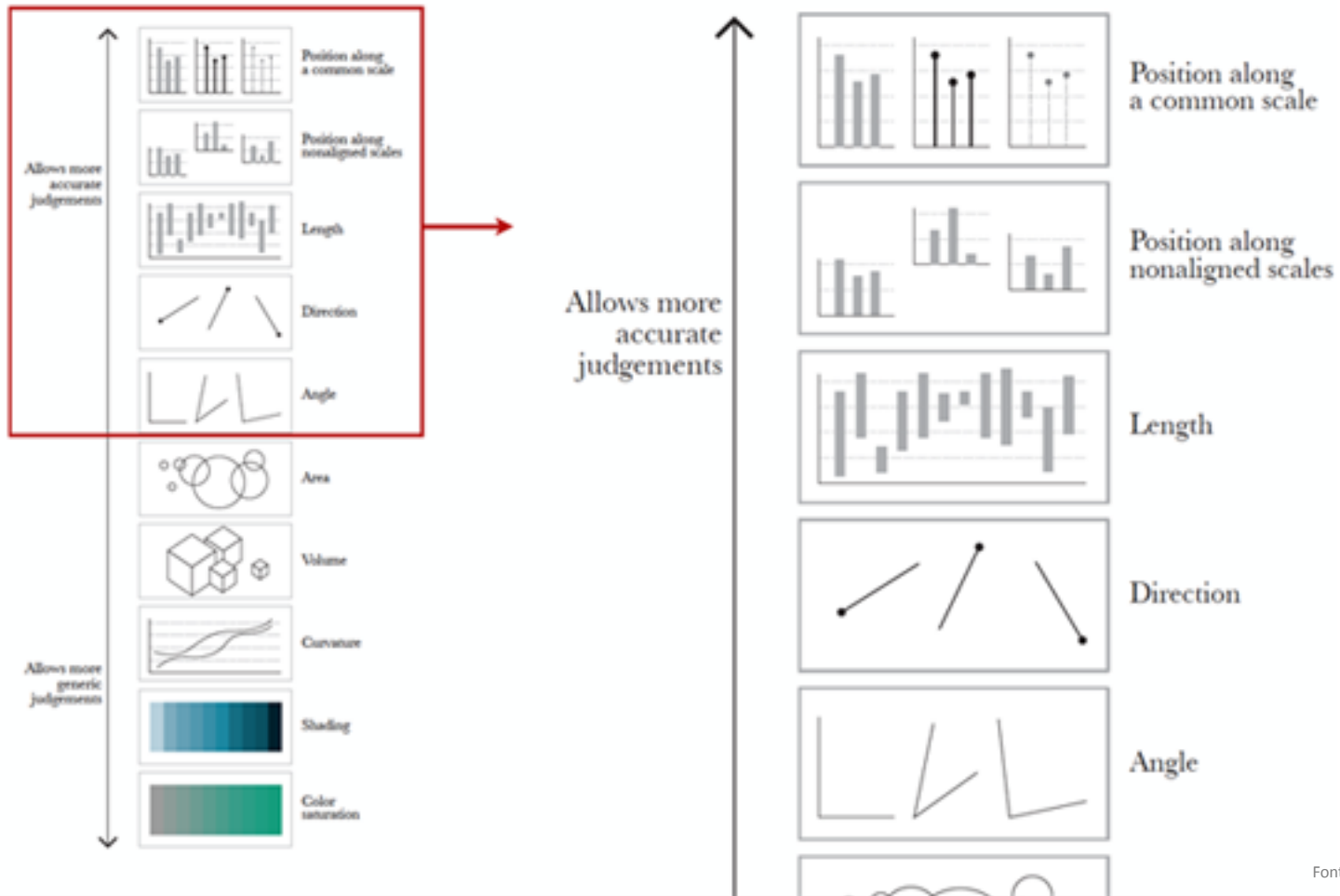
Source: CompletelyFakeData Inc.

Graphic by ACME

Fonte: Alberto Cairo

Oh... I'm seeing!

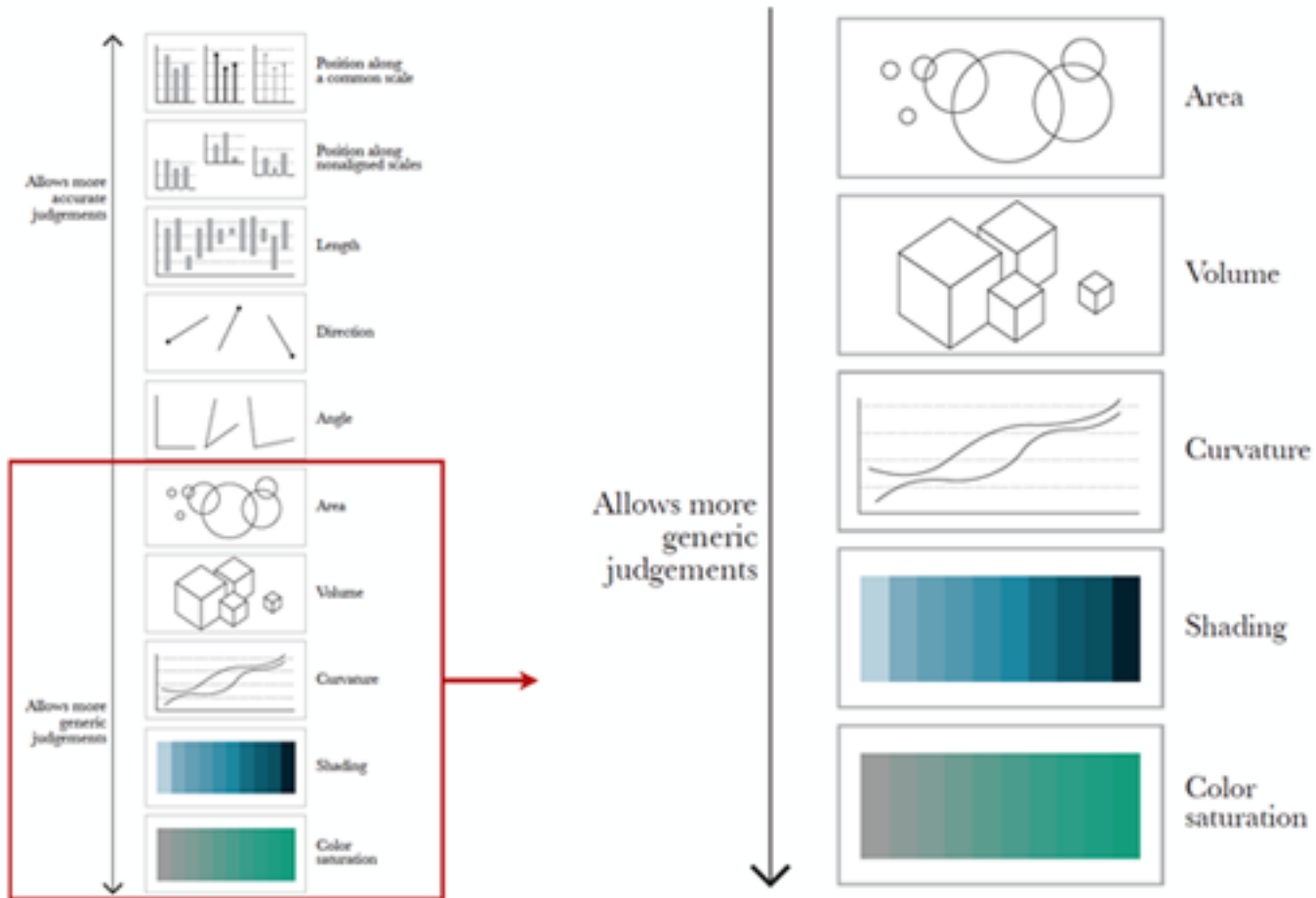
William Cleveland and Robert McGill



Fonte: Alberto Cairo

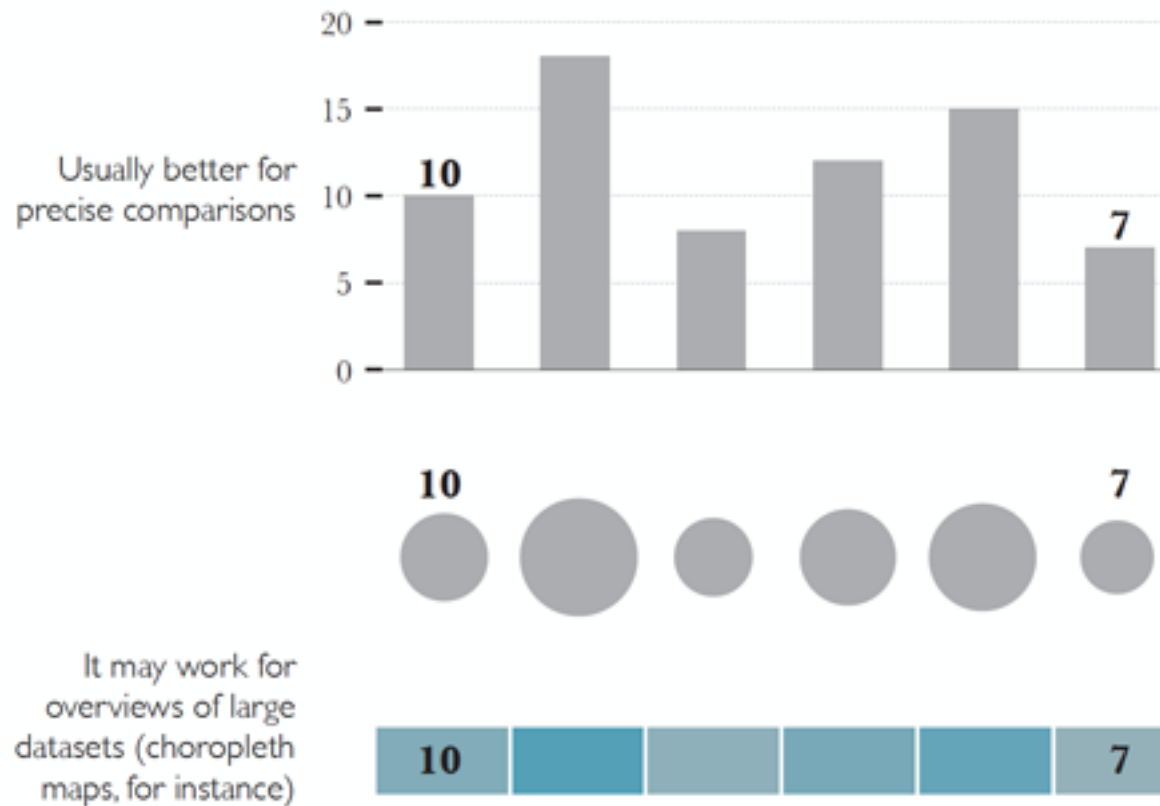
Oh... I'm seeing!

William Cleveland and Robert McGill



Fonte: Alberto Cairo

Oh... I'm seeing!

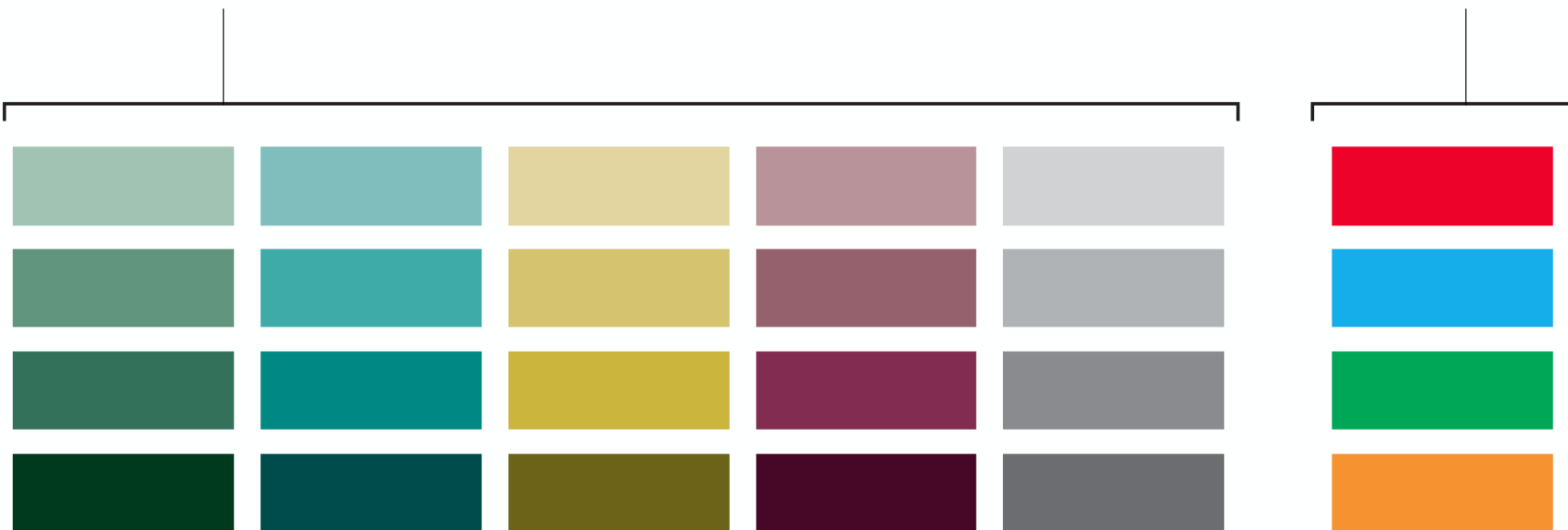


Fonte: Alberto Cairo

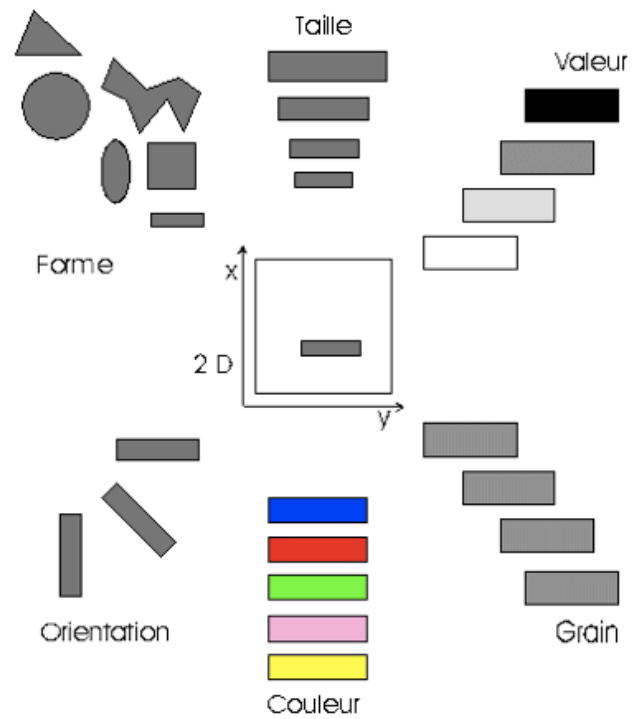
Oh... I'm seeing!

Cores neutras
para a maioria da
informação gráfica.

Cores puras
para destaques.



Oh... I'm seeing!



Variáveis visuais de Jaques Bertin.

Oh... I'm seeing!

Poster Científico

Oh... I'm seeing!

Objectivo do cartaz científico

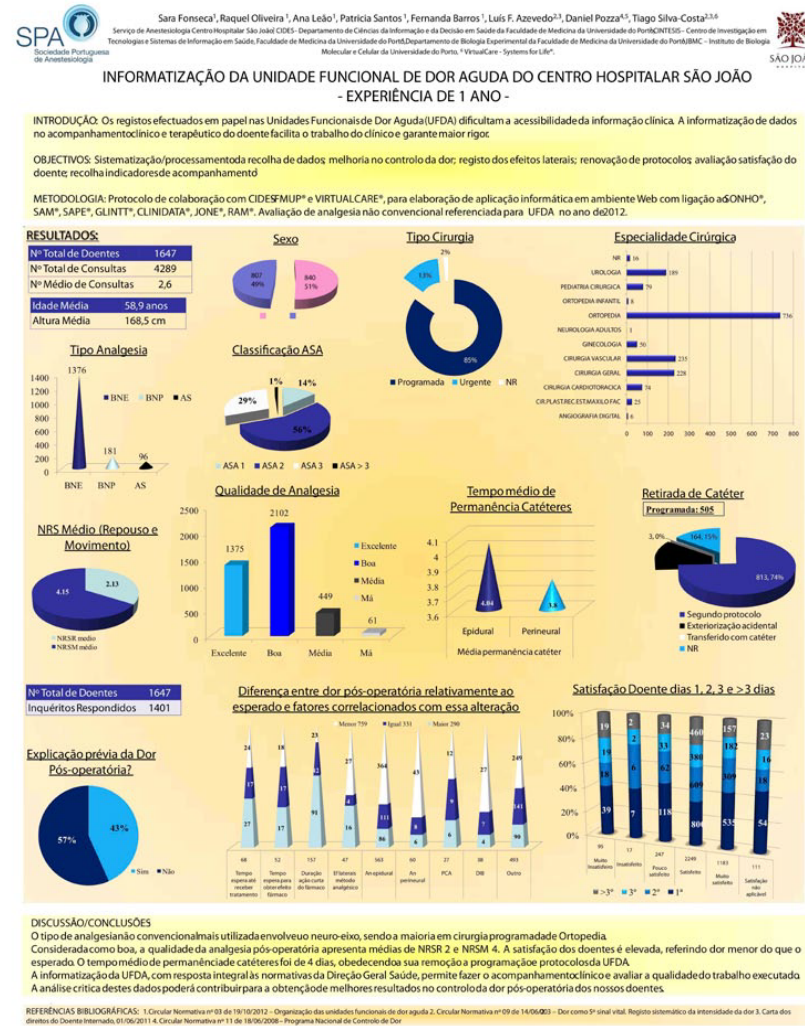
- Apresentar a informação de forma rigorosa, clara e concisa.
- Capaz de gerar interesse.
- Destacar-se, na exposição, de um grande conjunto de cartazes, que normalmente caracteriza este tipo de evento.

Oh... I'm seeing!

Elementos a considerar no cartaz.

- A escolha do fundo recai numa imagem preenchida?
- O fundo distrai o leitor do conteúdo?
- As imagens estão distorcidas e com pouca qualidade? Quanto pior for o tratamento dado às imagens, pior é o efeito geral obtido.
- Existe uma paleta, um tema ou um padrão de cores?
- A escolha de cores foi reduzida ao mínimo?
- O espaço é um elemento gráfico importante e determinante no cartaz. As imagens são muito grandes ou muito pequenas? Qual a proporção do espaço vazio, faforma face ao fundo?
- Importante: menos é mais.

Oh... I'm seeing!



Oh... I'm seeing!



Textos e imagens utilizados com objectivo didáctico, em contexto académico.

Mariana Mota

Oh... I'm seeing!

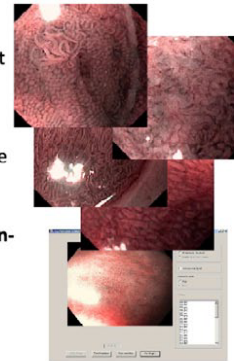


Computer Assisted Gastroenterology Examination

Funded through FCT PTDC/EIA-CCO/109982/2009

Context

- Gastrointestinal cancer is one of the deadliest forms of cancer
- Increasing number of deaths every year
- Multitude of available imaging technologies with new ones being introduced at a fast pace



Objectives

- Development of **Computer Vision** and **Human-Computer Interaction** methodologies
- Early cancer detection towards improved prognosis
- Improve clinician's ability to diagnose Cancer

Ongoing Works and Achievements

- Annotation tool for data collection
- User studies to ascertain care takers routines
- Multicenter studies

Indicators

- 3 Journals
- 2 Faculty
- 10 Proceedings
- 2 PostDocs
- 1 PhD Thesis
- 3 Researchers
- 1 MSc thesis

Project Milestones



Partners



Oh... I'm seeing!

it instituto de telecomunicações

Miguel Coimbra
Mário Dinis Ribeiro

Farhan Riaz
Ricardo Sousa

Bruno Mendes
Celina Gomes

Development of **Computer Vision** and **Human Computer Interaction** methodologies

Early cancer detection towards improved prognosis

Improve clinician's ability to diagnose Cancer

COMPUTER ASSISTED GASTROENTEROLOGY EXAMINATION

CAGE

COMPUTER ASSISTED GASTROENTEROLOGY EXAMINATION

Funded through FCT PTDC/EIA-CCO/109982/2009

Interactive Solution for Information

Integration with the Information System

Information Extraction and Processing

Testing and Validation

IPOPORTO CINETEJS U.PORTO FCT COMPETE URB

it instituto de telecomunicações

Miguel Coimbra
Mário Dinis Ribeiro

Farhan Riaz
Ricardo Sousa

Bruno Mendes
Celina Gomes

Context

Gastronintestinal cancer is one of the deadliest forms of cancer

Increasing number of deaths every year

Multitude of available imaging technologies with new ones being introduced at a fast pace

Objectives

Development of **Computer Vision** and **Human Computer Interaction** methodologies

Early cancer detection towards improved prognosis

Improve clinician's ability to diagnose Cancer

Ongoing works and achievements

Annotation tool for data collection

User studies to ascertain care takers routine

Multicenter studies

Project Milestones

Interactive Solution for Information

Integration with the Information System

Information Extraction and Processing

Testing and Validation

Indicators

- 15 Proceedings
- 1962 Hours
- 1464 Hours
- 2000h
- 2 Faculty
- 2 Professors
- 3 Researchers

CAGE

COMPUTER ASSISTED GASTROENTEROLOGY EXAMINATION

COMPUTER ASSISTED GASTROENTEROLOGY EXAMINATION

Funded through FCT PTDC/EIA-CCO/109982/2009

IPOPORTO CINETEJS U.PORTO FCT COMPETE URB

Mariana Mota

Oh... I'm seeing!

Multi-scale Modeling and Assessment of Malaria Risk in Northern South America

Alimi, T. O.¹; Fuller, D. O.^{1,2} and Beier, J.C.^{1,3}

¹ ABeSS Center for Ecosystem Science and Policy; ² Department of Geography and Regional Studies; ³ Department of Epidemiology and Public Health, University of Miami



1. Introduction

The public health problem posed by malaria has made it a top priority for control efforts and the general consensus globally is that its elimination is crucial for continued international development. Consequently there is ongoing research in different regions including South America (SA) to better understand the disease dynamics with the intent that findings may establish scientific framework that would support the development of new intervention strategies for malaria elimination in areas with seasonal malaria. One of such investigations is undertaken by the International Centers of Excellence in Malaria Research (ICEMR) under a National Institutes of Health (NIH) grant.

While only about 3% of the global malaria burden is borne by SA¹, undertaking malaria research in the region is currently important because an estimated 23million people are still at risk² and approximately about 80% of clinical cases are found in Northern South America (NSA)³. A key factor limiting effective control is lack of data and uneven implementation of control measures, including use of bed-nets, sprays, early diagnosis, and treatment. As part of the ICEMR investigation, this project seeks to model the spatial patterns of malaria risk in NSA through vector distribution and land-use changes. Furthermore, I intend to investigate the perceptions of malaria risk in order to identify barriers to adoption and how they can be circumvented.

2. Significance

Spatial distribution of malaria risk is still perceived as broadly categorized by the WHO's traditional risk maps which are highly generalized, of low resolution and have broad categories with uncertain boundaries (see da Nazeu-Silva et al. 2012). There is need for up-to-date high resolution risk maps which can aid malaria control efforts. Secondly, modeling distribution of principal malaria vectors and land use changes which may explain the observed distribution and risk are useful tools which would guide future management strategies. Finally, understanding the perceptions of at risk populations may help address barriers to adoption of interventions and influence policies. Overall, findings will empower NMCPs to achieve effective control and move them closer to elimination.

3. Specific Aims

- > Specific Aim 1: Model the spatial patterns of malaria risk through vector distribution and land use changes
 - Hypothesis 1.1: GIS-based Multi-Criteria Evaluation (MCE) model can accurately predict spatial extent of malaria risk areas. **Objective:** Generate risk maps that represent risk of malaria transmission.
 - Hypothesis 1.2: The Maximum Entropy (Maxent) model can accurately depict actual and predict potential distribution of three *Anopheles* species. **Objective:** Model observed and potential spread of *An. albimanus*, *An. darlingi*, and *An. macrotarsus*.
 - Hypothesis 1.3: Land-use changes can explain the variations in predicted malaria risk. **Objective:** Characterize land use land cover (LULC) and investigate changes in areas of risk.
 - > Specific Aim 2: Investigate the perceptions of malaria risk in order to identify barriers to adoption and how they can be circumvented.
 - Hypothesis 2.1: Knowledge of perception of malaria risk can aid design of malaria control strategies. **Objective:** Obtain and analyze data on subjective perceptions of risk.
 - Hypothesis 2.2: Identification of barriers to adoption of malaria control interventions provide means of tackling them. **Objective:** Analyze data addressing perceived barriers and policy implications
- *Only ongoing work on Hypothesis 1.1 is presented here

4. Materials and Methods

> **Study Area:** is NSA comprising of ten countries- Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname and Venezuela. These countries account for approximately 90% of clinical cases in the region hence, the choice as study area (Fig. 1).



Figure 1. Map of study area

> **Research Approach:** Due to the complexity of malaria problem, I'm employing an interdisciplinary approach to address the problem (Fig. 2).



Figure 2. Interdisciplinary approach

> **Materials:** Raster data layers of environmental, climatic and anthropogenic parameters from satellite imageries, weather monitoring stations, global land cover and population data were collected from Worldclim, Digital Charts of the World, Globcover and Landscan. Vector data was collected from field sampling by our collaborators and the Walter Reed Biostatistics Unit. Sociological data would be collected through questionnaires to be administered in one of the study area. Other data will be collected as needed.

> **Procedure:** To test hypothesis 1.1, raster data of parameters that influence mosquito distribution (rivers, wetlands, urban areas, roads, population and elevation) were combined using a Multi-Criteria Evaluation in Idrisi GIS package. This produced a map of potential exposure to malaria vectors which is used as a proxy for risk of malaria transmission. All the data layers were gridded at 1km spatial resolution. A set of distance layers had been created for discrete factors using standard GIS operations. All factors were subsequently standardized into a continuous common numeric range on a byte 0-255 probability scale using a fuzzy function based on knowledge of mosquito interaction with the factor. Weights were generated for each factor based on the importance of the factor to malaria transmission by expert opinions and then assigned using Analytical Hierarchy Process. The risk maps produced were validated statistically using data on *An. darlingi* distribution and malaria case data from some parts of the study area. See preliminary results (Fig. 3,4,5)

5. Preliminary Results

> Areas of high to moderate risk corresponded with locations of some of the anophelines collected.

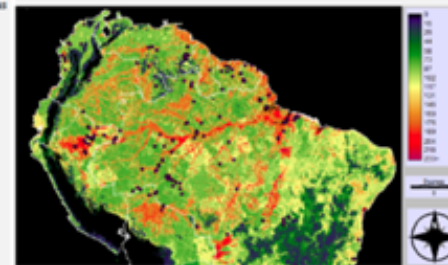


Figure 3. Potential risk of exposure to malaria vectors across NSA (2 indicates little or no-risk while 200 indicates high risk)

> Risk scores for mosquito occurrence points were significantly higher than those generated randomly (Fig. 4).

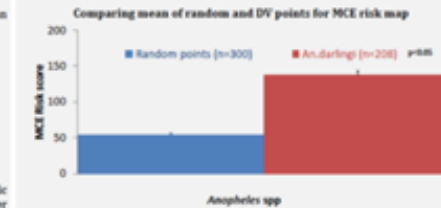


Figure 4. Plot showing the MCE risk values for randomly sampled points and for occurrence points of a DV *An. darlingi*

6. Conclusion

Findings from preliminary results suggest that the MCE approach is a viable method to modeling spatial risk. The high resolution risk map produced aligned well with sampled vector points and may therefore be used to plan control of malaria vectors. Further analysis is planned to generate and validate risk maps with actual measures of malaria transmission, results of which could be used to plan containment of future outbreaks.

References

1. WHO (2007). MALARIA ELIMINATION: A field manual for low and moderate endemic countries
2. PAHO (2012). PAHO Report 2012. Malaria: Challenges of the Americas. Available: http://literature.paho.org/hq/index.php?option=com_content&view=article&id=1742&Itemid=18029
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4. Da Silva Soares, R., Herrera, R., Cano, J.A., Galbarrón, S., Jarama, S., Trujillo, J.M., and Ferreira, M.G. (2012) Amazonian malaria: Anomalous human movements, diagnostic challenges, environmentally driven changes in mosquito vector populations, and the mandate for sustainable control strategies. *Acta Tropica* 121 (3): 281-29

Fonte: Alberto Cairo

Oh... I'm seeing!

Multi-scale Modeling and Assessment of Malaria Risk in Northern South America

Alimi, T. O.¹; Fuller, D. O.^{1,2} and Beier, J.C.^{1,3}



1 Introduction

Malaria as a public health problem has become a priority for control efforts worldwide. The global consensus is that its elimination is crucial for continued development. Ongoing research projects in different regions, including South America (SA), try to improve our understanding of the disease dynamics. Their goal is to establish a new framework that would lead to new intervention strategies for malaria elimination in areas where the disease is seasonal. One of such investigations is undertaken by the International Centers of Excellence in Malaria Research (ICEMR) under a National Institutes of Health grant.

While only about 3% of the global malaria burden is borne by SA¹, undertaking malaria research in the region is currently important because an estimated 23million people are still at risk² and approximately about 80% of clinical cases are found in **Northern South America (NSA)**³. A key factor limiting effective control is lack of data and uneven implementation of control measures, including use of bednets, sprays, early diagnosis, and treatment. As part of the ICEMR investigation, this project seeks to model the spatial patterns of malaria risk in NSA through vector distribution and land-use changes. Furthermore, I intend to investigate the perceptions of malaria risk in order to identify barriers to adoption and how they can be circumvented.

2 Significance

Spatial distribution of malaria risk is still perceived as broadly categorized by the WHO's traditional risk maps which are highly generalized, of low resolution and have broad categories with uncertain boundaries (see da Nunes-Silva et al. 2012). There is need for up-to-date high resolution risk maps which can aid malaria control efforts. Secondly, modeling distribution of principal malaria vectors and land use changes which may explain the observed distribution and risk are useful tools which would guide future management strategies. Finally, understanding the perceptions of at risk populations may help address barriers to adoption of interventions and influence policies. Overall, findings will empower NHCs to achieve effective control and move them closer to elimination.

3 Aims

Specific Aim 1: Model the spatial patterns of malaria risk through vector distribution and land use changes

- **Hypothesis 1.1:** GIS-based Multi-Criteria Evaluation (MCE) model can accurately predict spatial extent of malaria risk areas. **Objective:** Generate risk maps that represent risk of malaria transmission.
- **Hypothesis 1.2:** The Maximum Entropy (MaxEnt) model can accurately depict actual and predict potential distribution of three Anopheles species. **Objective:** Model observed and potential spread of *An. albimanus*, *An. darlingi*, and *An. nuneztovari*.
- **Hypothesis 1.3:** Land-use changes can explain the variations in predicted malaria risk. **Objective:** Characterize land use and land cover (LULC) and investigate changes in areas of risk.

Specific Aim 2: Investigate the perceptions of malaria risk in order to identify barriers to adoption and how they can be circumvented.

- **Hypothesis 2.1:** Knowledge of perception of malaria risk can aid design of malaria control strategies. **Objective:** Obtain and analyze data on subjective perceptions of risk.
- **Hypothesis 2.2:** Identification of barriers to adoption of malaria control interventions provide means of tackling them. **Objective:** Analyze data addressing perceived barriers and policy implications.

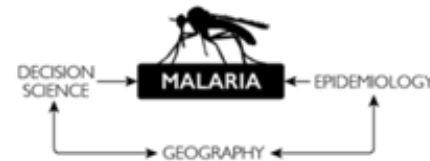
*Only ongoing work on Hypothesis 1.1 is presented here

4 Materials and methods

NSA comprising of ten countries - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname and Venezuela. These countries account for approximately 90% of clinical cases in the region.



Research approach: Due to the complexity of malaria problem, I'm employing an interdisciplinary approach to address the problem.

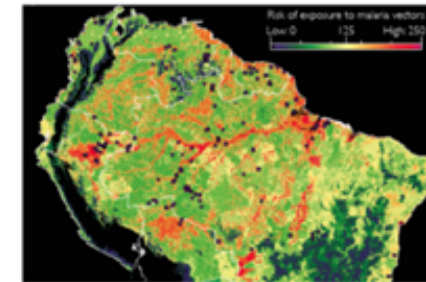


Materials: Raster data layers of environmental, climatic and anthropogenic parameters from satellite imagines, weather monitoring stations, global land cover and population data were collected from WorldClim, Digital Charts of the World, Globcover and LandScan. Vector data was collected from Cfield sampling by our collaborators and the Walter Reed Bioclimatics Unit. Sociological data would be collected through questionnaires to be administered in one of the study areas. Other data will be collected as needed.

Procedures: To test hypothesis 1.1, raster data of parameters that influence mosquito distribution (rivers, wetlands, urban areas, roads, population and elevation) were combined using a Multi-Criteria Evaluation in Idrisi GIS package. This produced a map of potential exposure to malaria vectors which is used as a proxy for risk of malaria transmission. All the data layers were gridded at 1km spatial resolution. A set of distance layers had been created for discrete factors using standard GIS operations. All factors were subsequently standardized into a continuous common numeric range on a byte 0-255 probability scale using a fuzzy function based on knowledge of mosquito interaction with the factor. Weights were generated for each factor based on the importance of the factor to malaria transmission by expert opinions and then assigned using Analytical Hierarchy Process. The risk maps produced were validated statistically using data on *An. darlingi* distribution and malaria case data from some parts of the study area. See preliminary results.

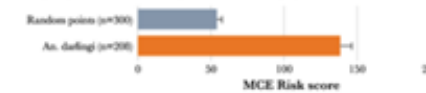
5 Preliminary results

Areas of high to moderate risk corresponded with locations of some of the anophelines collected.



Risk scores for mosquito occurrence points were significantly higher than those generated randomly.

Comparing mean of random and EW points for MCE risk map - $p < 0.05$



6 Conclusion

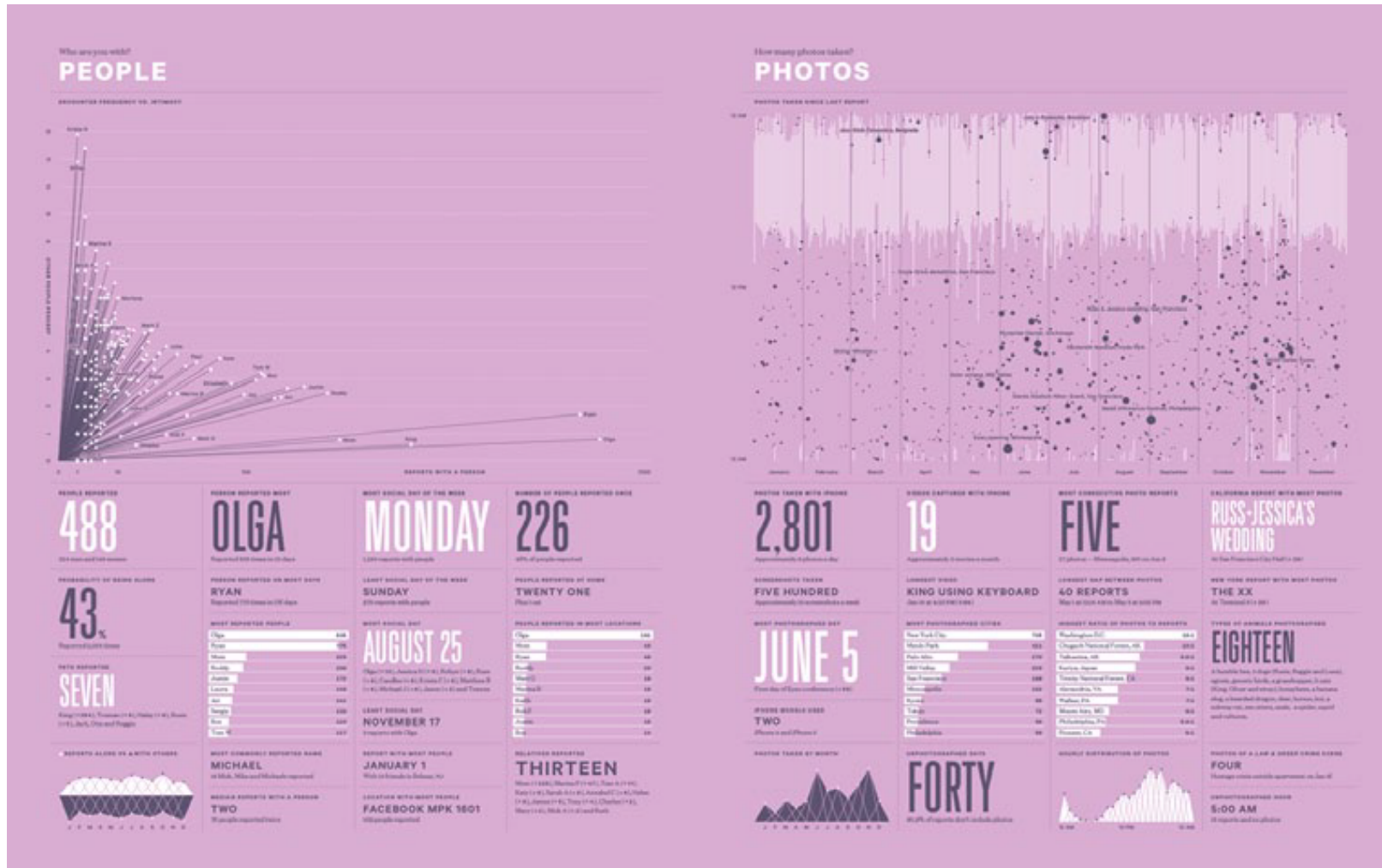
Findings from preliminary results suggest that the MCE approach is a viable method to modeling spatial risk. The high resolution risk map produced aligned well with sampled vector points and may therefore be used to plan control of malaria vectors. Further analysis is planned to generate and validate risk maps with actual measures of malaria transmission, results of which could be used to plan containment of future outbreaks.

References

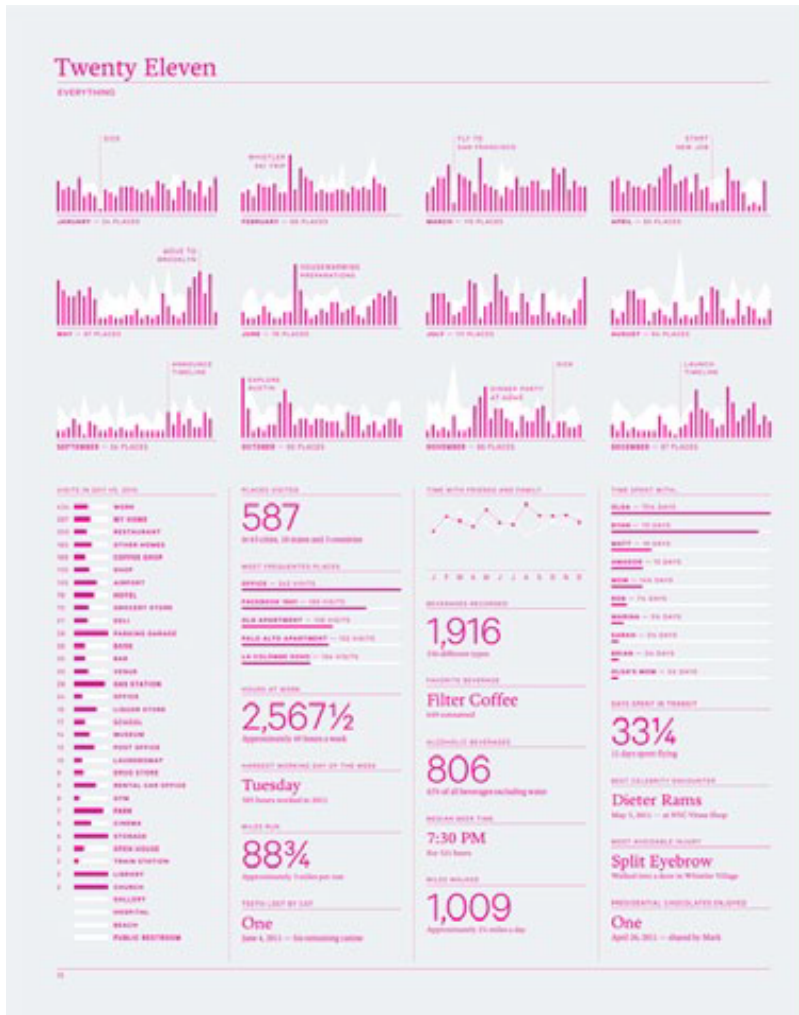
1. WHO (2007) *Malaria Elimination - A field manual for low and moderate endemic countries*. WHO (2012) *World Malaria Report 2012 - Malaria - Challenges of the Americas*. Available: http://www.who.int/malaria/publications/condemned/201204/mwr1202012_2012
2. Guzman B (1995) *Quantitative malaria control in the Americas*. *Parasitology* 41: 293-306.
3. De Silva-Nunes M, Williams M, Carr SJ, Garcia D, Alvaro L, Weiss DR, and Ferreira MG (2012) *Amazonian malaria: Asymptomatic human reservoirs, diagnostic challenges, environmentally driven changes in mosquito vector populations, and the mandate for sustainable control strategies*. *Acta Tropica* 121 (3): 285-291

Fonte: Alberto Cairo

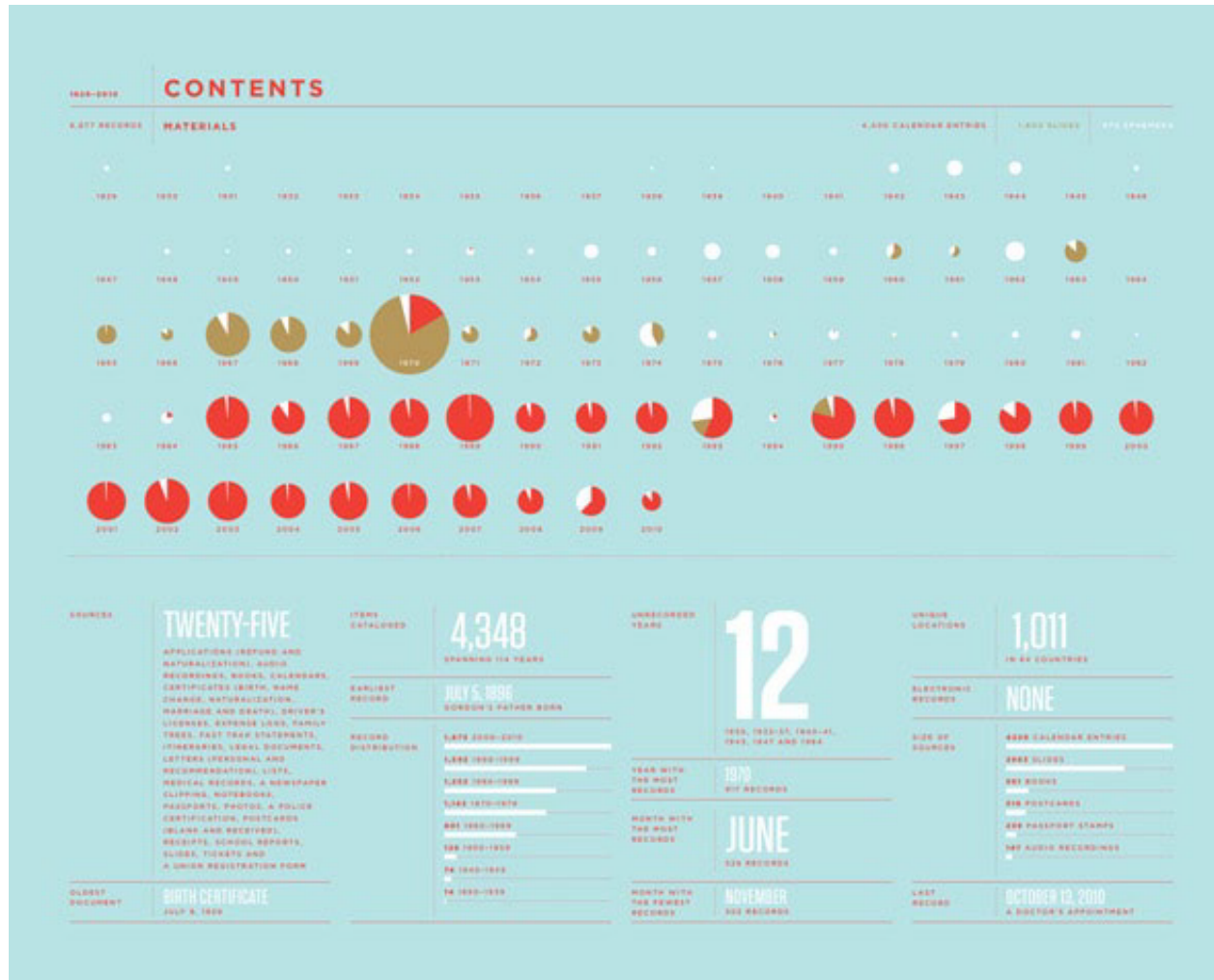
Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!

Data02

LAMOSCA

Pedagogía / La teoría de sistemas

El enfoque sistemático por sí solo no se centra en el alumno ni asegura que se atiendan y mantengan los intereses, habilidades, esperanzas y aspiraciones de la sociedad y del individuo. Es el profesor quien lo pone a su servicio. Sin embargo, quien quiera humanizar la educación, tiene en el enfoque de sistemas un modelo de planificación que le asegura su logro.

Los sistemas presentan las siguientes características:



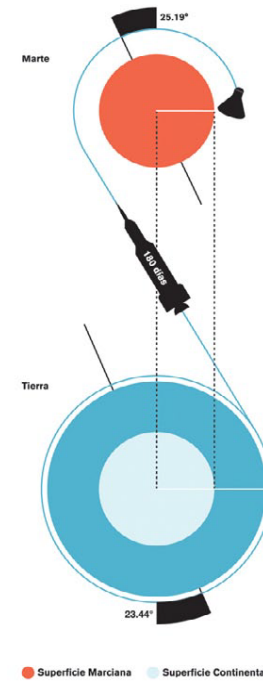
Fuente: http://www.edu365.cat/aulamet/comsco/complex_index.htm // www.uhu.es

Data08

LAMOSCA

La Carta de la Tierra / Nos vamos a Marte

Distancia al Sol (millones de km)	
229	
150	
Rotación	
24h 39' 35"	686.96
24h	265.25
Temperatura	
-140°	63°
	0°
	-90'6"
	34'4"
Gravedad	
Luz solar	



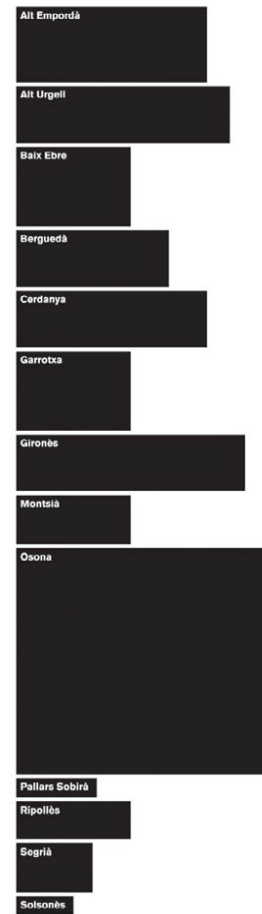
Fuente: www.nasa.gov

Oh... I'm seeing!

Data09

LAMOSCA

Ignasi Aballí / Arte conceptual



Lista de comarcas catalanas con más de 100 cabezas de ganado vacuno macho y número de vacas lecheras adultas que no han parido. Junio 2007

Fuentes: www.gencat.cat // Gabinet tècnic del DAR

Data11

LAMOSCA

Jonathan Littell / Bestsellers

10.000.000 de ejemplares vendidos a lo largo de la historia.
(1) Diccionario.
(2) Entre los puestos 11 y 20 se sitúan 5 libros de Harry Potter.



Fuentes: bestsellerserver.com/

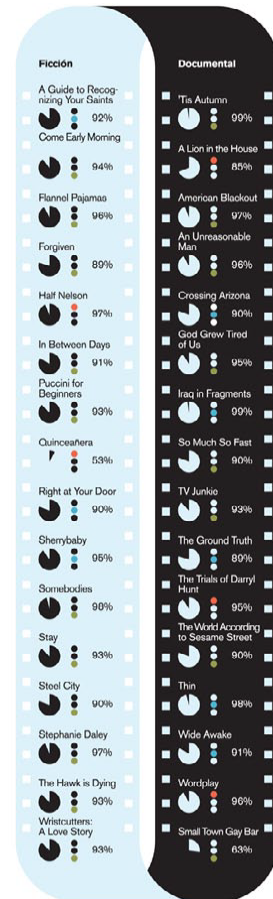
Oh... I'm seeing!

Data13

LAMOSCA

Festivales de cine / Deconstructing Sundance

Filtrando las reseñas previas a Sundance2008 con un programa *antispam*, basado en el análisis de las palabras, un grupo de informáticos con tiempo libre predijo con exactitud el palmarés.



● Mola ● Regular ● Apuesta ● Probabilidad de acierto

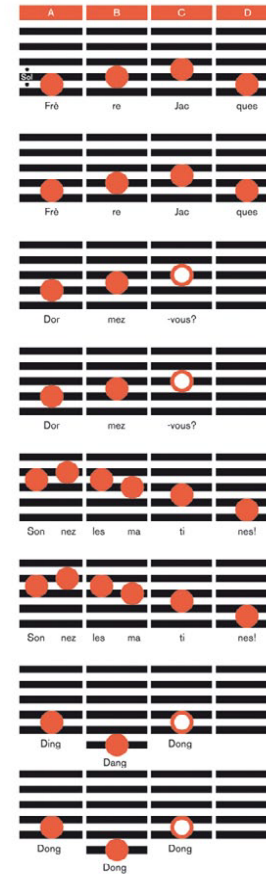
● Palabras que has de incluir en tu reseña si quieres molar: complejo, diálogo, sueño, muerte, humano, viaje, amor, madre, narrativa, relación, adverbio y verbo.
● Palabras que no has de incluir: África, América, negro, emocional, fascinante, inspirado, Sundance, verdad, visión, global y sexy.

Fuente: deconstructingsundance.com

Data108

LAMOSCA

John Cage / Música aleatoria



Tire una moneda al aire dos veces y anote el resultado. Repita el proceso cuatro veces. A cada combinación le corresponde una letra:

Cara / Cara: A Cruz / Cruz: C
Cara / Cruz: B Cruz / Cara: D

Oh... I'm seeing!

Interfaces

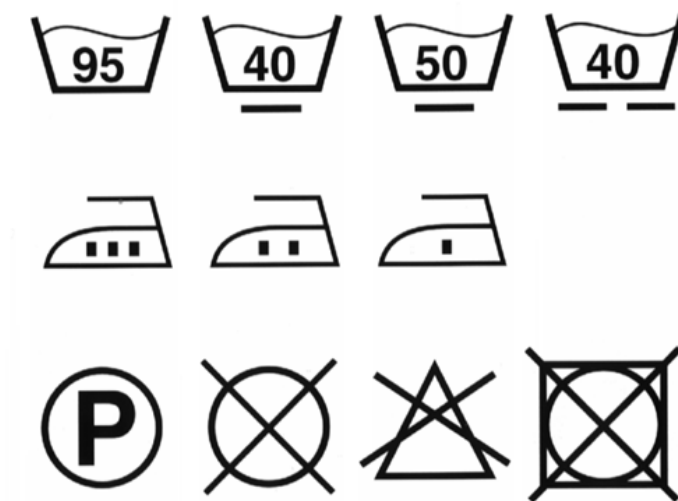
Oh... I'm seeing!

“A design is intuitive when the gap between a user’s actual knowledge about how to use a product and the knowledge required to use it efficiently is small or non-existent”.

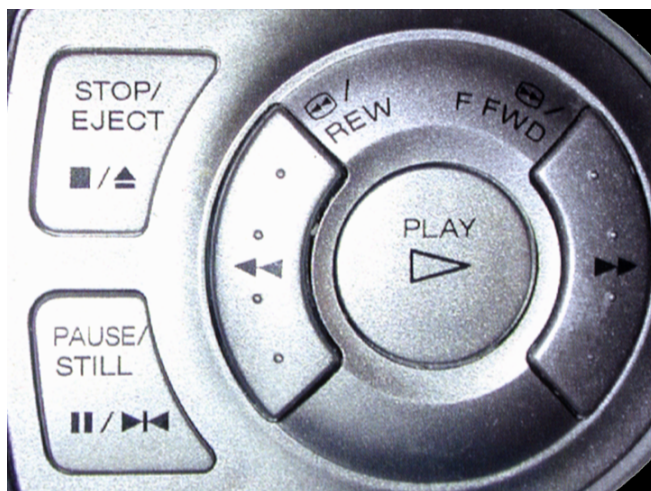
Jared Spool

(Founder of User Interface Engineering)

Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!

Objecto do design

Desenvolver produtos que se diferenciem dos baseados em *templates* pré-existent, e que embora simples e rápidos de implementar, mostram entre eles um elevado grau de semelhança e são pouco inovadores.

Ter um lado “humano” nos produtos, para dar a sensação ao utilizador que, do outro lado da comunicação, se encontra um individuo, e não uma máquina.

Oh... I'm seeing!

Objecto do design

A usabilidade

“A usabilidade refere-se à capacidade de um software de ser compreendido, aprendido, utilizado e ser atractivo para o utilizador, em condições específicas de utilização”.

Internacional Standard Organization – www.seisdeagosto.com/pt/definicoes/usabilidade/usabilidade.php

Oh... I'm seeing!

Objecto do design

A usabilidade

“Usability really just means making sure that something works well”.

Steve Krug

Oh... I'm seeing!

Objecto do design

A usabilidade

- Potencial de aprendizagem
- Eficiência
- Potencial de memorização
- Segurança
- Satisfação

Oh... I'm seeing!

Objecto do design
A usabilidade

Problemas:

- Problemas de utilização
- Problemas de legibilidade
- Desorientação
- Dificuldades de interpretação

Solução: Sair!

Oh... I'm seeing!

Objecto do design *A funcionalidade*

The Philosophy of UI Design: Fundamental Principles

(documentação *OS X Human Interface Guidelines da Apple*) adaptado: Pedro Brandão

Pontos a ter em conta no desenho de aplicações:

Estruturação. Criar e estabelecer hierarquias de informação e criar grupos e navegação com sentido.

Simplicidade. Qualquer produto deverá simplificar processos de navegação e interacção, ajudando o utilizador no que for possível para que não se sinta perdido ou confuso.

Oh... I'm seeing!

Objecto do design *A funcionalidade*

Intuitividade. Um design é intuitivo quando o utilizador não tem que aprender nada para o utilizar. Gestos como o *swipe* ou *pinch* têm vindo a ajudar nesse sentido, quando usados correctamente (apenas quando necessário e com o *feedback* que o respectivo gesto deverá ter).

Familiaridade. Os produtos não deverão fugir demasiado à relação que terão com outros produtos do género. Um utilizador cria uma ligação óbvia entre produtos semelhantes e a curva de aprendizagem deve ser mínima ou nula.

Oh... I'm seeing!

Objecto do design

A funcionalidade

Disponibilidade. Tornar as funções fundamentais para a interacção com o produtos imediatamente disponíveis. Por exemplo, numa aplicação de e-mail será importante criar um botão bem visível exclusivamente dedicado a “redigir mensagem”, ao contrário de outras funções que poderão ser colocadas em menus e submenus.

Descoberta. Deve-se tornar óbvio para um utilizador que elementos permitem a interacção e torná-los o mais funcionais possível (alargando a zona clicável, por exemplo).

Magnânimo. Deverá perdoar facilmente os erros (por exemplo, utilizando o *undo*).

Oh... I'm seeing!

Objecto do design *As experiências*

Numa TED Talk, o psicólogo Daniel Kahneman fez uma distinção concreta entre “**o eu que experiecio**” e “**o eu que lembro**” como duas pessoas absolutamente distintas.

Em muitas situações, a memória é tudo o que podemos guardar.

Oh... I'm seeing!

Objecto do design *As experiências*

Um bom desenho de experiência de utilizador terá que pegar em tarefas habitualmente menos apetecíveis (como preencher um formulário complexo) e torná-las o mais “aprazíveis” possível.

Uma opção, consiste em dividir o formulário, indicando com precisão ao utilizador em que parte se encontra, e disponibilizar ajuda.

Oh... I'm seeing!

Objecto do design *As emoções*

“When we go out to dinner at a fancy restaurant, we’re hoping for more than just an edible meal. We’re hoping for amazing taste and texture, clever presentation, and memorable ambiance. The pinnacle of a top culinary experience is extreme pleasure. Why don’t we shoot for the same target in web design?”

Why do we settle for usable when we can have usable and pleasurable?”.

Aaron Walte

UX director at MailChimp

Oh... I'm seeing!

Objecto do design *As emoções*

“Emotional Interface Design: The Gateway to Passionate Users”.

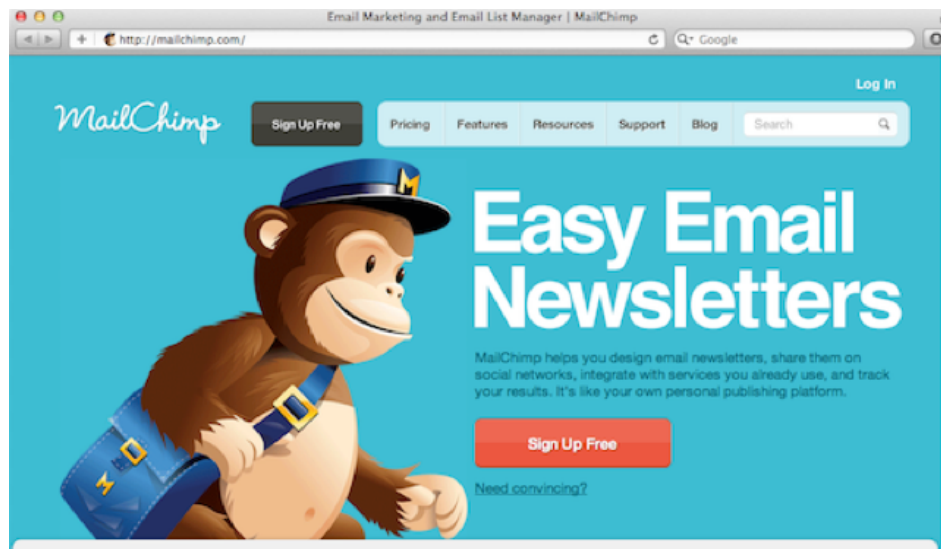
Aaron Walte (UX director at MailChimp)

Aplicações extremamente funcionais que, pelos seus grafismos consigam proporcionar a emoção como valor acrescentado.

Paralelamente à funcionalidade, a emoção é um factor fundamental.

As escolhas gráficas apelam directamente ao gosto que, por sua vez, apela directamente à emoção.

Oh... I'm seeing!



Aplicação MailChimp.



Oh... I'm seeing!

Objecto do design
Design responsivo

“It is the nature of the web to be flexible, and it should be our role as designers and developers to embrace this flexibility, and produce pages which, by being flexible, are accessible to all”.

John Allsopp

The Dao of web design

Oh... I'm seeing!

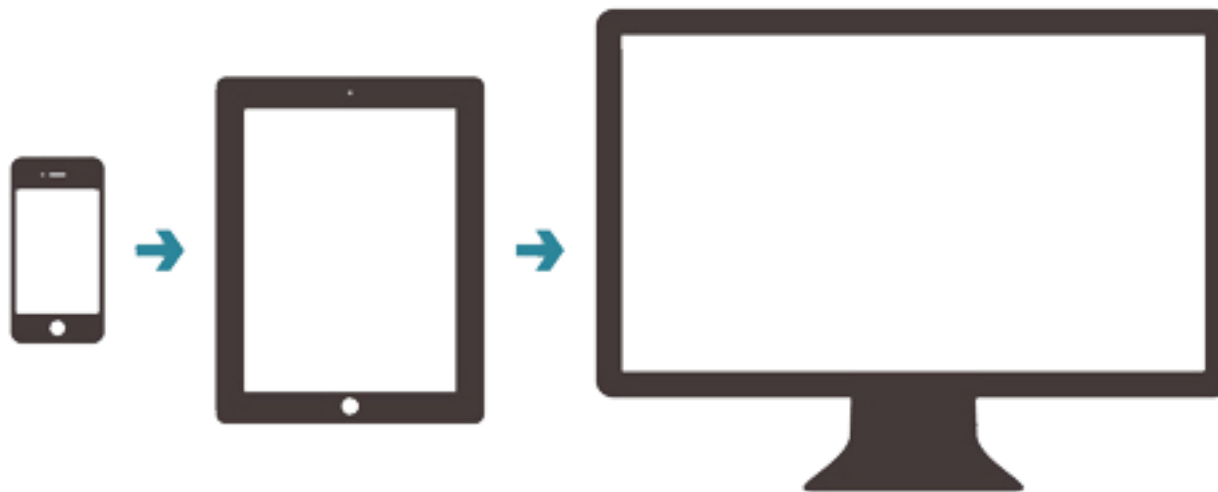
Objecto do design

Design responsivo

Luke Wroblewsky em *Mobile First*:

As páginas deverão ser desenhadas e pensadas primeiro para os suportes mais pequenos, de maneira a ser possível ter uma noção correcta do que é absolutamente essencial e o do que não (que poderá ser acrescentado em versões *desktop*).

Oh... I'm seeing!

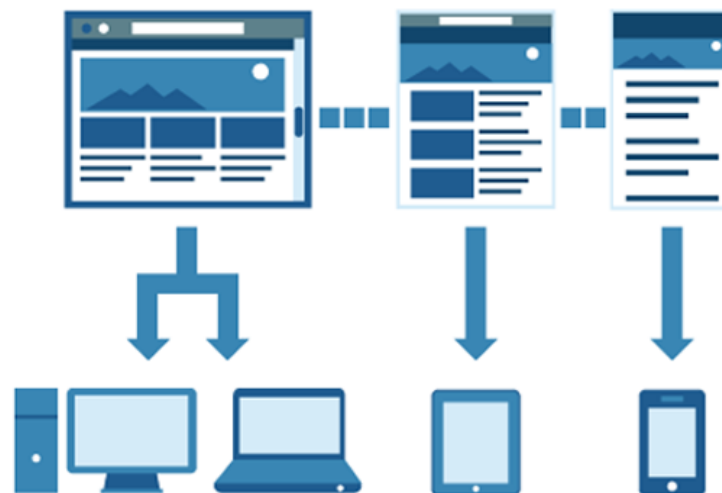


Plataformas mobile permitem gestualidade, mas têm constrangimentos como tamanho do ecrã ou limites de dados.

Plataformas *desktop* permitem tecnologias mais alargadas e recursos mais pesados.

Fonte: www.corephp.com

Oh... I'm seeing!



Fonte: www.liqui-site.com

Oh... I'm seeing!

www.corephp.com



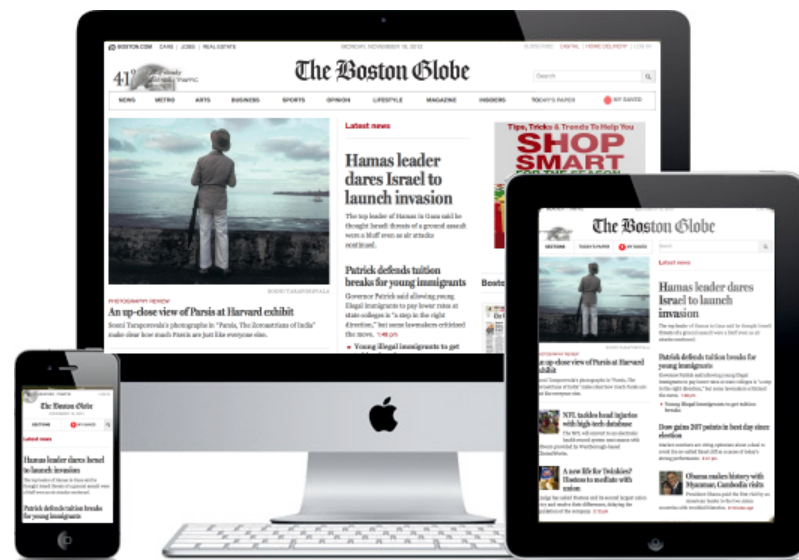
Fonte: www.corephp.com

Oh... I'm seeing!

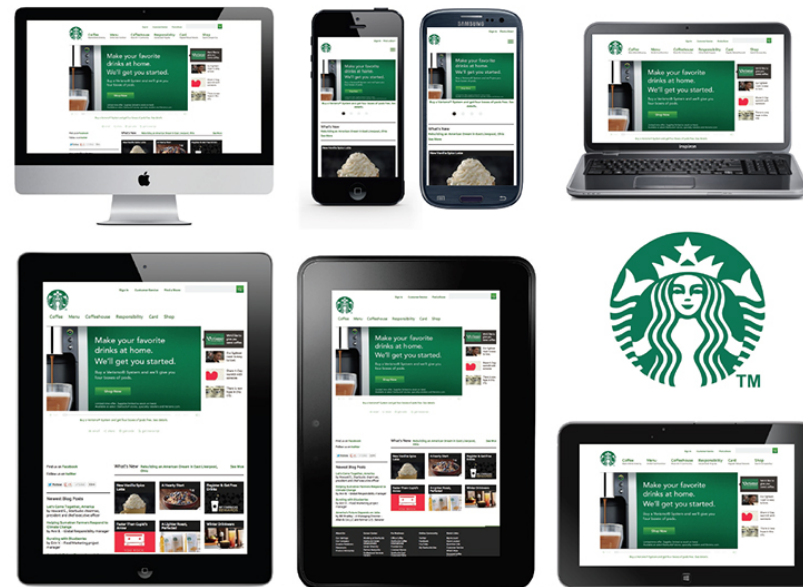


Fonte: www.liqui-site.com

Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!



Affordance

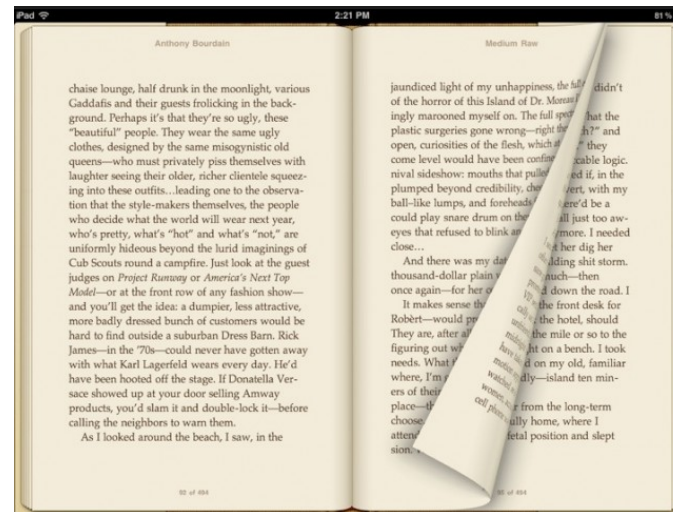
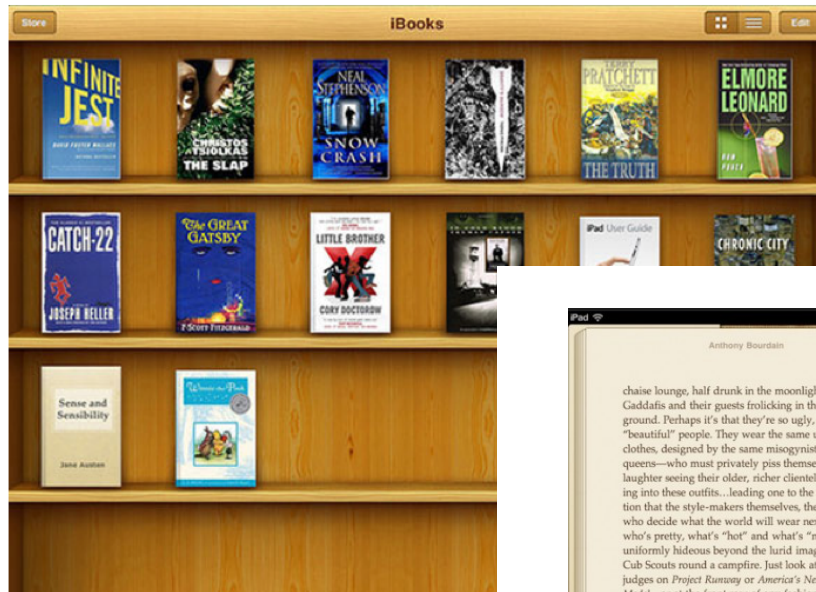
Oh... I'm seeing!



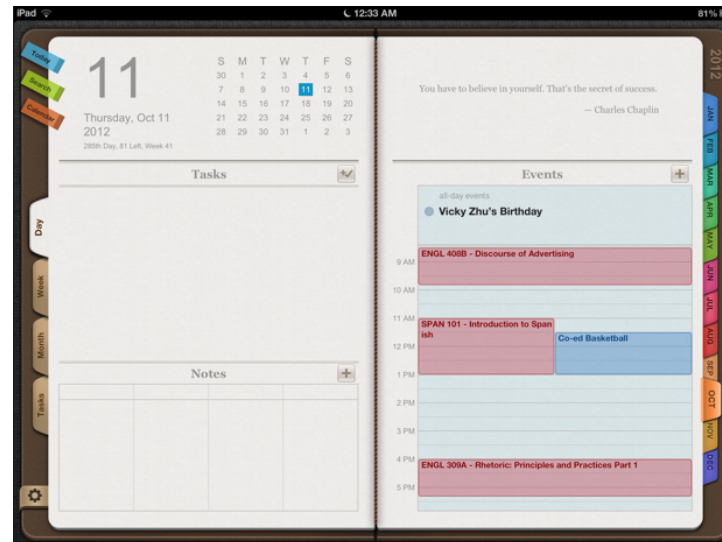
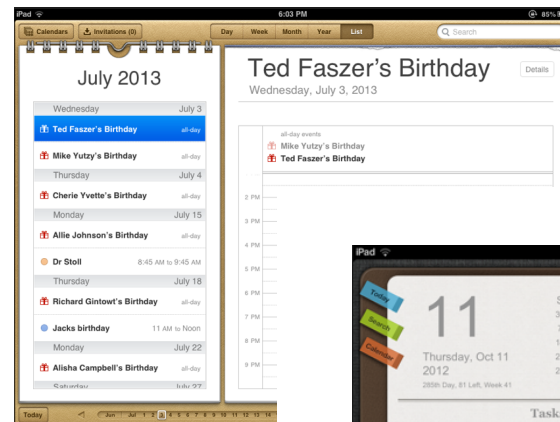
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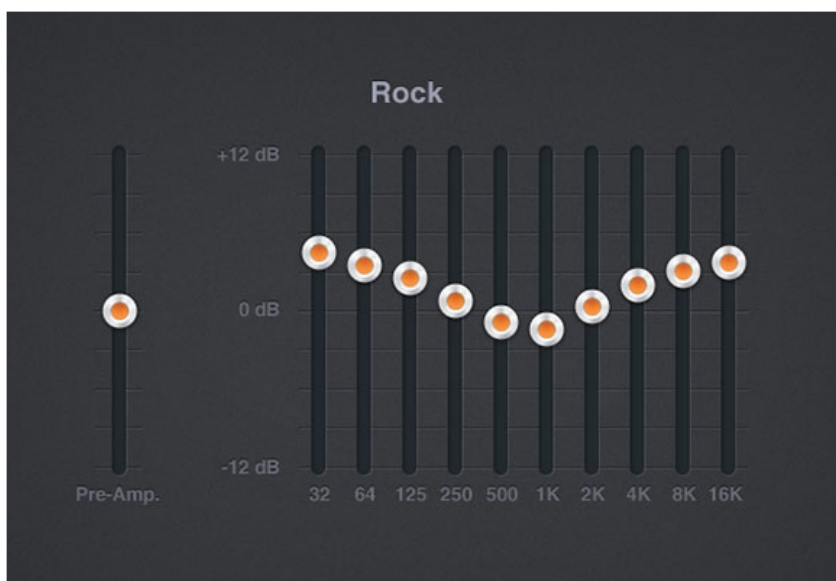
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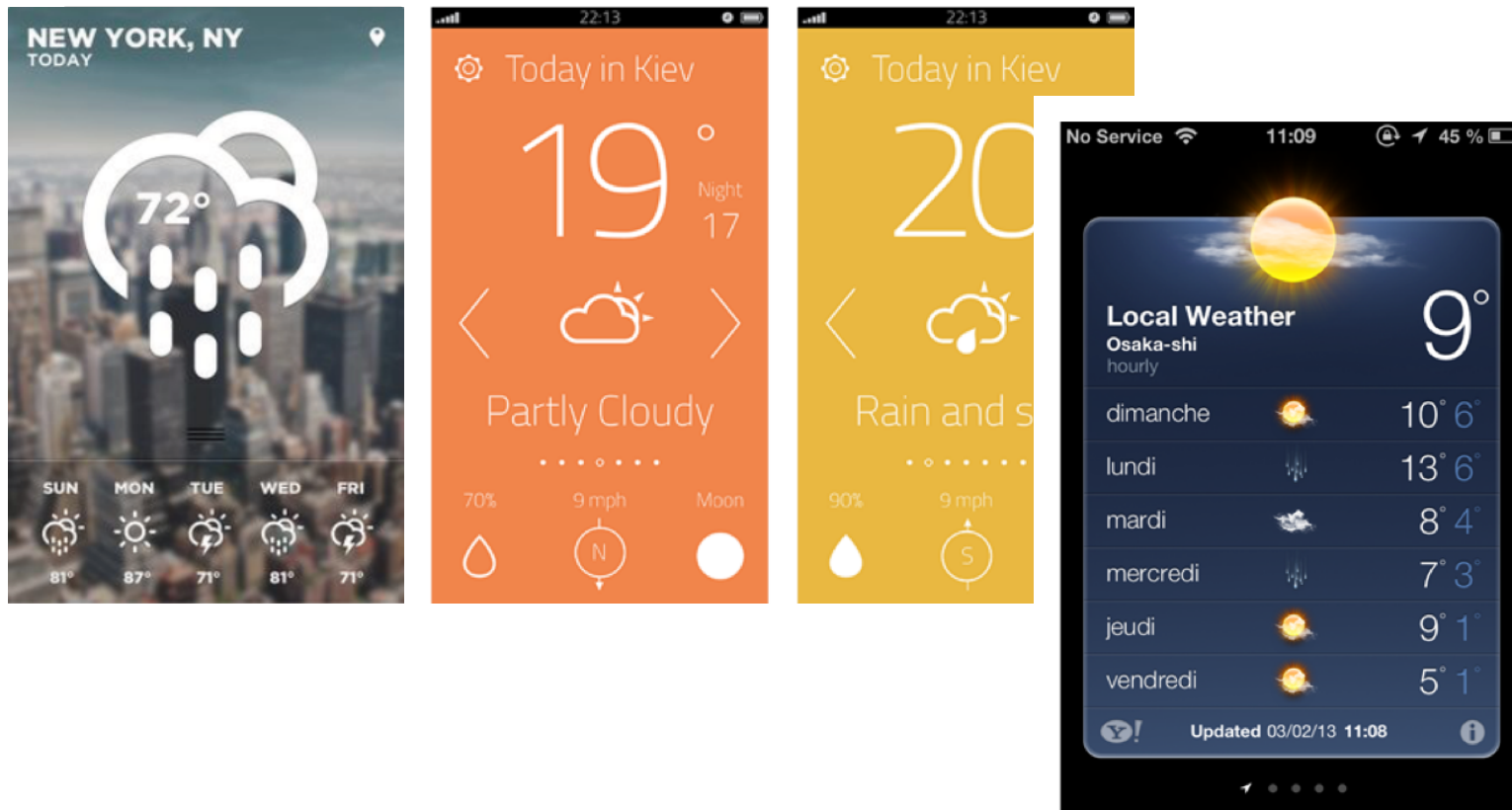
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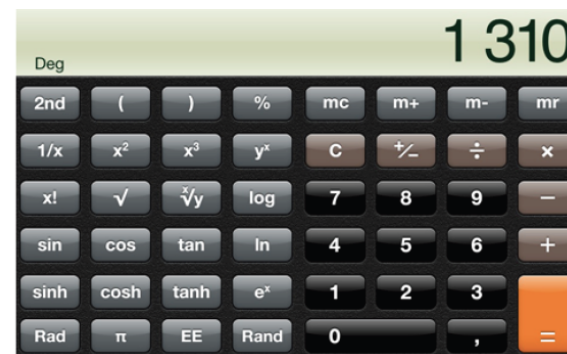
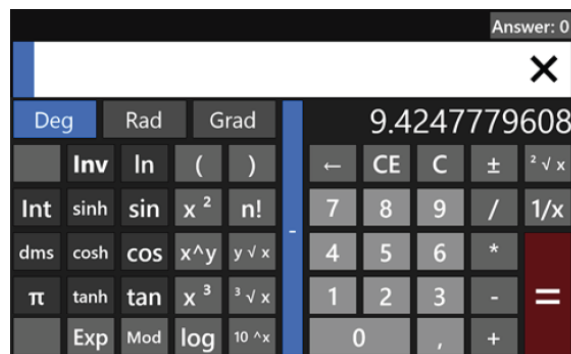
Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!

Cor
Tipografia
Hierarquia

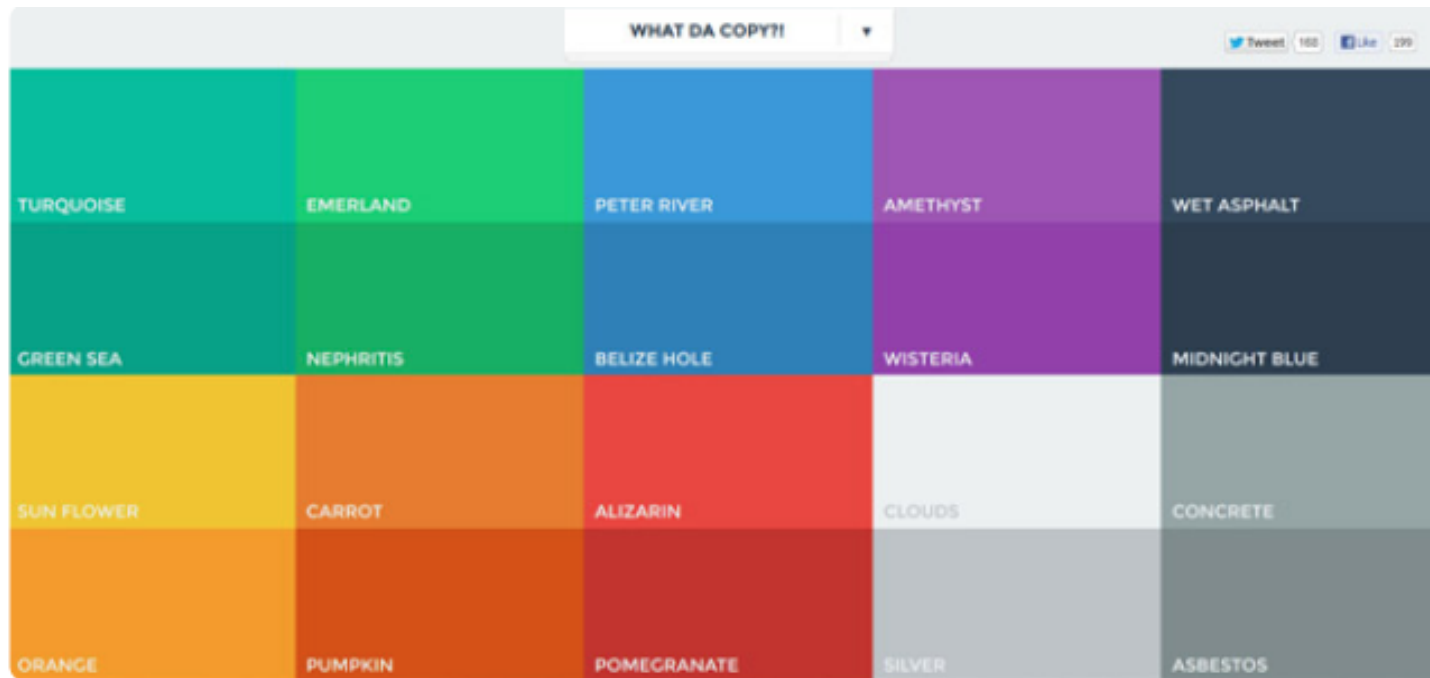
Oh... I'm seeing!



Oh... I'm seeing!



Oh... I'm seeing!



Matizes brilhantes, totalmente saturadas, que são, por vezes, associadas com banco, cinzas ou preto.

Oh... I'm seeing!



Paleta que de uma forma geral funciona bem em fundo claro e escuro.

Não se vê com muita frequência a utilização de cores primárias. Vermelho, azul e amarelo puros são muitas vezes colocados de lado, em favor de cores mais “ricas” e “misturadas”.

Oh... I'm seeing!



Oh... I'm seeing!



Paleta de cores menos saturadas, com a adição de branco para torná-las mais suaves. Recorrem por vezes às cores pastel com apontamentos “old-school”.

Neste caso, torna-se mais comum serem associadas a cores primárias e secundárias para compensar o enfraquecimento da cor.

Oh... I'm seeing!

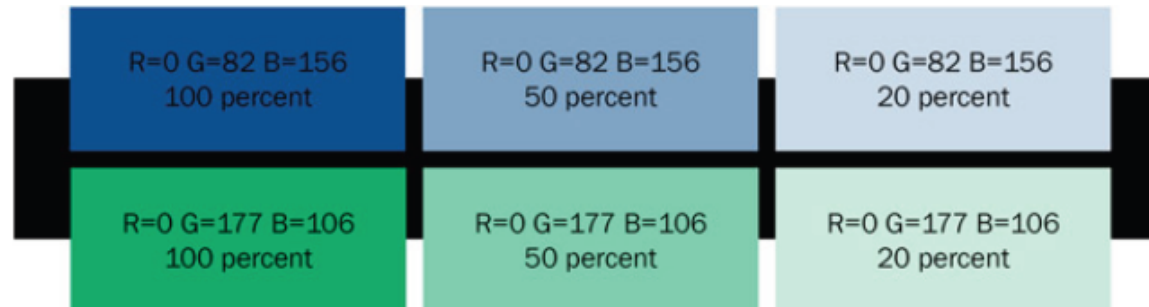


Oh... I'm seeing!



A paleta funciona quase sempre melhor quando existe uma cor dominante.

Oh... I'm seeing!

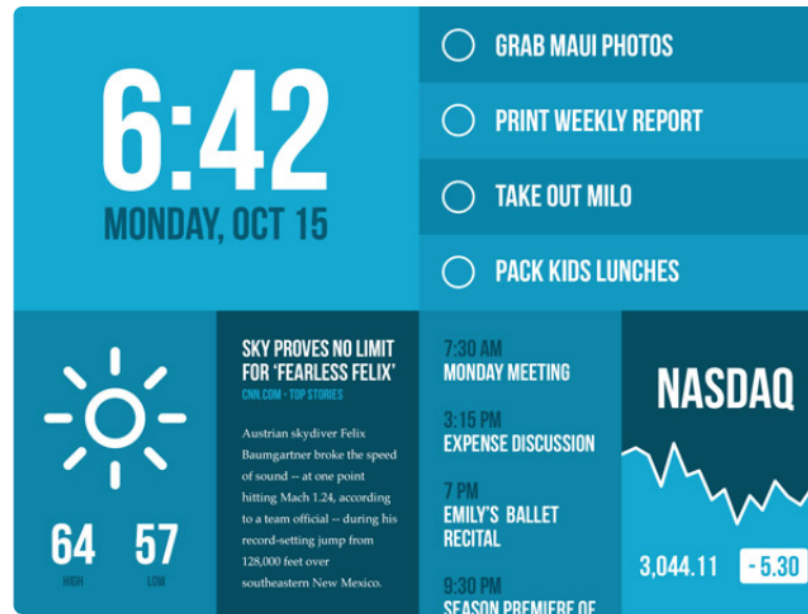


Paleta que usa uma cor base e dois ou três tons: 100 % de cor e tons de 60 %, 30 % e 10 %.

Outra opção para criar um efeito monocromático é criar pequenas variações na cor.

Se começar com o azul, por exemplo, adicionar tons de verde para criar uma paleta de cor azul-esverdeada. Modelos monocromáticos são particularmente utilizados em aplicações móveis.

Oh... I'm seeing!



Importante:
esquemas monocromáticos também precisam de incluir contraste.

Oh... I'm seeing!

Design baseia-se em:

Estrutura - Ordem - Harmonia - Equilíbrio

Oh... I'm seeing!

Traduzido nos seguintes princípios:

Unidade - Variedade - Hierarquia

Oh... I'm seeing!

1. O cérebro tenta identificar o principal do secundário.
2. Certos objectos, formas e cores são mais pregnantes.
3. O cérebro procura ordem e tenta extrair significados.

Assim, um dos principais objectivos do design é a antecipação...

Oh... I'm seeing!

“Creativity has muscles. They can be trained”.

Twyla Tharp

(At the Bucknell Forum Series “Creativity: Beyond the box” Conference, Bucknell University, 2010)