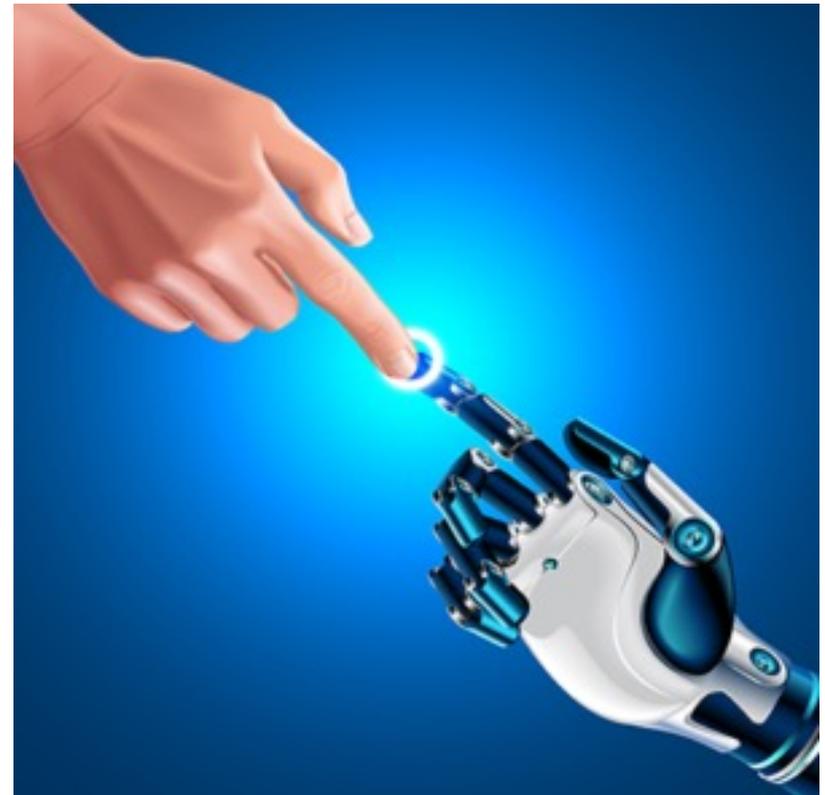# HUMAN COMPUTER INTERACTION

KASSYMOVA AIZHAN BAKHYTZHANOVNA, PHD, ASSOCIATE PROFESSOR

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LESSON PLAN

- **The first law of usability**

- **The second law of usability**

- **The third law of usability**

WHAT IS USABILITY?

- **Usability is when something works well**

- **Usability is ease of use**

- **Usability: the effectiveness with which users can achieve tasks in one software environment**

- **Studying and improving usability is part of HCI**
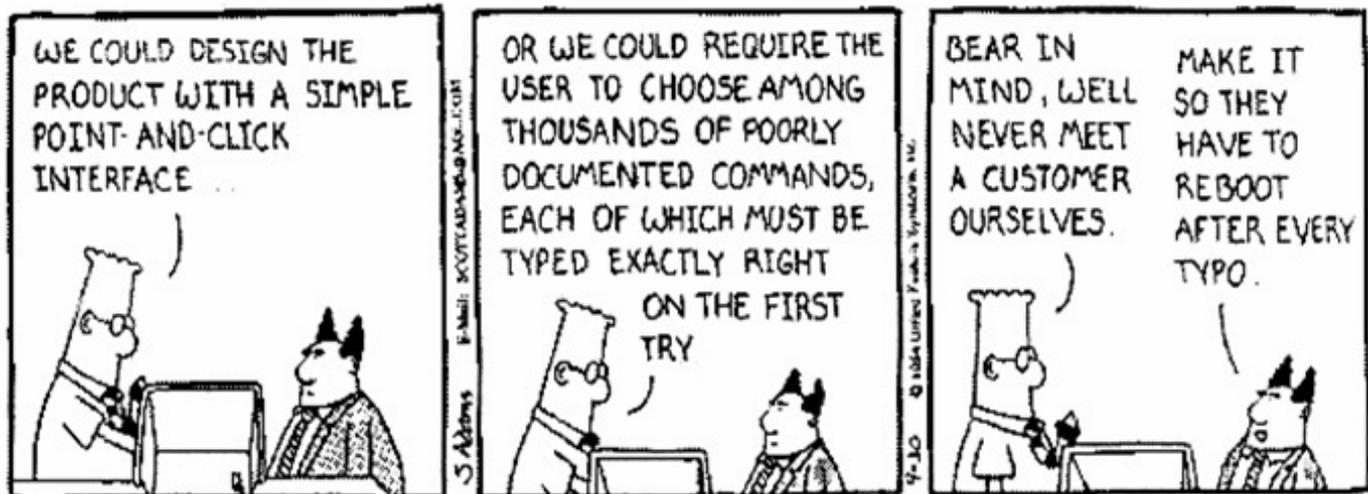
WHAT IS THE GOAL OF USABILITY?

- **Eliminate as many of the user's questions as possible.**

- **Questions may include:**

    - Where am I?

    - How did I get here and where can I go from here?

    - What can I do here?

    - Where should I begin/How do I start?

    - Where did they out X?

    - Why did they put X there?

    - Why did they call it X?

    - Can I click on that/Is that a clickable item?

    - What are the most important things on this page?

WHAT IS THE FIRST LAW OF USABILITY?

- **Users don't want to think. "Don't make me think" (Krug).**

- **The best designs are self-evident and self-explanatory.**

- **Good designs seem better and less time-consuming.**

NOT THINKING

THINKING

THINGS THAT MAKE US THINK

Typical culprits:

- cute or clever names

- marketing-induced names

- company-specific names

- unfamiliar technical names.

THINGS THAT MAKE US THINK

THINGS THAT MAKE US THINK

THINGS THAT MAKE US THINK

THINGS THAT MAKE US THINK

From bos ✕

BOS - Boston Logan International - Boston, MA

BOS - [Amtrak] South Station, Boston, Massachusetts

BON [Amtrak] North Station, Boston, Massachusetts

To City or Airport

Starts typing "bos" and gets a list of choices

From BOS - Boston Logan Inter

To ny ✕

NYC - New York City, NY (Area)

NYO - Skavsta - Stigtomta, Sweden

NYU - Bagan - Bagan, Myanmar

Starts typing "ny" and gets a list of choices

From BOS - Boston Logan Inter

To NYC - New York City, NY

Depart Dec 06

Return Dec 08

Good.

THINGS THAT MAKE US THINK

Short list of things that users shouldn't spend their time thinking about, like:

- Where am I?

- Where should I begin?

- Where did they put _____?

- What are the most important things on this page?

- Why did they call it that?

- Is that an ad or part of the site?
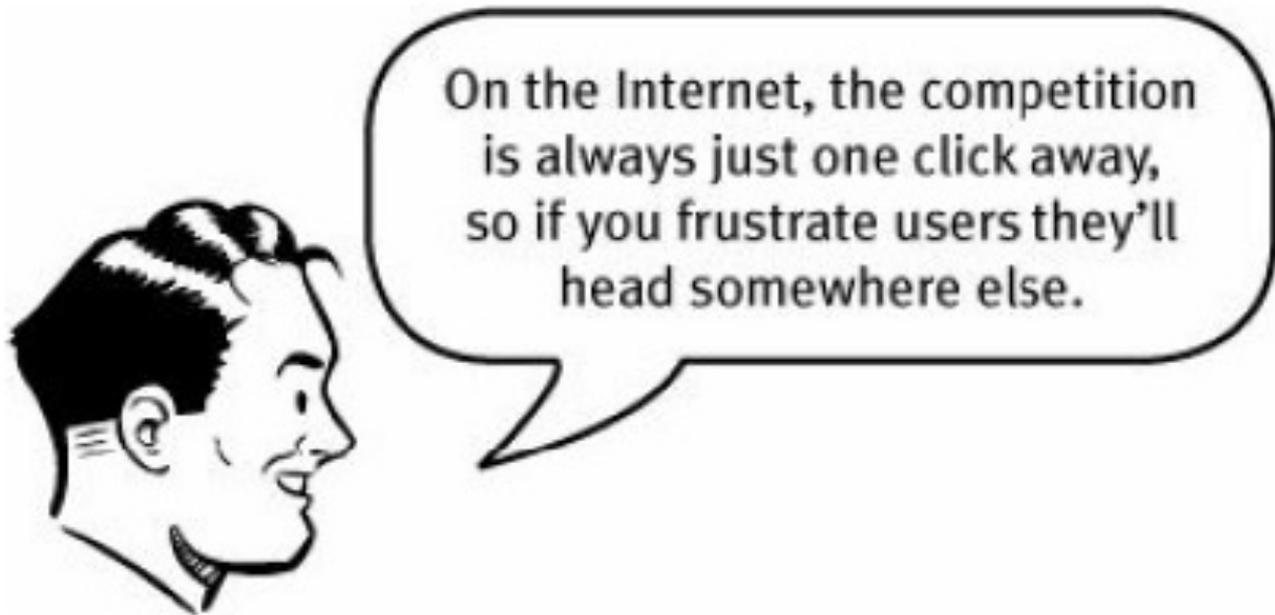
YOU CAN'T MAKE EVERYTHING SELF-EVIDENT

If you can't make something
self-evident, you at least need to
make it self-explanatory.

-Steve Krug

WHY IS ALL OF THIS SO IMPORTANT?

Oddly enough, not for the reason people usually cite:

On the Internet, the competition is always just one click away, so if you frustrate users they'll head somewhere else.

SO WHY, THEN?

HOW WE *REALLY* USE THE WEB

Why are things always in the last place you look for them? Because you stop looking when you find them!

—CHILDREN'S RIDDLE

HOW WE *REALLY* USE THE WEB

HOW WE *REALLY* USE THE WEB

FACT OF LIFE #1: We don't read pages. We scan them.

Why do we scan?

- We're usually on a mission.

- We know we don't need to read everything.

- We're good at it.

HOW WE *REALLY* USE THE WEB

HOW WE *REALLY* USE THE WEB

FACT OF LIFE #2: We don't make optimal choices. We satisfice.

"Satisfice"

Why don't Web users look for the best choice?

- **We're usually in a hurry.**

- **There's not much of a penalty for guessing wrong.**

- **Weighing options may not improve our chances.**

- **Guessing is more fun.**

HOW WE *REALLY* USE THE WEB

FACT OF LIFE #3: We don't figure out how things work. We muddle through.

DESIGNING FOR SCANNING, NOT READING

Faced with the fact that your users are whizzing by, there are some important things you can do to make sure they see and understand as much of what they need to know—and of what you want them to know—as possible:

- Take advantage of conventions

- Create effective visual hierarchies

- Break pages up into clearly defined areas

- Make it obvious what's clickable

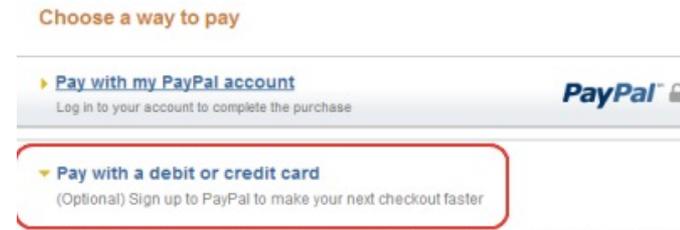- Eliminate distractions

- Format content to support scanning

CONVENTIONS ARE YOUR FRIENDS

CONVENTIONS ARE YOUR FRIENDS

Some Web pages conventions:

- **Where things will be located on a page.**

- **How things work.**

- **How things look.**

News i Q　アラファト元議長の骨からポロニウム検出、暗殺の可能性高まる　11/07 04:20

社会　政治　経済　国際　スポーツ　列島　天気　連続動画　報道コラム

注目キーワード

最終更新：2013年11月7日(木) 6時34分

NEW 「三越伊勢丹」も不適切表示、他の百貨店にも拡大

大手百貨店の三越伊勢丹ホールディングスは、グループの百貨店などにあるレストラン14店で、メニューと違う食材を使った料理を提供していたことを明らかにしました。不適切な表示は、小田急、そごうなどの百貨店にも広がっています。

▶ 続きを読む

TBSニュース番組ダイジェスト配信中

TBSニュースバード　　NEWS23

NRG　　JNN

NEW 日本人初の船長・若田さん、きょう宇宙へ

日本人で初めて国際宇宙ステーションの船長を務める若田光一さんが、日本時間7日午後の...

NEW 「特定秘密保護法」きょうから国会審議

政府が指定する特定秘密を漏らした公務員らへの罰則を強化する特定秘密保護法案は、きょ...

NEW 潘基文氏、金正恩氏の側近人・崔龍海氏と会談

北朝鮮を訪問中のアントニオ猪木参議院議員らが、金正恩(キム・ジョンウン)第一書記の...

NEW 山西省連続爆発事件、共産党本部狙った計画的犯行か

6日、中国・山西省の共産党本部ビルで起きた連続爆発事件です。爆薬が入ビル周辺の数か所...

台風情報

Smart News
スマートニュース

地震情報

JNN LIVE
福島第一原発情報カメラ

社会　　▷一覧へ

- 原子力規制委、20日まで"3年間安全確認後"解禁へ
- 福島第一原発4号機近公開、燃料取り出しへ再びハードル
- 「もんじゅ」で放射線管理で不備、原子力機構に緊急点検
- NEW 温室効果ガスの平均濃度、過去最高値を記録
- カルガモから鳥インフル、北海道で今シーズン4羽
- 一転、食材価格を認める、「三笠」運営会社の社長辞任へ
- 安愚楽牧場「和牛商法」、関連会社など9社破産へ
- NEW 表示適正化対策、消費者庁が業界団体に要請文
- 「嵐」など芸能人の偽サイン販売、容疑の親子ら3人逮捕
- 大阪・川に少年突き落とし、遺体は下着姿
- 飲食店街のホスト連死、何者かが暴行か
- NEW 小学校の4階から小6男児転落、意識不明の重体

政治　　▷一覧へ

- NEW 「特定秘密保護法」きょうから国会審議
- 日本版NSC法案、衆院特別委で可決
- 自衛隊が離島防衛演習、沖縄・宮古島に地対艦ミサイル展開
- 岸田外相、中国・韓国との関係改善が重要という認識示す
- 「隠れ子」農薬残留物の検出防止工事、自公が成立目指す
- 原発事故の対応見直し、国が情報初関与へ

経済　　▷一覧へ

- NEW 「三越伊勢丹」も不適切表示、他の百貨店にも拡大
- NEW 東武鉄道系ホテルでもメニュー表示と異なる食材を使用
- 食材"偽装"問題で注目、「高島屋」とは？

WHEEL
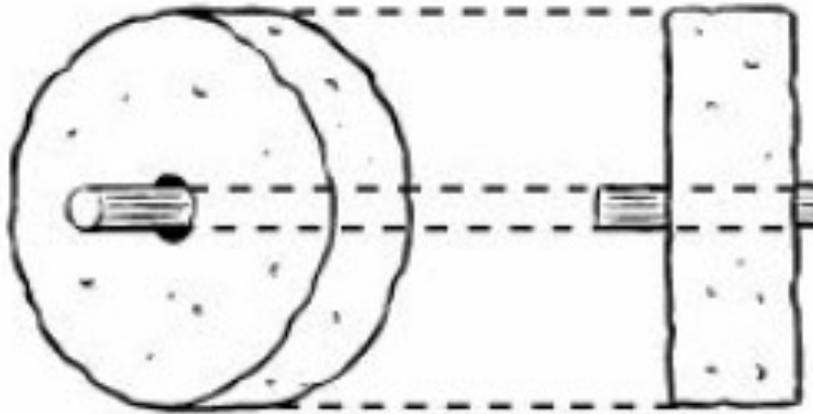
Patent Pending 48,022 B.C., 42,639 B.C., 36,210 B.C., 30,599 B.C., 28,714 B.C., 28,001 B.C., 19,711 B.C., 15,690 B.C., 15,689 B.C., 15,675 B.C., 15,674 B.C.

Recommendation: Innovate when you know you have a better idea, but take advantage of conventions when you don't.

Don't get me wrong: I'm not in any way trying to discourage creativity. I love innovative and original Web design.

HARLEM.ORG

Clicking on any area of the photo...   identifies the people there and...   lets you click on them to see their bios.

browse

Artists
Instruments
Jazz styles

Red Allen	Coleman Hawkins	Oscar Pettiford
Buster Bailey	J.C. Heard	Rudy Powell
Count Basie	Jay C. Higginbotham	Luckey Roberts
Emmett Berry	Milt Hinton	Sonny Rollins
Art Blakey	Chubby Jackson	Jimmy Rushing
Scoville Browne	Hilton Jefferson	Pee Wee Russell
Lawrence Brown	Osie Johnson	Sahib Shihab
Buck Clayton	Hank Jones	Horace Silver
Bill Crump		
Vic Dickenson		
Roy Eldridge		
Art Farmer		
Bud Freeman		
Dizzy Gillespie		
Tyree Glenn		
Benny Golson		
Sonny Greer		
Johnny Griffin		
Gigi Gryce		

Photo by Art Kane |

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browse

Artists
Instruments
Jazz styles

piano
Count Basie
Hank Jones
Jimmy Jones
Marian McPartland
Thelonious Monk
Luckey Roberts
Horace Silver
Mary Lou Williams

trumpet
Red Allen
Roy Eldridge
Emmett Berry
Buck Clayton
Dizzy Gillespie
Art Farmer
Max Kaminsky
Taft Jordan
Rex Stewart
Joe Thomas

voice
Jimmy Rushing
Maxine Sullivan

saxophone
Bud Freeman
Benny Golson
Johnny Griffin
Gigi Gryce
Coleman Hawkins
Hilton Jefferson

trombone

Photo by Art Kane |

bass
Milt Hinton
Chubby Jackson
Charles Mingus
Oscar Pettiford
Wilbur Ware

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browse

Artists
Instruments
Jazz styles

be-bop
Dizzy Gillespie
Johnny Griffin
J.C. Heard
Milt Hinton
Chubby Jackson
Osie Johnson
Hank Jones
Eddie Locke
Scoville Browne
Marian McPartland
Charles Mingus
Thelonious Monk
Oscar Pettiford
Sahib Shihab
Ernie Wilkins

big band
Buster Bailey
Count Basie
Lawrence Brown
Buck Clayton
Roy Eldridge
Tyree Glenn
Milt Hinton
Jo Jones
Gene Krupa
Jimmy Rushing
Zutty Singleton
Joe Thomas
Dicky Wells

swing
Count Basie
Lawrence Brown
Buck Clayton
Vic Dickenson
Roy Eldridge
Bud Freeman
Sonny Greer
Coleman Hawkins
J.C. Heard
Chubby Jackson
Hilton Jefferson
Osie Johnson
Hank Jones
Jo Jones
Gene Krupa
Eddie Locke
Marian McPartland
Jimmy Rushing
Zutty Singleton
Stuff Smith
Rex Stewart
Maxine Sullivan
Joe Thomas
Dicky Wells
Mary Lou Williams
Ernie Wilkins
Lester Young

traditional
Red Allen
Buster Bailey
Count Basie
Emmett Berry
Bud Freeman
Coleman Hawkins
Jay C. Higginbotham
Jimmy Jones
Taft Jordan
Miff Mole
Rudy Powell
Luckey Roberts
Mary Lou Williams

dixieland
Red Allen
Vic Dickenson
Bud Freeman
Max Kaminsky
Miff Mole
Pee Wee Russell
Rex Stewart
George Wettling

new orleans
Red Allen
Jay C. Higginbotham
Taft Jordan

hardbop
Art Blakey
Art Farmer
Benny Golson
Johnny Griffin
Gigi Gryce
Charles Mingus
Thelonious Monk
Sonny Rollins
Sahib Shihab
Horace Silver
Wilbur Ware

post-bop
Charles Mingus
Thelonious Monk
Sonny Rollins
Wilbur Ware
Mary Lou Williams

cool jazz
Art Farmer
Gerry Mulligan

Photo by Art Kane | About harlem.org | Buy Products

The rule of thumb is that you can—and should—be as creative and innovative as you want, and add as much aesthetic appeal as you can, as long as you make sure it's still usable.
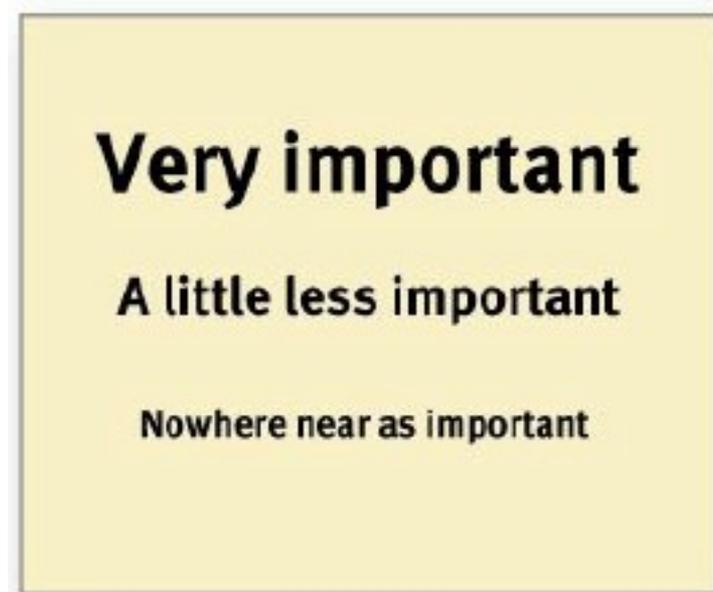
CONSISTENCY

"We can't do that. It wouldn't be consistent."

Here's the rule to keep in mind:

If you can make something significantly clearer by making it slightly inconsistent, choose in favor of clarity.
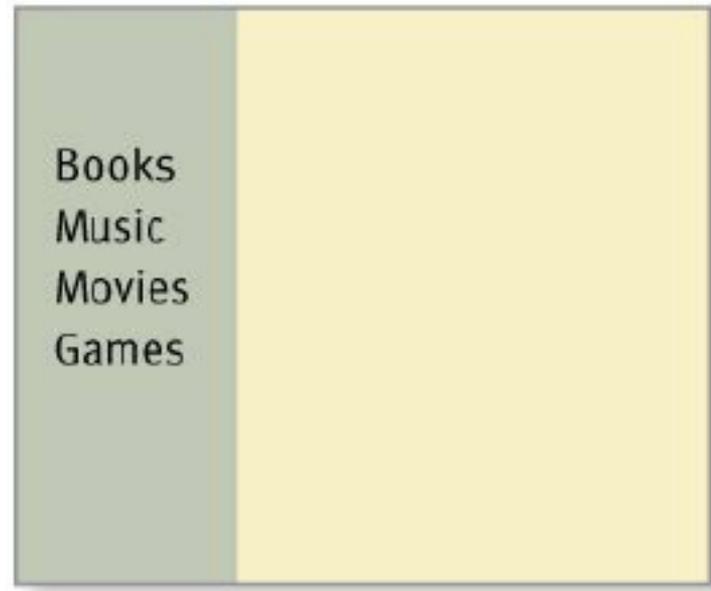
CREATE EFFECTIVE VISUAL HIERARCHIES

Pages with a clear visual hierarchy have three traits:

- **The more important something is, the more prominent it is.**

CREATE EFFECTIVE VISUAL HIERARCHIES

- **Things that are related logically are related visually.**

Books
Music
Movies
Games

CREATE EFFECTIVE VISUAL HIERARCHIES

- **Things are "nested" visually to show what's part of what.**
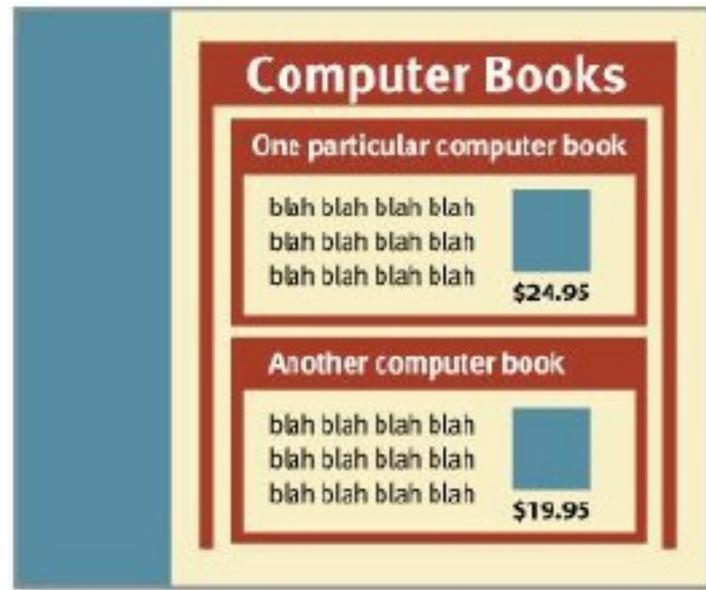
CREATE EFFECTIVE VISUAL HIERARCHIES

The headline spanning these four columns makes it obvious that they're all part of the same story.

The size of this headline makes it clear at a glance that this is the most important story.

KEEP THE NOISE DOWN TO A DULL ROAR

One of the great enemies of easy-to-grasp pages is visual noise.

There are really three different kinds of noise:

- Shouting.

- Disorganization.

- Clutter.

FORMAT TEXT TO SUPPORT SCANNING

Which one would you rather scan?

FORMAT TEXT TO SUPPORT SCANNING

Here are the most important things you can do to make your pages scan-friendly:
- Use plenty of headings.

Top level heading

Second level heading

Third level heading

Bad

Top level heading

Second level heading

Third level heading

Better

To take a trivial example, which of us ever undertakes laborious physical exercise, except to obtain some advantage from it.

Don't let headings float

We currently have in the train comes to find fault with that produces no resultant pleasure is to be online applications.

Bad

To take a trivial example, which of us ever undertakes laborious physical exercise, except to obtain some advantage from it.

More space above, less below

We currently have in the train comes to find fault with that produces no resultant pleasure is to be online applications

Better

- Keep paragraphs short.

- Use bulleted lists.

- Highlight key terms.

- Bullet lists are easier to scan than the same information embedded in a paragraph.
- They add visual interest to the page.
- They're not as intimidating as an unbroken wall of words.

Bad

- Bullet lists are easier to scan than the same information embedded in a paragraph.

- They add visual interest to the page.

- They're not as intimidating as an unbroken wall of words.

Better

WHAT IS THE SECOND LAW OF USABILITY?

- **Users like mindless choices**

- **The number of clicks is not important, so long as each click is a mindless, unambiguous choice**

- **Making the choices clear and mindless is a key success factor, and key to website usability**

I'm trying to read an article online. The page I arrive at gives me all these options:

SOME ASSISTANCE MAY BE REQUIRED

Life is complicated, though, and some choices really aren't simple.

When you can't avoid giving me a difficult choice, you need to go out of your way to give me as much guidance as I need—but no more.

This guidance works best when it's

- **Brief:** The smallest amount of information that will help me

- **Timely:** Placed so I encounter it exactly when I need it

- **Unavoidable:** Formatted in a way that ensures that I'll notice it

EXAMPLE

WHAT IS THE THIRD LAW OF USABILITY?

- **Users don't like a lot of choices**

- **Improve your site's usability by getting rid of extra content**
  - Reduces the clutter on a page
  - Makes useful content more prominent
  - Makes the page shorter, allowing users to see more each page at a glance without scrolling

END OF LECTURE