

# LAWS OF UX

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*Users often perceive aesthetically pleasing design as design that's more usable.*

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**Aesthetic Usability  
Effect**

**Doherty Threshold**

Productivity soars when a computer and its users interact at a pace (400ms) that ensures that neither has to wait on the other.

The time to acquire a target is a function of the distance to and size of the target. Make elements you wish to be easily selectable large and position them close to users.

The time it takes to make a decision increases with the number and complexity of choices. Simplify choices for the user by breaking down complex tasks into smaller steps.

Fitt's Law

Hick's Law

Jakob's Law

Users spend most of their time on other sites. This means that users prefer your site to work the same way as all the other sites they already know.

Elements tend to be perceived into groups if they are sharing an area with a clearly defined boundary.

People will perceive and interpret ambiguous or complex images as the simplest form possible, because it is the interpretation that requires the least cognitive effort of us.

# Law of Common Region

# Law of Prägnanz

# Law of Proximity

Objects that are near, or proximate to each other, tend to be grouped together.

The human eye tends to perceive similar elements in a design as a complete picture, shape, or group, even if those elements are separated.

Elements that are visually connected are perceived as more related than elements with no connection.

## Law of Similarity

## Law of Uniform Connectedness

## Miller's Law

The average person can only keep 7  
(plus or minus 2) items in their working  
memory.

Analyze each element and remove  
as many as possible, without  
compromising the overall function.

## Pareto Principle

# Occam's Razor

Analyze each element and remove as many as possible, without compromising the overall function.

Focus the majority of effort on the areas that will bring the largest benefits to the most users.

# Parkinson's Law

# Peak-End Rule

# Postel's Law

Any task will inflate until all of the available time is spent.

People judge an experience largely based on how they felt at its peak and at its end, rather than the total sum or average of every moment of the experience.

Be liberal in what you accept, and conservative in what you send.

# Serial Position Effect

## Tesler's Law

## Von Restorff Effect

Users have a propensity to best remember the first and last items in a series.

Tesler's Law, also known as The Law of Conservation of Complexity, states that for any system there is a certain amount of complexity which cannot be reduced.

The Von Restorff effect, also known as The Isolation Effect, predicts that when multiple similar objects are present, the one that differs from the rest is most likely to be remembered.

# Zeigarnik Effect

## USABILITY HEURISTICS FOR USER INTERFACE DESIGN

## Visibility of System Status

People remember uncompleted or interrupted tasks better than completed tasks.

JAKOB NIELSEN'S 10 GENERAL PRINCIPLES FOR INTERACTION DESIGN. THEY ARE CALLED "HEURISTICS" BECAUSE THEY ARE BROAD RULES OF THUMB AND NOT SPECIFIC USABILITY GUIDELINES.

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

# Match Between System and the Real World

# User Control and Freedom

# Consistency and Standards

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

**Error Prevention**

**Recognition Rather  
than Recall**

**Flexibility and  
Efficiency of Use**

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

# Aesthetic and Minimalist Design

Help Users  
Recognize, Diagnose,  
and Recover from  
Errors

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.