

# 7 Fundamental Interaction Design Principles



Ross Dillon · Follow

Published in UsabilityGeek · 4 min read · Aug 4, 2019



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According to Don Norman there are 7 fundamental design principles when it comes to interaction design.

Here they are put in to context with definitions and software based examples:

## Discoverability (visibility)

The user should be able to determine what actions are possible and the state of the device.

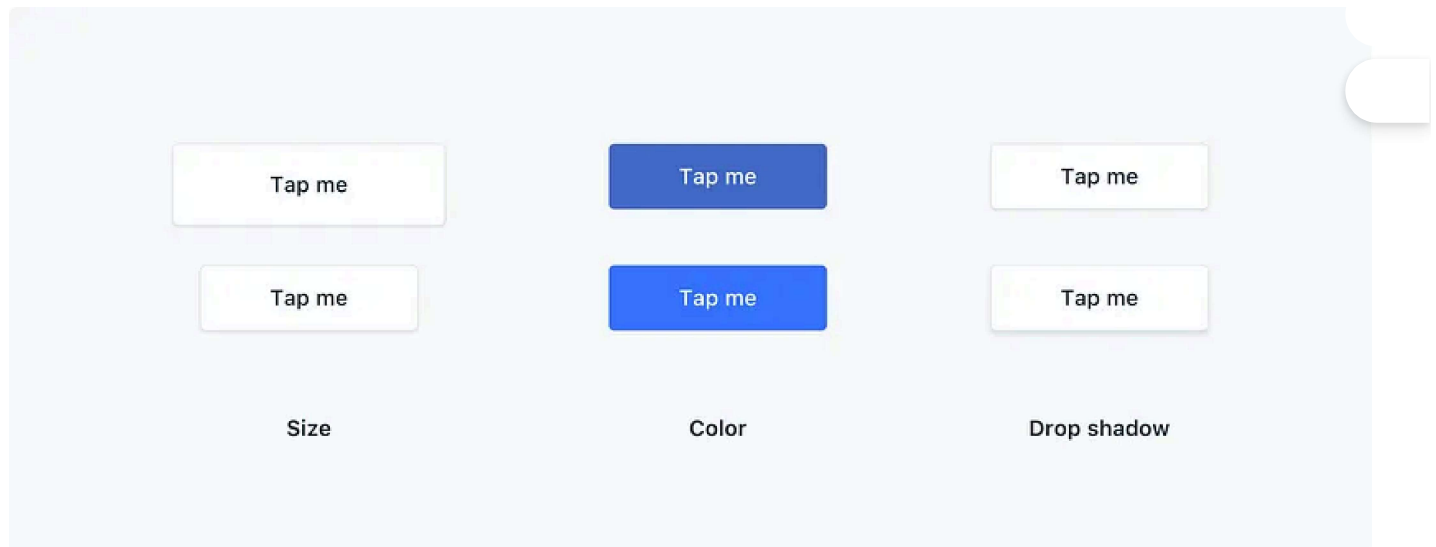


Discoverability results from appropriate application of the fundamental design principles (affordances, signifiers, etc.)

Problems arise when discoverability fails.

Hiding certain functions can be advantageous in interface design. Certain functions are kept invisible until needed.

**Example:** Defining buttons. Size for visibility, color to emphasize, shadow to define, “tap me” to tell the user what to do. User understands to tap the box, they now have discovered what they can do with the box.



## Affordances

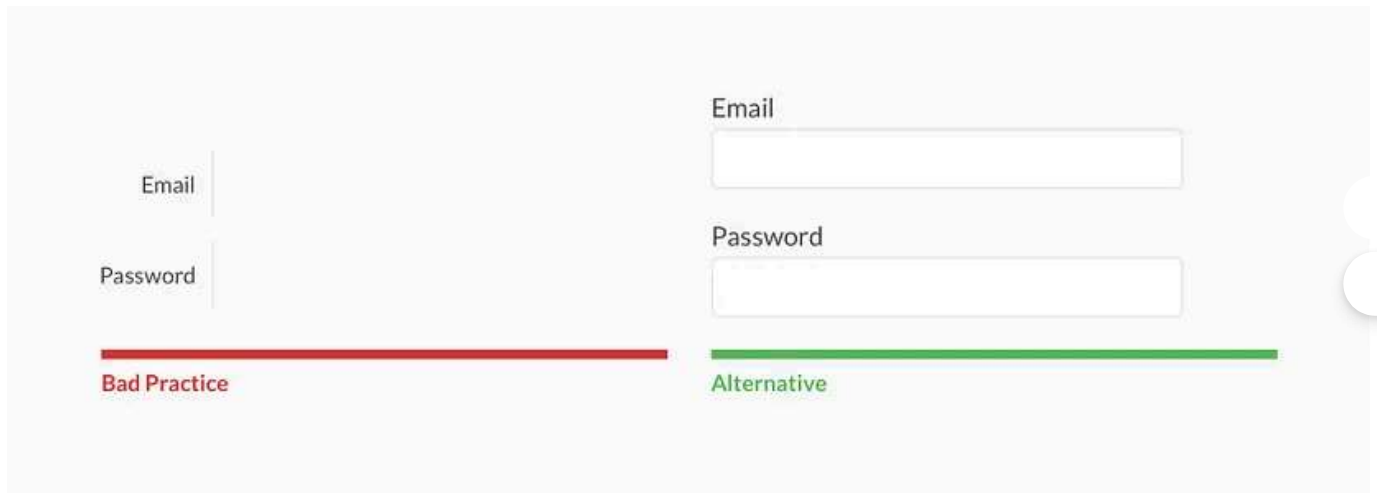
The perceived and actual properties of an object. Primarily the fundamental properties that people recognize and use to determine just how the thing could possibly be used.

**Perceived affordances** — What a person thinks can be done with an object.

**Affordances** — Provides strong clues to the operations of things.

When affordances are leveraged correctly the users will intuitively know what to do with the object just by looking.

**Example:** Adding signifiers can help users know what can be done, this example shows bad and good practice of affording help to show the user where they can type.



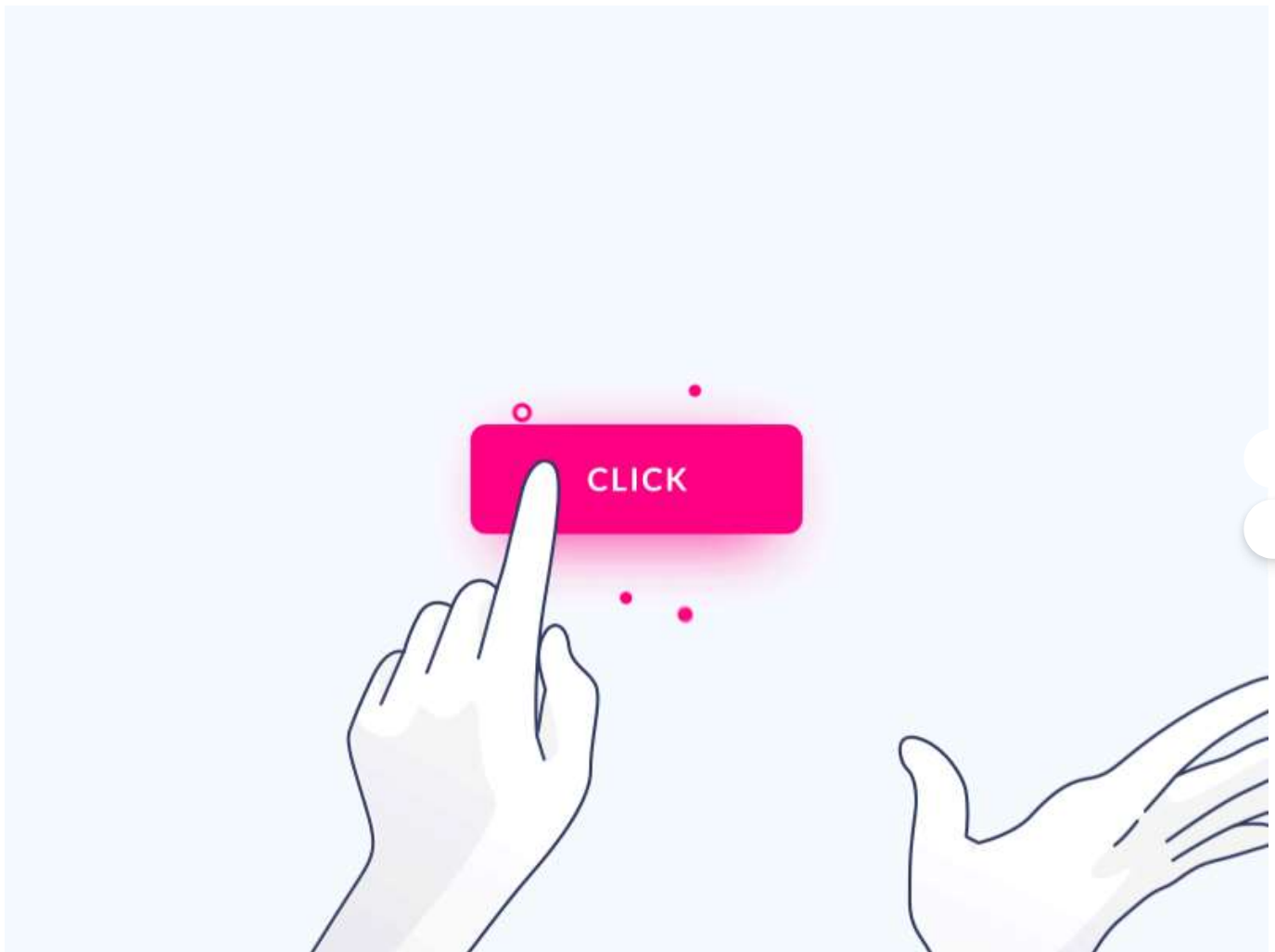
Affordance

## Signifiers

Signals with the goal to communicate how to use the design.

Any mark or sound, any perceivable indicator, that communicates appropriate behavior to a person. Use your 5 senses. They signal what actions are possible and how they should be done.

**Example:** A button which can be clicked has a box around it, looks like a button, is labeled, and has an animation.



## Feedback

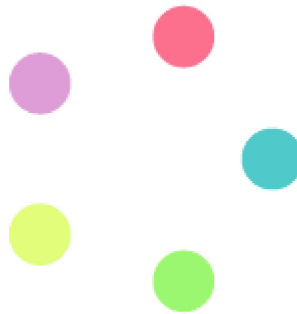
Sending back to the user information about what action has actually been done, what result has been accomplished.

Feedback should be:

- Immediate
- Informative
- Planned & prioritized



**Example:** The screen displays an animated loading icon to show the application is working, but it's loading so the user has to wait.



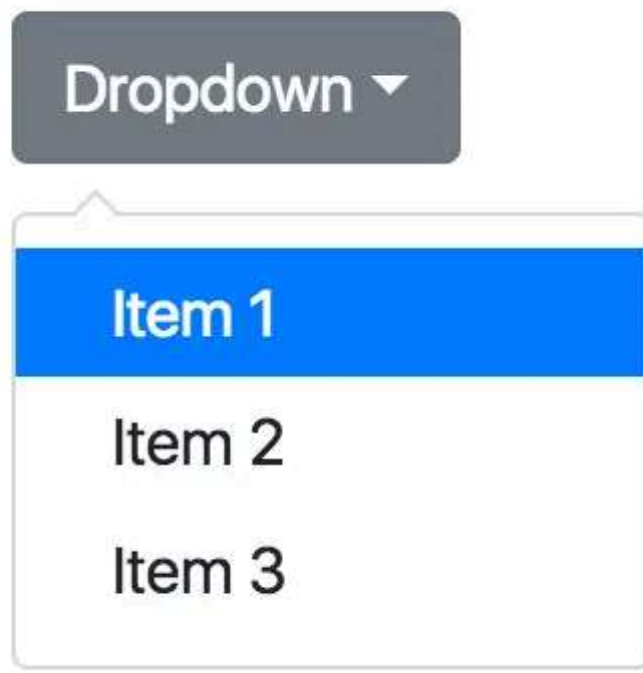
Feedback

## Constraints

Constraints **restrict** the kind of interactions that can take place.

**Example:** Limiting selection, for example, in a drop down menu.





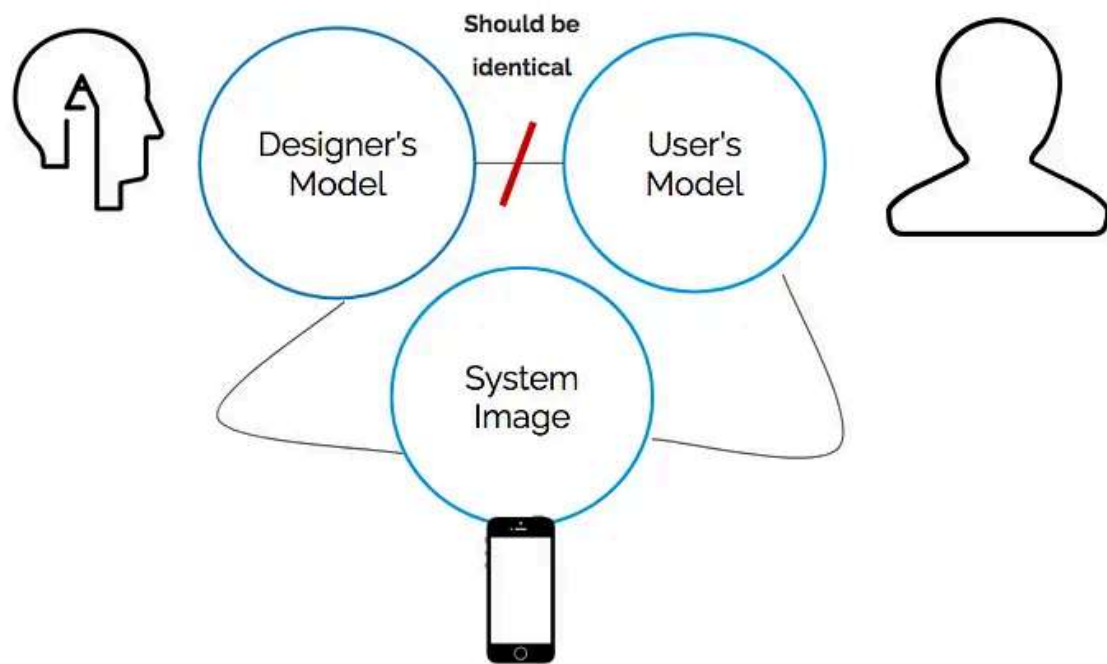
Constraint

## Conceptual Models

Conceptual models are the representations that a person has in mind about the object they are interacting with.

Example:

# CONCEPTUAL MODEL

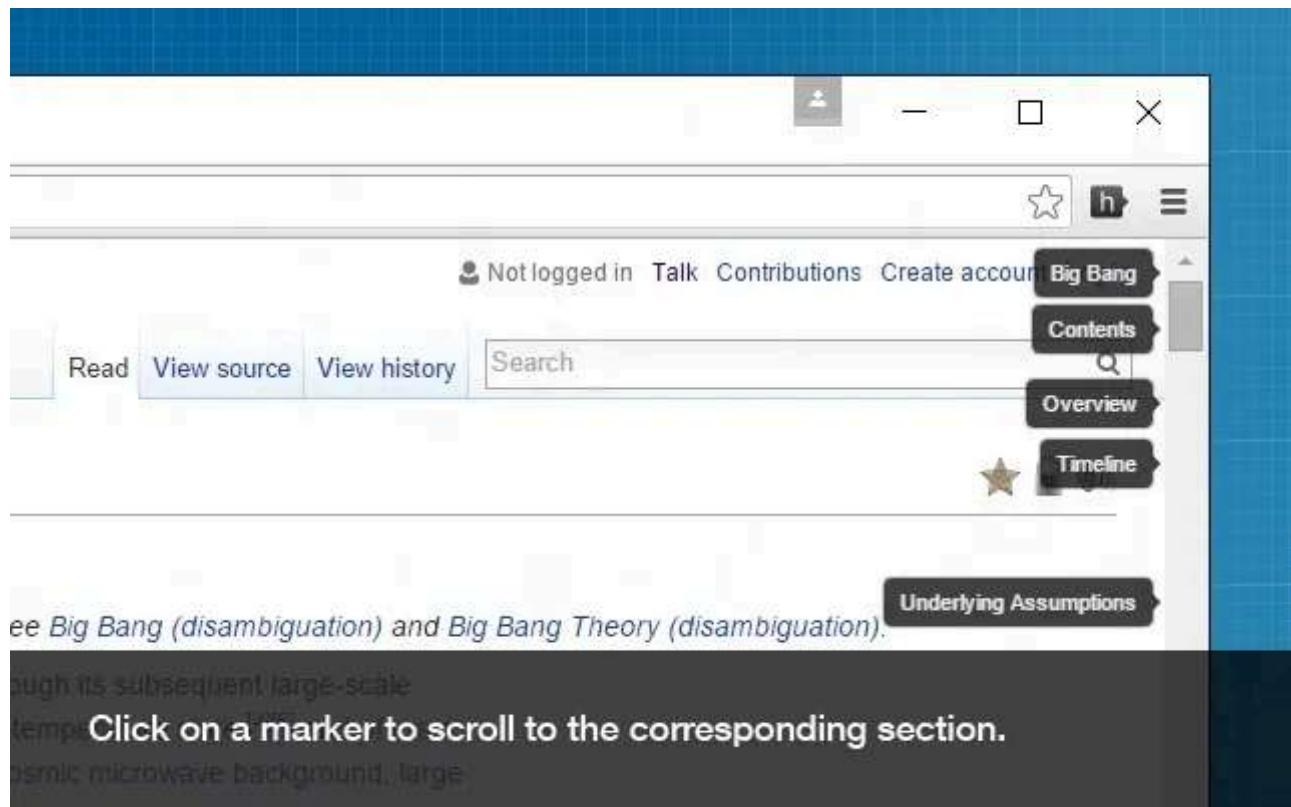


## Mapping

Relationship between the controls and their movements and the results in the world.

The concept of mapping is important for designing the layout of controls and displays.

Example: Scroll Bar shows you where you are on the page



Mapping

That's the big 7. Always remember: "You are not the user." Check out further readings below.

## Want to learn more?

If you'd like to become an expert in UX Design, Design Thinking, UI Design, or another related design topic, then consider to take an [online UX course](#) from the Interaction Design Foundation. For example, [Design Thinking](#), [Become a UX Designer from Scratch](#), [Conducting Usability Testing](#) or [User Research — Methods and Best Practices](#). Good luck on your learning journey!

### *Interaction Design must reads:*

*Designing for Interaction: Creating Innovative Applications and Devices (2nd Edition) — Saffer, Dan*



# *The Design of Everyday Things (Revised Edition, 2013) — Norman, Donald A*

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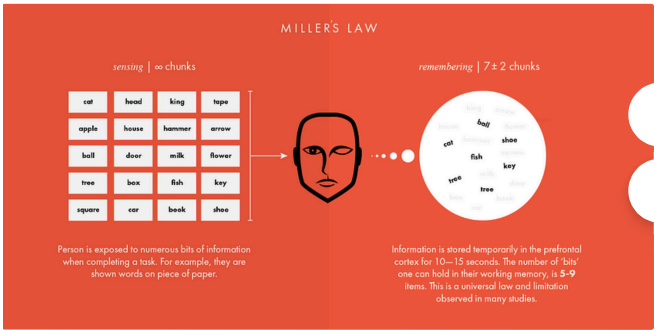
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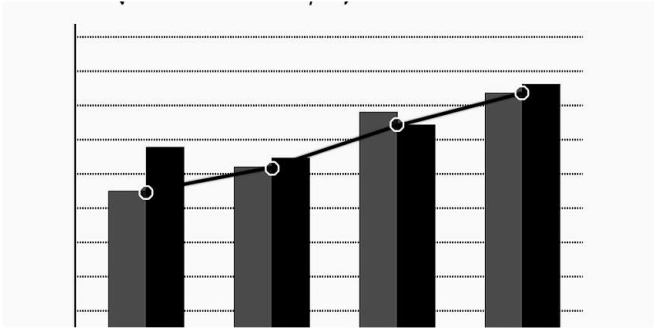
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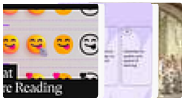
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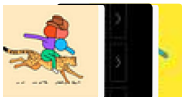
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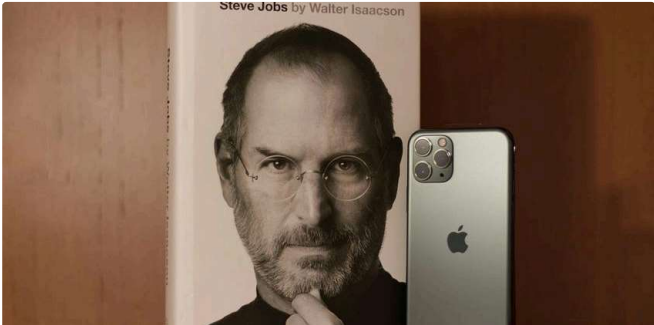
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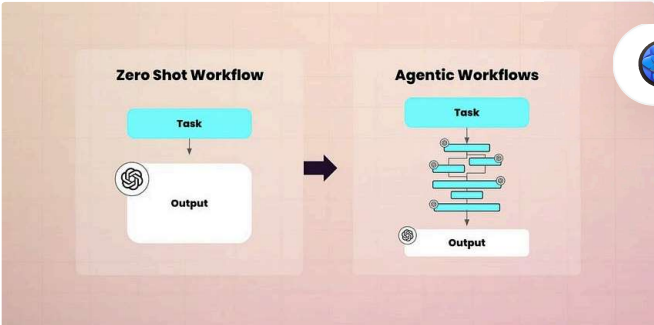


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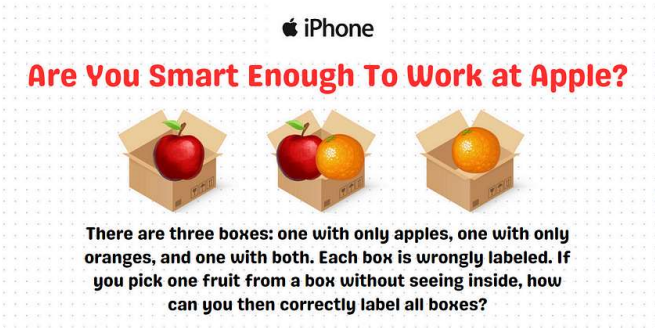
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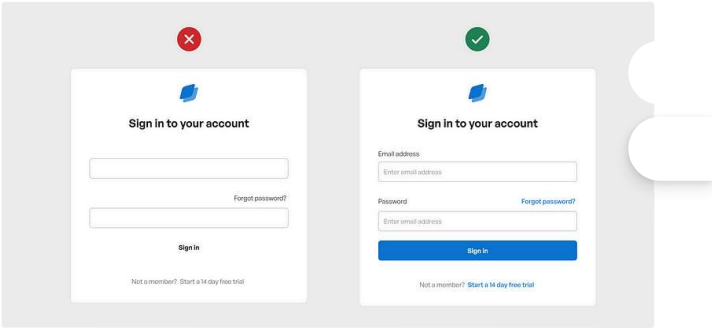
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