Types of Cognition

1. Perception
2. Attention
3. Memory
4. Learning
5. Language
6. Thought

1. Perception

How information is acquired from the environment, via different senses.
(vision being the most dominant)

Visual Perception

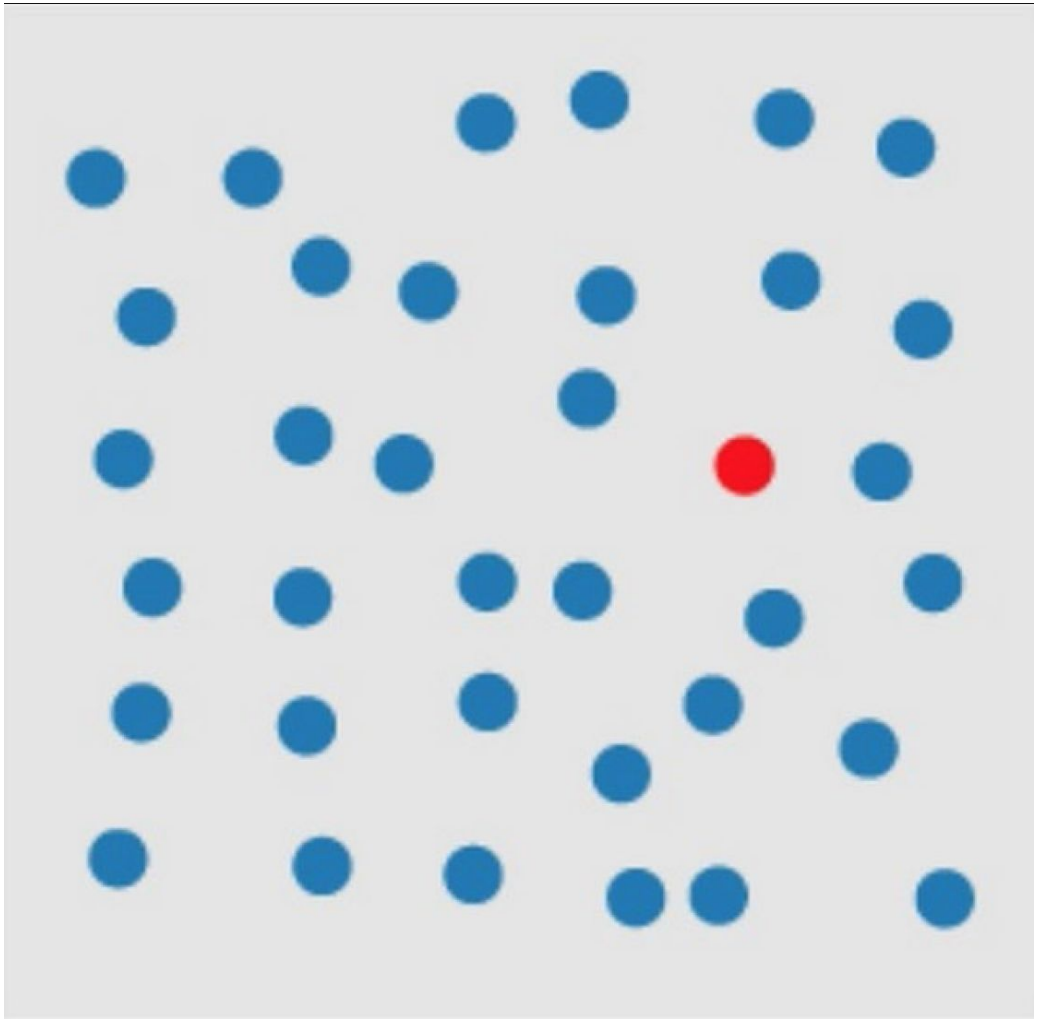
Visual Patterns

We are pattern seekers. We store patterns that influence our expectations. What we see is strongly influenced by our expectations.

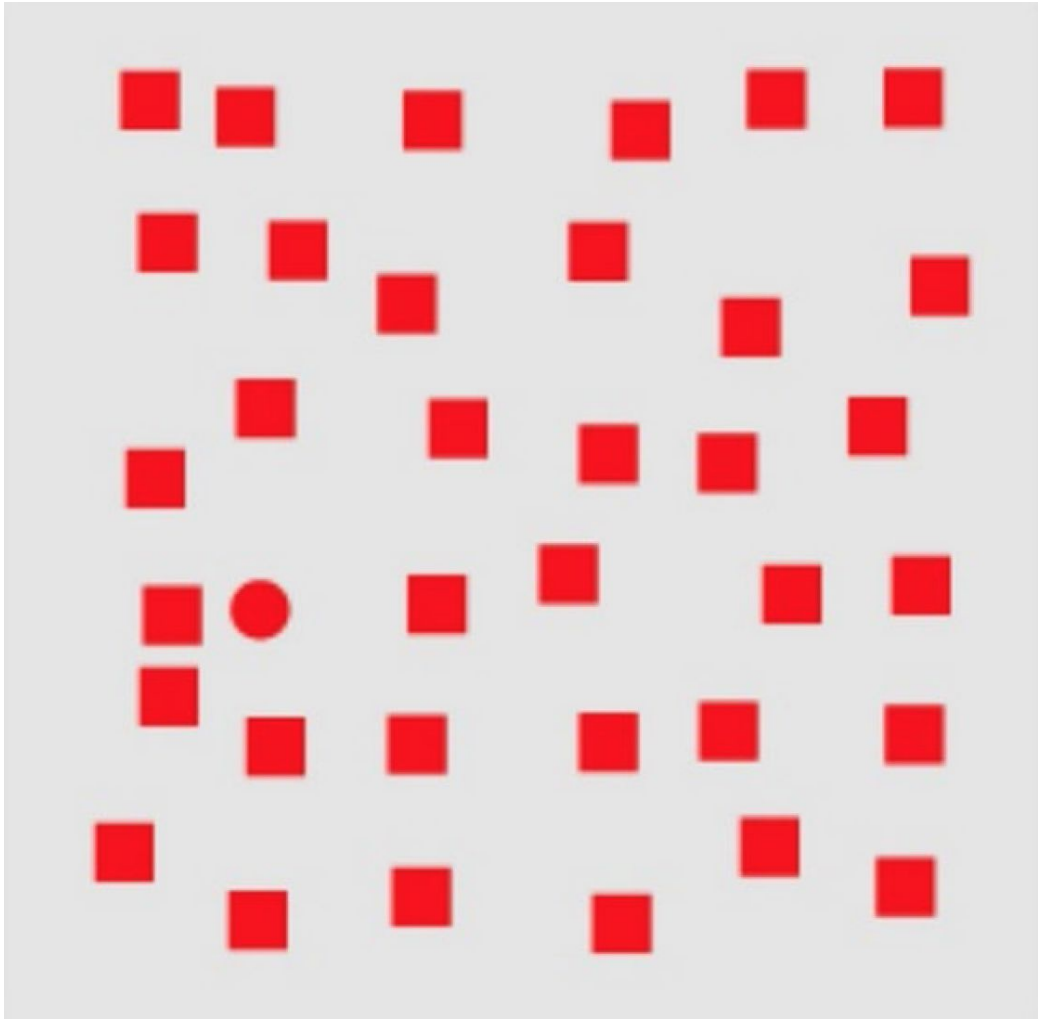
Visual Perception

Perception is based on change. We scan, filter and interpret differences. We use differences to create understanding.

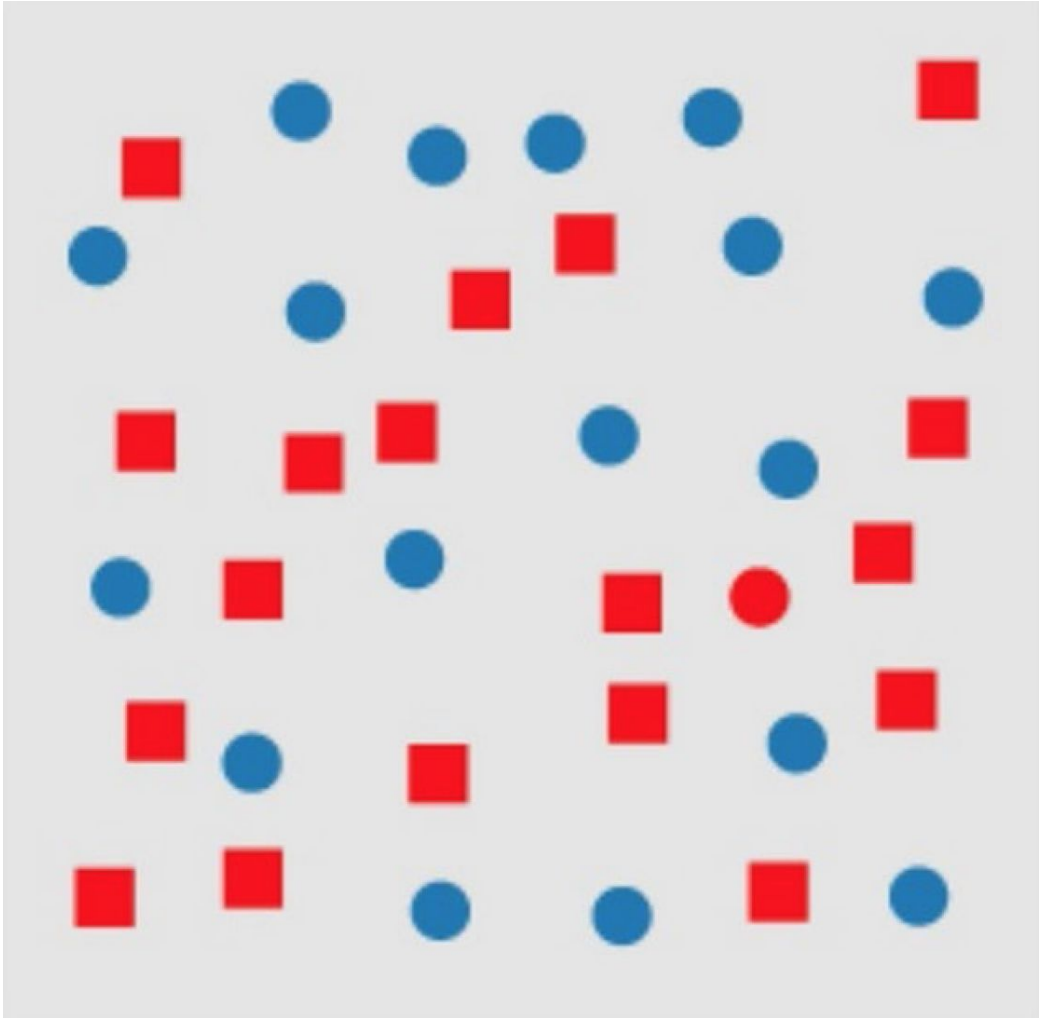
Find the Red Dot



Find the Red Dot

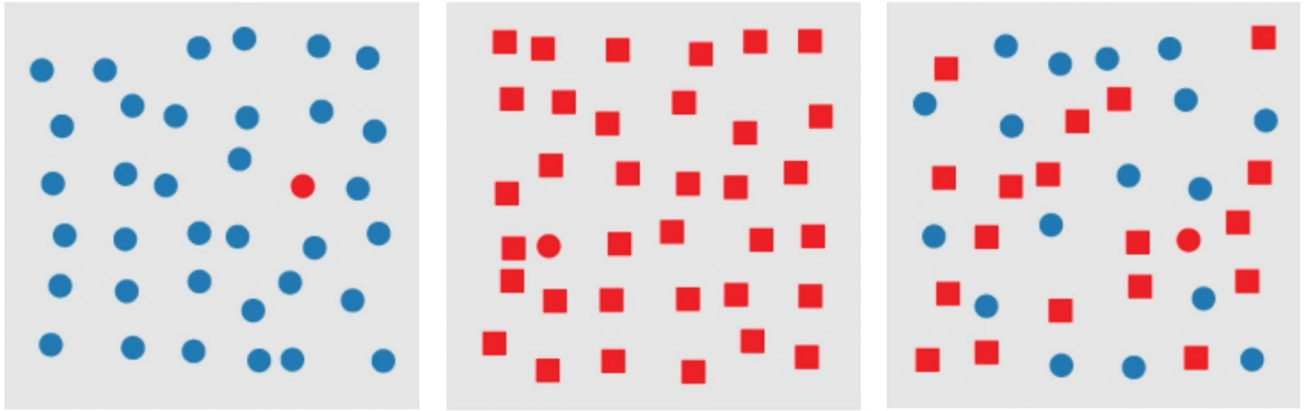


Find the Red Dot



Don’t Make Me Think

An interaction is intuitive when the user doesn’t have to think.
We can guide them via visual and interaction design.



Gestalt Principles

Gestalt is a psychology term which means "unified whole".

It refers to theories of visual perception developed by German psychologists in the 1920s.

These theories attempt to describe how people tend to organize visual elements into groups or unified wholes when certain principles are applied.

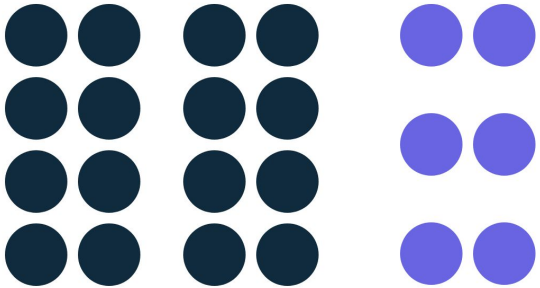
“The whole is different than the sum of its parts.”
– Max Wertheimer, (German psychologist, 1910)

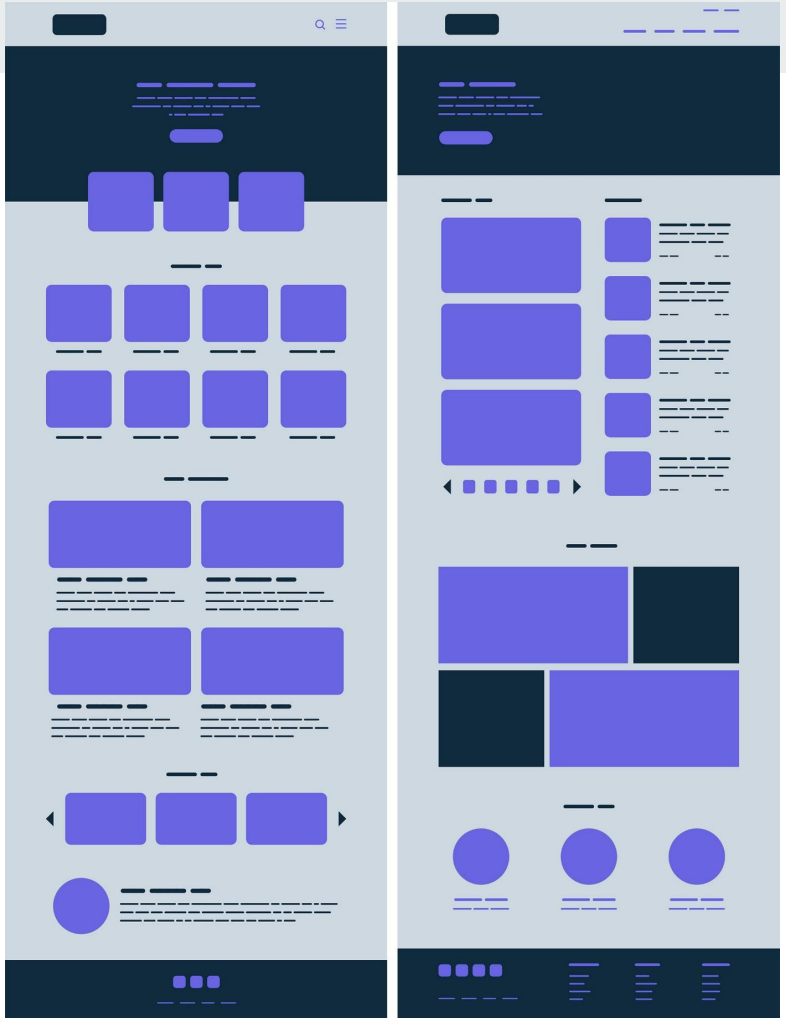
1. Proximity
2. Common Region
3. Similarity
4. Continuity
5. Common Fate
6. Closure
7. Figure/Ground
8. Symmetry

Most images from "Gestalt Principles in UI Design," by Eleana Gkogka, Medium, 2018

Proximity

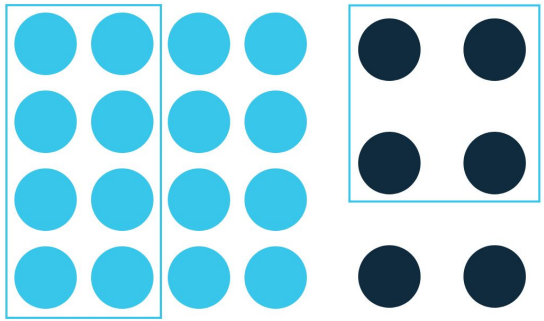
Objects positioned close together appear grouped.

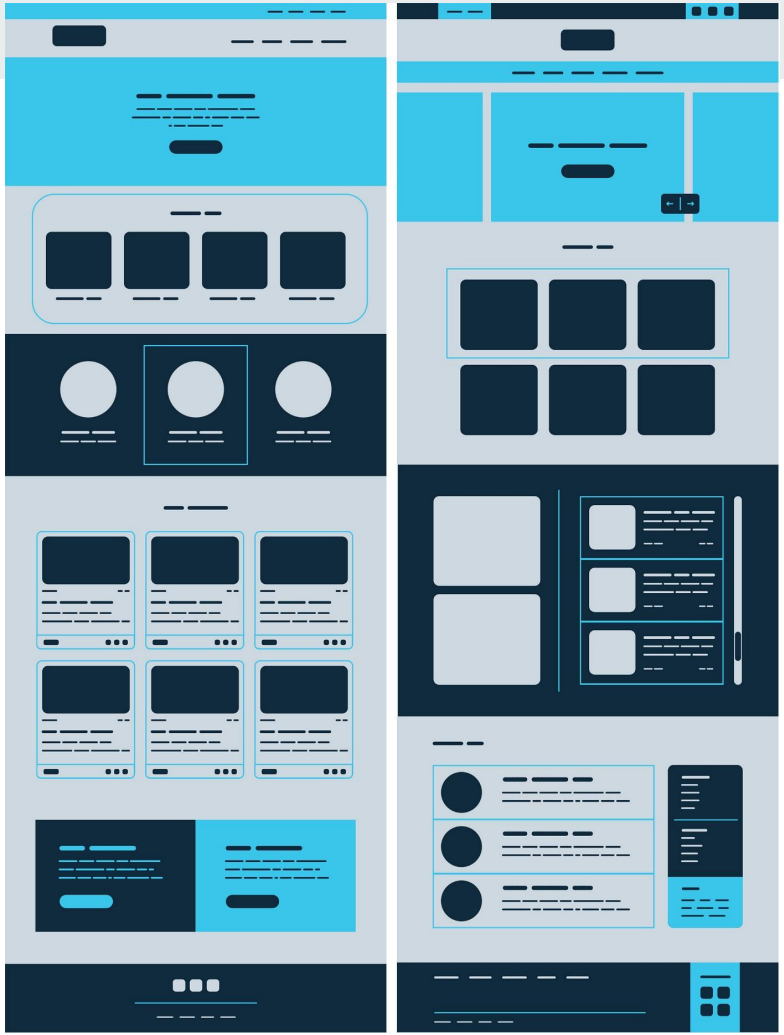




Common Region

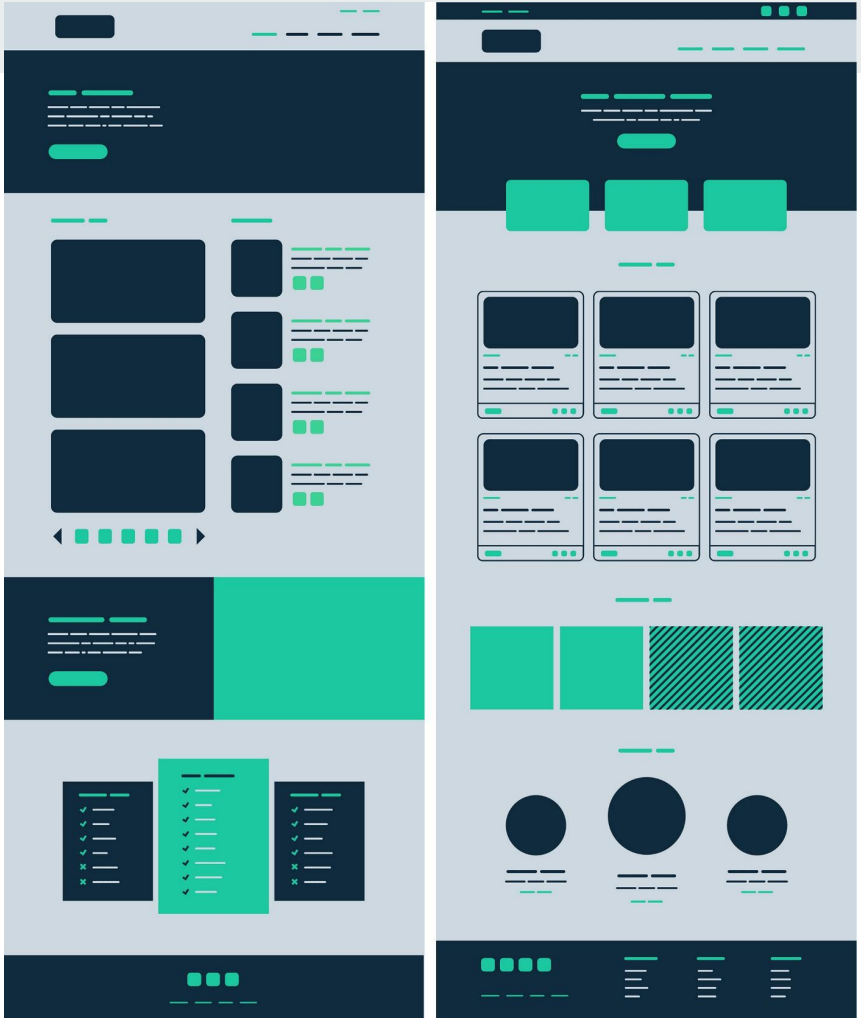
Similarly to the Proximity principle, elements placed within the same region are perceived as grouped.





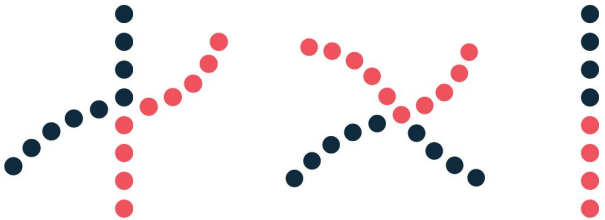
Similarity

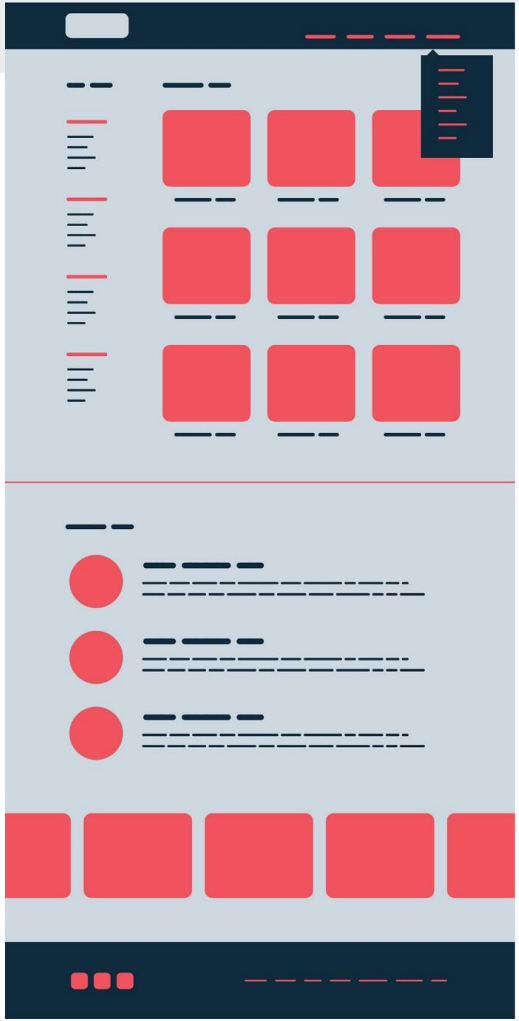
Objects that look similar appear to be grouped.

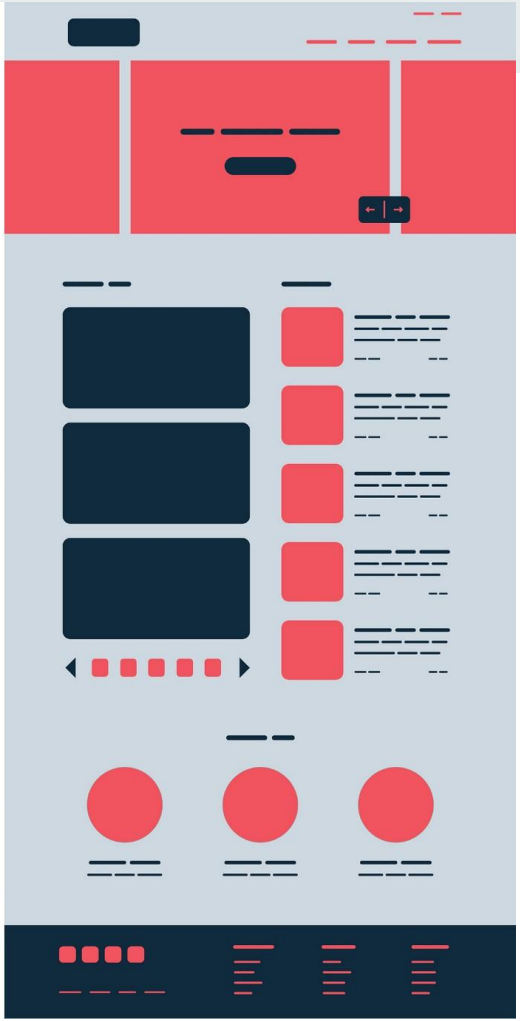


Continuity

Objects arranged in a continuous line are grouped together.





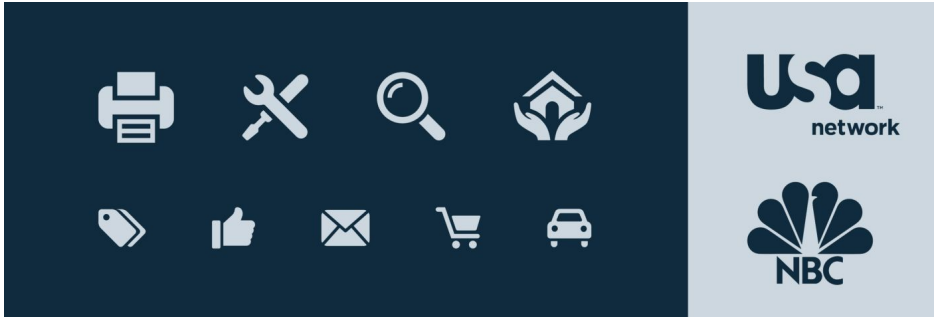


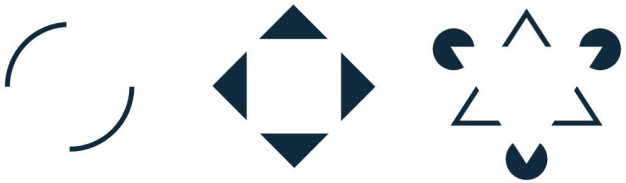
Common Fate

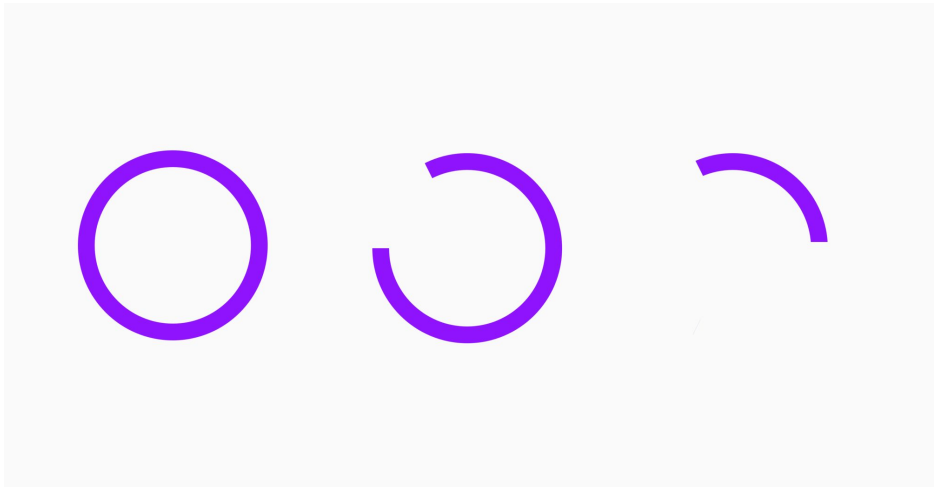
Objects arranged or moving in the same direction are grouped together, any outsiders may create tension.

Closure

Objects grouped together are seen as a whole shape because our brain fills in any missing information.

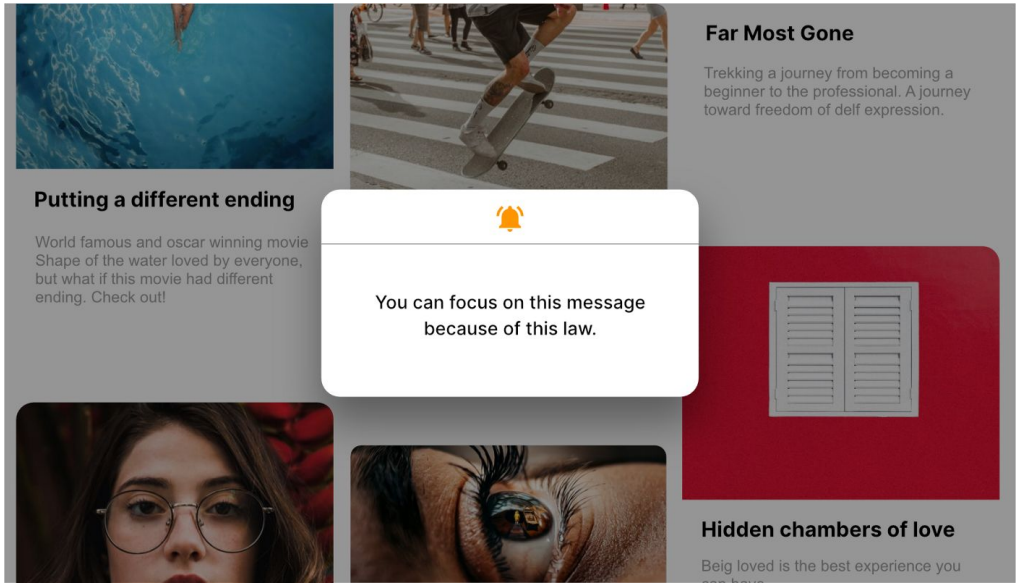






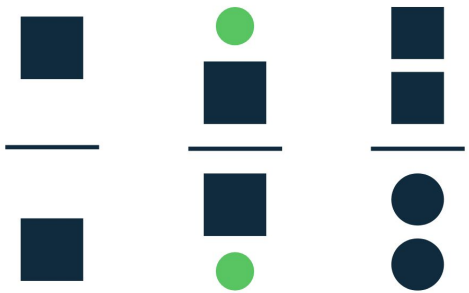
Figure/Ground

Objects are perceived as either being in the foreground or the background.



Symmetry

Balanced objects are perceived as belonging together regardless of their distance.



Scan Screens

Put the most important information in the top third of the screen or in the middle.

Avoid putting important things at the edges, since people tend to not look there.

Design screens so that people can move in their normal reading pattern. Avoid a pattern where people have to bounce back and forth to many parts of the screen to accomplish a task.

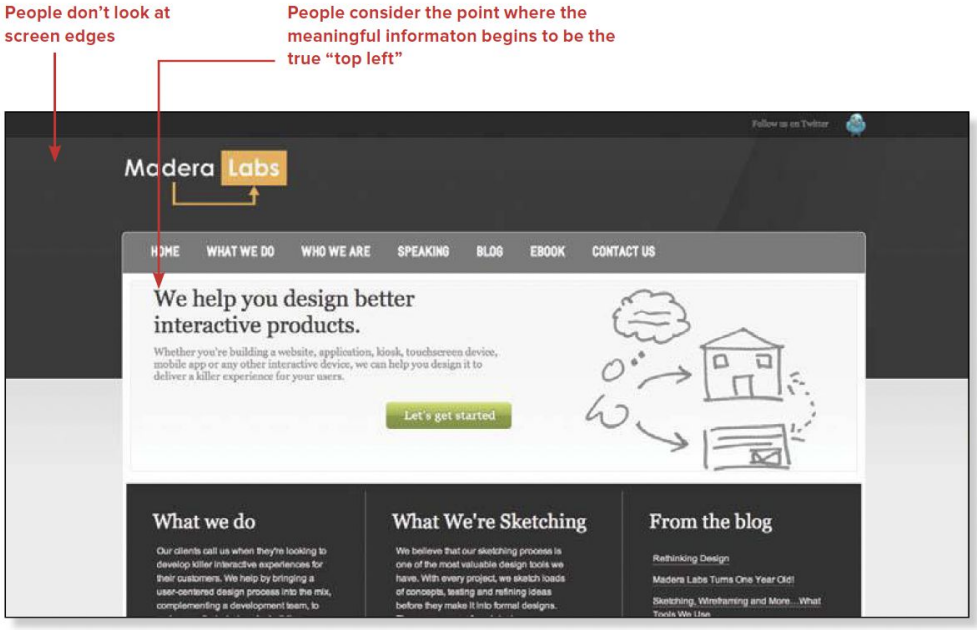


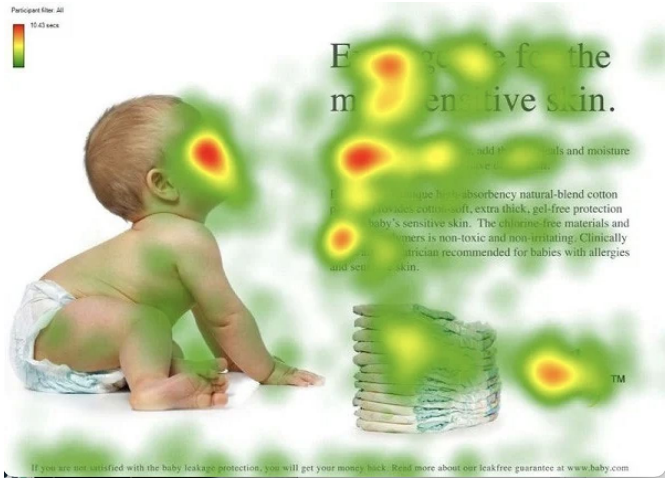
FIGURE 6.1 We skip the edges of a screen and move to meaningful information

Recognizing Faces

People recognize and react to faces on web pages faster than anything else on the page.

Faces looking right at people will have the greatest emotional impact, probably because the eyes are the most important part of the face.

If a face is looking at a product on the page, people will also look at that product. This doesn't mean they paid attention to it, they just physically looked at it.



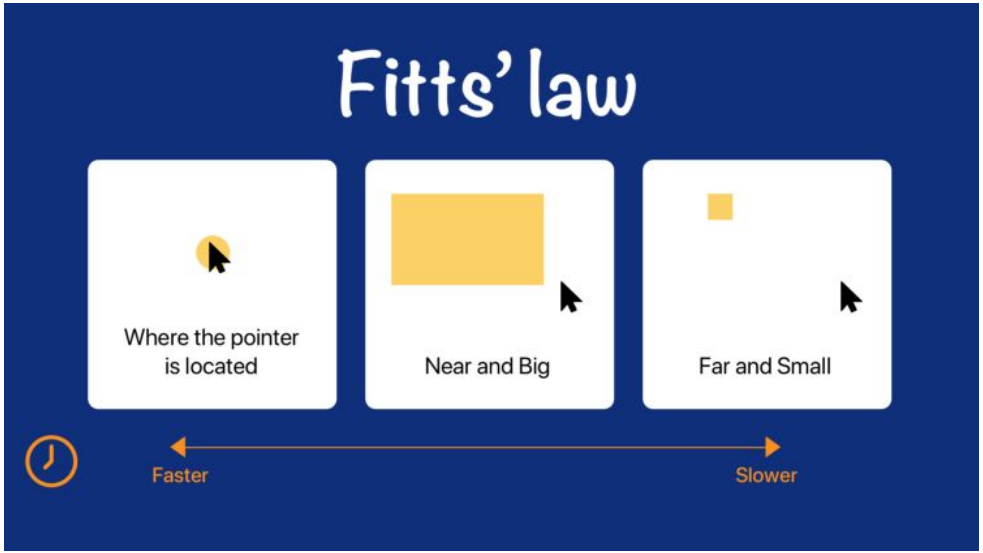
Affordance Cues

Think about affordance cues when you design. By giving people cues about what they can do with a particular object, you make it more likely that they will take that action.

You need to make sure that people can easily perceive, figure out, and interpret what the object is and what they can and should do with it.

Fitt's Law

The time to acquire a target is a function of the distance to and size of the target.



Aesthetic-Usability Effect

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