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The User

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Learning Goals

- Know basic human information processing stages
- Understand perception and cognition principles
- Use the knowledge of user to help design interfaces

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Knowing your user profile

It is not always possible to run user tests to the extent that we want or need them.

There are however several assumptions (one may even call them stereotypes, the we can make about our users.

By years of research and study, we are able to 'model' several actions, ideas and concepts that a human being will undergo when in specific situations.

We can use this knowledge in designing interactive systems

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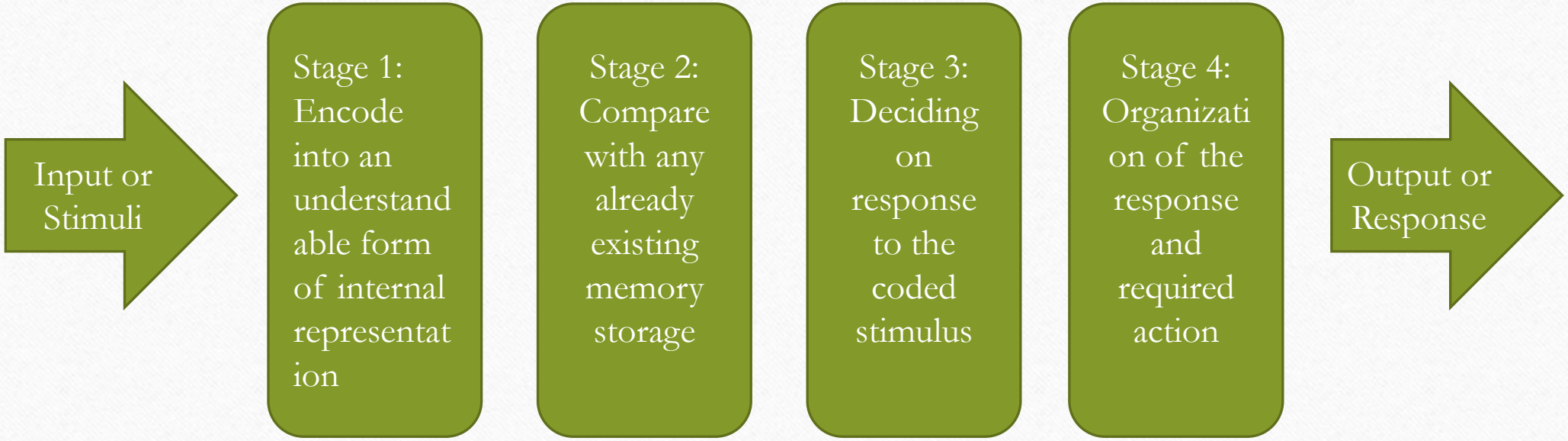
Human Information Processing Stages



Adaptation from Barber 2015

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Human Information Processing Subsystems

1. **Perception.** Receives and Handles the Perception of Input Stimulus. This includes our senses (taste, sight, touch, smell, and sound). Although there is some work done, taste and smell is rarely looked at within a UX context. We will be focusing on the 'sight' sense in this module.

2. **Cognition.** Handles the processing of the information. It includes memory.

3. **Motor.** Handles the physical actions resulting from the user.

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Visual Perception

Two leading theories trying to explain the way we 'see'.

The most prominent recently, and the one we will be looking at the most is called '**constructionism**'. The other is called '**ecological'** theory.

Constructionism advocates that we 'construct' our view from a combination of information within the environment as well as previously stored knowledge (Gregory 1970). Ecological theorists advocate that you need to 'pick up' information from the environment without elaboration or construction (Gibson 2014).

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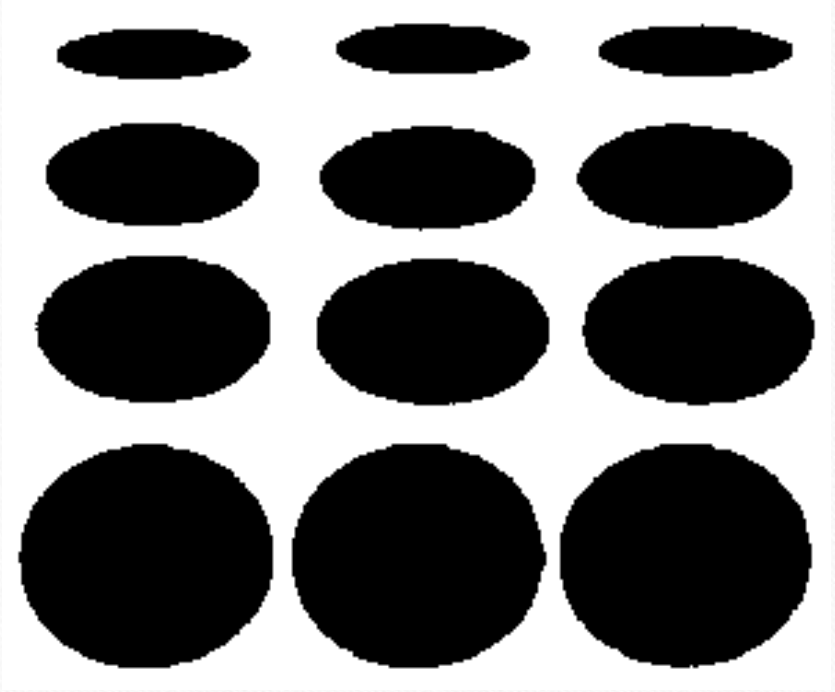
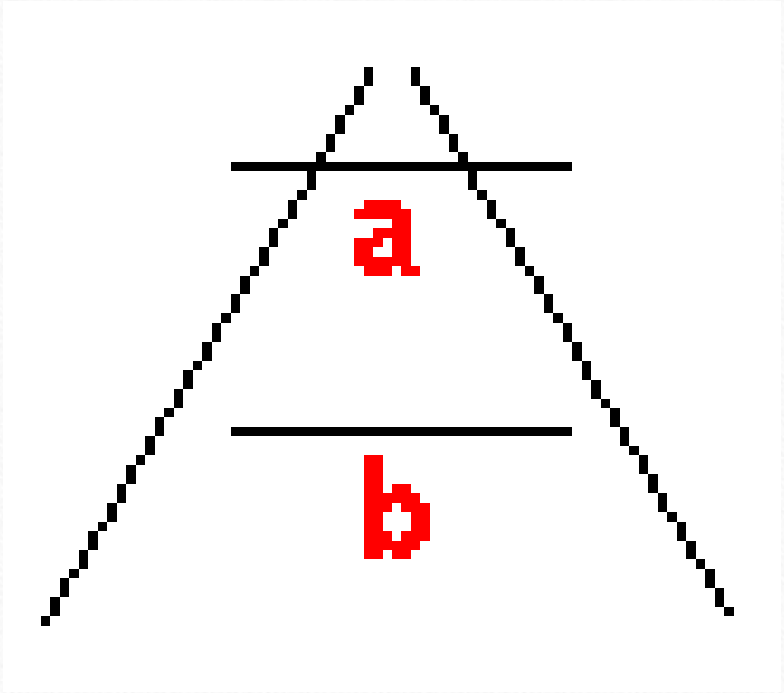
Some examples – count the passes

Some examples – is it really..?



Some examples – Parallel lines



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Some Example – What in the world is that?

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Some Examples – Now you see me…

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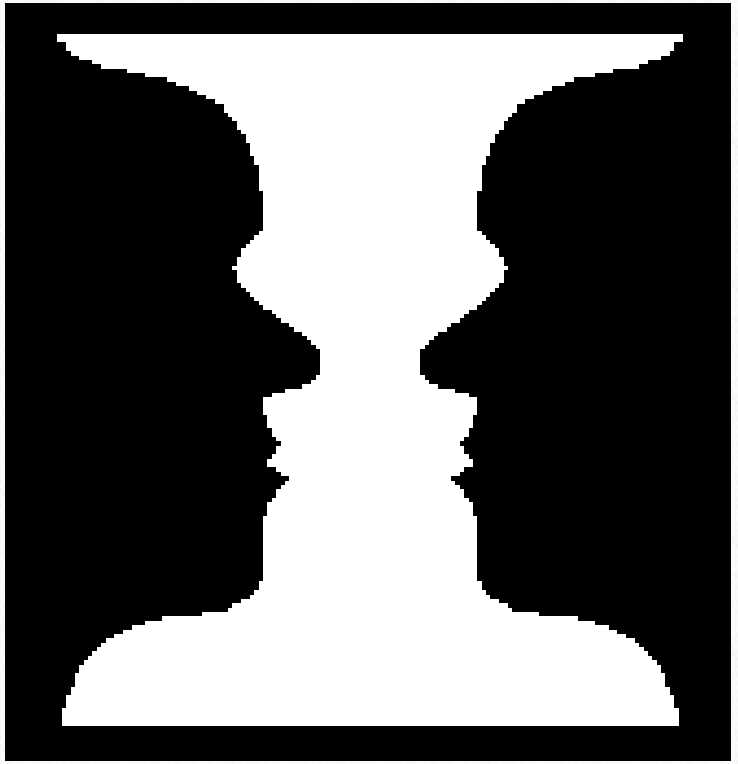
Some Examples – Oh it's a… no it's a..



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Some Examples – Oh it's a… no it's a..2

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Some Examples – Oh it's a… no it's a..3

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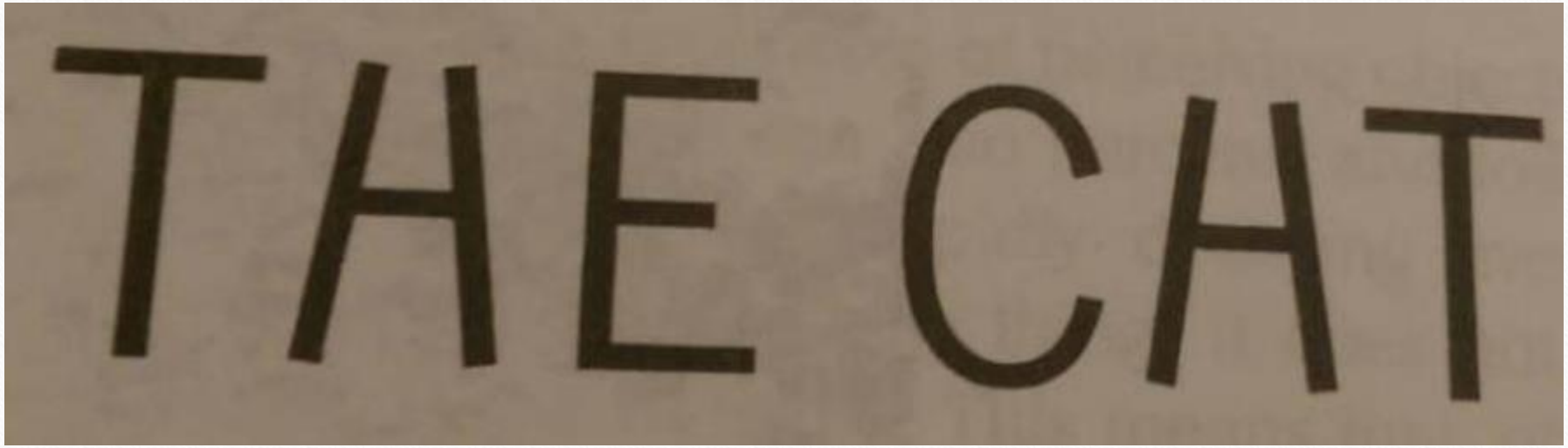
Some Examples – What you see is what you get



Some Examples – The Ames Room

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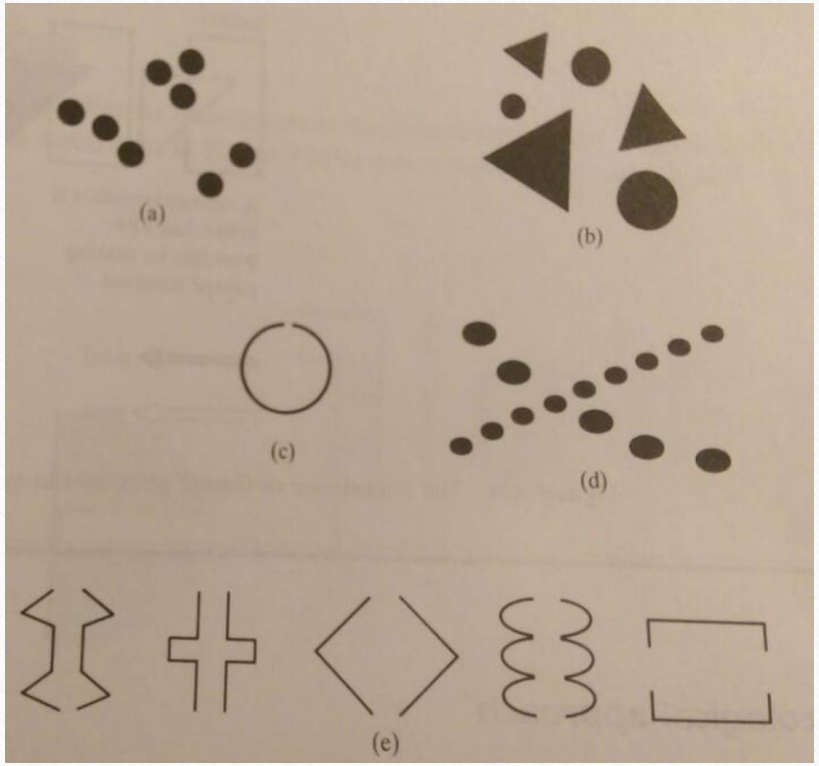
Some Examples – a look into each one of us

Gestalt's Laws of Perceptual Organization



1. **Proximity.** Objects or shapes that are close to one another appear to form groups.
2. **Similarity.** Things which share visual characteristics such as shape, size, color, texture, value or orientation will be seen as belonging together.
3. **Closure.** The brain tends to perceive forms and figures in their complete appearance despite the absence of one or more of their parts.
4. **Continuity.** Unifies multiple elements on a linear path.
5. **Symmetry.** Regions bounded by symmetrical borders tend to be perceived as coherent figures.
6. **Many more.**

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So in interfaces…

How can we use these principles?

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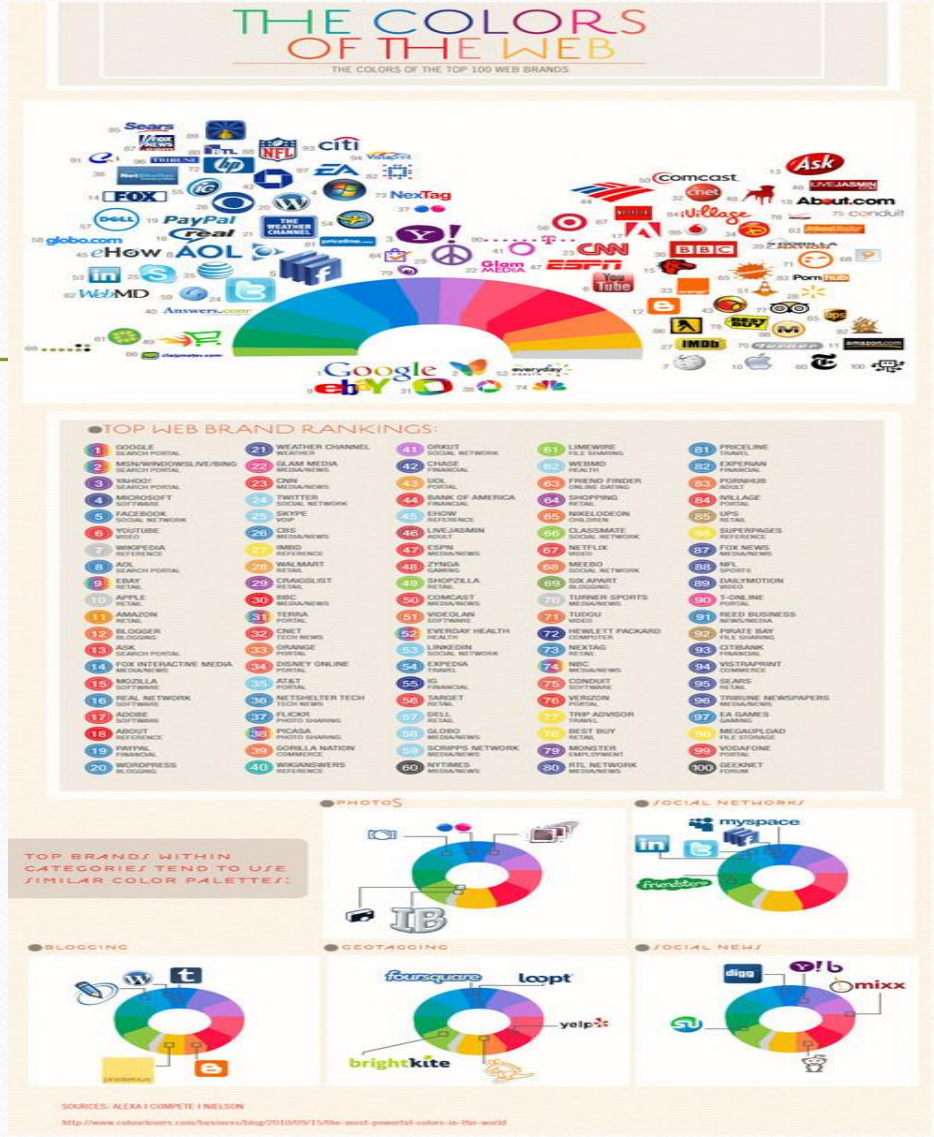
Colo(u)rs

Red	Aggressive, strong & heavy
Blue	Comfort, loyalty & security
Yellow	Caution, Spring & brightness
Green	Money, health, food & nature
Brown	Nature, aged, & eccentric
Orange	Warmth, excitement, & energy
Pink	Soft, healthy, childlike & feminine
Purple	Royalty, sophistication & religion
Black	Dramatic, classy & serious
Gray	Business, cold & distinctive
White	Clean, pure & simple



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Perception and External Influence

HAMLET Do you see yonder cloud that's almost in shape of a camel?

POLONIUS By the mass, and 'tis like a camel, indeed.

HAMLET Methinks it is like a weasel.

POLONIUS It is backed like a weasel.

HAMLET Or like a whale?

POLONIUS Very like a whale

Attention and Cognition

The most important point here is to be able to give attention where attention is due.

Humans cannot – contrary to popular belief – parallel process. Even when 'multitasking' in thought process, we use a linear approach with one 'processor'.

With this in mind we need to minimise conflict where the user needs to divide attention or use the same part of their cognition to manipulate information.

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As an example…

Imagine we have 6 people to …… GET OUT OF THE ROOM

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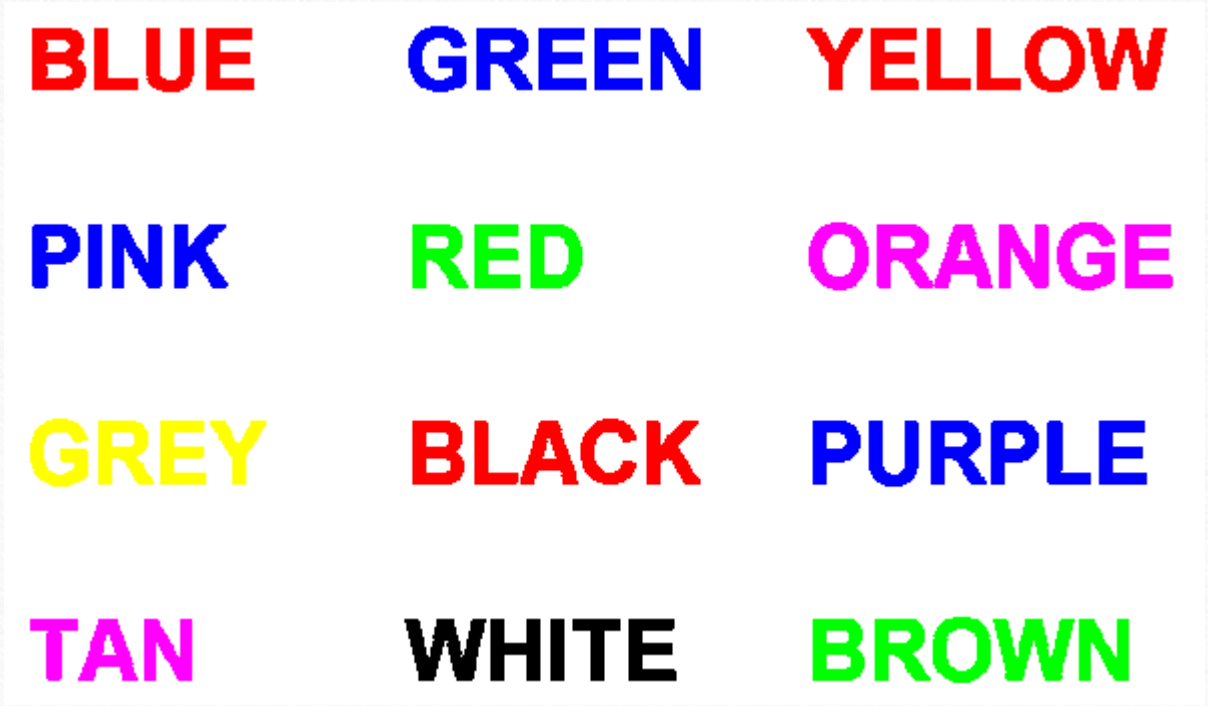
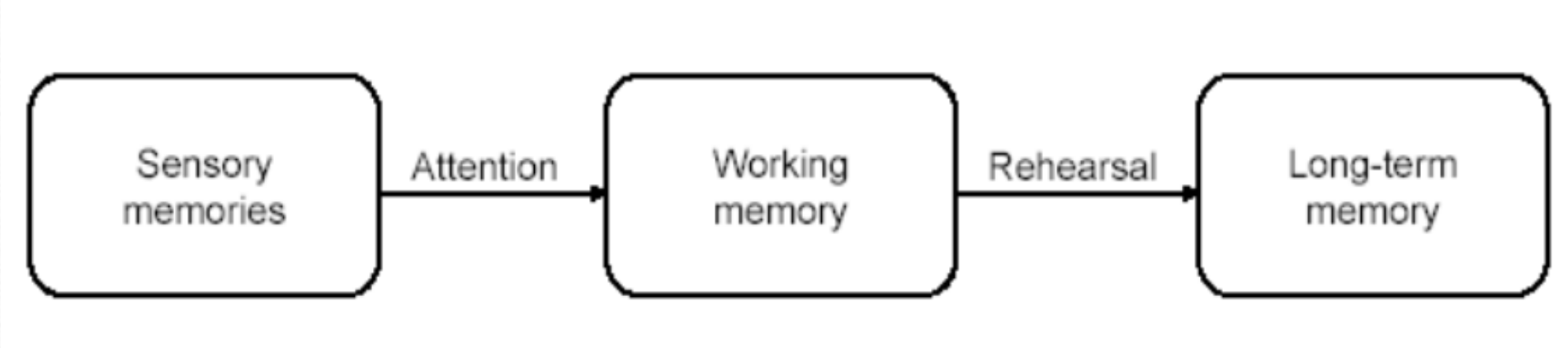
Attention and Cognition



Memory


Sensory memories
Attention
Working memory
Rehearsal
Long-term memory

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We can focus on helping short term memory

For example…

How many ‘things’ like numbers does one remember when they have been dictated to them?

7 +- 2 objects = between 5 and 9 objects

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Helping by... Chunking

2583932 5 **(8 objects)**

25-83-93-25 **(4 objects)**

Personas

Janet - The Family Planner

CF

Janet's Vital Statistics

- Janet is a 38 year old married female living in Berlin, Germany.
- Janet is the mother of 4 children, aged 1 to 10.
- Janet lives a busy life, and is often on the go.

"I'm so busy with everything, but I really feel like I should take the kids on a family trip to give them some great memories!"

Janet's Goals and Needs

- Janet wants to plan a trip full of positive memories for her children.
- She feels like she can plan the logistics, but that she needs help with figuring out what family activities to do once she reaches her destination.
- She needs something easy to use, she doesn't feel like she has time to work with complex apps.

Janet's Motivations

- Her main motivation is to create memories for her family.
- To get ideas for family activities while on an upcoming family vacation.
- To find activities that will keep her children busy and happy.

Janet's Frustrations

- Janet always feels like she has very little time to spend on planning.
- Janet is rarely home and needs a solution that will allow her to easily work while on the go.
- She doesn't want to spend time looking up guides when she gets to her destination, they should be easily available when she needs them.

Janet's Everyday Activities

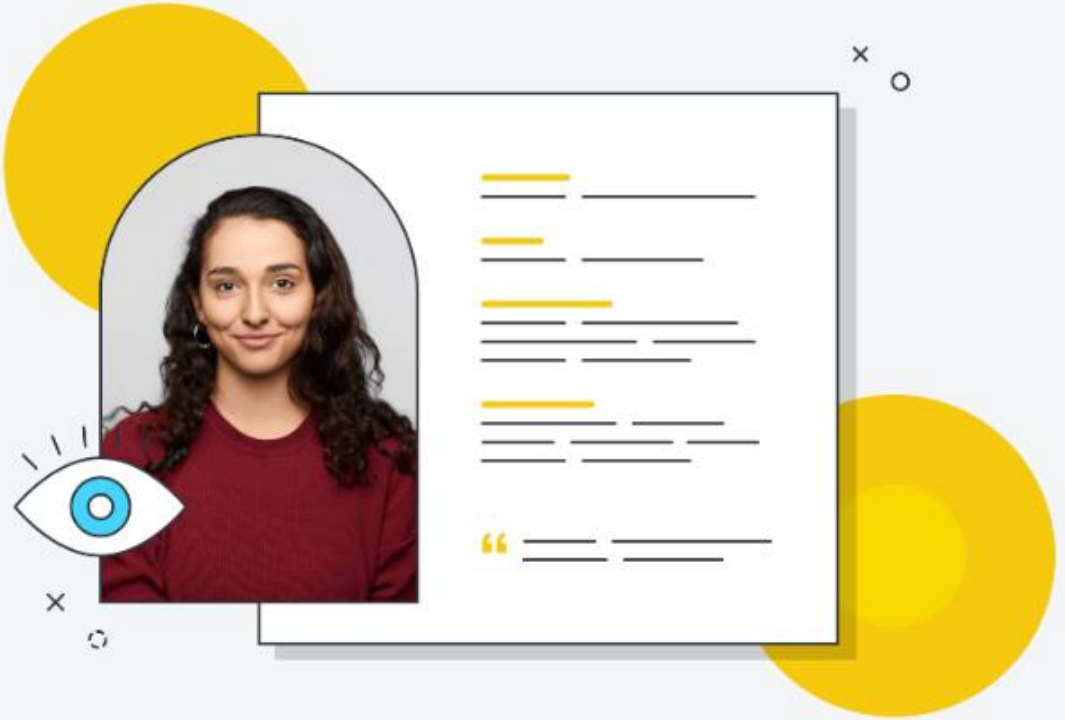
- Get the kids out of bed and get them ready for school in the morning.
- Run errands with the non school-aged kids, shopping, lessons, and pre-school.
- Scheduling playdates and meetings with other parents and friends.
- Changing diapers, cleaning, making lunch, and tons of other small tasks!

Janet's Device and Internet Usage

Desktop devices
Mobile Devices
Social Media
Technical Know-how

Janet's Notable Quotes

- *"I would really love to take a vacation from all of this, especially one where I can spend a little along time with my husband!"*
- *"I've tried things like TripAdvisor, but it doesn't have enough information about activities we can take part in at our destination."*
- *"It would be great to have something I can just keep on me for the whole trip and refer to whenever I want."*



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What are personas

User persona is a fictional character: represent your target users.

Personas are a valuable UX tool, allowing you to better understand and empathise with your target audience.

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What are personas

Personas are usually captured in a document or presentation deck, providing an easily digestible visualisation of your target users.

Personas comprise a mixture of text and icons/graphics and you can give them a face.

1. Name
2. Image (e.g., an illustration, avatar, photo or stock image)
3. Demographic information (e.g., age, gender, family/living situation, employment status)
4. Their needs and goals in relation to your product
5. A summary of their challenges, frustrations and pain points in relation to your product or problem space
6. Quotes from real users whom the persona should represent

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What are personas used for…

- Capture your user research in a digestible and visual format
- Build user empathy and make sure the design process prioritises the target audience's needs
- Steer, inform and justify design decisions
- Enable others to understand who you are designing for

What are the different types of personas

- **Proto** method
  - Based on assumptions (quick)
  - Do not need any new user research
- **Qualitative** method
  - Based on qualitative research, e.g., interviews
  - Involve small-medium sample of users (real data)
- **Mixed** method
  - Based on both quantitative and qualitative research (time-consuming)
  - Involve a much larger sample of users

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Information Architecture and Interaction

If you would like to read more on this specialized subject – and one that is close to my area of research and interests (beyond the scope of this module), have a chat with me.

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