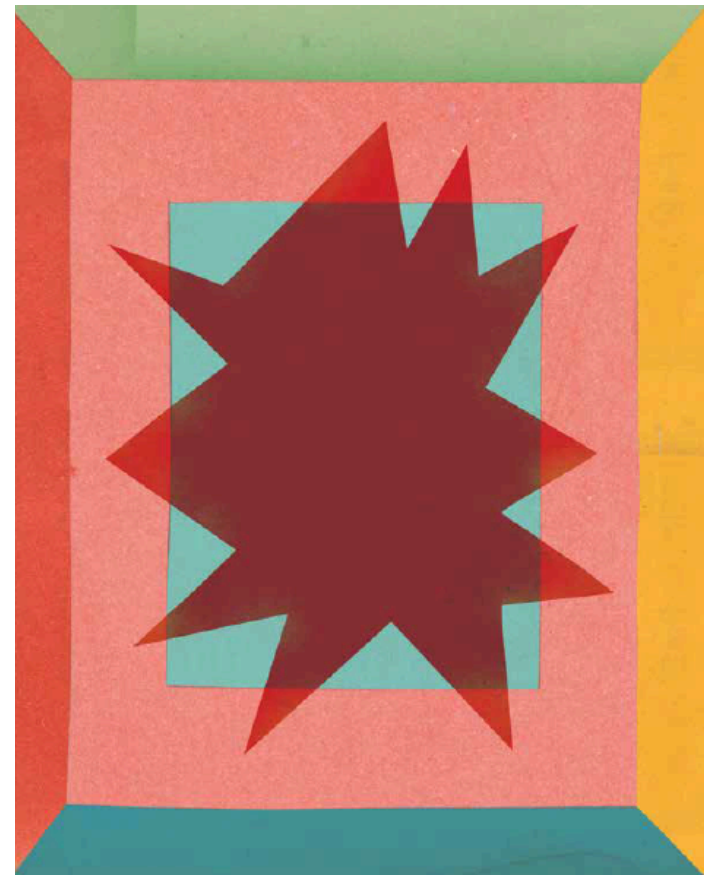


Animations in interaction design

Based on the book

”Designing interface animation”

Written by Val Head



DESIGNING INTERFACE ANIMATION

Meaningful Motion for User Experience

by **VAL HEAD** Foreword by Ethan Marcotte

 Rosenfeld

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- Why animation – CogSci perspective
- Do's & don'ts for animation in interaction design
- Tools for prototyping animation
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- Chapter 3 – Animation in interaction design
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You know more than you think

1. Timing
2. Follow-through and overlapping action
3. Anticipation
4. Secondary action
5. Arcs
6. Squash and Stretch
7. Slow In and Slow Out
8. Exaggeration
9. Straight Ahead and Pose to Pose
10. Solid Drawing
11. Appeal
12. Staging

Why animation in interaction design?

- Reduce cognitive load
- Complement communication through colour
- Grab attention
- Reduce change blindness
- Show hierarchal and spatial relationships
- Guide people through your interface/tasks
- Give personality to your interface
- ...

Animation do's

- User's mental model of the interface
- Guidance/navigation
- Context changes
- Direct & hold attention
- Affordances for interaction
- Interaction affordances
- Previews of effects
- Cue additional actions
- Error handling
- Error messages
- Task confirmation
- Inform on progress
- Demonstrate what user can do in the software
- Add personality to the interface

Mental model of the interface

Help users to create a mental model (even of what is not in view)

- LeapSecond2015: <https://vimeo.com/162715959>

Guidance through interface and tasks

Guiding the user through tasks using animations, to hint at the next step or action to take in a task flow

- Basecamp: <https://vimeo.com/162715964>

Context changes

- Change the content of the screen depending on the context of the interaction (e.g. different types of payment require different information)
- Facebook messenger: <https://vimeo.com/162715965>

Direct attention

Use motion to focus attention on a certain interface element

- Codepen.io: <https://vimeo.com/162721300>
- Fitbit dashboard: <https://vimeo.com/162719982>

Draw attention with contrast in animation

- Tito: <https://vimeo.com/162719988>

Hold attention

Keep visual elements on screen for visual continuity

- Twitter: <https://vimeo.com/162719987>

Interaction affordances

Hinting at interaction through affordances - using animation to show what people can do with the interface

- iOS: <https://vimeo.com/162721526>
- To-Do list: <https://vimeo.com/162721533>

Onboarding

Make users aware of functions they have not tried in a subtle way

- Slack: <https://vimeo.com/162721537>

Preview effect of actions

Use animation to show to preview what will happen (e.g. moving files)

- Google Docs: <https://vimeo.com/162721545>

Cue additional actions

Cue by exposing additional actions (what more can you do in interaction with the interface). For instance: not just add text, but also other media.

- Tumblr: <https://vimeo.com/162721548>

Error handling

Use animation to correct user errors

- TeauxDeaux: <https://vimeo.com/162721547>

Error messaging

Indicate an error or omission using movement (e.g. failed to fill out fields in a form)

- Stripe: <https://vimeo.com/162722757>

Task confirmation

Use animation to confirm that user input was registered and processed

- Wunderlist: <https://vimeo.com/162721551>

Update on task progress

Loader animation to show that the input was registered and is being processed

- Slides: <https://vimeo.com/162723544>
- Stripe: <https://vimeo.com/162723550>

Fit loader animation contextually

- Surepayroll: <https://vimeo.com/162723551>

Demonstrate functionality

Demonstrate functionality (e.g. tour through the software)

- Mailchimp: <https://vimeo.com/162724775>

Add personality

Show personality in the interface

Make it funny (if desirable/fitting)

Stop-motion animation

- Dropbox: <https://vimeo.com/162724786>
- Zappos: <https://vimeo.com/162721302>

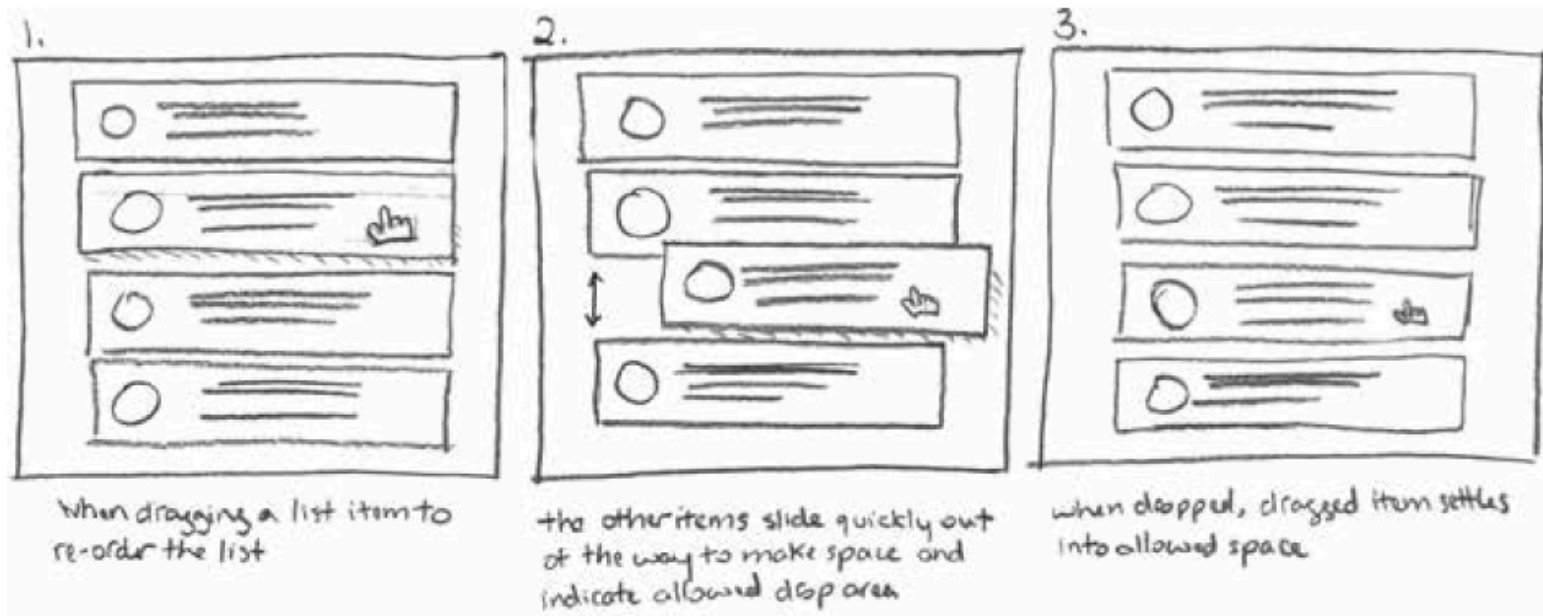
Animation don'ts

- Blocking interaction
- Long tours of the interface
- Loading several animations simultaneously

Tools for prototyping animations

Analogue tools

Sketching and storyboarding using pencil and paper



Lo-fi digital prototypes

Determine if and how animation is helpful to support the task flow

Tools:

- Illustrator/Sketch/Omnigraffle
- Keynote
- Adobe XD
- Principle (only Mac)

Medium to hi-fi digital prototypes

Motion comps to show what the animation would look like: <https://vimeo.com/164275903>

Tools

- Keynote
- Adobe After Effects & Animate
- Adobe XD
- Godot
- Figma
- Principle (only Mac)

Introduction to the exercise

Design assignment

Design and implement animated interface elements for one of the designs from exercise 1 in this course.

Explore different animations for different purposes.

Record screen casts of variations.

Develop a feeling for details

Reflection on designing animations

Where and how should you use animation in the interaction design?

Betygskriterier för portfolio

- Kronologiskt redogöra för planering och genomförande av de tre uppdragen genom att visa utdrag ur skissning och prototypningsarbete.
- Demonstrera utforskning av designrymden utifrån användarnas perspektiv.
- Redovisa en passande designlösning (praktiskt, estetiskt och tekniskt) i förhållande till probleminramningen.
- I den tillhörande reflektionen besvara frågorna på nästa slide.
- För Väl godkänt ska portfolion dessutom visa på god (a) praktisk kvalitet, (b) estetisk kvalitet, och (c) teknisk kvalitet.

Frågor för reflektion

1. Var i designprocessen fattade du designbeslut med begränsad information? Ge ett par exempel.
2. Vilka skissnings- och prototypningsmetoder har du använt i designarbetet? Motivera varför. Relatera ditt svar till Vallgård & Sokoler (2010), Löwgren (2016), och Chevalier m.fl. (2016).
3. Vilken roll spelade dina olika skisser och prototyper i utforskningen av designrymden? Relatera ditt svar till Botero m.fl. (2010), Dove m.fl (2016), och Westerlund (2005).
4. Vilken roll spelade de olika skisserna och prototyperna i utforskningen av olika bruks-/upplevelsekvaiteter? Relatera ditt svar till Arvola & Holmlid (2015).
5. Hur vidmakthåller eller ifrågasätter ditt designarbete samhällliga normer?
6. Var i designarbetet var din egen kompetens och kunskap en begränsande faktor, och hur skulle du framgent kunna utveckla din kompetens och kunskap i de områdena?

Litteratur

- Chevalier, F., Riche, N. H., Plaisant, C., Chalbi, A., & Hurter, C. (2016). Animations 25 Years Later: New Roles and Opportunities. In *Proceedings of the International Working Conference on Advanced Visual Interfaces (AVI'16)* (280-287). New York: ACM.
DOI: <https://doi.org/10.1145/2909132.2909255>
- Head, V. (2016). [*Designing interface animation: Meaningful motion for user experience*](#). Brooklyn, New York: Rosenfeld.
- Google. (n.d.). Understanding motion: Motion helps make a UI expressive and easy to use. In Material Design. <https://material.io/design/motion/understanding-motion.html>

Conclusions

- You know more than you think
- Why animation – CogSci perspective
- Do's & don'ts for animation in interaction design
- Tools for prototyping animation
- Topics for your reflections

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