Introduction to Medical Illustration
PLME 0400

Week 4
Day 1

Texturing
Simplify, simplify...

- Volumes, shadows and light (weeks 1 and 2)
- Volume *rendering*
  - Gray tones v. pen and ink
  - “Back of the envelope” (drawing on the fly)
  - Shading techniques and other tricks
Outlines

• Use different thickness lines
  – Wide for contours (marker)
  – Finer for inner details (pen)
Outlines

• Use different thickness lines
  – Fine lines close to the light
  – Thick lines away from the light
Outlines

• Suggest transparency
  – Fine lines for hidden objects
Outlines

• Suggest transparency
  – Fine lines for hidden objects
  – Unshaded hidden objects
Outlines

• Suggest transparency
  – Fine lines for hidden objects
  – Unshaded hidden objects
  – Incomplete lines for hidden objects
Outlines

• Suggest transparency
  – Fine lines for hidden objects
  – Unshaded hidden objects
  – Incomplete lines for hidden objects
  – Graying out for hidden objects
White is a color

- Not everything has to be shaded
  - Anything “light” can be white
  - Maximize contrast

Christoph Niemann
White is a color

- Not everything has to be shaded
  - Anything “light” can be white
  - Maximize contrast
Shading techniques
Shading techniques

• Depends on
  – Medium (pencil, pen, felt-tip, chalk, marker, paint)
  – Color v. black
  – Purpose
Shading techniques

• Depends on
  – Means of reproduction
    • Black-and-white is cheaper than full-color
    • Black-and-white is easier than gray-scale
Shading techniques

- Basic styles
  - Dots (stippling)
Shading techniques

- Basic styles
  - Dots (stippling)
  - Hatching
    - Crosshatching
Shading techniques

• Basic styles
  – Dots (stippling)
  – Hatching
    • Crosshatching
    • Contour v. straight
Shading techniques

• Basic styles
  – Dots (stippling)
  – Hatching
    • Crosshatching
    • Contour v. straight
    • Basket hatching
Shading techniques

• Basic styles
  – Dots (stippling)
  – Hatching
    • Crosshatching
    • Contour v. straight
    • Basket hatching
    • Woodcut
Shading techniques

• Basic styles
  – Dots (stippling)
  – Crosshatching
  – “Eyelashes”
Shading techniques

• Basic styles
  – Dots (stippling)
  – Crosshatching
  – “Eyelashes”
Shading techniques

• Basic styles
  – Dots (stippling)
  – Crosshatching
  – “Eyelashes”
Shading techniques

- Basic styles
  - Dots (stippling)
  - Crosshatching
  - “Eyelashes”
Shading techniques

- Basic styles
  - Dots (stippling)
  - Crosshatching
  - “Eyelashes”
  - Snodgrassing*

*Robert E. Snodgrass
Shading techniques

• Basic styles
  – Dots (stippling)
  – Crosshatching
  – “Eyelashes”
  – Snodgrassing
Shading techniques

• Combine styles
• Rich texture
  – Wall Street Journal “hedcuts”
Shading techniques

• Combine styles
• Represent different textures
Shading techniques

• Combine styles
• Represent different textures
  – Fluffy objects
  – Cross-sections
Shading techniques

• Combine styles
• Render imperfections
  – Random dots and squiggles

Jean Giraud (GIR, Moebius)
Shading techniques

• Combine styles
• Watercolor, “organic”
• Sharp, hard lines, “artificial”
Shading techniques

• Combine styles
Shading techniques

- Basic styles
Shading techniques

- Basic styles

- Right subclavian artery
- Right carotid artery
- Left carotid artery
- Left subclavian artery
- Brachiocephalic trunk
- Aortic arch
- Pulmonary artery
- "Eyelashes"
- Cross-hatching
- Graded cross-hatch
- Graded dots
- Woodcut style
- Graded basket weave