09 Upcycle specs, Perspective sketching

Monday, February 4, 2019   1:03 PM

Today

Upcycle specs
Sketching: Intro to perspective, boxes

- Meow Wolf
  Tue, Feb 5
  VAC 1B20 Auditorium, 6:00 - 7:30 pm
  Free and Open to the Public
  Students and researchers from all majors and fields are welcome

- Office hours Today, 3 pm ECME 220
- Blog this week Upcycle Inspiration

(handwritten notes)

The feedback
I gave Sunday

feedback I got

8% A Very Useful
57% B ~ useful
29% C only +
11% D didn't do it

→

11%
40%
23%
D did't read it 20%
E didn't get any 6%

Upcycle Presentations

In class next week, all three days, we will have presentations in pods, groups of teams. These will be the pods for the rest of the semester too, so remember your pod assignment, given in Lecture 08 notes. Your pod will have an assigned facilitator/timekeeper/session chair to keep things moving along (Volunteers please email me). Locations for the presentations will be in conference rooms and classrooms in the EC with projectors or screens; I'll let you know soon.

Each student will give a presentation on their Upcycle project, with the content of the presentation to mirror the written report, detailed below. You can choose to bring your physical artifact to your presentation or not, although I recommend you bring it; everyone will want to admire it. Plan to talk for 9 minutes, then take 2 minutes for Q&A, then one minute for the next speaker to get set up while others are commenting. This way 4 students can speak each period. The order of speakers will be set by who volunteers to go next, but if desired your pod can decide to set an order.

 It's up to you to make sure your computer works with the projector. If it doesn't work, be prepared to have a backup on a thumbdrive to show on somebody else's laptop or speak without it. DO NOT depend on downloading or showing your presentation in a browser; everybody will be online so there won't be enough bandwidth.

Say Thank You at the end of your talk. Do NOT say 'Any questions' right away; wait until after the applause. Then ask for questions. It's magic. It completes the rhythm of the talk. Allowing applause sets the audience free to ask.

Plan to have a teammate video your talk on your phone or camera, to add to your posted report. Yes, **this is required**. If your video turns out awful for some reason, you may re-record your talk afterwards and post that. I recommend you test your setup in advance. Title it, then upload to Youtube or Vimeo.

Everyone is expected to bring a laptop or other online device to comment on your podmates' presentations, live in class. **Even on the days you are not presenting, you must attend and comment**. This is another opportunity to hone your critique skills.

Upcycle Reports/Blog

- Title/blog spaceholder due noon Monday Feb 11, so your pod can comment on it during your presentation. Complete report due as blog post, midnight Weds Feb 13.
- Set a Featured Image.
- OK to cut and paste from Inspiration, Progress and Process Reality posts.
- Describe and **cite** your inspirations and any existing designs that you adapted. *You must cite ALL content on your blogs for this course! Any photo that you did not take, any text that you did not write MUST have a citation, a source link. If you can't remember where you got something DON'T USE IT. Go back and search for something similar that you can cite. Please go back and correct your first three posts ASAP.*
- Describe your vision for your project, the specifications that you developed for its function *and its form, (your artistic vision)*. What were you trying for?
- Describe your actual design process vs ideal. Compare to your design process graphic. Can you create a new graphic that would be more descriptive? For example, are there stubs, dead ends? Did it seem more linear than iterative, loopy?
- Add any other useful details to a description of the final artifact and how you made it. Document with lots of photos or video.
- Compare what you achieved to your FUNCTIONAL goals.
- Compare what you achieved to your ARTISTIC goals. This your aesthetic, your metric.
- What is next? Will you refine this artifact? Keep it, recycle it, try again someday?
- Include a link to the video you made of your live presentation. If you want this to appear with a play button instead of a Featured Image, insert the link to your video (upload to YouTube or Vimeo) as the first text in your post, and set your post type to Video.

One, Two and Three Point Perspective

2.1 INTRODUCTION

We asked several non-designers to simply 'draw a chair' in perspective, with no specific purpose for the drawing. You will of course recognise a chair in all the drawings, but it is obvious that these drawings were made by people untrained in drawing, who are not designers. What is the striking difference between drawings by designers and non-designers? Non-designers in general will focus on a 'story', an archetype perhaps, or a history: this is a chair that I have, remember, know, etc.

A designer's drawing, however, will always have a specific purpose, and will in a lot of cases be about communicating an idea. Like a language, different rules apply to drawings that 'communicate'.

The designer is able to analyse, and can make a distinction between the overall shape and details, and will make a deliberate choice on where to put the emphasis in his drawings. In the concept phase, just after ideation, for example, the overall shape will probably need to be communicated in a clear way. To do so, a so-called 'informative' viewpoint is chosen, and aspects such as guidelines and shading are used.

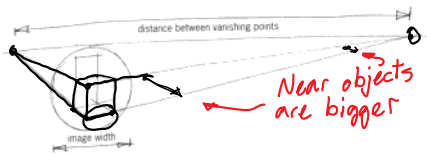**Drawing of chairs** by none-designers of various age and gender
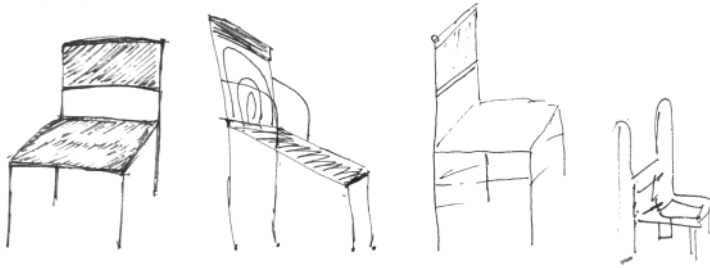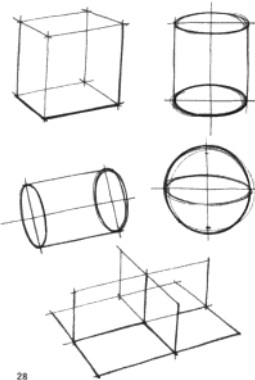
In the following chapters we will show a drawing method that will lead to informative, shape explaining drawings. In this chapter a quite bold division between shapes (products) is made by means of how they are drawn:

- starting with a block shape
- starting with a cylinder or cone
- starting with a sphere
- starting with a plane

In each of the above, the necessary aspects of lines, shading, colour and drawing materials will be explained.
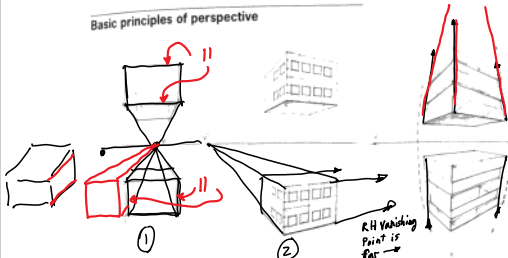
We have c⋯ this division for specific reasons. O⋯se, not every situation can be desc⋯ in such a bold way; a mixture of a⋯aches will eventually be more realistic. But it is a simple way to start with learning how to analyse and ⋯ shapes. Learning how to draw spatially ⋯ implementing it in design work are sure⋯ two different things at the beginning of ⋯ studies.

3D cue, one of many: Vanishing point *(handwritten)*

distance between vanishing points

image width

Near objects are bigger (handwritten)

Basic principles of perspective

|| (handwritten)

① ②

RH Vanishing Point is far → (handwritten)

0 perspective — Central perspective
2 point perspective
3 point perspective (exaggerated)

0 perspective — Central perspective. All parallel (||) lines are || (handwritten)

This drawing method requires no horizon and vanishing points on the paper. The reason for this is that in order to appear 'realistic' (without distortion), the vanishing points of a shape need to have a distance between them that is approximately 5 times the image width. In the case of a chair, for example, this means that the drawing will be very small in relation to regular paper size or needs a very large piece of paper.

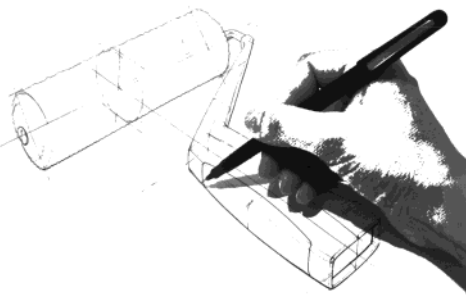Among the several 'kinds' of perspective, such as central perspective, 2-point perspective with 2 vanishing points, and 3-point perspective, we will mainly draw in 2 point perspective. This means that the vertical lines will have no vanishing point, no convergence, and therefore no foreshortening. This will ease things dramatically, while still maintaining a realistic appearance. In reality we will more or less perceive or notice objects having 2-point perspective, but if you take a picture of a product, you can immediately see 3-point perspective. Seeing with your mind instead of with your eyes explains this difference in perception.
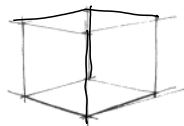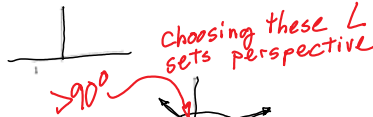
As for the actual drawing itself, the main guidelines can be described as follows:

- Use long lines and draw with a definite medium such as a fineliner. A pencil and eraser will tempt you to keep erasing things and will not train you to be resolute in your decisions.
- Draw in a 'transparent' manner; for example, draw the lines of the main shape that you do not see. These lines will guide you regarding control and correction of the perspective and shading.
- Choose an informative viewpoint (See also Chapter 3)
- Start the drawing with a large basic shape, and work your way down to the details; save the details till last.
- Drawings are preferably in a size related to your hand size, preferably bigger and not smaller.
- Use guidelines; they not only enable you to draw easier, but they will also make the drawing more comprehensible (readable) for the viewer.

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Traditional Engineering Graphics = Orthographic views, or 45 degree perspectives

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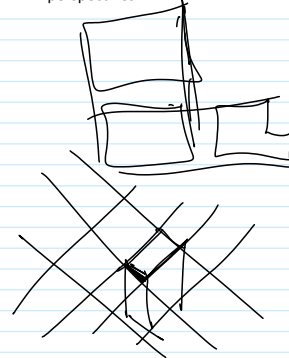
Look at a horizontal rectangular object (book, phone) with one eye. Observe how the apparent angle of the corner changes as you rotate the object around a vertical axis. The near corner appears always > 90 degrees. Then observe how the apparent angle of the near corner changes as the object is moved from eye level down to the floor.


Choosing these L sets perspective (handwritten)

>90° (handwritten)

These point to R.H. vanishing point (handwritten)

Stronger convergence — almost || (handwritten)

These Point to L.H vanishing point (handwritten)

Deliberately unequal angles are chosen to avoid the front and back verticals of the cube from overlapping one another.

The lines to the left converge more than the lines to the right, owing to the shorter distance to their vanishing point.

The cube is drawn, starting with a horizontal guide line, a vertical and two lines that will determine the viewpoint.

In an informative drawing, a realistic amount of perspective convergence is chosen.
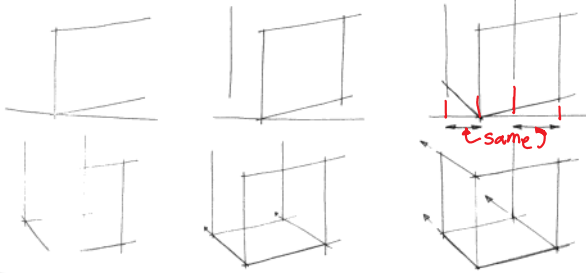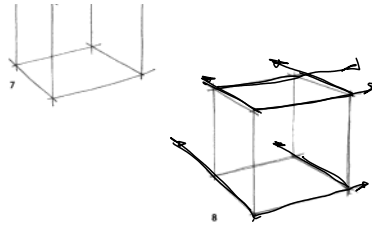
After the bottom surface is completed, use the other perspective lines as a guide. A back vertical and the top surface are drawn last.

1 2 3 4 5 6 7

Point to L.H
vanishing point

7

8
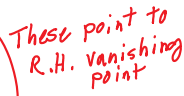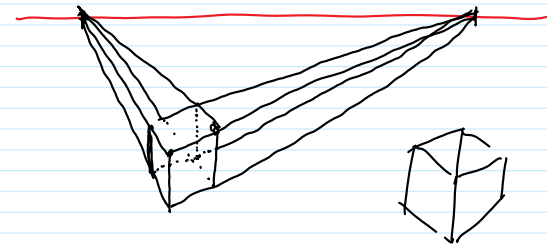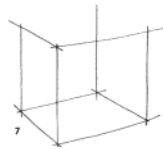
There are of course
more ways to draw
a cube; another way
is shown here. In this
sequence, there is
an emphasis on the
placement of the
verticals. The placement
of the back vertical is
based upon the principle
indicated with the added
arrows. These dimensions
are of unequal size, as
illustrated on the next
page.

(same)

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