

22.05.20  
Life Drawing  
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Dear Core members,

Hope this handout reaches you well and healthy during lockdown. For today we have a great lesson on foreshortening! Hope you will find it interesting and useful. I look forward to seeing your results 😊

All the best and hope to see you all soon. Take good care,

Noel

### **What Is Foreshortening?**

Foreshortening in art refers to the way we perceive an object as it recedes in space. It is perhaps best explained visually. Take a moment to do the following:

- Place your arm in front of your body, bent at the elbow so that your forearm aligns with your chest (refer to the photo below on the left). Observe the length of your arm, from elbow to fingertips. This is an example of limited foreshortening.
- Now, extend your arm straight out in front. Notice how, from this perspective, your arm appears compressed. The perceived distance from the bottom of your elbow to your top finger does not reflect the *actual* length of your arm. *This* is an example of extreme foreshortening.

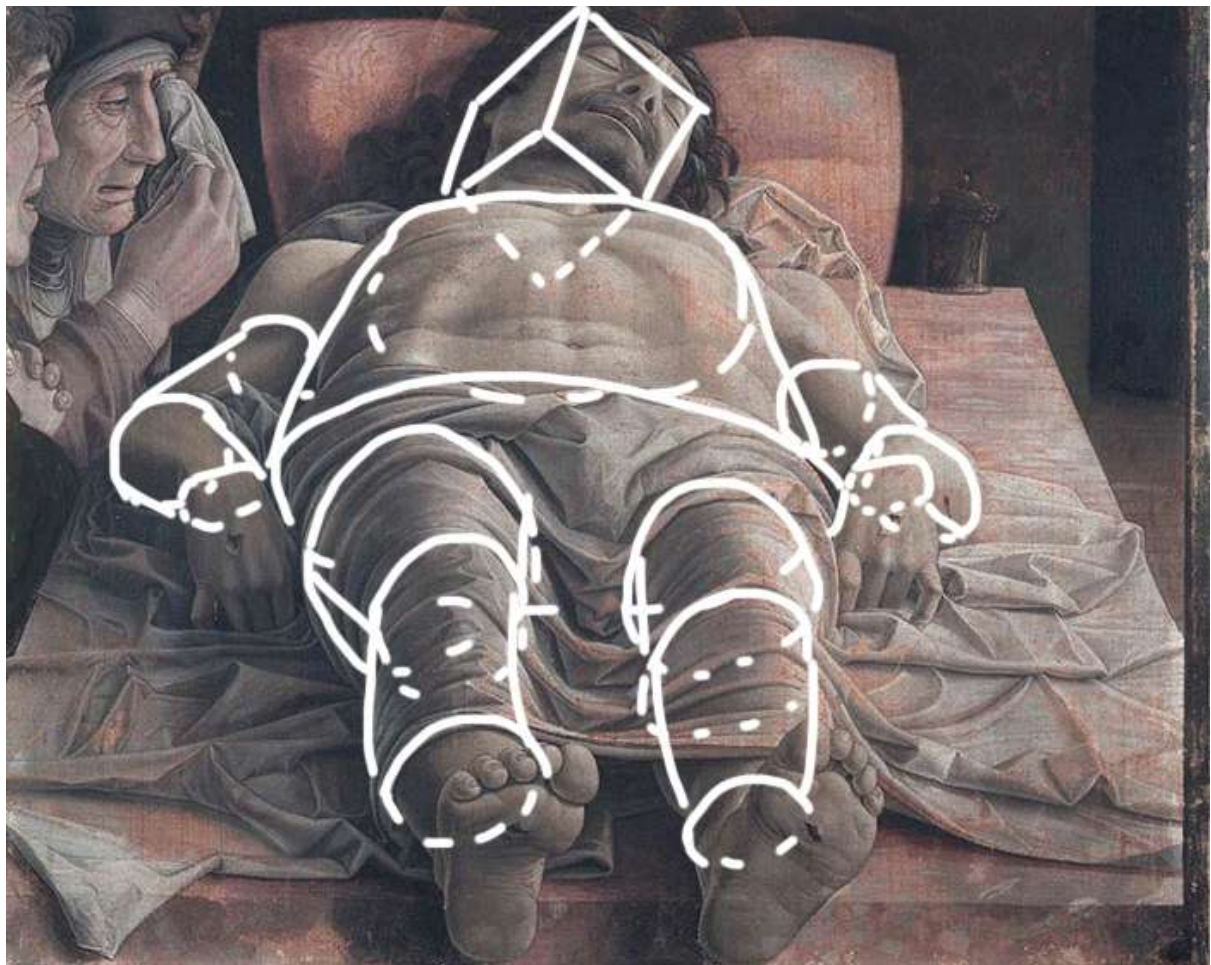
The photos below are examples of what you should see, modeled by yours truly. On the left: limited foreshortening; on the right: extreme foreshortening.



You will be dealing with some extent of foreshortening whenever you paint a three-dimensional object in space. In that sense, it is a rather general term. But it is typically only used to describe more extreme cases, such as the painting below:



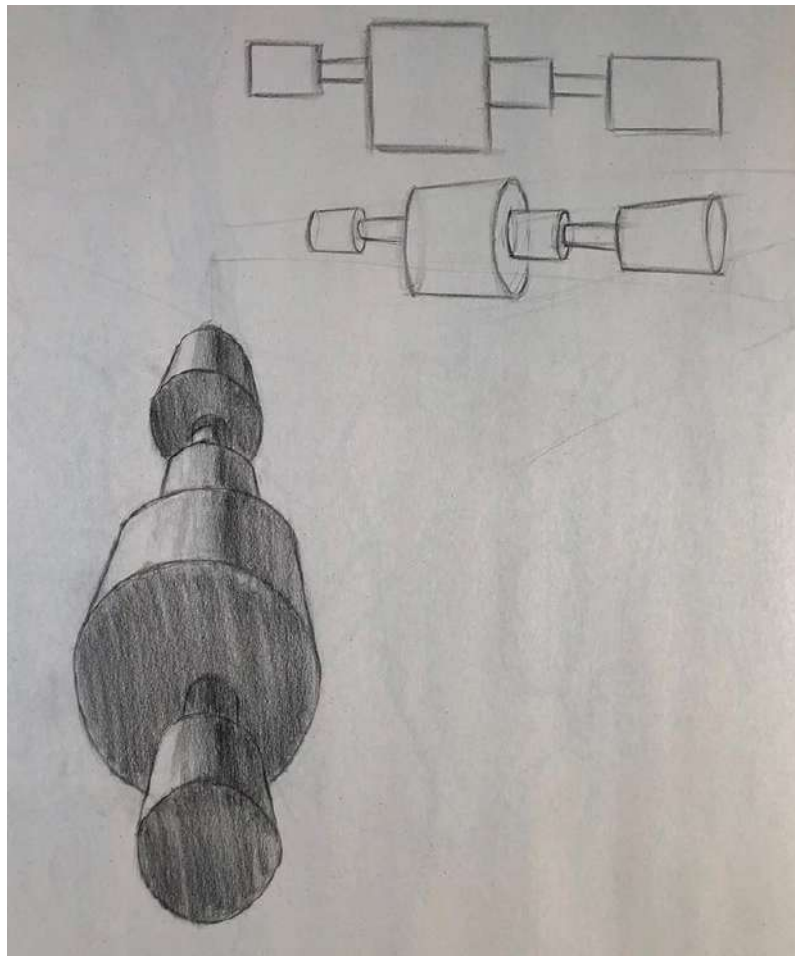
Andrea Mantegna, The Lamentation over the Dead Christ, c.1480  
You can see the effects of foreshortening in my draw-over below, including overlapping and compressed shapes. But more on that in the next section.





Below is another example from my sketchbook. It depicts a shape arrangement at varying degrees of foreshortening. The shape in question is a series of connected cylinders.

At the top is the shape without any perspective; it is two-dimensional or flat. In the middle is the shape at a slight angle with slight foreshortening. At the bottom is a rendered version of the shape with extreme foreshortening. Remember, the three individual drawings depict the same shape from different perspectives.



#### Effects of Foreshortening

Here are the main effects of foreshortening:

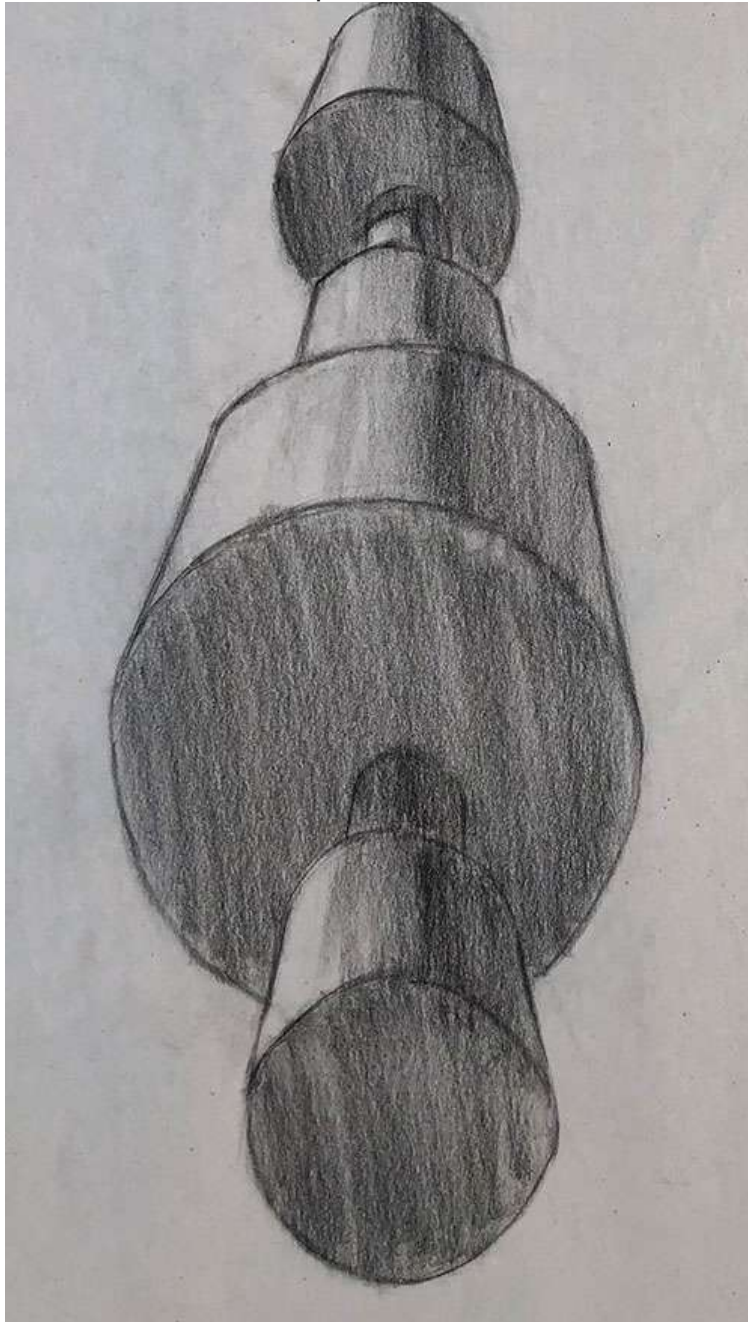
1. Objects appear to get smaller as they recede into the distance.
2. Objects appear to be shorter or more compressed than they actually are.
3. Objects at the front will overlap objects behind.

The extent of these effects will vary based on the extent of the foreshortening.

Going back to my drawing example (below), notice how:

1. The shapes get smaller as they recede into the distance. If the shape continued, it would eventually converge at a single point on the horizon line (vanishing point).

2. The shape appears shorter than it actually is.
3. The sections at the front overlap the sections at the back.



#### The Mathematics Behind Foreshortening

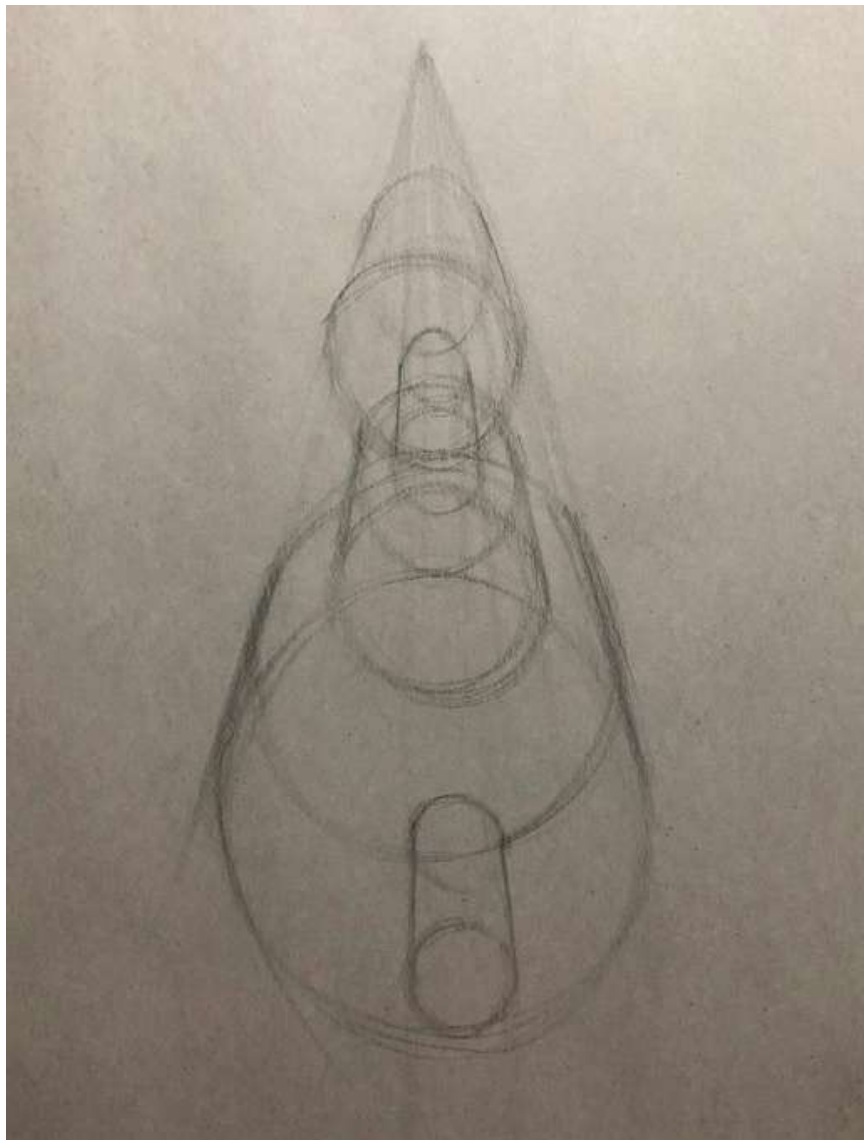
As with any matter of perspective, foreshortening can be as complex as you want to make it. The effects of foreshortening could be determined with absolute certainty through mathematics, but where is the fun in that? *Artists do not need to be perfect, we just need to be convincing (unless your audience is full of esteemed mathematicians).*

#### Foreshortening Tips

Here are some tips for rendering a foreshortened object:

**Where is the object in space?** Understanding the object's position in space relative to your own position is essential for accurate foreshortening. Ask yourself: *Is the object coming back at me, away from me, up, down?*

**Use perspective lines (lines that extend from a single point on the horizon line).** You can use these lines to determine the relative size of objects as they recede into the distance. You can see the rough perspective lines I used for my shape drawing below:



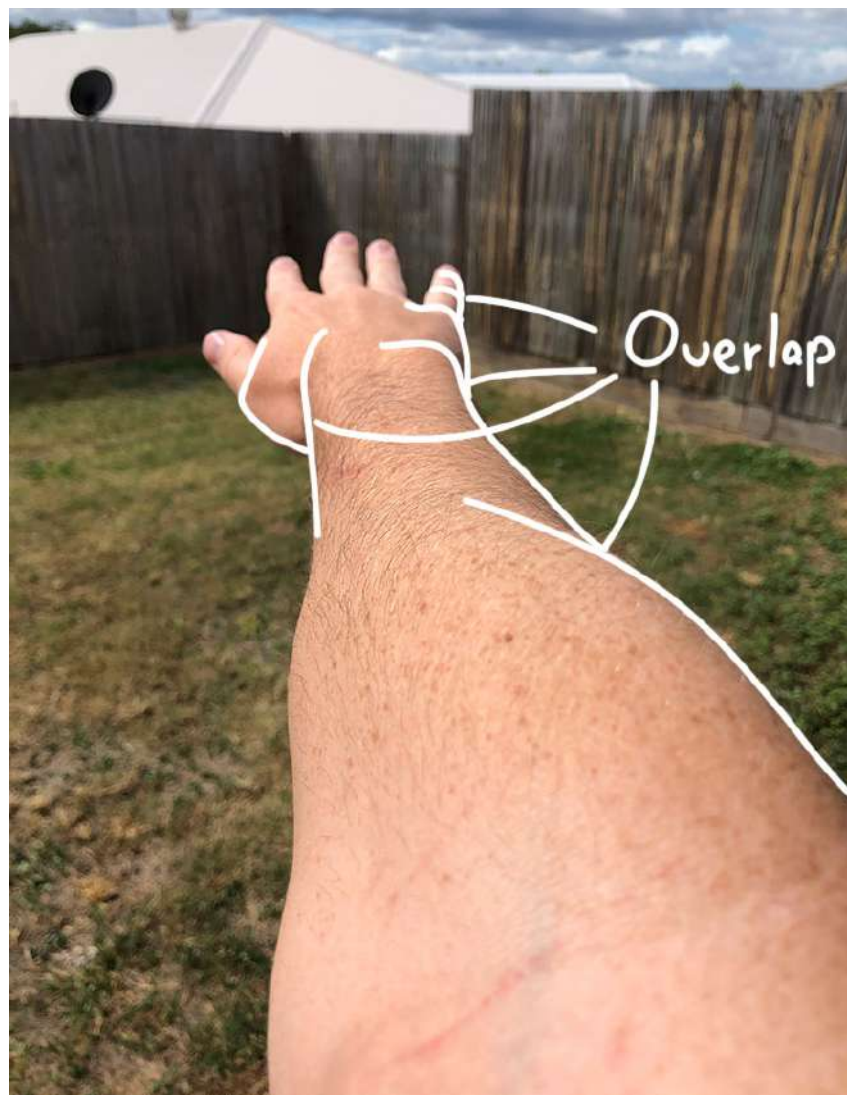
**Look for basic, overlapping shapes.** Foreshortening is easier to comprehend if you break the object down into basic shapes. Steve Huston refers to it as "box logic". Seeing the object in this way will help you understand how the shapes overlap and are positioned in space.

*What would you see if the object was made up of boxes, spheres, cylinders, and cones?*

**Draw *through* the object.** Imagine the object is transparent. Allow your pencil to draw *through* the object, following the contours over, under, and around. This will help you better understand the form of the object and how it is positioned in space.

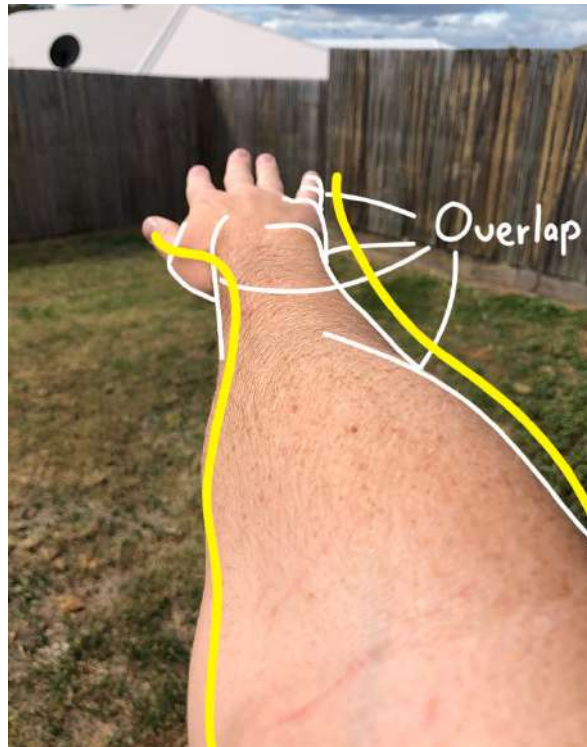
**Edges and contours.** What are the important edges and contours? Some edges are more important than others. It can be effective to narrow down on those important edges and accentuate them.

**Continuity.** Foreshortening typically comes with many overlapping shapes and therefore many broken edges. This can interrupt the sense of continuity throughout the object as a whole. You can see what I mean in white below:



To add a sense of continuity throughout the arm, you could pick up some of the long, sweeping lines that follow the gesture of the arm (indicated in yellow below). These lines help connect the dots so to speak.





Below is another example by Leonardo da Vinci. Look at the bottom hand: notice how the overlap between the hand and forearm breaks up the inside edge. The other side of the arm, however, has a continuous edge that connects the forearm, hand, and fingers.



Leonardo da Vinci, Study of Hands

**Exaggerate or understate.** You could push the drama and distortion by exaggerating the effects of foreshortening. Or you could go the other way and understate the effects, giving your artwork a flat and cartoonish feel.

### Foreshortening Exercises

The best way to learn and understand foreshortening is to sketch it out. Theory will only take you so far. You need to train your hand and eyes to see objects in perspective. Here are some basic exercises you can do:

- Draw simple shapes in extreme foreshortening.
- Draw multiple overlapping shapes in extreme foreshortening.
- Draw the same shape at varying degrees of foreshortening (like my drawing at the start of this post).
- Draw over master artworks that demonstrate foreshortening.
- Practice using perspective lines and one-point perspective to draw shapes at relative scale.

You do not need to be perfect with these exercises. Rough sketches are fine. Below are some examples from my sketchbook:

