Through The Lens

A guide to digital photography for computer enthusiasts.
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Focal length compression – what it is and what it isn't

by Lynda Buske

While we often hear that focal length compression is caused by the use of a telephoto lens versus a wide-angle lens, it is actually only related to the distance you are from the objects of interest. If you are the exact same distance from an object and take a photo with both a wide angle and a telephoto lens, there will be no compression effect, although you will have to crop the wide angle to have the same framing. See example images below.

Wide angle lens (9.1mm)

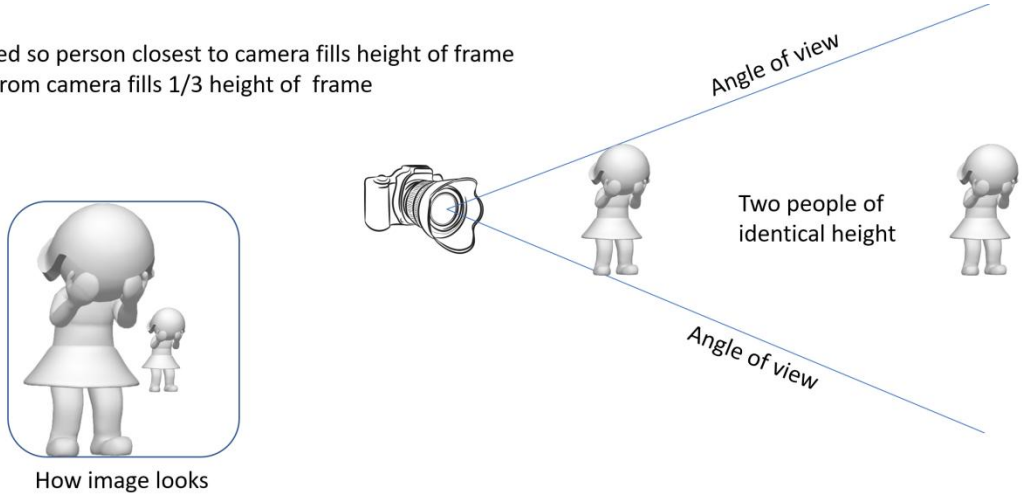
Slight zoom (27mm) but taken from same position

Wide angle cropped to match zoom shot. No compression visible

Taken much further away with a long focal length (60mm). The rear silver car appears much larger and closer to the black car than in the above photos. This is the compression effect. Note also how close the stop sign appears compared to wide angle shot where it is too far back to even be in the photo!

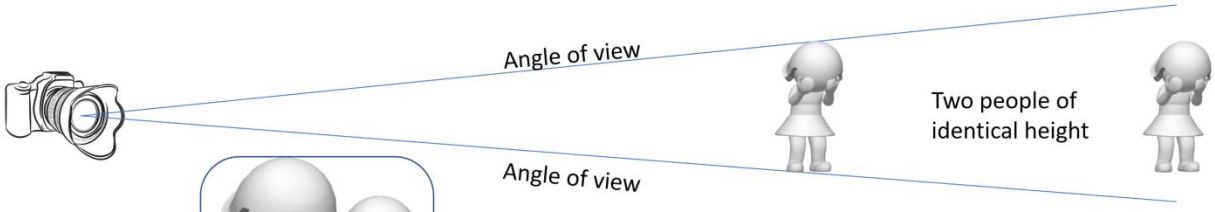
Schematic of the phenomenon below:

Wide-angle lens
- Camera positioned so person closest to camera fills height of frame
- Person furthest from camera fills 1/3 height of frame



How image looks

Telephoto lens
- Camera moved back to fill frame with person closest to camera
- Person furthest from camera fills 3/4 height of the frame



How image looks