The bilateral filter in OpenCV, applied using **cv2.bilateralFilter**, is a bit more complex compared to Gaussian or median blurs. This filter smoothes images while keeping edges sharp, but if you want it to return the original image without any filtering effect, you'll need to set its parameters in a specific way:

1. **Returning the Original Image**:
   * **Diameter**: Setting the diameter to 1 will effectively turn the filter into a non-operation, as it will only consider a 1-pixel neighborhood around each pixel.
   * **SigmaColor and SigmaSpace**: When the diameter is set to 1, these values become irrelevant because the filter doesn’t extend to any neighboring pixels. However, if the diameter is larger than 1, you can set **sigmaColor** and **sigmaSpace** to very small values (close to zero) to minimize the effect of the filter. But remember, as long as the diameter is greater than 1, there will be some degree of filtering.
2. **Parameter Range**:
   * **Diameter**: An integer representing the diameter of the pixel neighborhood. The larger the diameter, the more pixels are included in the computation, leading to more extensive smoothing.
   * **SigmaColor**: A float representing the filter sigma in the color space. A larger value of **sigmaColor** means that more colors in the neighborhood will be mixed together, resulting in larger areas of semi-equal color.
   * **SigmaSpace**: A float representing the filter sigma in the coordinate space. A larger **sigmaSpace** value means that farther pixels will influence each other, as long as their colors are close enough.

So, to ensure the bilateral filter returns the original image, you can set the diameter to 1. The