


The Nature of Bokeh: Quality and Types of Bokeh in Photography

Whenever discussions or articles are presented that examine image quality, there are many common areas to look at, including sharpness, size, composition, color accuracy, and much of this has been covered ad infinitum in books, magazines, online communities and forums, as well as in the blog-o-sphere at large. On the other hand, bokeh is a subject that is often glistened over and described in vague terms as the nature of your background areas that are out of focus. This article will look at what bokeh is both in general terms, and at specific types and qualities of bokeh as it relates to image quality. So, let's start with an overall explanation of what bokeh is and how to identify it in your images.

Bokeh, or more accurately “bokeh-aji¹” comes from Japanese origin, and has a symbol that looks like this:  (courtesy of [Bob Atkins Photography](#)). When translated from the symbolic to English, we get roughly the term “boke” or “bokeh” which has a loose translation of “fuzzy”. In a general sense, this does refer to the out of focus area, but if you start looking carefully, you can see that different lenses render the background differently. This is because different lenses use blades of different types and lengths to control aperture settings.



If you were to take the 18-55mm lens from Canon and compare the blades in that to those of the 70-200mm, you would find that the blades in each are very unique. As a result, the bokeh that is produced is equally unique. Those unique characteristics define the type and quality of your bokeh.

While all backgrounds will have a general circular pattern that can be detected across the entire range of the out of focus areas, the value of “good bokeh” can be seen pretty quickly. It is helpful to mention two important caveats here. First, the terms “good bokeh” and “bad bokeh” can be pretty subjective (Who's to say what's good or bad?). Second, given that the nature of bokeh can lend itself toward many implementations, what may be “good” for one situation may be “bad” for another and vice versa. However, in general terms, when we want the background thrown out of focus, we don't want to see any sharp lines or jaggedness in the blending and transitions from one color or shape to another. So, what is generally considered “good bokeh” and “bad bokeh”? A couple characteristics have already been mentioned, and the following is most definitely not an exhaustive list, but these are some of the characteristics of both good and bad bokeh in general terms:

<u>Good Bokeh</u>	<u>Bad Bokeh</u>
Blades open and close smoothly without sticking	Blades stick or otherwise do not open and close smoothly
More blades are used to control aperture size	Fewer blades are used to control aperture size
Gradual color blending through the background	Little or no blending in color transitions through the background
Objects in background are indiscernible or do not detract from the focus of the image.	Background objects are easy to identify and/or detract from the focus of the image.
The circular objects produced by the aperture blades have few lines and the circle itself is mostly curved.	Circular objects produced by the aperture blades have lines and look more like polygons than circles, with little curvature.



If you think about these characteristics of good and bad bokeh, there is one key element that the quality can be traced to, and that is the number of blades used. As more blades are used to control aperture, the smoother the curvature of bokeh circles will be. As the circles become smoother, the colors and objects of the image background will also transition more smoothly.

Again, while generalizations are to be made with caution, as a rule of thumb, more expensive or “professional” lens assemblies will have more blades used in their construction. As a result, the higher the lens quality, the better the quality of bokeh you will get in your images. This is another reason why lens quality ranks higher than body quality in terms of gear selection. Bodies may come and go, but the best place to invest your money is in the glass. Not only will you produce sharper images, and across a wider range of sharpness, but you will also produce images with a better quality of bokeh.



This can also be helpful in evaluating lens quality when making purchases. When looking at sample images released by the manufacturer or other photographers, it’s a good idea to not just look at image sharpness, but also at the nature and type of bokeh, as this can have just as much of an impact on your pictures as sharpness, megapixels, or anything else. So, the next time you get involved in technical gear discussions, and someone starts bragging about their MP count, sensor size, and/or quantity of gear, stop them and say, “Yeah, but what kind of bokeh do you get?”