

of the question as it manifests, being possible in one person, may possibly exist in others, and we wish to set it right for the sake of those whose practice our teachings may influence. In the leader in our contemporary to which we have referred, a similar misconception is manifest. It says:—"We confess that we had understood, from some notices of lenses which have appeared in our contemporary's columns, that with him 'sharpness' was a *sine qua non*. We are glad to find that we have been mistaken." Why it should be matter of gladness to the writer in question that we should, as he fancies, disregard sharpness, we cannot divine. We should be very sorry to be mistaken, and sorry to admit any such disregard for the quality in question; we should also conceive ourselves guilty of grave error if we taught that sharpness was not a good quality in a lens, and fine definition not a good quality in a picture.

Let us, then, not be misunderstood: we consider sharpness a good quality, and should always secure as much of it in a photograph as consistency with pictorial beauty will permit. But there are three things which govern this question of sharpness, and regulate the amount of it possible and suitable under various circumstances. These three things which govern the question are:—Optical laws, the nature of the subject, and the size and character of the picture.

*First. Optical laws.*—There are some subjects in which perfect sharpness throughout would be an advantage; but much as we may love sharpness, we cannot have it in all cases throughout the picture. We can only have perfect sharpness on one plane, and the more perfect we have it on that plane the more hopelessly wanting in sharpness many other planes become. The question, then, arises: How will we have our sharpness; concentrated—a little very perfect indeed in one plane, or less concentrated and spread over several planes? Of two evils, we choose the least; and if—especially in portraiture—we can get all planes moderately well defined, we prefer this to one plane microscopically sharp, and all others not merely very imperfectly defined in fact, but looking still worse by contrast with the limited plane of extreme sharpness. For some subjects, and where the optical conditions will permit it, we prefer perfect sharpness; in copying maps, engravings, &c., having one plane, perfect sharpness is desirable; in some interiors, &c., where the use of small stops will give sharpness over many planes, and the long exposure consequent upon their use is not a serious evil, we prefer a considerable amount of sharpness.

*Second. The nature of the subject.*—Much as we prize sharpness, there are some subjects in which, even if it were possible to obtain it over every plane, we should consider it an evil, at least in a pictorial sense. In the portrait of a person strongly marked with freckles, deeply pitted with smallpox, or seamed and furrowed with deep wrinkles, &c., we prefer a slight loss of sharpness, and such a softening and blending of the inequalities of the skin as shall, without entirely erasing them, remove the effect of hideous exaggeration which their microscopic definition in a picture in black and white always produces. There are few faces, except those of blooming youth, in which microscopic definition of texture, even if possible in every plane, is desirable in a pictorial sense.

*Third. The size and character of the picture.*—It is manifest that sharpness is a relative term, and its exact meaning must be governed by the object to which it is applied. That which is sharpness in a hatchet would not be sharpness in a razor; yet both may be sufficiently sharp without being equally sharp. So in pictures. A standing card figure may be as sharp as possible; and, as a general rule, the sharper the better. But a large head—say from one to three inches in diameter—requires a much less degree of sharpness for sufficient definition, and is pictorially better for less sharpness. Even if it were possible to obtain microscopic definition in every plane, the result would be in most cases offensive rather than pleasing.

We wish it to be clearly understood, then, that in advocating diffusion of definition in large portraiture, we are not, and never have been, antagonistic to sharpness in its proper place. We advocate in all cases *sufficient definition* to render the subject with enough detail for pictorial truth. For most reproductions and most interiors and architectural subjects, we prefer as much sharpness in every important part as the best lenses will give. For most landscapes we prefer as much sharpness, especially in the foreground, as can be obtained. The distance must inevitably, if the picture be true, be less defined than the foreground, but that loss of definition should be rather due to the skilful rendering of atmosphere than to the rapid loss of focus in the lens. For portraiture we want sufficient definition: sharpness for small pictures, always; sharpness, also, but in a modified degree, for large heads of young and beautiful faces: sufficient definition, but not sharpness, for large photographs of heads old, harsh, rugose, freckled, pitted, wrinkled, or scarred. In all cases we want the definition to be not equally diffused throughout a picture, but best in the most important parts. But it should be diffused sufficiently to do all parts—of the head especially—sufficient justice to indicate their form and texture. In all cases we want photographic portraits, in the words quoted by our contemporary's correspondent from our article of 1862, to be "soft and properly graduated" as well as sharp and brilliant; and they cannot, as we have said, be properly graduated if the definition is confined to one plane instead of being diffused over several planes.

Hence the importance we attach to the discovery of a lens which, whilst capable of giving the sharpest possible definition, can, at the will of the judicious portraitist, be made to give diffusion of focus in the exact degree which the size of the image and the nature of the subject may require. Sharpness, as a valuable quality in its place, is not ignored; but diffusion of focus is acquired as a quality at times of even greater importance in pictorial portraiture.

Had it not been necessary to correct the misconceptions on the subject of sharpness, we should scarcely have referred again to our contemporary's article on its claims to have anticipated our suggestions on the use of lenses with spherical aberration for the purpose of securing diffusion of focus. As we have shown, its alleged "anticipation" was in 1864, whilst our suggestions as to the construction of lenses with diffused focus were published in 1861. This is practically admitted, and it is unnecessary for us to say more upon that part of the question. In returning to the subject, our contemporary, in tacitly admitting that its 1864 paragraph did not anticipate our suggestions, as before alleged, now makes its claim rest upon the incidental notice of the public exhibition of an undescribed arrangement of a lens. If its claim had been confined to that in the first instance, we should scarcely have been called upon to notice it. As the matter is now before us, however, we may as well add one or two remarks on other misleading observations made in its return to the subject.

In reference to our remark that an orthoscopic lens is not a portrait lens, and is useless for portraiture, it affects to be uncertain of what constitutes a portrait lens. This is sheet trifling: every optician's shop-boy knows what is a "portrait lens." Because a landscape lens will take a portrait, it does not become a portrait lens, as the veriest tyro in our art knows. But our contemporary adds, that if a lens which "takes a portrait in two or three seconds in a good light be not a portrait lens, and is useless for portraiture, then we fear a *portrait lens* has not yet made its advent." The writer further points to certain subject-pictures produced by Mr. H. P. Robinson and others as illustrating the suitability of the orthoscopic lens for portraiture. Now, as all this is dangerously misleading, we will simply answer it by stating one or two facts. The groups in question by Mr. H. P. Robinson were taken in the open air, in full sunshine, on a fine spring day, in the best possible light,