architect, models to applications for patents, illustrations to verbal descriptions in dictionaries and periodicals.

Painting and sculpture, on the other hand, address the eye only, and are subject to the limitations to which the eye is subject. They can convey impressions of a single moment only, since the eye cannot receive impressions of two successive moments at once; but they can represent a wide extent of space or a scene comprising numerous details, since the eye can in a moment receive an impression of a whole that is composed of many different parts. Being limited to a single moment, they naturally choose the moment that tells most about the past and the future of the object represented. Their Lady Macbeth appears in the sleep-walking scene, in which she lives over again, not only the murder, but the motive that led to it and the remorse that followed; their Medea appears in the struggle between her maternal love and her impulse to murder; their Ajax, sitting among the slaughtered herds whose destruction he now regrets; their Laocoön, while his pain is still endurable; their Dying Gladiator, at the moment when with the pangs of death mingle the memories of his "young barbarians at play."

Whatever painting and sculpture can thus suggest to the imagination, language can fully recount. It can tell the whole story of Lady Macbeth, Medea, Ajax, Laocoön, the Dying Gladiator. No gallery of pictures, however large, can tell a story as words can; for each picture is distinct from every other, but each word is part of a continuously flowing current. Words succeed each other in time, as forms and colors lie side by side in space; words are, therefore, especially fitted to represent movement, forms and colors to represent rest. A writer suggests to

the imagination persons or scenes that a painter presents to the eye, as a painter suggests a story that a writer tells. Each is strongest at the other's weakest point.[1]

No one can describe a person or a thing that he has not seen either in fact or in imagination, and no one can describe well what he sees unless, in obedience to Wordsworth's rule, he has his "eye on the object" to be described. All description, then, implies observation. There are, however, two ways of observing: we may observe as men of science, — that is, give attention to the details of an object; or we may observe as artists, — that is, give attention to an object as a whole. In the first case, our purpose is to study the object ourselves or to enable others to study it; in the second case, our purpose is to enjoy the object ourselves or to enable others to enjoy it. Answering to these two kinds of observation are two kinds of description, — one in the service of science, the other in the service of art. The first may be called SCIENTIFIC, the second ARTISTIC.

Two kinds of description.

SECTION I.

SCIENTIFIC DESCRIPTION.

The purpose of SCIENTIFIC DESCRIPTION is to convey information about the object described. It analyzes an object in order to distinguish its parts and thus enable us to identify the object by comparing it part by part with the description. This kind of description, — which is employed not

Aim and method of scientific description.

[1] For a complete exposition of these principles, see Lessing's "Laocoön," sects. xv. xvi. *et seq.*

only in works of science but also in passports, inventories, title-deeds, advertisements of lost dogs or of escaped criminals, — is useful as far as it goes; but it does not go very far. It has, however, resources of its own. The description of a thief may give many details that would not appear in a photograph. The description of a flower or of an animal may be supplemented by an account of its habits, of differences in the varieties of the species to which it belongs, and of the relation of that species to others.

The following passage begins with a scientific description of the barn-swallow (*Hirundo horreorum*), and then gives an account of its habits and notes some peculiarities of the nest and the eggs: —

"Tail very deeply forked; outer feathers [of tail] several inches longer than the inner, very narrow towards the end; above glossy-blue, with concealed white in the middle of the back; throat chestnut; rest of lower part reddish-white, not conspicuously different; a steel-blue collar on the upper part of the breast, interrupted in the middle; tail feathers with a white spot near the middle, on the inner web. Female with the outer tail feather not quite so long.

"Length, six and ninety one-hundredths inches; wing, five inches; tail, four and fifty one-hundredths inches.

"This beautiful and well-known bird arrives in New England from about the 10th of April to the 25th of that month, according to latitude; it is quickly dispersed in great numbers through these States, and soon commences mating. Its habits are so well known that any description here is hardly needed. About the 10th of May, after the birds have paired, they commence building; or sometimes the same couple begin repairing the nest of the preceding year or years, as the same nest is occupied several seasons. It is built in the eaves of houses or barns, or on rafters of barns and other buildings. It is constructed outwardly of a strong shell of pellets of mud, which are plastered together, and, as Nuttall says, 'tempered with fine hay, and rendered more adhesive by the glutinous saliva of the bird.' This nest is built out and up until the top is about horizontal, and then lined with a layer of fine grass or hay, which is covered with loose feathers. This bird is fond of society, often as many as twenty nests being in the same eaves. The eggs are usually four in number, sometimes five: they are of a nearly pure-white color, with a slight roseate tint; and are spotted more or less thickly with fine dots of two shades of brown, reddish, and purplish. The dimensions of four eggs, collected in Upton, Me., are .76 by .56 inch, .70 by .52 inch, .76 by .52 inch, .69 by .53 inch. The largest specimen, in a great number, is .78 by .57 inch; the smallest, .67 by .50 inch. Two broods, and sometimes three, are reared in the season. The period of incubation is thirteen days.

"About the first week in September, the old and young birds of different families gather in immense flocks; and, after remaining about the marshes near the seacoast for a few days, they leave for their winter homes. It is seldom that any are seen after September 15th in New England."[1]

In the description with which this passage begins, the method adopted is that which experience has shown to be most useful for purposes of study, — the method of selecting characteristic particulars and presenting them with clearness. In the several sciences modes of procedure differ somewhat; but they are all referable to the general purpose of beginning with what is most characteristic of the species described and going on in the order familiar to a specialist. When a description of this nature is intended for the general reader, it should begin with that peculiarity which first strikes an untrained eye, and should enumerate particulars in the order adapted to an untrained mind.

In purpose scientific description has much in common with exposition: like that, it aims at conveying information. In subject-matter it resembles artistic description.

[1] Edward A. Samuels: Ornithology and Oölogy of New England.