VII

NEW REPORTS AND NEW VISION

THE NINETEENTH CENTURY

At the end of the nineteenth century photography had been known in one or another of its forms for sixty years, and some of the photomechanical processes for at least half that time. The traditional graphic processes had been defeated on most of what had been peculiarly and essentially their own ground—the making of exactly repeatable pictorial statements about the shapes and surfaces of things. The change had come about so slowly and gradually that, after the first explosion of interest and excitement which accompanied the announcements of Talbot and Daguerre in 1839, very few people were aware of what was taking place under, and especially *in*, their eyes. For a long time photographers were laughed at good-naturedly and were one of the stock subjects for jokes and caricatures. Slowly, as the community itself began to take photographs with hand cameras, there was no joke left because the photographer was everybody. As so many times before, men were doing something long before they knew what they were actually doing.

The photograph and its attendant processes took over at one

and the same time two very different utilitarian functions of the graphic processes that previously had never been clearly differentiated. One of these was the reporting of portraits, views, and of what may be called news. The other was the recording of documents, curios, and works of art of all kinds. Where the requirements of the first of these functions could be and still were on occasion fulfilled by the old techniques, the other had been taken over irretrievably by photography, for the photograph made it possible for the first time in history to get such a visual record of an object or a work of art that it could be used as a means to study many of the qualities of the particular object or work of art itself. Until photography came into common use there had been no way of making pictures of objects that could serve as a basis for connoisseurship of the modern type, that is for the study of objects as particulars and not as undifferentiated members of classes. The photograph in its way did as much for the study of art as the microscope had done for the study of biology.

Up to that time very few people had been aware of the difference between pictorial expression and pictorial communication of statements of fact. The profound difference between creating something and making a statement about the quality and character of something had not been perceived. The men who did these things had gone to the same art schools and learned the same techniques and disciplines. They were all classified as artists and the public accepted them all as such, even if it did distinguish between those it regarded as good and as poor artists. The difference between the two groups of artists was generally considered to be merely a matter of their comparative skill. They all drew and they all made pictures. But photography and its processes quietly stepped in and by taking over one of the two fields for its own made the distinction that the world had failed to see.

The blow fell first on the heads of the artists—painters, draughtsmen, and engravers—who had made factual detailed informational pictures. The photograph filled the functions of such pictures and filled them so much better and with so much

greater accuracy and fullness of detail that there was no comparison. For many purposes the drawing, as for instance in such a science as anatomy, preserved its utility because it could schematically abstract selected elements from a complex of forms and show them by themselves, which the photograph could not do because it unavoidably took in all of the complex. The drawing, therefore, maintained its place as a means of making abstractions while it lost its place as a means of representing concretions. The ground was cut from under the feet not only of the humble workaday factual illustrators of books and periodicals but of artists like Meissonier and Menzel, who had built up pre-photographic reputations by their amazing skill in the minute delineation of such things as buttons, gaiters, and military harness for man and beast. An etcher like Jacquemart had gained a world-wide reputation for his ability to render the textures and sheens of precious objects, such as porcelains, glass, and metal work—but when it was discovered that the photographic processes did all that infinitely more accurately than Jacquemart could, it was also realized that Jacquemart had been merely a reporter of works of art and not a maker of them, no matter how extraordinary his technical skill. The devastation caused by the photograph rapidly spread through all the gamut of the merely sentimental or informational picture, from the gaudy view of the Bay of Naples or the detailed study of peasants and cows to the most lowly advertisement for a garment or a kitchen gadget. What was more, by 1914, the periodicals had begun to be so full of the photographic pictures that the public was never able to get them out of its eyes.

The photograph was actually making the distinction that Michael Angelo had tried to point out to the Marchioness and her companions in the conversation that was related by Francesco da Hollanda—'The painting of Flanders, Madame . . . will generally satisfy any devout person more than the painting of Italy, which will never cause him to drop a single tear, but that of Flanders will cause him to shed many; this is not owing to the vigour and goodness of that painting, but to the goodness of such devout

person. . . . They paint in Flanders only to deceive the external eye, things that gladden you and of which you cannot speak ill, and saints and prophets. Their painting is of stuffs, bricks, and mortar, the grass of the fields, the shadows of trees, and bridges and rivers, which they call landscapes, and little figures here and there; and all this, although it may appear good to some eyes, is in truth done without symmetry or proportion, without care in selecting or rejecting, and finally without any substance or verve.' [1] Michael Angelo was attempting to point out that the pictorial report of things which people enjoy in stories and in actual life is not the same thing as design.

Inescapably built into every photograph were a great amount of detail and, especially, the geometrical perspective of central projection and section. The accuracy of both depended merely on the goodness of the lens. At first the public had talked a great deal about what it called photographic distortion—which only meant that the camera had not been taught, as human beings had been, to disregard perspective in most of its seeing. But the world, as it became acclimated, or, to use the psychologist's word, conditioned, to photographic images, gradually ceased to talk about photographic distortion, and today the phrase is rarely heard. So far has this gone that today people actually hunt for that distortion, and, except in pictures of themselves, enjoy it when found. A short fifty years ago most of the 'shots' of Michael Angelo's sculpture that were shown in the movie called *The Titan*, would have been decried for their distortion, but today they are praised. Thus by conditioning its audience, the photograph became the norm for the appearance of everything. It was not long before men began to think photographically, and thus to see for themselves things that previously it had taken the photograph to reveal to their astonished and protesting eyes. Just as nature had once imitated art, so now it began to imitate the picture made by the camera. Willy nilly many of the painters began to follow suit.

[1] Quoted from Charles Holroyd's *Michael Angelo Buonarroti*, London, 1903, by permission of Gerald Duckworth & Co., Ltd.

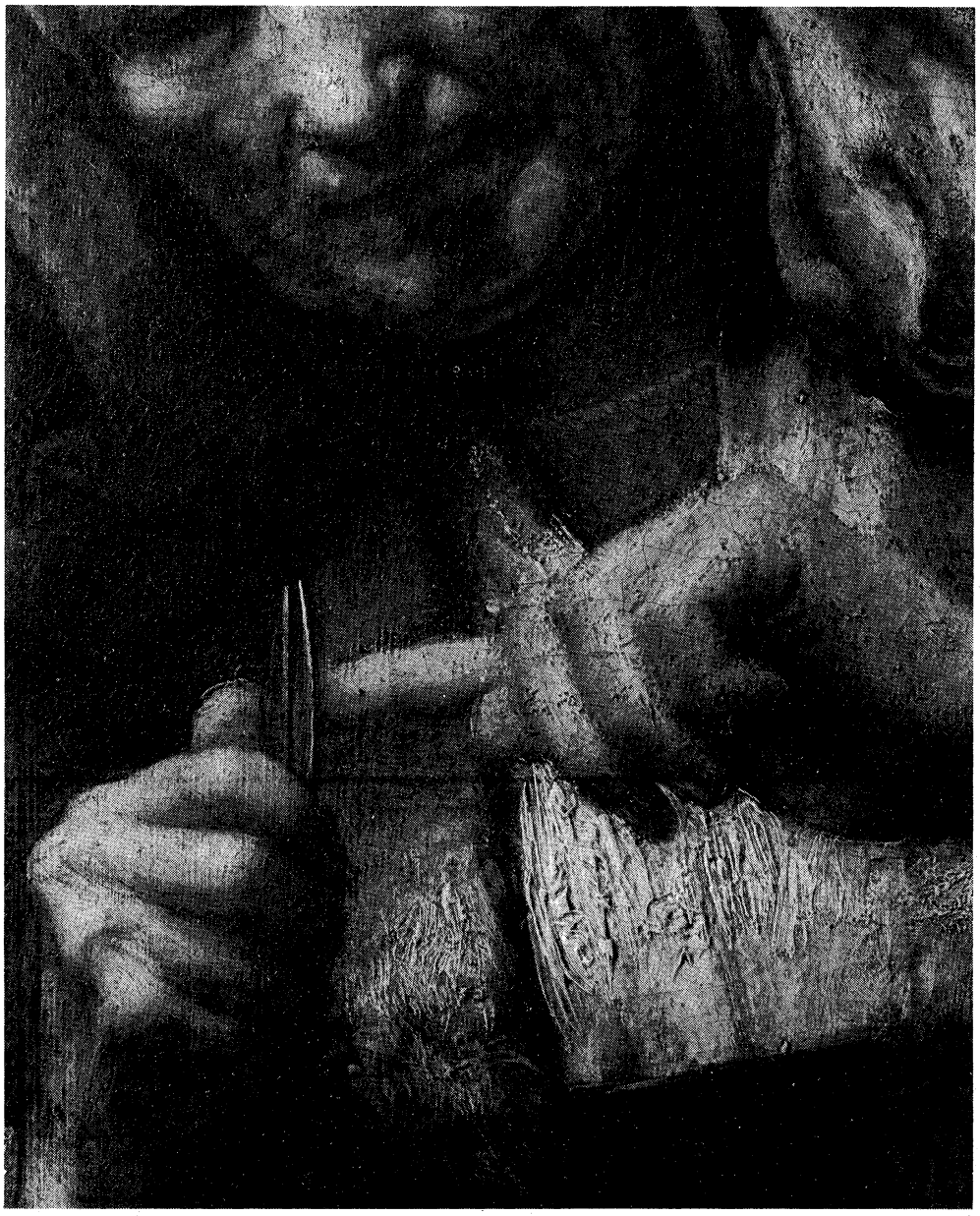
So long as the old graphic processes provided the only means of making exactly repeatable visual reports, men were always tempted to hypostasize something behind those reports that they could neither see, nor describe, nor report, but which was more real than the things actually contained in their reports. It was this unreachable, unknowable, *vraie vérité*, that all too often they tried to talk and argue about when they talked and thought about works of art with which they had not immediate first-hand acquaintance. When people begin to talk about nobility, grandeur, sublimity, ideality, and all that group of purely emotive verbal obfuscations, as qualities of art, the appreciation of art has become a sort of verbalist intoxication unrelated to particulars—a situation that is observable in the talk and writing of many persons who read books about art, or follow verbalist doctrines or party lines about it, instead of surrendering themselves to sharp-sighted first-hand acquaintance with it. It is interesting to notice how dry and tongue-tied so many of the people are who have had long and intimate first-hand acquaintance with works of art as compared with the volubility in abstractions of the persons who know about art through words and verbalist notions. Seen in its concretion, the greater a work of art is, the more it is a bundle, not of similarities to other things, but of differences from them. All that words can deal with, however, are similarities. The simple reason for all this is that words, with the exception of the proper names, relation words, and syntactical devices, are mere conventional symbols for similarities. Although differences are just as perceptible as similarities, the inability of words to cope with them has given rise to the notion held by many self-consciously hard-headed persons that talk about art is merely an attempt to deal with the ineffable, a thing that for them is completely laughable. But that these differences are not statable in words does not mean that they are ineffable, for they are clearly communicable in non-verbal ways. While the photograph is far from being a perfect report, it can and does in practice tell a great many more things than any of the old graphic processes was able to, and, most importantly, when

two photographs of two different things that are very much alike are laid side by side, they enable us to gain awarenesses of differences that defy description either in words or in any of the old graphic processes that preceded photography.

In order to grasp the broad meaning of the photograph as record or report of work of art or curio it is necessary to look back over the nineteenth century, and to take account of some things that happened in it, apparently completely outside the territory that photography was taking over. I refer to the astonishing gathering together in the great capitals of Europe of the arts and crafts of the distant past and the far away, which was one of the distinguishing events of the century. It was greatly hastened, if not begun, by Napoleon, when, as part of his political propaganda, he systematically looted the countries his armies invaded, and brought back to Paris the results of his efforts. He did this not so much because of the artistic importance of his loot, as because it enabled him to demonstrate to both France and the world that he had been able to assemble in Paris the objects held most holy by the peoples of Europe. There was no comparable way of symbolizing the prowess of the Empire and the French. It was the nearest thing in modern times to the triumphs of the Roman generals and proconsuls, in which the kings, the high priests, and the most sacred objects of the conquered had been paraded before the Roman populace.

In the eighteenth century hardly anyone took seriously the art of the Middle Ages, let alone of the Dark Ages, except a few students who were interested in hagiography, iconology, and the lore of the local churches. A few dilettantes, such as Horace Walpole, were fashionably and perversely amused by the view from the Castle of Otranto, but for most of them, I think it can be said, the Gothic merely provided a relatively cheap way of being smart and different from other people. The rich who had received classical educations went in sentimentally for classical sculptures, which in practice meant Roman copies, either of the late Republic or Empire, or even of the eighteenth century itself, in which the Roman craftsmen so surprisingly and obligingly were able to

83. The same portion of the finished state of the same engraving after Moreau le jeune. Enlarged.



84. A modern cross-line half-tone block after a photograph of a portion of Rembrandt's painting of 'An Old Woman Cutting her Nails'.

supply the northern nabobs with the very 'antiques' they were in search of. No one knew the difference between a Greek original and the ancient and modern imitation, as was demonstrated in such different ways by both Winckelmann, the founder of classical archaeology, who accepted fakes, old and new, and John Thomas Smith, who, in writing the life of Nollekens, told how that sculptor in his youth had paid his way by making modern ones. If we look at the pictorial reproductions of classical art that were available to collectors in the eighteenth century and much of the nineteenth century, we can discover not only many of the reasons for their blindness but the reasons they took their interest in the objects they actually collected.

The art of ancient Egypt was practically unknown until Napoleon made his armed descent into that country. He took with him a group of scientists, archaeologists, and artists, among whom was that very curious and interesting person, Vivant Denon—perhaps the first man to have a really catholic taste in art in our modern sense of the word. The difference between the seeing Denons and the posturing Walpoles of this world is rarely discussed, but it is very important. A great cargo of ancient Egyptian artistic and archaeological loot that Napoleon shipped for Paris had the misfortune to meet a British warship, with the result that, instead of going to Marseille or Toulon and thence to the Louvre, it went up the Thames and came to rest in the British Museum. Within a few years afterwards that institution also acquired, though in less exciting manner, the Elgin marbles and the friezes from Phigaleia, that were so remarkably unlike the classical sculpture which had been fashionable during the eighteenth century that some of the best judges of the day declared the Elgin marbles to be late work of the time of Trajan. If we are honest with ourselves, the Venus of Melos is a masterpiece not so much of ancient Greek sculpture as of the taste of the eighteen-thirties.

The French Revolution and the wars that accompanied and followed it caused many of the great church and monastic treasures to be thrown upon the market, with the result that for the first

time in many generations there was available to the collector and the curious a flood of mediaeval works of art of all kinds, and of manuscripts and early printed books. The opening up to the curiosity hunter and the archaeologist of Greece, Egypt, and the Levant, was followed in turn by that of the Near East, and that in turn by that of the Far East and of southern Asia. Last of all to be recognized as works of art were the objects from America, Polynesia, and Africa, which had begun to accumulate in Europe as the result of exploration and armed adventure. The primary interest of those who brought most of these things back to London and Paris was not their artistic value but their curiosity.

In any case, nothing like this amassing of exotic objects had ever been known. One of the principal reasons it was so effective was that it was done by men who were so ignorant of art and taste that they gathered together everything of every kind without consideration of what the professors of art and the dilettantes might think of them. If the collections had been made in the field by the artistically educated of the day, very little that ultimately has been of great artistic interest would have been brought back. One can but imagine what such a pontiff as Ruskin would have acquired on the Guinea Coast or the islands of the Pacific.

So long as there were available only the traditional graphic processes of pictorial reproduction and publication the publication of all these strange things was not only very small in volume but very expensive and slow, and, worse than either, amazingly untruthful and distorted. As was inevitable, the print-makers rationalized their representations, and their rationality was that of their period. Also they liked to show what they imagined the objects looked like before they had been damaged or broken, and so they filled in the missing parts in their pictures out of the treasury of their ignorance, just as Thorwaldsen 'restored' the marbles from Aegina so thoroughly that he turned them into monuments not of Greek art but of early nineteenth-century taste. This desire to show ancient objects not as they have actually come down to us but as they ought to be, can be easily observed by attentive

visitors to almost any of our art museums. It flourishes most in those very collections or departments which take such great pride in their scholarship and the scientific quality of their knowledge that they look down on mere aestheticism. There is curiously little difference between much of the restoration done in museums and the faking done by the unregenerate.

The gradual introduction of photographic process in the last thirty years of the nineteenth century effected a most radical change in the methods of reproduction and publication of works of art. Not only did the reproductions become cheap, but they were dependable. Perhaps as easy a way as any to perceive this is to compare the illustrations of ancient and exotic art in the art books of the 1820's and 1830's with those in the art books of the 1870's and 1880's, and both with those in any cheapest little contemporary pamphlet or magazine. Until long after the middle of the century art books were much more a means by which the very rich could show their snobbishness than a means to convey truthful knowledge to the public. Actually the cheap modern photographic picture postcard contains so much more valid and accurate information than any of the expensive engravings and lithographs of the period of snobbery that there is no comparison between them. In this way photography introduced to the world a vast body of design and forms that previously had been unknown to it.

Objects can be seen as works of art only in so far as they have visible surfaces. The surfaces contain the brush marks, the chisel strokes, and the worked textures, the sum totals of which are actually the works of art. But the hand made prints after objects were never able to report about their surfaces. If the surface of a painting represented hair and skin, the print after the painting also represented hair and skin, but in its own forms and techniques which bore no resemblance to those embedded in the surface of the painting. In other words, the engraved representation of a painting was confined to generalized, abstract, reports about iconography and composition.

The magic of the work of art resides in the way its surface has

been handled, just as the magic of a poem lies in the choice and arrangement of its words. The most exciting and the most boresome paintings can have the same objective subject matter. Their differences are subjective, and these subjective differences can only be seen in the choice and manipulation of the paint, that is in their actual surfaces. If Manet and Bouguereau had painted the same model in the same light, with the same accessories, and the same iconographical composition, any engravings made from them by the same engraver would have been remarkably alike. In a way the engravings were attempts, as the philosophers might say, to represent objects by stripping them of their actual qualities and substituting others for them—an undertaking which is logically impossible. The photograph, to the contrary, despite all its deficiencies, was able to give detailed reports about the surfaces, with all their bosses, hollows, ridges, trenches, and rugosities, so that they could be seen as traces of the creative dance of the artist's hand, and thus as testimony of both the ability and the deliberate creative will that went to their making.

The result of this is never referred to, but it was very important in the formation of opinion and values. Thus, to take a particular case: the engravings, saying nothing about surfaces, could easily be read, and actually were read, by a world soaked in the pseudo-classical Renaissance tradition of forms, as reporting that the sculpture of the early and middle Christian periods was merely a set of debased forms representing the inability of a degraded society and its incompetent artisans to hold to classical ideals and precedents.

With the advent of photography, however, it became impossible to maintain the opinions based on the engravings, for photography gave detailed reports about the surfaces of the Christian sculpture, with all their sharp incident, and revealed the skilful, wilful, way in which they had been worked. It thus became obvious that those works of art represented not any degeneracy of workmanship but the emergence and volitional expression of new and very different intellectual and emotional

values, and, therefore, had the right to be judged on their own merits and not from the point of view of the very ideals and assumptions which they challenged and against which they were engaged in an unrelenting warfare. From Winckelmann to the present day, the lack of expression and personality of the figures of classical art has been commented upon. It is the basis on which the archaeologists have built their claims for what they describe as the ideality of classical art. Christian art, however, in conformity with the faith it represents, developed the expression and personality of its figures and made deliberate sacrifices to that end. The photographic reports of surfaces made visible the volition with which this was accomplished.

Within the closed world of classical art itself the introduction of photography in place of the old engraved reports has had remarkable results. The inability of the engraving to report about surfaces and its restriction to iconography and composition made possible, in the early years of the last century, a sort of aesthetic transubstantiation. The discovery and bringing to western Europe of examples of Greek sculpture revealed that the actual qualities of fine Greek work were very different from those of the Roman copies with which Europe had been familiar up to that time, but the standard vocabularies, like the engravings which then provided the only available means of reproduction, were incapable of stating the differences. The result was that the world fitted the newly discovered qualities into the critical literary tradition and vocabulary of both words and pictures that had been built up about the so very different qualities of the Roman copies. No better example of the tyranny of the old methods of reproduction and their linear nets and syntaxes on the art of seeing can be desired than the dominance through the nineteenth century and into the present one of ideas and critical jargon that had their origin in the deficiencies alike of the Roman copies and the engravings after them. It is only within very recent years that the world has been able to see that the primitive Greek marbles and small bronzes were really very wonderful works of art. The current substitution of photo-

graphs of Greek pots for the familiar engraved and lithographic reproductions of dull routine modern drawings after them has brought about a notable change in the appreciation and understanding of their qualities.

Thus, luckily for the exotic and most of the early Christian and mediaeval objects, they were thought so lacking in beauty in the days of the engraved visual statement, that comparatively few of them were reproduced until after photography had taken over the task of reproducing works of art. Thanks to this they escaped the perversion both of form and of critical ideas that inevitably accompanied the older methods of reproduction.

A rarely mentioned result of this shift away from engraved reproductions is that the only prephotographic *catalogues raisonnés* of works of art that are still of use and constantly referred to are those of prints themselves. The photograph has antiquated all the rest. Its pervasion opened up the other subjects to visual scholarship as distinct from the scholarship of the texts and archives, and there began that flood of photographically illustrated catalogues and special studies that has enabled the vast masses of material to be reduced to order. It is astonishing to notice how few of the books, for example, about old Italian painting that were written before the eighteen-eighties are still referred to for qualitative judgments as distinct from purely archival matters. The rewriting of the inventory of old Italian paintings, that was made possible by photography, was so exciting that for several generations connoisseurs and students devoted their major efforts to problems of attribution, and even devised aesthetic theories which reduced subject matter and its imaginative treatment to a very subordinate and unimportant position. However, today, now that so much has been done on the new inventory, the special students of the younger generation are finding a new interest in iconography—the discovery of what it was that the old pictures illustrated.

Thus, while on the one hand the photograph enslaved a preponderant portion of the population to the photographic versions of natural forms, the photographic reproductions of curios and

works of art emancipated an important group of people from the traditional and academic points of view. In many places, but especially in Paris, with its artistic confidence in itself and its faith that all had not yet been said and discovered in art, very intelligent men came to give serious thought to the aesthetic and other problems raised by these strange forms from the past and the far away. What took place in this group may perhaps be indicated to some extent by the mid-century story about Baudelaire and the naval officer. The officer had been away from Paris for a number of years on one of the exploring expeditions to the South Seas, and had brought back with him a great many strange objects. Baudelaire went to see him. Baudelaire was holding and looking very hard at a little carving when the officer, desiring him to look at something else which he regarded as of greater interest, referred to the object in Baudelaire's hand as 'merely a negro totem'. Instead of putting it down and looking at the other object, Baudelaire held up his hand and said, 'Take care, my friend, it is, perhaps, the true God.'

The formal academic art teaching and doctrine of the nineteenth century had been based on ideas that can be traced back to the Renaissance in Italy, and were full of assumptions that were believed in as indubitable truths. Some of these indubitable truths received very hard blows during the second half of the century, as for example, when the palettes were lightened, when pleineaireism made its first tentative appearance, when colours were broken down into their constituent shades, and when account began to be taken of such things as that shadows were very rarely or never brown. Many of these new ideas were based on notions derived from popular books on the physics of light and were defended as being highly scientific. Between the sharp-eyed notation of detail that was the mark of the English pre-Raphaelite painters and the new French interest in atmosphere and the envelope, as typified, for example, in the work of Claude Monet, there was little basic difference, great as was the superficial one. Each group believed in accurately reporting what it thought was

the appearance of the thing seen. They merely happened to look for and to see quite different things and appearances. Where the pre-Raphaelites were greatly interested in the emotional implications of their subject matters, the French, realistically, contented themselves with ocular curiosity. But in each instance the emphasis was on verisimilitude and reporting.

One of the most important persons in the mediaeval royal courts was the king's jester, a functionary whose purpose was to keep the court amused, and who was privileged to utter home truths that would not have been permitted from the mouth of anyone else. I have little doubt that among the greatest influences in artistic Paris during much of the second half of the nineteenth century were the lithographed caricatures by Daumier. Daumier, in addition to being one of the caricaturists whose work reached the entire Parisian community two or three times a week, happened to be one of the boldest innovators of his generation and one of the great seminal forces in modern pictorial design. As caricaturist and funny man he was exempted from the trammels of pictorial convention which weighed so heavily on the solemn and the academic painters. He did with impunity things that had they been done in oil paint would have been shocking and inexcusable. The world laughed with him, the academic artists shuddered at the thought of him, and the intelligent saved and preserved his prints. When we think of the fate of most old newspapers, one of the wonders of the world is that such a vast supply of Daumier's caricatures was preserved. The print collectors did not care for the work of his maturity, because it did not conform to the wholly artificial notions they had conceived about what constituted good lithography, but many of the painters took his work seriously and studied it hard. Anyone who is familiar with the last fifteen years of Daumier's work can see the reflections of it all through the mature work of Degas, and consequently through the work of the younger artists whom he influenced.

Degas had an independent fortune and a witty and independent mind. His fortune did for him what Daumier's position as the

accredited jester had done for him. He was enabled by it to go his own way without thought of the conventional modes of pictorial conduct on which the poorer painters depended for their sales. He was led by his study of the Italian primitives, of Daumier, and of the newly discovered Japanese prints, to think about the possibilities of what happened when compositions were built up about unfamiliar points of view, unconventional cutting of the field of vision, and the arbitrary use of colour. He and the group of younger artists who came under his influence were not only the greatest draughtsmen of their time but were also those who thought most about design. Their adoption of the unconventional point of view and unconventional cutting of the field of vision, and their willingness to invent colour schemes, enabled them to find visual interest and excitement in episodes from familiar life of a kind that had either been overlooked or had come to be regarded as exhausted. There is reason to think that Degas devoted so much of his attention to the ballet simply because its costumes, its attitudes, and the lights and the colours of the stage, bore so little resemblance to those of ordinary life that he could deal with them from the point of view of design absolved from the insistent popular demand for conventional verisimilitude. Gauguin had to go to the South Seas for similar release from the iron bound convention. Poor Van Gogh achieved it by going mad; Lautrec by becoming a social outcast.

In the Metropolitan Museum in New York there is a pair of pictures by Degas that remarkably illustrates his interest in this kind of thing. The basis of one of these pictures is a monotype in monochrome. The basis of the other is a counterproof of the same monotype. So far as their iconography is concerned they are mirror images of each other—exactly alike but in different directions. Actually they are so different that many people do not recognize their close relation to each other. Their colour schemes are absolutely unlike, and their masses of colour and light and shade bear no resemblance to each other. Had Degas not been over and above mere verisimilitude he could not have done them. Marvel-

lous as they are as separate works of art, taken together they demonstrate that Degas was primarily interested in design and not in representation. Had they become known to the world through engravings such as those that Raphael Morghen made after the great Bolognese painters the fundamental differences between them would never have been known to that part of the world which depended on engraved reproductions for its knowledge of paintings. Degas made a well-known remark that the ballet provided him with a '*prétexte pour le dessin*'. This phrase has been translated as a 'pretext for (representational) drawing', but the word '*dessin*' also means the very different thing we call 'design', which has strong creative, volitional, implications—and it was in this latter sense that Degas used the word. It was not his business to imitate what he saw but to dominate what he saw and to play with it as a creator of something quite his own.

In the 1890's and the early years of this century Toulouse-Lautrec made advertising posters with which the walls of Paris were covered. A Parisian might never have been to an art exhibition, and never have looked attentively at any painting, but he could not evade the Lautrec posters, for they were everywhere before his eyes. In them great liberties were taken with traditional forms and colours. Many of them were two-dimensional in design. And they had the great quality of 'carrying'—their arbitrary and wilful patterns could be seen from afar. The solemn and the traditionally minded did not take them seriously, but many picture-makers did. And they had their undoubted effects on the public's eyes. Just as Daumier, the jester, and Degas, the rich man, had been enabled to do many things that were not permitted to the painter who lived on the sale of his canvasses, so Lautrec, the witty advertising man, was permitted to do so too. The shock of his posters was for many people an ocular liberation. The public learned from them that verisimilitude was far from being the be-all and end-all of picture-making. Incidentally, these posters made it obvious to even the most obtuse that the Impressionist emphasis on the envelope was after all not much more than reporting and

had not essentially altered the hardened tradition of picture-making—that actually Impressionism was only a technical variation on the standard academic themes, and that much of it was peculiarly empty.

Thus Degas and these younger men had discovered the difference between design and reporting, that a picture of gods and heroes and sentimental situations could be utterly trivial, and that a joke or a laundress, a bony ballet girl or café singer, or the good bourgeois and his wife, could provide the titular subject matter of as serious design as was ever contrived.

The ruling academic notions were based on silly theories about the dignity of subject matter and impossible ones about the truth of colours and shapes. Religious subject matter had begun to fall out of fashion before the end of the seventeenth century. It is doubtful whether any of the outstanding painters in France during the eighteenth and nineteenth centuries ever seriously put his mind on the traditional Bible stories from which the mediaeval and the Renaissance painters had drawn so much. Fine subject matter, other than portraits and landscape, had to be something far removed from the actualities of life, and preferably was to be taken from ancient myth or the lives of the heroes—the only subjects in which prudery permitted preoccupation with the nude female figure. As the ancient myths and the lives of the heroes were not generally known and certainly not emotionally cogitated over by the public, the dramatic element of picture-making gradually faded away. All that was left for the picture-maker-dramatist was a series of subjects that while apt to sloppy sentimentality were actually vapid and empty, because the pictures represented no one in particular. It is very difficult to arouse emotions about the human troubles and emotions of no one in particular. It may be that the frequent success of the mediaeval and later religious paintings was based on the fact that they represented very particular people about whom everybody knew and in whom everybody was very much interested—possibly the same reason that the ancient Greek drama in its time and way was so successful. In

the failure to think about design all that was left was reporting of a kind that set great store by verisimilitude of a very limited and conventional sort. In the endeavour to accomplish verisimilitude it was overlooked that it can be acquired only at the cost of personality, with its emphases and omissions.

As to the truth of shapes and colours—the academic doctrine was based on a very complete contradiction in terms. What was thought of as visual truth was actually only a conventional verisimilitude, which was a very different thing. To leave colour out of the discussion for the time being, there is no such thing as a true still representation of a form in movement. Actually there is a constant conflict between the tactile-muscular sense returns and the visual returns, no matter how accustomed we may be to their association in what we think of as a single space. What we call the shape of a figure is no more than where its parts are in relation to one another at a moment. Its movement is how its parts are changing their relation to one another at a moment. The 'where' and the 'change' are incompatible notions, as has been known ever since the days of Zeno and his paradoxes. So far as the human eye is concerned it is impossible to see a shape clearly both in motion and at a moment. The camera has taught us that when we actually 'stop' the motion of an object completely enough to see its tactile-muscular shape with sharp accuracy, that is to say to stop it for something like the one five hundredth or the one one thousandth of a second which physiologically approaches a moment, the movement departs from both the perception and the record, and all we have is a stiff frozen shape that conveys no sense of motion at all.

The only way that a sense of motion can be given to a body in a still picture is by distortion of its tactile-muscular shape at a moment. We can see this in the very simplest of shapes, let alone in such complicated ones as those of the human body. It comes out in the difference between a fast and a slow photograph of the drops of water thrown by a lawn-sprayer. In the fast photograph the drops are clearly and sharply defined and betray no sense of

movement at all. In the slow photograph the drops of water are blurred and elongated in the direction of their movement. It is this distortion in the picture that makes us feel that the spray is moving. The more we elongate our representations of rain drops the faster seems their movement. If we want to represent a terrific driving downpour we actually cover our picture with parallel lines running diagonally across it.

Much the same thing is true of colour. The only way we can get the colour of a spot is by matching it, which in practice means isolating it, but when we do that we change the apparent colour, for our perception of the apparent colour is affected not only by the colours of the adjacent areas but by their sizes and illumination. It is this, for example, that makes it impossible to get a true colour reproduction of even an abstract diagram in colour, let alone of a picture, unless we make our reproduction of the same size as that of the original and give it the same texture. There is literally no way to make a true colour reproduction on a changed scale. The implications of this should be obvious.

Another thing that the academics set up to do was to create beauty with a capital B. According to them beauty was something that the artist created. Beauty was the distinguishing mark of the work of the artist. But of course, it was only created by the real artist, who, also of course, belonged to the right trade union and abided by its rules and by-laws. From a logical point of view, I suppose, there has never been anything funnier than the idea of 'objects', the 'essence' of which was a 'quality' like 'beauty', for the making of which there were official recipes and cook books. Intrinsic beauty is today an exploded notion, though doubtless there are still many persons who believe in it.

Anyway, at the end of the nineteenth century and the beginning of this one, there were men in Paris who did not take the academics or their precepts and assumptions with any too great seriousness, and who did not hesitate to try to think about the problems presented by the arts of long ago and far away, with which they were gradually becoming familiar. Among other things

these men perceived was the folly of the traditional view that the early and the exotic artists only worked the way they did because they were ignorant and unskilled, and that when we looked at their work we forgave them their errors because of their ignorance and their innocence—but that we should not forgive the work of contemporaries for such reasons. It came to be recognized in these inquiring circles which took design seriously that the primitive artists of Europe were not so ignorant and certainly not so innocent as the official academic painters believed. These groups also discovered that the Asiatics, the Polynesians, and the Africans were far from being all innocence in the ways they designed and carved objects. What these primitive and exotic artists had been ignorant of was the specifically western European post-mediaeval requirement of verisimilar reporting—an activity that had been taken over by the photograph.

Thus there gradually came into being a group of artists who were so much interested in this question of innocence and ignorance and knowingness in design and representation, that they began to make experiments for themselves to see whether they might find out why it was that objects that had no verisimilitude, that had lost all their anecdotal subject matter in their transference across the ages and the seas, and that ignored the canons of taste and beauty that had been set up in post mediaeval Europe, should nevertheless be so remarkably fascinating to the modern Europeans who looked at them. Of course these men talked and wrote as well as painted and sculpted, and of course much of what they said and wrote was arrant nonsense. For, after all, that is the way men have always gone about things of this kind. No greater nonsense has ever been perpetrated than that which great thinkers in the past have put forth in their search for workable hypotheses. But in the course of time something always comes out of these discussions and this kind of moonshine. What men do in these matters is what counts, and not what they say. And so, as we look back at what was being done about the turn of the century in Paris, we have to disregard the verbal notions and ideas and

look at the things that were made. If we look at these dispassionately and without any doctrinaire *parti pris*, I believe we can see a pattern in them. This pattern is that of a long and exciting series of experiments and discoveries in syntax. It may be silly of me, but I cannot help being interested in the fact that these artistic experiments were being made just at the time that such men as Frege, and Whitehead and Russell, were making their syntactical analyses of the basic notions of logic and pure mathematics.

Just as the mathematicians and logicians in their investigations into the logic and syntax of arithmetic and geometry had to make a clean distinction between pure and applied mathematics and logic, in other words to omit all thought of the subject matters to which their mathematics and logic might be applied, so the artists had to give up thinking about anecdotal subject matter and verisimilitude in their experiments and investigations into the syntax of design. In this way they learned that many of the forms which had become traditional in the studios were not real in the sense of representing anything that was found in nature or of having any existence aside from their utility in the drawing school,—that actually they were merely syntactical devices, and that there were many variant varieties of them, none of them any truer than the other. In the abstract it is no truer that A times B equals B times A than that they do not equal each other. In practice it all depends on what you are trying to do, and you have the privilege of taking either assumption, as it meets your problem.

To object to these experiments on the ground that they did not conform to the accepted canons of reportorial representation was and is as foolish as it would be to object to the notations of the modern logicians because it is impossible to write a funny story or report an exciting fire in them. Just as there is a subject called the Foundations of Geometry, which bears little or no resemblance to the metrical geometry of the carpenters, so the work of these artists bore little or no resemblance to the factual reporting that most of the European world demanded of what it called art.

Naturally, as soon as these experiments were sufficiently

damned and belaboured a great many artists came into the game, not so much because they had any understanding of what it meant or represented, but out of curiosity, and in some instances because they mistakenly thought that it seemed to excuse incapacities in both draughtsmanship and design. It is to be doubted whether even the academics of the purest water misunderstood the movement any more thoroughly than did a lot of the most vocal of its fellow travellers. In any case, they seem to have been utterly unable to distinguish between the real and the imitation. There was, however, one peculiar difference between the men who started the investigations and the fellow travellers; the original group very rarely did anything that was deliberately offensive, or bilious, or resentful. Also, it was obvious, no matter how queer and odd their things may have seemed, that they knew very well how to handle their materials. Some of them were actually amazingly skilful draughtsmen even from the most reactionary point of view. Thus there was always a curious but indefinable sense of professional competence about their work. If it was shocking, it was not because it was in any way indecent or vulgar but because it challenged basic assumptions. It is funny how easily we forgive and forget nastiness and immorality, and how we harbour resentment against the men who raise questions that make us look foolish.

Today, as nearly as I can make out, the little drama has come pretty nearly to its end. People no longer get excited about it. But its results, I believe, have been a permanent gain, if in no other way than that the empty verisimilitude, the particular reportorial formlessness and lack of design which marked so much of nineteenth and early twentieth-century work of the defter and slicker kinds, has tended to find its level on the insurance calendars rather than on the walls of public buildings and museums.

I am convinced that all of this has taken place very largely because the photograph and photographic processes have brought us knowledge of art that could never have been achieved so long as western European society was dependent upon the old graphic

processes and techniques for its reports about art. The syntaxes of engraving had held our society tight in the little local provinciality of their extraordinary limitations, and it was photography, the pictorial report devoid of any linear syntax of its own, that made us effectively aware of the wider horizons that differentiate the vision of today from that of sixty or seventy years ago.

VIII

RECAPITULATION

THE time has come to attempt a summary of the story and the argument that have so rapidly been indicated in the previous chapters.

While the number of printed pictures and designs that have been made as works of art is very large, the number made to convey visual information is many times greater. Thus the story of prints is not, as many people seem to think, that of a minor art form but that of a most powerful method of communication between men and of its effects upon western European thought and civilization.

We cannot understand this unless we bear in mind some of the basic factors in communication between human beings.

Whatever may be the psychological and physiological processes which we call knowing and thinking, we are only able to communicate the results of that knowing and thinking to other men by using one or another kind of symbolism. Of the various methods of making such symbolic communication there can be little doubt that the two most useful and important are provided by words and pictures. Both words and pictures have been known to man since the most remote times. In fact, it may be said that until the animal had used them he had not become man.

While both words and pictures are symbols, they are different