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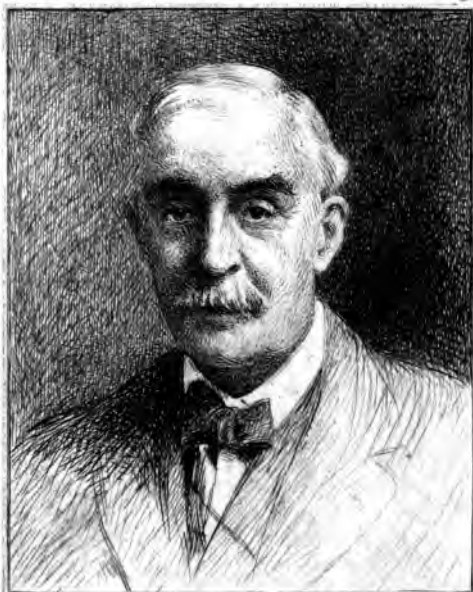
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Geddes, P. - Industrial Exhibitions



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INDUSTRIAL EXHIBITIONS

AND

MODERN PROGRESS

BY

PATRICK GEDDES

(Reprinted from "INDUSTRIES")

EDINBURGH: DAVID DOUGLAS

1887

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PREFATORY NOTE.

THE general aim and argument of this little book are so briefly summed up in its Introduction and Conclusion as to render any further exposition of them unnecessary here. I have therefore simply to express my obligations to the Proprietors and Editor of *Industries*, and to their representative in Glasgow, Mr. James Mavor; as also to Mr. J. Marchbank, late Secretary of the Edinburgh International Exhibition, for permission to consult his collection of books relating to International Exhibitions.

PATRICK GEDDES.

6 JAMES COURT, LAWNMARKET,
EDINBURGH, 16th July 1887.

“This fair, therefore, is an ancient thing of long standing, and a very great fair. . . . Now, as I said, the way to the Celestial City lies just through the town where this lusty fair is kept, and he that will go to the City, and yet not go through this fair, must needs go out of the world.”

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INDUSTRIAL EXHIBITIONS. AND MODERN PROGRESS.

INTRODUCTION.

SINCE at the very outset of all serious thought, not only upon political and social, but even strictly industrial and economic questions, we have to substitute for the notion of mere individual moneymaking that of the aggregate production of material wealth, there can be no better standpoint for an intelligent survey of modern progress than that afforded by an international exhibition. This must be viewed, however, not merely as an extensive bazaar with attached places of amusement, but as a central museum of industry; too vast and costly for permanence, but all the more fully illustrative of production, and of social progress in every respect. Moreover, since each exhibition is the highest expression of the industrial possibilities and general civilisation of its place and time, a retrospect of the great exhibitions, from that of London in 1851 to that of Paris in 1878, is seen to involve a retrospect alike of the advances of production and the arts, and of progress in health and education, in social feeling and public life. Nor is an exhibition a landmark of progress merely, but a starting-point as well; it is filled not only with the flower of present industry, but with the seed of that of future years. And this latter aspect is not the less important. The results of each exhibition thus come up for consideration; and, avoiding the vague rhapsodies of progress which usually have to do duty for this, we must attempt a fair summing-up of the advantages and drawbacks of past exhibitions, of their good and bad effects on industrial and social progress. Thus,

and thus only, we shall be in a position fairly to criticise and profit by such recent minor exhibitions as those of Edinburgh and Liverpool, and we shall be able to consider the pressing practical question of the criticism of present exhibitions, notably those of Manchester and Newcastle this year, or that of the organisation of future ones, as at Glasgow or Melbourne the year following. For it is in proportion as we disentangle the lines of partly upward and partly downward progress in past exhibitions, that we shall be successful in organising future ones. These once grasped, we can proceed with economy and certainty to construct our exhibition either on the one line, as an extended shop-window, music saloon, and refreshment bar of unparalleled lustre and magnificence ; or, on the other, as a true museum, somewhat less partial and confused, of [real material and social progress in the immediate past, and a school, somewhat more effective and inspiring, of these in the immediate future.]

CHAPTER I.

RETROSPECT OF EXHIBITIONS.

FOR practical, if not for antiquarian purposes, the earliest industrial exhibitions were those held in the rooms of the Society of Arts in 1756 and 1761. A small exhibition of Bohemian industries was held at Prague in 1791; but the first distinctly national exhibition was that of Paris in 1798. This arose in the attempt to keep out British industry, a gold medal being offered to the exhibitor who should deal the most fatal blow to English commerce. Others took place in 1802 and 1806, but not again till 1819; thereafter every four or five years till 1849. The earliest suggestion of an international exhibition seems to have been made as early as 1833, at the provincial exhibition of Abbeville, by the famous archæologist Boucher de Perthes; and it may be noted in passing as not a little remarkable that the same man should have been nearly twenty years before his contemporaries in insight alike into the remotest past and the immediate future of civilisation. In 1848 the project was seriously mooted; but the reactionary Government of 1849 held the proposal "to have emanated from the enemies of French industry." During the preceding twenty years small exhibitions were held everywhere throughout Europe; thus, not only Austria and Germany, Belgium and Switzerland, Italy and Sweden, but even Spain, Portugal, and Russia had their exhibitions. From 1829 triennial exhibitions were held in Dublin, and from 1828 an unsuccessful exhibition in London dragged on till 1833, finally degenerating into a mere bazaar; that of 1845, however, was more successful, and that of Birmingham in 1849 was the best which had been held in England. In the same year, the Society of Arts procured a Royal Commission to discuss the expediency

of holding an international exhibition. The project was warmly supported by Prince Albert, and the report being favourable, the first international exhibition was rapidly organised on a scale of unprecedented vastness, and the famous Crystal Palace was opened in Hyde Park in May 1851, amid no small rejoicings; in fact, with a burst of optimism unparalleled at any rate since 1789. While the Paris Exhibition of 1798 had only 110 exhibitors, and that of 1849, 5,500, that of London had 17,000 exhibitors, whose goods were valued at three-quarters of a million, while the visitors numbered 6,000,000, yielding a clear profit of over £200,000. Of the million square feet of space, one half was taken up by foreign countries. The respective national predominances were already well marked, Britain being easily first in raw materials, mechanism, and manufactures; Germany in products involving the general and technical education of the workman, such as printing and the kindred trades, the cheaper glass and porcelain wares, etc.; while France stood unrivalled in the artistic industries. This was even more clearly shown by the result of the next Paris Exhibition, which took place in 1855, and which, though on a small scale, had a greater number of exhibitors, and a far more markedly artistic character.

In 1862 the second London Exhibition took place. Its plan was similar to that of its predecessor, save that a retrospective collection of paintings and sculpture showed an increased artistic endeavour. But the most remarkable advance was made by the Paris Exhibition of 1867, which not only greatly exceeded its predecessors in extent, but still more markedly in conception and execution. The collections were arranged more admirably than in any previous or perhaps subsequent exhibition, a simple classification of products based on their uses being adopted. Each class of products occupied a concentric gallery, while to the various countries were allotted radial sections of an appropriate size. Processes of industry were also for the first time shown in action, and the industrial progress of France was well attested in many ways. The official report tersely put the problem of contemporary material progress—“*What enterprises are best fitted to develop production in general*”

on the surface of the planet, and to encourage the best division of labour?" this question being also followed into its branches, *e.g.*, means of communication, like inter-oceanic canals and trans-continental railways; international telegraphy and postage; unity of weights, measures, and so on. Higher questions, too, than those of exploitation received effective treatment. Not only were architecture and the subordinate arts copiously illustrated, but this exposition is memorable as for the first time definitely passing beyond the field of mere production, to consider that for which production exists. New departures of this kind were the departments of education, dwellings, health, and domestic economy; in short, the maintenance and evolution of the community had for the first time received public recognition beside the production of wealth.

In 1873 took place the Vienna Exhibition, which ended in a heavy deficit, attributable partly to the geographical remoteness of Vienna, partly to the recent Franco-German war, and the occurrence of a serious speculative and commercial crisis, itself largely excited by the exhibition. Despite this want of success, the show was richer and fuller than any of its predecessors, and more evidential of civic and public magnificence. Notable new features on the side of production were an historical collection of discoveries and inventions, and copious illustrations of industrial processes, with comparisons of old and new. On the higher side, the appliances of health and education and public culture were even more fully illustrated than at Paris. Public lectures, too, were instituted, and a dozen congresses held, on mechanics, medicine, history, economics, and so forth. In 1876 took place the Centennial Exhibition at Philadelphia. Although as usual exceeding all predecessors in vastness, it was necessarily less cosmopolitan and more largely occupied by the mechanism and immediate products of the primary industries, thus corresponding in its phase of development to that of 1851. Its most noteworthy original feature was the government building, in which were illustrated the functions of government in peace and its resources in war.

But it is with the Paris Exhibition of 1878 that the

progress of general exhibitions hitherto culminates, alike in quantity and quality. This was due partly to the popular enthusiasm of the proudest of nations, eager to demonstrate the supremacy in arts which she had lost in arms; largely, too, to the legitimate political purposes of at once evidencing her resumed place in the councils of Europe, and of peacefully displaying her re-organised national resources against the incessant menace of German re-invasion. Its magnificence of display of all kinds, decorative and festal, its extent, and its throngs of visitors, were alike unparalleled. More worth our notice is the excellence of many special departments, artistic and mechanical. The scientific collections, notably the anthropological, and the historical galleries of the Trocadero, gave increased evidence of advancing culture: similarly the many specialist congresses, scientific and economic. Of these some bore immediate fruit, e.g., the International Statistical Commission, and the completion of the Postal Union. With this exhibition it was largely hoped to conclude the series of general exhibitions, and the coming exhibition of 1889 has rather been forced by the advanced Republican party as a celebration of the centenary of the Revolution, than developed as a natural outcome of the industrial condition of France.

Minor exhibitions were held at Moscow in 1882; Amsterdam, 1883; and Antwerp, 1885; the latter recalling in many features that of Paris. In Germany, where progress had not been entirely of the right sort, a considerable feeling of depression prevailed, owing to the poor appearance and scanty successes at the Philadelphia exhibition. Their educational pre-eminence was not only less distinctly marked, but the quality of products was distinctly lowered, the Imperial German Commissioner himself characterising them as "cheap and nasty." More probably from this reason, than from national jealousy, the Empire refrained from participating at Paris, in 1878, further than in sending a small collection of pictures; but confidence has been reviving since the recent national exhibitions in Berlin, 1879, and other cities. In England, after 1862, a pause *took place*; annual exhibitions were, however, commenced *in 1871, only to die out in 1874*, and it was felt that the

time was fully ripe for a new departure, that of special exhibitions. Thus, in 1876, was held an exhibition of scientific apparatus, historical and modern, and a "Caxton exhibition" of printing; and henceforth the principle of exhausting one department, rather than vainly struggling to accumulate all, may be taken as fairly established. The primary industries were, of course, amongst the first to obtain illustration; thus arose a series of fishery exhibitions; forestry, too, has been well represented (Edinburgh, 1884); while the Colonial Exhibition, although nominally general, mainly belongs to this class. Electricity has been repeatedly represented, while the recent London "Inventories" and Liverpool "Shipperies" have done adequate justice to manufactures and transport. Of higher order and more pressing utility are the various "Health" exhibitions (Brussels, 1876; Berlin, 1882; London, 1884), and it would be interesting, if space allowed, to trace in these our modern progress, as being no longer essentially in material appliances, but social in aim. For this series reflects a higher wave of contemporary progress than do the exhibitions of mere wealth production; here the progress of well-being is no longer proclaimed by a pyramid of gilt nuggets, or a "trophy" of blacking tins and preserved meat; the ideal condition of the workman is no longer merely typified by his attendance upon his machine, nor that of the middle-classes by a profuse supply of tinsel and refreshments. A new series of industrial possibilities opens up as the production of health takes its place beside the production of wealth. The doctor has been steadily, if slowly, rising to the occasion; from barber-surgeons to modern practitioners was no small step, but these again are dividing into two classes, the specialists fighting disease in detail, and the hygienists battling with it wholesale, city by city. The function of the latter, too, is developing from the simple analysis of water and sewage, to the initial and consultative side of the organisation of public works, and even towards regulation of the whole conditions of industry. Following this, also, comes the reform of education, and hence the importance of health exhibitions, which not only illustrate, but further *this silent and peaceful social revolution. It is fitting that*

with the health exhibitions our brief retrospect should terminate, since it is from their pinnacles that the main path alike of contemporary and future evolution is most clearly to be descried. For Emerson's reproach, that "things are in the saddle and ride mankind," is rapidly becoming less true among us.

But what of our minor and provincial exhibitions? These are, of course, legion. Exhibitions are a fashion of the hour. Last year there were not only at least seven or eight special exhibitions in Europe and America, but three general international ones; not only Edinburgh and Liverpool, Manchester and Glasgow, must have their international exhibitions, but Valetta and Thurso, Christiania and Rio, Kioto and Bogota, have had theirs already; the wave has all but literally travelled "from China to Peru." Regarding the recent Colonial Exhibition as necessarily chiefly of the 1851 stage, and resulting rather from the political aim of federation than as a needed expression of the contemporary industrial movement, what is to be said of the recent exhibitions of Edinburgh and Liverpool? From the larger point of view little can be said; they are not on the main line of evolution, nor do they claim any distinct position, or evince any sufficiently definite idea or aim. There is no doubt much to be said in their praise, but that has not been wanting; their most striking interest to us lies in the perfect way in which they reflect the strong and weak sides of the community organising them. Thus, while the Liverpool Exhibition was widely international, as becomed a great maritime city, that of Edinburgh was so in little more than the name, scarcely, indeed, even British, but acutely provincial—in too many respects, indeed, almost parochial—alike in conception and execution. On the other hand, the profuse vulgarity and monumental ugliness too common in the Liverpool Exhibition, and which the noblest exhibits, such as those of Elkington or Doulton, served rather to accent than to redeem, was in contrast with the comparatively artistic and architectural character of the Edinburgh show, thanks to the longer tradition of *culture of the latter city*. Sections like those of the women's and artisan industries in Edinburgh show a hopeful tendency,

and will no doubt be developed in proportion as the skilled handicrafts emerge from the present overflow of mechanical production beyond its rational bounds. Other higher sides are not wanting; some improvement, still much needed and slow, is observable in the artistic quality of goods; the art exhibitions at Edinburgh showed some fair Scottish work, but which could scarcely fail to be stimulated by contrast with the almost immeasurably higher and deeper quality of French and Dutch art, which was for the first time placed side by side with it. Still more useful was the street of "Old Edinburgh," as at once stimulating and popularising the historic spirit, and helping to the recovery of the fallen, yet highest, art of civilised production of permanent wealth—that of rational, fitting, and beautiful architecture, civic and domestic. Best of all were the typical workmen's dwellings, slums no longer, but genuinely human homes, spacious and lightsome, with flower-filled windows, and built with honest old-fashioned mason's marks. The importance of such exhibits is hardly ever realised; the public has now for a couple of generations so unquestionably intrusted this most essential form of permanent accumulation of wealth to the incompetent rapacity of the jerry builder, that the most obvious economic and physiological science is constantly mistaken for "sentiment" when it protests, in the name of every form of real civic progress, against that "progress of the city" in rapidly bricking over hundreds of square miles of country with dreary labyrinths of so-called new streets—too often mere roofless tunnels, leading nowhere save to the factory, and the public-house, the hospital, and the grave. Such "progress of wealth and population" has indeed been dinned into our ears *ad nauseam* by our statisticians, optimistic economists, and all the other comfortable simpletons who do not live there. It has, perhaps, also been sufficiently shrieked against by the sentimentalists and æsthetes who first awakened public attention to it. The time for action is now ripening, and will fully come in proportion as the hygienist gains and the architect recovers that place among the organisers of production which our extreme concentration upon the more transitory industries has so long withheld from them.

CHAPTER II.

ADVANTAGES AND DISADVANTAGES OF EXHIBITIONS.

A CONVENIENT, and moreover authoritative statement of the advantages claimed for industrial exhibitions, is the retrospect of the results of the Philadelphia Exhibition of 1876,¹ which may be briefly summarised. Comparison, we are told, is needed for progress, and to show the effects of position, climate, race, institutions. An industrial exhibition tells each nation (especially the host) its deficiencies and errors. In the field of production it improves agriculture, manufactures, and arts (mediate and ultimate), and also æsthetic production in all respects. In the department of social progress it affords the public a substitute for travel, improves international relations by increasing mutual respect and solidarity, and removing prejudices, and in this way conduces to peace. If we combine such a statement of these advantages with that of M. Chevalier, President of the International Jury in 1867, we may consider the case for exhibitions fairly complete. They increase the knowledge of natural resources. Thus it was a surprise to the Americans to know that their whole foreign market for cotton might be supplied by two per cent. of their available lands, or four per cent. of the area of Texas alone, and such knowledge is of distinct importance to the scientific exploitation of the globe. The improvement of processes and products is again insisted on, and a stimulus is given to education, both in art and science. Considerable stress, too, is laid on the impulse to production and the increase of the volume of international commerce.

Any summary of the advantages of exhibitions would be incomplete without a sample of the more enthusiastic pan-

¹ *Report of President, etc., of Phila. Exh., 1876.* (Philadelphia, 1879.)

egyric, of what we may call the 1851 style, but which is still current in the newspapers after the opening and closing of every exhibition. Take, for instance, from a leading Paris newspaper of 1878, the following extract from a leading article: "Mutual schools of all countries, they serve alike for the general and mutual instruction of producers and consumers; they ensure emulation and progress in all branches of production, by bringing within the reach of all the complete study of processes, methods, instruments, machines, tools, products of arts and trades; they are a source of increase of public wealth, develop sentiments of international brotherhood, dismiss the mutual jealousies of producers in different countries; they increase exportation, and thus furnish a better argument for free-trade than the most eloquent manual of economics; while, finally, these great festivals, manifestations of the state of civilisation of all peoples, the proofs, indeed, the apotheosis of labour and genius, being only possible under conditions of certain peace, make the desire of peace arise in all hearts, which must needs seek the means of maintaining it," and so on, with a thousand variations.

After eloquence of this sort, one is ready to listen more patiently to the other side. Granting, say the critics of exhibitions, that the primary industries are stimulated still further out of proportion to all others, how far is this a public gain, exciting, as it does, the popular imagination to more and more feverish productive enterprise, and increasing that glorification of material resources, which is as marked and mischievous a habit of the British, and still more of the American mind, as is the pride of military resources of the German; and, with regard to the boasted improvement of products, is it not as much in the direction of the showy as of the useful? As to the healthy rivalry for excellence, how often are the articles simply manufactured for the jury and the visitors, and how far are the jury examinations and awards of any real value, save for impressing those who overlook the steadily increasing proportion from one in five in 1798, to more than one in two at Paris in 1878? At Edinburgh recently, the farce indeed went so far as to grant nine awards to as many exhibits of Dunfermline

damask alone. It is urged, too, that these international comparisons tend to destroy healthy individuality of local products, and to check the tendency towards national division of labour. Be this as it may, the enormous expenditure on transport, both of persons and goods, cannot be considered as other than unproductive; while the increase of retail business lies notoriously as much in stimulating the sale of mere gewgaws to holiday-makers, as in the distribution of useful products. We hear much of this "stimulus to trade;" and it is at least instructive to learn that the social organism, unlike the bodily one, is always benefited by an indiscriminate use of stimulants. We are assured, too, that this stimulus is effective on labourer and capitalist alike. Doubtless; but how? To the former the exhibition affords employment. Granted, for the time; but the exhibition is soon got ready, comes suddenly to an end, and with it most of the employment; while the overcrowding, the raised rents and prices are not so rapidly, if ever, lowered to their former level. Thus, in Paris in 1878, the effect on the working class was most disastrous; labour flowed into Paris so fast that rooms were often divided into three, and each was let at the full original rent. Prices, too, rose; then lack of work and hard times of course followed, and the exhibition resulted in a serious, and, to a large extent, permanent depression of the condition of the already hard-pressed Parisian labourer.

And let us examine more closely how the exhibition "encourages trade." We have so much money, which represents a certain definite quantity of material wealth, and possible labour. We spend so much of it on a vast exhibition, a directly unproductive enterprise, a luxury as much as an opera-house is, and having thus reduced our available capital, we further reduce it by enormous expenditure on transit, spending money freely at and over the exhibition. Meanwhile we enlarge our business everywhere, and start enterprises more or less speculative to boot. But business was already up to its full margin of safety, as much on credit as it would possibly bear; the whole addition, and even more, is thus on credit, and this inflated credit must *either leak out gradually in diffused losses, or burst in a*

crisis, as it did in Vienna in 1873. An exhibition, then, certainly does stimulate production, but the stimulus is not of a kind entirely to be desired; it operates in no small degree towards accelerating the return and increasing the violence of the periodic social crises, and the boasted production of material wealth thus ends with a wail over the still more effective production of material poverty. Speculative inflation—crisis—poverty—these are not all. Political agitation and unrest—social disorder—tend as distinctly to follow. The social ferment of Paris, Vienna, and now more lately London, is by no means unconnected with this; and it needs little gift of prophecy to see that such will be, on an unprecedented scale, the fruits of the coming unprecedentedly vast exhibition of 1889, and that its Tower of Babel may be expected to succeed—as other Towers of Babel have done before.

Again, the pretence of technical education is largely a farce; the exhibition is alike too vast and too confused for real popular instruction. Nor, indeed, is this claim now-a-days seriously maintained, being replaced by the converse and more admissible claim of its being a place of harmless public amusement, which competes successfully with the music-hall and the restaurant. Nor is the establishment of peace and goodwill any longer generally believed in—war too surely comes on the morrow. There is little wonder, then, that an increasing number of thoughtful men should say, “This also is vanity.” Thus the *Saturday Review*, in a recent discourse on the vanity of exhibitions, grants the Edinburgh exhibition no worse than other “organised hypocrisies” of the same class; scoffs utterly at its awards of phantom medals and the like, affirming “advertisement to be the sole reason of being of such places,” declares that “the exhibition business is as notorious as the confidence trick itself, and that if the game is to be played at all, it must be played under changed conditions and new rules,” and concludes that “the farce is as good as played out, and the sooner we cease from regarding exhibitions as a civilising influence, the better it will be for civilisation.”

Happily, such a criticism, though temperate and refreshing beside the conventional rhapsodies sampled before, is still

that of advocate, not judge. Nor will exhibitions perish so easily, let reviewers thunder as they will: we only destroy what we replace by something fitter to survive, and our dawning era of scientific industrialism cannot dispense with exhibitions of some sort or other, for industry is striving to see and know and understand itself, and the sooner the better. Hence these exhibits of products and processes, hence these innumerable throngs of sightseers, each eager for his object-lesson in the great school of life. We cannot work out these things on paper: we must have a general view of this wealth in the concrete, of those things which "are in the saddle," were it only to put them back into their right place—the saddle-bags. Again, people must have pleasure, and there is no pleasure like that of seeing the results of our own work. The music would never sound half so sweet alone, nor the pictures seem half so fair, as beside the gathered products of our own industry. It is, indeed, our only modern means of sitting down under our own vine and the fig-tree which we have planted. (But it is the business of the exhibition to anticipate and accelerate that coming age of scientific industry, and not simply to conserve the lower phases of wasteful idleness and ignorant competitive struggle.) Nor is even the most obvious criticism, that against the cheap cosmopolitanism of exhibitions, wholly just. Vague humanitarianism and sham cosmopolitanism, maudlin and mischievous philanthropy all over Europe there may indeed be; but, besides its contemptible, it has its hopeful side. This feeling has been increasing from one exhibition to another, the steam is getting up which may some day be put to useful work. Humanitarian energy, like any other, only needs concentrated application to become available for rational objects. The "parliament of man, the federation of the world," though it did not come in 1852, nor in 1878, though not yet coming in 1889, is "comin' yet for a' that:" nay, small but definite beginnings, in international committees and juries, are already made. (Thus, in 1851,¹ "for the first

¹ *Cole: Lectures to the Society of Arts on the Results of the Great Exhibition of 1851. (London, 1852.)*

time in the world's history, men of Arts, Science, and Commerce were permitted by their respective Governments to meet together to discuss and promote the objects for which civilised nations exist. The chief business of politicians, lawyers, and soldiers is to protect the results of other men's industry, and up to this time governments, consisting for the most part of politicians, lawyers, and soldiers, have had the chief voice in regard to the affairs of industry. The men of Arts, Science, and Commerce have hitherto had but a subordinate voice in the regulation of their own interests. . . . But a new principle was introduced in the exhibition of 1851." During this exhibition, the Postage Association was formed; other results of it were, besides the exhibition building itself, the beginning of the reform of our Patent Laws, the establishment of the International Sanitary Congress (Paris, 1852), and many international hospitalities. Promises, too, were made to reform the system of weights, measures, and coinage, and the Customs and tariffs; to abolish passports and restrictions on international intercourse; to institute an international copyright and catalogue of printed books, to establish international commercial laws, and to found an industrial university.

As to practical counsel, then, it is evident that we need other than our reviewer's, though his demand for "changed conditions and new rules" must be fairly faced. Above all, it is necessary that he who would educate others should first educate himself; and that no such vast enterprise be started without a thoughtful criticism of what has gone before. A student is wont to credit the practical man with foresight and consideration, with counting the cost of an enterprise before he embarks on it; but his respect is wofully shaken when he discovers that the projectors and organisers of exhibitions have usually never even seen, much less collected and studied, the easily accessible, as well as ample and suggestive, literature of the subject. Yet this gross and wasteful carelessness seems to be only too common. [But the gravest of all preliminary questions is that of ideals; is it north or south, right or left, up or down, that we are to tend? Are we setting out on lines of

progress or degeneracy? What are our aims? Science and Art? So say Barnum and Madame Tussaud. Industry and Social Progress? So said our Parisian newspaper. It is easy to promise these things, but to get them is by no means so easy. What is the use of "doing like our neighbours," of squandering the limited resources of a second- or third-sized city on artificially working up a mere feeble reflection of the great wave that echoed round the world a generation ago, of so elaborately seeking "advantages to industry," of which not a few are either immediately, or in the long-run, pure disadvantages, both to industry and social progress. On the other hand, what a possibility, too splendid to come more than once in a lifetime, is before the organisers of an exhibition, of making what shall be an exhibition of the truest progress, in public health, and in public wealth—and those in the largest senses. Not simply as Colbert did, for the seventeenth century; or Turgot, for the eighteenth; or the men of 1851, for the nineteenth; but better, for the fortunes of the twentieth lie in their hands. [In organising such an ideal exhibition, not only producer, but consumer; not only capitalist, but artisan; not only artist, but thinker, must have a say, and bear a hand.] Let us glance, therefore, briefly at some of the practical possibilities of the case.

CHAPTER III.

PRACTICAL POSSIBILITIES OF EXHIBITIONS.

THE difficulties in the way of improving on exhibitions are, it must be admitted, partly moral. It is easy and delightful, in opening addresses and after-dinner speeches, to rise to an enthusiasm of progress far beyond the level of the ordinary caterers for popular amusement, and to promise more public spirit than has yet been evinced by any financial syndicate; but the best-intentioned of our industrial chiefs or city fathers, when the fortunes of an exhibition are once intrusted to their care, will find it no easy task to keep up to the heights of vision reached during these preliminary flights of eloquence. It is so tempting to decide the continually recurring struggle between what is best and what will pay best by assuming the favourite axiom of so many economists, that the latter includes the former, as the greater does the less. A gain to industrial processes, to technical education, to civic progress in any form, would, moreover, hardly be estimable at the closing of the exhibition. How much better a surplus which the newspapers can mention with approval next morning! Look, for instance, at the "successful results" of the Edinburgh Exhibition. Did it not leave behind it—a "surplus"? What such a practical and material view really means—viz., that out of a total expenditure of labour represented by, say, a couple of thousand "man-years," there now remains as material residue only a heap of building materials, plus a few thousand pounds which nobody can agree how to get rid of—is not, of course, considered: no one dare criticise such "results" without incurring the reproach of being an *economic Jeremiah*. The moral difficulty is complicated.

too, with a practical one; wish as one may for improved processes, for industrial education, for social progress, it is hard to see how to get them; urgent practical details absorb every one's attention from the outset, and thus our ideal exhibition falls practically out of mind. Plan and organisation alike pass into the hands of simple officials, upon whom established precedent and desire of pecuniary success press with doubled weight. The "trophies," tinsel, and music-hall elements soon assert themselves, in season and out of season, while the higher questions silently vanish; however, an unparalleled blaze of electric light is turned on, the champion brass band strikes up, the crowd pours in, the till is filled, the reporters are in ecstasies, and the exhibition is "a complete success." That its essential objects have been shelved for the future, much more than what we saw to be the crisis-making factors of the exhibition have been retained, while the progress-making factors have been allowed to remain undeveloped, is entirely lost sight of.

The initial problem is that of clear arrangement—of classification: and here again a brief historic retrospect will be of service. The unimportant early French exhibitions were mainly geographical in plan, but in 1809 the increase of detail compelled sub-division; as 39 "natural" heads, however, were adopted, the result is said to have been confusing. By 1827 the classification had become "purely scientific," i.e. into chemical, mathematical, physical, economic, and miscellaneous! Science so pure being found "too artificial and abstract," the shows of 1834 and 1839 were arranged by Dupin from a more practical point of view, that of the relation of the arts to man, the heads being "alimentary, sanitary, vestimentary, domiciliary, locomotive, sensitive, intellectual, preparative, and social." In 1844 and 1849 a partial compromise of this with the productive point of view was made, and in 1851 this latter aspect became pre-eminent. As this classification has largely influenced succeeding ones, the names of its thirty classes, themselves, of course, sub-divided, deserve citation: (1) Raw material and produce: mining, chemistry, food, vegetable and animal material. (2) Machinery: transport, *machines, and tools, engineering, architecture, and building,*

naval architecture, military engineering, agricultural implements, philosophical instruments. (3) Manufactures: cotton, wool, silk, flax, leather, paper, weaving, tapestry, clothing, cutlery, hardware, precious metals, glass, pottery, decoration, furniture, mineral decorations, miscellaneous manufactures, animal and vegetable materials, miscellaneous. (4) Fine arts. This method was unaltered in 1862, though a few processes obtained separate representation; but many changes were introduced in Paris in 1867, underlying the peculiar advances already mentioned as made at that exhibition. The groups were: (1) Fine arts. (2) Material and application of the liberal arts (printing, photography, medicine, etc.). (3) Furniture and domestic appliances of all kinds. (4) Clothing and personal appliances generally. (5) Raw materials. (6) Appliances and processes of the mechanical arts. (7) Alimentary products. (8) Agriculture. (9) Horticulture. (10) Appliances of physical and moral progress of population. The subject was reconsidered by the projectors of the American Centennial Exhibition, who largely based their scheme upon the preceding, but laid down as the essential principle to group together (1) raw materials, (2) manufactures and products, (3) means and appliances of the preceding, (4) resultant effects of such productive activity; and claimed that this classification is not only "natural and simple, but calculated to show more effectively than any other system the development of man, the progress of the arts and of civilisation." Ten departments were arranged: raw materials, manufactures, textiles, furniture and domestic appliances, tools, motor machines and processes, transport, education, engineering and architecture, fine art, physical, intellectual, and moral improvement. These ten groups were each somewhat arbitrarily divided into ten classes; the exhibits in each group occupied a longitudinal band of floor space, while the exhibits of each country could be followed along a band at right angles, an arrangement also recalling that of the Parisian model.

The great exhibition of 1878 somewhat modified the classification of 1867, the groups being: (1) Fine Arts (five sub-classes). (2) Education, apparatus and processes of the

liberal arts (eleven sub-classes). (3) Furniture and accessories (thirteen sub-classes). (4) Textiles, clothing and accessories (thirteen sub-classes). (5) Mining industries, raw and manufactured products (seven sub-classes). (6) Apparatus and processes of the mechanical industries (nineteen sub-classes). (7) Alimentary products (seven sub-classes). (8) Agriculture and pisciculture (nine sub-classes). (9) Horticulture (six ; total, ninety sub-classes). This scheme is to be substantially adhered to in 1889.

This general view shows us that while the arrangement of sub-classes has no doubt been developed in detail, the large features of all classifications still mainly arise from the industrial bias of France and England in artistic and primary industries respectively. Is it not possible to retain all the advantages, yet to arrange our industrial museum in a more instructive and intelligible way? The two essential points of view already insisted on are also seen to influence all classifications ; those on the 1851 lines favour the progress of industrial processes, while those of the French type are more adapted to aid the higher aspect of industry, *i.e.* the ultimate products and the social progress which all processes exist to subserve.

Our ideal exhibition should unite both ; every exhibition, in fact, does so to some extent, and the problem really comes to be that of laying down that general outline of economic processes and results, within which every exhibition, general or special, is included, and of which it is a more or less complete or partial realisation. And in proportion as such a scheme is truly scientific, it will differ from existing ones, not in any far-fetched principle or complexity of detail, but merely in systematising their common-sense, and so reaching greater simplicity and unity, with easier applicability to purposes practical and instructive. Our 1851 classification, and that of Philadelphia, finds its justification in broadly following the stages of production, *viz.* : exploitation, manufactures, transport, and trade ; yet how much more instructive had this scheme been followed out in detail. The general problem of production must be kept clearly in view. This we may state as it is tersely summarised by Jevons : " Given a certain population,

with various needs and powers of production, in possession of certain lands and other sources of material; required the means of utilising this labour which would maximise the utility of the produce." And, first of all, the problem of exploitation, of extractive industries, of getting hold of our resources, of realising our estate in short, is successfully treated by no means in proportion to the vastness and heterogeneity of the piles of raw material which lumber up our exhibitions to so little purpose, but lies in a careful stock-taking of our resources, actual and latent. This part of the plan is primarily for the geographers and statisticians; and a series of well-coloured maps and wall diagrams, compiled by these, require only a set of illustrative and verifactory samples of the raw materials. The whole of this could be kept within limits of cost and space far less extravagant than is customary, yet be ten times more instructive, and even more popularly interesting, than we ever see. Of course this part of the arrangement of an exhibition is being increasingly well done; yet it is not needless to call attention to the desirability of doing it better. Thus, in the Edinburgh Exhibition, there was no real attempt to answer the fundamental economic inquiry—what are the resources of the country? Coal heaps belonging to rival merchants there were, certainly, and in abundance; but for an estimate of the mineral wealth of the country and of its various districts one sought in vain. Yet the Geological Survey, the Geographical Society, and the Society of Arts were all at hand; their help might readily have been secured had a real exhibition been seriously wanted; but as the general circular brought in chance samples by the cart-load, the services of science were not pressed for. The other great departments of exploitation, agriculture in its many branches, and fishery, have, of course, their special exhibitions; yet no general exhibition should fail to place before its visitors at least some clear reminder and diagrammatic abstract of their respective importance in the national economy. To the agricultural shows may safely be left the latest reaping machine and the prize pig; but it is for the projectors of a great exhibition to set before the public, especially at this period of crisis and widespread ruin in

agriculture, an impartial summary of the existing state of things. This, again, might have been done with peculiar fitness in Edinburgh, as the centre of what is, or used to be, the most fertile and well-cultivated region in Europe, and the seat of the Highland and Agricultural Society, to whose labours the creation of that fertility is so largely due. A set of statistical maps and diagrams would have given the general public and its law-givers that outline of existing facts so much needed in this period of impending legislation, but which they cannot obtain from the party press, and will not from the more ponderous sources. Doubtless, however, the wall space was required for advertisements. At any rate, the organisers are always townsmen, not to say something of Cockneys, and organise their show out of the familiar town industries accordingly; hence the representation of agriculture comes in all exhibitions alike to fare but ill, and a splendid opportunity of aiding the cause of applied science in many departments is thrown away. From every point of view, indeed, agriculture deserves a foremost place; historically its stages are those of civilisation, practically it is of all industries most important to general prosperity; and thus, whether we are to arrange for the frescoes and statuary of the grand hall of our exhibition, or the disposal of its sewage, the importance of agriculture cannot pass unrecognised without injuring the whole.

CHAPTER IV.

PRACTICAL POSSIBILITIES—ARRANGEMENT.

BUT it is time to pass from agriculture to manufactures. The vastness of this court of our exhibition renders some general idea even more indispensable than before, and, fortunately, this is not far to seek. In all times, and in all countries, the essential industries are the same; the infinite division of labour which characterises our time is nothing more than a development of that of the savage; nothing generically new has ever been introduced, for what seems new is but a differentiation of the old. Defence from brute and human enemies provided for, the first task of savage industry is to obtain food, the next to get a garment for warmth, and to construct a shelter for the night; while, subservient to these industries of direct or *ultimate* utility, those of indirect or *mediate* utility, *i.e.* tool-making and portage, soon arise. A rough division of labour, at first conditioned by sex, exists also from the beginning, and of this all our subsequent complexity is a development. The passage from the hunting to the pastoral phase involves a complication of the same essential industries; that to the agricultural state differentiates them further, tool-making and transport develop into vaster and vaster importance, and react upon the ultimate industries, and the modern world thus begins to open out before us. Our era of modern industry is marked by the same two features as the earliest one, increasing command of fire and marked progress of the tool; and its associated enthusiasm of steam and electricity, of mechanism and invention, which seem so characteristically modern, is but a repetition, with mere change of language and ritual, of the antique worship of Prometheus. Of "fir

and the tools," men sing in one age ; in another they read in *Industries*, or the like, of energy and its applications.

This idea may seem too general for practical purposes, yet, like every true generalisation, it may at once be carried into detail. We may, in fact, lay it down in short tabular form.

Retrospective.		Tool-making.
Actual.		Transport.
Prospective (<i>Inventions, etc.</i>).		Shelter.
		Clothing.
		Aliment.
		Struggle.

Further clearness is reached if we separate, as is, indeed, commonly done, only the general modes of utilising energy,

EXPLOITATION.	MANUFACTURE.	PRODUCTS. (a) Mediate. (b) Ultimate.
Sources of energy.	Apparatus and processes of utilisation of energy (prime movers, etc.).	(a) Mediate products (historical retrospect of evolution of the tool, etc.).
Materials of transport.	Apparatus and processes of tool-making in widest sense (mechanical engineering, etc.). Apparatus and processes of transport.	(b) Architecture, furniture, decoration, etc.
Materials of shelter.	Apparatus and processes of constructive arts.	Clothing.
Materials of clothing.	Apparatus and processes of vestimentary arts.	Food.
Materials of aliment.	Apparatus and processes of alimentation.	

and arrange the various mechanisms with the special industries to which they respectively belong; and this

arrangement, so far from necessarily excluding an historical survey, rather facilitates it, since the history of every industry is worked out by, and consequently written in, the tools it makes use of. On one side, too, we may now add the department of exploitation, which assumes a new clearness when arranged beside the processes it exists to subserve; nor do its own natural sub-divisions interfere with completeness of parallelism, since the sources of energy and the raw material of construction are mainly furnished by mining, and those of alimentation and clothing by agriculture and fishing. On the other side run the ultimate products of the various industries, the fine arts going, of course, with the constructive.

That this scheme is at once simple and natural will not probably be disputed, while its applicability to practice becomes evident when we note that it simply amounts to a reconciliation of the differences and a combination of the advantages of the French and English types of classification. In fact, these various styles of classification are best understood by simply going through the preceding ground-plan in different directions; and further, it is thus that, so far as production is concerned, the facts of past exhibitions are best pigeon-holed in our memory. Here, of course, one court has to be enlarged, and there another left vacant; but the general principle is none the less universal. The objection may be made that this interferes with the geographical arrangements; and so far this is an advantage. There is no reason why a Japanese machine, for instance, should not be placed with other machines of its class, wherever they come from. French wines, Japanese ware, and every other natural genus of product would be kept together as much as formerly; but one would find each in its proper place, among its congeners of all countries. The comparative technological uselessness of most great exhibitions is, perhaps, more largely attributable to the confusion which the national principle introduces than to any other single defect, for forty bazaars will never make one museum. All the real claims of national distinctness are quite adequately met by using tickets printed with the national colours, and placing the objects in the same (conveniently alphabetical)

national succession in every court; while the interests of cosmopolitanism, free-trade, and the like, would be served less, perhaps, by eloquent protestations over an unwieldy agglomeration of petty rival shows, like the booths at a fancy fair, but in reality far more by the simple common-sense method of recognising no difference between an exhibitor from one town and an exhibitor from any other. Nor would there be any real loss to picturesqueness or variety, since the national styles of architecture and decoration would be exhibited in their proper places, and the possibility of the appropriate decoration of each court would only then, indeed, render real variety possible.

Another practical necessity, in the interests of utility and beauty alike, is the total abolition of the "trophy" system of exhibits, and the substitution of the simplest possible show-cases, uniform for each class of goods, and placed in regular rows upon the ground-plan. It is surely unnecessary to argue at length for this indispensable step towards making any department of production intelligible to nine-tenths of the visitors whom it is desired to instruct, or to show that the ends of progress are better served by letting the excellence of each article speak for itself than by displaying it with all the borrowed magnificence of a gaudy frame; or, finally, to insist on the possibility of giving that degree of beauty and variety to the exhibition, which is certainly one of its chief attractions to visitors, in some way at once less wasteful and less absurd than by encouraging exhibitors to make themselves ridiculous by arranging their products in ways which unconsciously, yet absolutely, repeat in construction and colour alike the primary æsthetic efforts of infancy. The spectacle of not only grown men, but intelligent chiefs of industry, naïvely working up their contributions to a museum of production into the exact likeness of the ornaments made in every kindergarten, is as instructive from an educational and anthropological point of view as it is grotesque from the artistic or the utilitarian. But since the total disappearance of the trophies is hardly to be looked for, so long as the majority of exhibitors and organisers *alike have not gone through this phase of juvenile education, it is well to console ourselves with such possibilities of*

instruction as are unintentionally open to us. That an exhibition, too, should help to render clear to us something of the amount, and still more of the mechanism of exchange as well as production, is clearly desirable. The illustration of transport, though still too much in the early phase of showing only ship-models or real locomotives, has been at least fairly attempted, especially at Liverpool; but the "beautiful complexity and secretiveness of British trade" still await attempts at their exposition, in line with the other industrial processes. Unlike transport, the subject, if treated at all, cannot be smothered by mere material exhibits. A model ship may satisfy most people's desires for information as to transport; but the best display of office stationery would hardly be accepted as explanatory of trade. The subject is one peculiarly for graphic statistics; but the periodic curves of general crisis or local depression, for instance, might have unpleasant associations if written too legibly upon the wall. How far such an exposition of commercial mechanism is practically possible on one hand, as, on the other, how far any industrial exhibition can be complete without it, are inquiries which would lead us far beyond the present limits.

It may seem time to pass from the industrial processes altogether to the arrangement of the ultimate industrial products; yet before this arises the question of the organisation of labour. Here, however, though the processes of industry are constantly treated by the economist from the point of view of the division of labour, our exhibitions are usually deficient. The "Galerie de Travail," which is so interesting a feature of most exhibitions, certainly gives some idea of the division of labour in detail; but for adequate public instruction more must be done. The essential historical retrospect of production is, of course, an illustration of the increasing division of labour; but the progressive concentration of labour also needs illustration, not so much in increased number of workers, but in that complexity of co-ordination of different processes which is now setting in, and of which such arts as ship-building, engineering, etc., furnish salient examples. The evolution of the factory into a complete industrial town like Creusot

or Essen, and the setting forth in detail the vast mechanism which the marvellous co-ordinating power of a Schneider or a Krupp is able to organise and hold together, would be an exhibit of supreme importance¹ for technical education, in a form of which we hear far too little—that of the capitalist himself. For in industry as in war, it is not even the quality and quantity of the rank and file that, on the whole, decides the victory, but the degree of generalship; and since the pressure of competition has brought the problem of educating the workman as a specialist clearly before us, it is not less needful to bear in mind the corresponding necessity of educating the master as a generaliser.

¹ This was, in fact, largely shown by Schneider and Krupp at Paris (1878) and Berlin (1882) respectively.

CHAPTER V.

INDUSTRIAL AND TECHNICAL EDUCATION.

INDUSTRIAL education, scientific and technical, in its more general aspect, as being no less needed for the industrial captain himself than for the rank and file, is still far too much neglected among us. This involves, not only that master and man alike should know the detailed practice and the scientific rationale of their special art or manufacture, if they would not be beaten in the struggle for existence with those who do, but also demands some knowledge of the wider bearings of their industry ; some consciousness of their personal place and function in the general economy, domestic, civic, and national ; some idea, in short, of their economic powers and duties. We are prone to think little of this ; yet, so strange is human nature, that an ounce of enthusiasm and manly pride, whether in art or war, has always been worth a pound of technical knowledge. And thus, while duly noting what definite profit may be fairly expected from each improvement in technical processes or organisation, we should do well to bear in mind what the history of every great industrial community shows, be it Lübeck or Nürnberg, Ghent or Milan, Bruges or Venice, namely, that industrial success depends no less on immaterial than material factors ; and that this varies not so much with the natural advantages, or even the technical skill and scientific knowledge of each competing community, as with the breadth of economic and political vision, and the depth of social feeling of its citizens. The history of the fortune and fate of these industrial communities, like the progress of our own at present, is like a voyage ; for the course is fixed neither by *the size or build or cargo of the ship, nor by the number of*

the crew, but lies at the mercy of every wind of doctrine, of every current of moral temperature, of every unseen rock of accident, save in so far as these are provided against by skilled captaincy and manful steering. It is true that many a political economist, with his legitimate interest as purser's clerk in the bulk of the cargo, and his statistical numbering of the hands, and parsimonious reckoning of wages at "what will maintain the labourer," has been accustomed to deride all those essentials of seamanship as "mere sentiment;" or, when put on the defensive, to excuse his position by feebly protesting that "all this is beyond his province," that "he cannot hope to become a specialist." In proportion, however, as history and the sciences, morals and statesmanship, widen our economic vision; in proportion, for instance, as we learn wherein and why (despite all our advantages) our modern cities are still far behind many of these mediæval ones, our educational ideals for labourer and for capitalists must surely rise; meantime, the exhibition affords a unique opportunity of at least preparing for this. It is not needful to confuse economics with morals, yet perfectly certain that if we do injustice to one we are also doing injustice to the other. We are perfectly at liberty, for instance, to consider our labourers from the physical standpoint as machines or "hands," but not to reason superficially about them as well, as if it did not pay to keep and perpetuate the best machines—that is where the immoral comes in, and with it the un-economic too.

Parallel to the vast physical processes of industry, let us map out our producers as organised for labour—classify their occupations in short. This doubtless seems, at first sight, of little interest, a mere census; but a census of occupations, when rationally, not alphabetically, arranged, teaches us more than would at first appear. Group the producers, like their products, according to exploitation, manufactures, transport, and trade, and divide these again into their respective sub-classes, and one sees at once the strength of the various industrial brigades, and of their companies; estimate, too, the next great class, that of "servicers"—*persons engaged, that is to say, in personal services, whether bodily, or mental, or social*; estimate, in the third place,

that vast and miscellaneous class who agree only in being the social "creditors," *i.e.* in diminishing, not increasing, the wealth produced by the other two classes, and who thus include not only the criminal and the disabled, but the occupations (legal, medical, etc.) to which these give rise; and not only the "unemployed" by misadventure, but by refusal, whether this be due to the ignorance or apathy of well-merited poverty or of ignoble wealth. These three classes of occupations set before us, in a far more important way than do the more popular statistics of income, the real wealth and strength of the community, and, more than this, its possibilities of improvement and of change. We begin to see how the industrial health and wealth of the mediæval city was in such large measure due to the guild organisation, which kept before each man his own place and duty, and set before him also the relative place and usefulness of his neighbour's work; thus rendering impossible that miserable view of life so characteristic of our own day, and which we need not so much good intentions as wider social knowledge to dispel; that simplification of "Number One," isolated amid an unintelligible confusion of activities, in which there is nothing better than to snatch as many of the current counters and tokens as one can—the crude conception, or, rather, misconception, which lies not merely at the bottom of the old mercantile theory, but has to be got over by every man separately, and upon which the faintest comprehension, not only of our exhibition, but of the whole of life, depends—that of "making money," as opposed to "producing wealth." This is, in short, not only the moral, but the intellectual, "ass's bridge" of political economy.

Useful survivals of the old "régime" of industry, from which a boy often learned more of this general truth and of his special place in industry than men do now, were picture-books descriptive of the various crafts and trades. Our exhibition should afford the developed equivalent of this: it should set forth, in practice where possible, but at any rate in simple pictorial diagram upon its walls, the essential processes of the various crafts and industries. Of course it will be urged that this could not be done for lack of artists, or by reason of expense; but any one who has had

occasion to look into the matter of public and mural decoration, knows not only that artists are spoiled for lack of such tasks, but that the younger ones would be glad and proud of the opportunity. Moreover, there is hardly a house-painter graining oak, or producing sickening mimicries of marble, who could not help, in at any rate a subordinate capacity, with such a task; the invaluable mural paintings which preserve the life of ancient Egypt needed no skill beyond the reach of the average artisan—and, for that matter, the magic-lantern enables one adequately to transfer a tracing or a photograph to a wall without any previous pictorial training. Again, the passion for advertising might (under due guidance of a “hanging committee”) be in this way allowed judicious outlet; the leading soap-makers would doubtless gladly contribute an excellent representation of their processes, while the claims of mustard or matches to public attention might be graphically set forth with a freshness exceeding, even for purely advertising purposes, the hackneyed reiteration of the maker’s name alone. The proposal, in short, is everywhere to supplement, as far as possible, the mere exhibition of inanimate products by graphic illustration of processes—that is to say, to apply to our museums of production the graphic illustration now everywhere admitted to be necessary (and largely in active progress) throughout museums in general. The same methods may, of course, even more simply be applied to the purposes of illustrating the mechanical or physical principles underlying the respective processes; while the elementary economic conceptions, starting from the division of labour, as has been before pointed out, would be for the first time vividly popularised.

CHAPTER VI.

THE ORGANISATION OF INDUSTRY.

THE various relations of capital and labour, and their different modes of adjustment, can nowhere be so well compared, and their respective advantages set forth, as at an exhibition. At present we have many and various relations between capital and labour; but these are, unhappily, only actively discussed in times of strike or arbitration, in superficial and transient, even when not one-sided, columns of the newspapers, or, at best, either scattered in economic papers or heterogeneously compiled in such a volume as that of the recent Industrial Remuneration Conference. Seeing the enormous friction and waste of wealth which such unsettled relations involve, it would surely be worth our while to spare some little space (a small room, with tables and a few book-shelves, is all that is required) for the definite and statistical exposition of typical cases of the actual history and present state of the relations of capital and labour in the various occupations. Economists and journalists, masters and workmen alike, speak as if the state of relations in any one industry were much the same as in others, whereas the various occupations are at planes of progress years, nay sometimes perhaps whole generations, apart.

In some occupations, strikes are of constant occurrence; and these differ as widely as wars in duration and tenacity, in degree of waste and exasperation. In other industries, strikes are almost unknown, yet for very different reasons; sometimes the worker is depressed too near the margin of bare existence to have any fight in him, and too undeveloped for any hope of combination, even if he had; sometimes, happily, the age of battles seems over, at least a peaceful *modus vivendi* has been arranged. The degree of progress

in this respect, in short, differs from one occupation to another perhaps even more widely than does the status and well-being of the worker. And for that matter, too, the capitalist is not a mere colourless shadow, always the same, as in the conventional economic text-book, but a man very similar to those he employs ; varying widely, however, from occupation to occupation, as well as from individual to individual, through an enormous range of moral and social progress, which is not easily realised without contrasting, in some detail, the coarse mastership of a century ago with one's ideal of a century hence. Representatives well-nigh of both extremes actually exist side by side amongst us ; and so long as the slop tailor and his slaves on the one hand, and the great brewer or engineer, shipbuilder or decorator and his prosperous workmen on the other, present us with types of men and manners so widely contrasted, it is surely needful to study and treat their respective cases separately and in detail. Then, too, let not only the different industries—say coal-mining and damask-weaving—learn their relative levels on the ladder of evolution, but let trades-unionist and co-operator each enunciate his case. Let one master set forth his sliding-scale and another his plan of profit-sharing, and so on ; let amicable conferences be arranged, and their results printed in abstract. In this way, were but the economist allowed the humblest voice in the arrangements of a single exhibition (of course after the superior claims of the American bar and the Indian jugglers had all been disposed of), so far as to be granted the disposal of a committee-room for a month, as definite a step might be made towards reaching the ultimate industrial order as by all the strikes and lock-outs in the city for a dozen years. But he would doubtless have a difficulty in satisfying the finance committee that the gate-money would appreciably be increased by so unconventional an undertaking : the proposal is therefore, doubtless, too visionary for serious discussion, and it is needful to take up the argument from before this digression.

The organisation of processes and labour being for the *first time clearly set forth together*, the question of the effect *of the work upon the worker* would naturally come up for

treatment. The peculiar risks and the specific effects of each occupation upon the duration and quality of the worker's life need much exhibition before adequate heed is taken of these, even by the workers most concerned; yet such reiterated popularisation would strengthen the hands of the hygienist (who would willingly undertake the labour), and so save something of that vast waste of wealth by waste of health, which, even from the most purely mechanical point of view, is a more serious item of national loss than any other form of depreciation of machinery. As scientific ideas slowly filter into the political mind, inquiries into the "depression of trade" will soon cease entirely to ignore the simultaneous depression of tradesman and trader. Here, again, space does not permit detailed exposition, and it would require the insertion in the present text of much of that diagrammatic illustration which is demanded for the walls, to set forth the importance and the perfect practicability of this proposal. The economic value of human life, both actual and potential, is, however, a subject which will richly reward more consideration than it has yet obtained. In this relation, too, the recovery of waste products might profitably be considered, especially as it is usually to the action of these, rather than to the essentials of a so-called unhealthy process itself, that bad effects are usually due. For it is not so much in the rapid and wasteful development of new natural resources, nor in the rapid increase and wasteful employment of an unskilled population, that the industrial progress of the future will lie; but rather in the more economic use of existing resources, and the more regular employment of a healthier, more developed, and longer lived community.

CHAPTER VII.

JURIES AND THE PRINCIPLES OF JUDGMENT.

AFTER these long preliminaries, we are now ready to deal with the central feature of the exhibition—the finished results of industry, the ultimate products themselves. The raw materials and processes, nay, the whole organisation of industry, exist for these, and lead up to these, and it is natural, therefore, that upon their abundance, novelty, utility, and beauty, as well as upon our skill in arranging and judging them, the success of our exhibition must, in the main, depend. The mode of natural arrangement of these, setting out from the primary wants of aliment, clothing, and shelter, has already been outlined (see page 24); but the further development of this, as well as the general principles of critical judgment, requires fuller exposition. Note, first, the need of such general principles, from the experience of past exhibitions. The difficulties of judging, and the invidiousness of awards, were strongly felt in 1851, and at Paris, in 1855, the president of the exhibition recommended the abolition of both jurors and awards in future! In subsequent exhibitions, the dissatisfaction of all parties only increased, and after that of 1867, the commissioners of the principal countries recommended that no prizes of any kind be awarded, but that reports on every class of productions be drawn up and signed by the judges; and this plan was adopted in London from 1871 to 1874. At Vienna the plan of international comparisons was abandoned altogether, and mere special juries for each country took their place; while at Philadelphia, after an unusual degree of *inquiry* and discussion, the principle of large juries *awarding graduated medals* was abolished altogether, and *250 judges were paid to attend regularly, considered indi-*

vidually independent and responsible, and instructed to furnish signed reports. The award consisted of a uniform bronze medal with diploma, together with a certified copy of the judges' report. Here, then, is a certain progress, although how little this has yet affected minor exhibitions we saw only too clearly at Edinburgh. Briefly summed, the modes of judgment have, as yet, been mainly two: either that of rapid survey by an irresponsible and impersonal, even if not careless or partial, jury; and, secondly, by more detailed criticism by responsible specialists. That the latter method is an improvement upon the former, is obvious; but neither has as yet given, or ever can give, great satisfaction either to the exhibitors or the public. Yet the social utility of testing the innumerable products offered to the public, in some way less slow and wasteful than that of natural selection alone, is obvious enough; in fact, we have here one of the main economic claims of an exhibition to exist at all, in that it attempts to help the consumer to find the best article. Raw materials may, indeed, be judged with tolerable fairness, if we obtain the services of experienced dealers as judges; but new processes or mechanisms must appeal from the almost inevitable bias of the judge towards conservatism of the old or enthusiasm of the new, to the only real test, that of use. And here the exhibition affords many opportunities, and might readily be developed to give more: the various systems of electric lighting, of gas regulating or gas heating and cooking, of water filtering and sanitation, are obvious cases which have, indeed, in variable measure, been actually tested in this way; and the principle might, with a little thought, be extended in many others, from the construction, ventilation, and decoration of the building, down to the clothing of the employés. Rival producers might, perhaps, be permitted to submit their wares to actual test before chosen arbiters and the public; but it is questionable how far such duels *à outrance* should be encouraged, except, doubtless, in cases where adulteration or other dishonesty has to be proved or disproved.

That this slow and empirical test of use can, however, be to some extent anticipated by that of rational criticism,

is, of course, generally admitted ; witness the existence of juries at all. The question thus arises—Can we not diminish the differences among these rival doctors, by discovering some common, however broad, basis of agreement, by laying down some general canons of criticism within which the various judges may work on special, yet broadly parallel, lines? This difficulty, which, as we have seen, is slightest among raw materials, where shades of utility are easily recognised, increases as we undertake the study of processes and mediate products, though we can still appeal on either side to practical experience and theoretic science ; it becomes, however, almost bewildering as we enter upon the field of ultimate products. Here we are met on all hands by the ancient outcry that “there is no accounting for taste” ; and if this be so, we must, of course, disband our juries forthwith. Yet with it our whole exhibition should logically follow ; for unless our ultimate products are brought here to be criticised and compared, they have come simply to be sold, and our incipient museum can never be more than the mere bazaar it is at present. With raw materials and processes we were in the comparatively indisputable field of science ; but on entering among the ultimate products of the industries, we are confronted by a new series of considerations—those of art, in which unanimity has always seemed hopeless. First, however, let us note that science and utility must fairly claim a fundamental voice in the criticism of products : for that food and drink have primarily to be tested by the analyst before they can be submitted to the palate, whether of the child or of the epicure ; clothing criticised by the physiologist, before it appeals to custom or fashion, to the taste or to the means of the wearer ; and the details of housing scrutinised by the hygienist before style or beauty is concerned, are considerations all obvious enough to the intelligence, yet, probably, never so much neglected as has been the case in the past generation. Food, in short, must be food, clothing clothing, and houses houses ; the utilitarian is evidently at the root of the whole matter, and it is little wonder that, *seeing that the æsthetic factor in production is not only a mere costly superaddition to the fundamental one of utility,*

but tends at best, constantly, to be either crude or unintelligibly complex, even when not obviously ugly, formal, or ostentatious, the utilitarian should often wish to do away with it altogether. He sees, too, how factories are no longer built with a Grecian portico, nor chimney stalks tattooed with childish patterns; how the beam engine is no longer supported on wreathed columns, nor the railway carriage fashioned in the likeness of a stage-coach; and he hopes to see science and common-sense spread to the makers and users of ultimate products as well; necessities, and doubtless comforts, he will admit, but no luxuries. In this way we can readily understand the view of a German commissioner at Philadelphia, that works of art do not properly belong to an industrial exhibition at all—"Ernst ist das Leben, heiter ist die Kunst."

The æsthete is accustomed to meet such extreme views as those by vague abuse of utilitarians as "Philistine," and to give vent to his feelings in hard sayings, as that "the beautiful is more useful than the useful," or that while "life without industry is guilt, industry without art is brutality." Our reconciliation must thus evidently begin with less extreme types. In the first place, the representative utilitarian is happily less severe; witness the speech of the President of the United States at the opening of the Philadelphia Exhibition in 1876: "Our necessities have compelled us to chiefly expend our means and time in felling forests, subduing prairies, building dwellings, factories, ships, docks, warehouses, roads, canals, machinery, etc. etc. Burdened by these great primal works of necessity, which could not be delayed, we yet have done what this exhibition will show in the direction of rivalling older and more advanced nations in law, medicine, and theology; in science, literature, and philosophy; and in the fine arts. While proud of what we have done, we regret that we have not done more: our achievements have been great enough, however, to make it easy to acknowledge superior merit wherever found." This type of industry, which as we have seen has given English and American exhibitions a predominantly utilitarian character as contrasted with those of Paris and Vienna, also however produces types of community no

less diverse ; in fact, gives rise to greatly differing habits and views of life, which curiously recall the distinction between the Puritan and the Cavalier periods. The disproportionate place given to the primary productive industries during the dawning age of industry, however inevitable and even useful it may have been as a brief phase of progress, tends, like every phase of progress, to claim permanence and finality ; and the whole end and aim of production—to provide for consumption, and that for the maintenance and evolution of the community—becomes lost sight of. Thus the ultimate products of industry become degraded into the mere fuel of increased production, and become viewed, not as the end of production, but as a mere means of more. Whole generations of conventional economists have accepted and systematised this sordid view of life—or rather absence of view ; hence wages are said to be “ what will maintain the labourer,” whatever would evolve the man being “ unproductive consumption.” In the name of “ progress,” we used to be told, he should minimise all such unproductive consumption, for is not “ capital entirely the result of saving ?” In this way, the swiftest multiplication of an unskilled populace who have never acquired even the conception, much less the possibilities, of adequate human life, because accompanied by an equally swift multiplication of the apparatus of primary and transitory production alone, comes to be customarily regarded as “ progress of wealth and population :” and we are thus enabled to see why such economists as have complacently regarded the utmost starvation of civilised life as only a commendable sacrifice to their idea of increased production, did not even get so far as to promulgate so obvious and utilitarian an idea as, *e.g.*, that of the necessity of national technical education, but left this and every other step of social progress to the enthusiast or the philanthropist or the more tardy scientist alone. It is not too much to say that this doctrine of production has done far more, not only to retard progress, but to create difficulties in its way, than would have been possible to any *avowed crusade* against culture. The American who went *on building saw-mills*, not only after he had made a fortune *and reached old age*, but after no more saw-mills were

required, and who excused himself by saying, "I have had no education, I have no tastes, I am not interested in anything else; what can I do but build more saw-mills?" is too truly a type of the industrialism of his age; and the duty of the economist is certainly no longer to extol such industry as "productive," nor the saving which provides capital for it as "meritorious," but to point out that the needed revival of industry, and the yet more needed, though as yet less desired revival of industrial life, alike demand not the mere building of more mills, to employ more hands to saw more planks to send to still more distant markets, but rather that some of the sufficient abundance of existing planks be better used nearer home. Some have to be fitted into healthier and more spacious dwellings, some shaped into better and more permanent household furniture, some, too, carved into permanent household treasures; it is thus that not only health and comfort, skill in production, and enjoyment in consumption, but material wealth, and even "saving," in its true form of permanent realised wealth, can ever be secured among us; thus it is that "progress in wealth and population" may recover the idea of direction, at present so deficient, and enter consciously upon a truly upward, although less broad and easy, course.

CHAPTER VIII.

THE CONDITIONS OF DESIGN AND ART CRITICISM.

THE political economist is tardily rising to a conception, which, it must be confessed, many practical men have grasped and acted on ever since the great Exhibition of 1851, viz., that art is no less of solid economic importance than are manufactures or exchange. The South Kensington collections, the systematic art teaching, and the innumerable schools of design of the Science and Art Department, however imperfect their results, are all due to the invaluable object lesson we then received from our French exhibitors ; yet while this great industrial movement has now grown far past the initial stage at which the friendly criticism of the economic student would have been of most value to it, there is all the greater need to analyse it intelligently, and so help to direct it aright. The problem, in short, resolves itself into the question of how we can aid buyers and sellers to choose the best products, and how aid the maker to design and produce still better ones.

The study of the æsthetic element in production, and of the "political economy of art," demands not only a rational theory of æsthetics, but the practical application of it ; and it is, in fact, from the examination of a museum or exhibition of beautiful products, and not from any metaphysical first principles, that our theory should be derived. While old attempts at æsthetic criticism grappled from the very outset with the Laocoon itself, only to land the critic in dire entanglement, of which that statue furnished the fitting type, a more cautious renewal of the attempt at "accounting for taste" will begin with simpler objects. Let us start, *in fact, with the simplest of the senses—with literal taste*

itself ; this understood, higher forms of taste may be more intelligible. The utilitarian physiologist and the food analyst have here first to be put on the jury ; bread and meat, cakes and ale, bonbons or wine have first to pass their judgment. More, however, than presence of right ingredients and absence of wrong ones is needed ; some flavour is indispensable even for bare digestibility, and the æsthetic factor is thus given a hold. This granted, a real scale of æsthetic superiority is ascertainable in every class of product, from insipid up to delicious ; and though there is great variety, and though we here and there find individual peculiarities of taste which are not easily accounted for, there is no question that our judges, from the simple matters of baking and confectionery up to such subtleties as tea- or wine-tasting, can and do fairly distinguish good, better, and best ; that is to say, we can come to fair agreement over a standard and scale of sensuous pleasure, *i.e.* of taste, in fact of beauty, in which even custom and fashion will disturb us little. Yet such additional factors already make their appearance, and as these retain their importance and increase their complexity when we enter the field of the higher senses, it is needful to consider them at once. First, then, legitimate sensuousness may be and constantly tends to be exaggerated into sensuality. The flavour or pleasant stimulus to digestion then becomes the object of consumption, perhaps even of life, and wholesomeness and temperance are alike forgotten. Again, a certain standard of consumption tends to become fixed by habit, irrespective of varying conditions of climate or occupation, health or age, and new evils arise. Finally, too, the fixity of habit and the love of luxury may unite to establish a costly and elaborate, yet conventional and monotonous, standard of consumption. We thus reach the too frequent modern beatitude of vulgar wealth—that of a feast-dinner every day, with its consequences of dulled palate, overworked liver, and no genuine enjoyment of any food at all. Finally, beyond and largely by help of all these æsthetic aberrations, we not only round off our theory, but we obtain a base of rational practice. We see how to compile our scale of dietetics to the satisfaction of the physiologist ; how to refine and vary it up

a due background of simplicity to the satisfaction of the trained yet healthy palate; and, finally, how to admit the claim of the moralist and economist for due moderation of the amount and due application of the energies of what we consume.

Following the same simple lines, which run through the whole field of æsthetics, we may now safely proceed to the examination of all other classes of products. Thus, in clothing, the infinitude of complexity may be rapidly analysed. From the mere covering and crude ornament of the savage we can pass to study the differentiation of materials and of costume. The former are influenced not only by colour and texture, but by qualities of surface, like those of silk or velvet, which appeal at once to touch and sight; the latter not only by these primary æsthetic considerations, nor even by the fundamental needs of climate and occupation, but are peculiarly liable, on the one hand to exaggerate into vulgar or sensual forms the legitimate sensuous enhancement of physical beauty at which all costume to some extent aims, and on the other, to smother this beneath a mere useless, yet costly, accumulation of survivals of past fashions or obsolete adaptations to use. These lines, then, enable us to interpret the history of costume: from the skin and beads of the savage up to the perfect drapery of the Greek gentleman, or the resplendent mail of the mediæval knight, the union of utilitarian and æsthetic evolution is clear and unbroken; while, again, the modern costume of the sexes often requires for its interpretation the tracing of the side-lines of crude sensuality on one hand, and of unmeaning survival on the other. Tailor and milliner, hatter and bootmaker, then may have their products judged by various standards. What standpoint will the judge select? Probably of course and unconsciously, the conventional, slightly modified by the primary æsthetic—yet the intelligent combination of the claims of utility with those of beauty need not wholly be ignored; while, if this standard be fairly adopted, the judge must decide in favour of those products in which these claims are not asserted in such a way as to startle and repel the average consumer. Another set of conditions of increasing importance in higher

industries clearly makes its appearance here : the nature of the material and the processes of its production may be directly worked out, or any amount of elaborate counterfeiting may be gone into. On utilitarian grounds this is, of course, wholly indefensible and wasteful ; equally is it so on æsthetic grounds, although this is too frequently a field of misapplied æsthetic endeavour. Little argument is, however, needed to show that an art workman might do something better with time and paint than grain stone like oak and wood like marble ; yet this principle, if carried out, would obliterate half the art industry of the last three centuries, and many of our household possessions merely serve to show how the child's love of imitation may persist in and enslave the man. Of course, where a new product or process obtains naturally and more cheaply the effect of an old one, the utilitarian and æsthete may alike gladly adopt it ; by all means let us make our velvet of jute instead of silk if it can be shown to look and wear as well.

Coming now to the third great class of ultimate products, those connected with housing, we find its criticism again easily practicable upon the same lines. The primitive shelter soon acquires ornament, beginning, doubtless, with those incised sketches on the wall, such as are to be found in the caverns of the stone age. By-and-by the mat and basket are woven with varied colour ; later, with civilisation and growing wealth, houses and public buildings become decorated without and enriched within. That the magnificence of ancient Athens, or the far more varied and gorgeous splendour of all the details of the civic, religious, and private life of the great mediæval commonwealths was in this way a natural and in the main healthy evolution of æsthetic complexity and fulness, need not here be demonstrated : more important is it to note that the side-lines of decay existed from the first. The exaggeration of sensuous aspects and details invariably marks the decline of Greek sculpture or of Gothic building, while the converse error, where force of habit hardens into dead conventionality, is incipient from the earliest imitation of wood-work in the masonry of the Doric temple, and reaches its culmination in our own day in the worn-out Renaissance ornament of every dwelling-house

or shop-front. These two forms of aberration have, moreover, been united, and that in the most exaggerated forms, at two main epochs of the world's history. They are characteristically seen in the buildings of the declining Roman Empire, or in those of the great capitals of empire during the present century ; first, St. Petersburg and Munich and Berlin, next, Paris under the Empire ; and a host of smaller cities are following suit. Their vastness yet monotony of design, the elaborate finish yet utter spiritlessness of detail, need no description ; but the essential character of the Roman and Renaissance styles (whether in their pure, decayed, or exhumed state, matters not) is well worth seriously noting. They agree in effacing the individuality of the worker well nigh as completely as does the great Pyramid itself. The architect is in fact a petty Pharaoh, for whom crowds of characterless workers, urged only by fear and hunger, sullenly smooth and lay their stones. The living periods of art, however, Greek or mediæval, were, on the other hand, invariably of thoroughly democratic type. The architects were but the elder brethren of the guild-house, and while co-ordinating the most complex architectural combinations the world has ever seen, and within this all the subordinate arts of sculpture and painting, metal work and furnishing, they yet managed not only to tolerate, but train and develop the individuality of each individual worker, whether this were simple or complex, comic or tragic, saintly or grotesque.

Of these possibilities, too, we have happily here and there a dawning instance among us. Houses really new sometimes arise in London, and other great towns, which the mason rejoices to build. Hardly a third-sized town but already contains a painter or two who knows good colour from bad, and who with his men takes again some of the old-fashioned pleasure in laying on the former, despite the additional time and higher wages which this may involve. Even the cabinet-maker, after having copied for a century in cheap caricature the extravagant drawing-room furniture of the mistress of Louis the Well-beloved (varied only by an occasional parody of Gothic details, curiously recalling the spasms of piety *which rhythmically agitated that remarkable epoch*), is *positively learning, with such vitality as he has left, how to*

carve an occasionally fresh ornament upon an occasionally well-constructed article.

[Here, then, are some of the possibilities, architectural and subordinate, which have already obtained considerable prominence in the more rationally designed world-shows. Not only, in fact, have the historical and general exhibitions of architecture of Paris and Vienna, or the streets of Old London and Old Edinburgh, arisen in this way, but the building of the first great exhibition, the Crystal Palace of 1851, gave that deserved prominence to the architect which it is sadly to be regretted he has not had the ability to retain. It is natural that the best arranged exhibitions, whether we take the case of Paris in 1878, or contrast Edinburgh with Liverpool in 1886, should have been those in which the special training of the architect, both in the convenient and tasteful arrangement of places and things, and in the co-ordination of many industries, has been taken advantage of inside the building as well as outside ; and it is clearly to be noted that the material defects of exhibitions are in no small degree traceable to the constant attempt on the part of their organisers, necessarily for the most part specialists in some department of production or exchange, to "keep the architect in his place," by attempting arrangements too gigantic indeed for him satisfactorily to grapple with, even after the preparation of a lifetime, yet all the more hopelessly out of their own reach as unprepared amateurs.]

If space permitted, it would be interesting to pursue these considerations, through the present developments of architecture and into its subordinate arts, from construction to sculpture and decoration, and thence again to the industries of furnishing ; the development and practical application of the lines of criticism above laid down may, however, be easily carried on by the reader. That in industrial exhibitions some judgment, though necessarily not severe, should be exercised upon the admission of objects, and that the specially distinguished producers, from whose product or example most is to be learned, should be invited and encouraged to contribute (*e.g.*, by borrowing, or if need be, purchasing typical exhibits), are principles partly of course recognised, yet needing enforcement. Thus pottery like Doulton's and

Minton's, or bronzes like Christofle's and Barbédienne's, should be obtained for every exhibition, whether by means of love or money. As already suggested, it also follows that the mode of displaying products separately and in "trophies," *i.e.* in ornamental designs which are infantile or barbarous, should be replaced as far as possible by their synthetic grouping in ways at once useful and artistic; witness the rooms at different scales of expenditure and standards of comfort from palace to cottage, already happily appearing in recent exhibitions, and of which, it is to be hoped, we may see more at Glasgow and other prospective exhibitions. In this respect Mr. Morris's exhibit of the furniture suitable for a working-man's dwelling is specially to be noted in the Manchester Exhibition of the present year.

CHAPTER IX.

EXHIBITIONS AND ART EDUCATION.

THE relation of industrial exhibitions to art teaching is, indeed, so obvious that the establishment of our national art schools and museums since 1851, and the promises of the (usually imaginary) surpluses of subsequent exhibitions, need hardly be put in evidence. Since the artistic development of the worker, like all human development, is a gradual evolution from the simple to the complex, the problem of raising taste and with it proportionately the quality and value of the product, is seen to depend upon the arrangement of an ascending series of what may be called planes of life—that is to say, not only of precept, but of exercise; not only of exercise, but of work; not only of work, but of surroundings. [In evolutionary terms (and the problem of art education is one of evolution if ever there is to be one), the *function* of the organism is determined by its *environment*. Here, then, lies the use of such re-arrangement of houses, of rooms, and their furnishing as we have been arguing for; for even the most official educationists cannot for ever continue under the hallucination that the productiveness of any art workman—past, present, or future—stands in relation to examinations passed rather than to the impressions of beauty taken in. Here, in short, is the simple secret of art education, and with it of doubled wealth and tenfold enjoyment: here lies the very Secret of Beauty—yet, as happens with every open secret, men are slow to read and slower still to act.]

The comparative failure of South Kensington and its schools to develop taste is no longer discouraging when we see its reason; while the far wider influence on decor-

tive arts and even general production exercised of recent years by the individual influence of two or three great designers, or by such consumers as the "æsthetic school," becomes intelligible. The former, moreover, aims almost exclusively at educating the producer, who thereafter too often starves or relapses. The latter method aims primarily at educating the consumer, to whom the producer has every inducement speedily to adapt himself. We shall have industrial art when the rich consumers who set the fashion in most products, and the smallest purchasers who consume the bulk of almost all, demand it, and not till then. [To set before rich and poor higher and better standards of consumption than those now popular is, therefore, the indispensable condition of any artistic progress. That this comes peculiarly within the possibilities of an exhibition is obvious; and it has been partially attended to in several of the more important, especially on the Continent; in too many others, however, the assistance of the art critic would often be an interference as uncalled for as that of the economist.] Yet the conclusion of the whole matter with respect to the arrangement of exhibitions as museums of production simply is that they are to help us to find out in due detail what good houses are like inside and out, and how their inhabitants can be best fed, clothed, and developed; commonplace purposes perhaps, yet they are those for which raw materials and apparatus, industry and commerce, decorative art and technical education all alike exist.

Without going too far into detail, the lines of working out this scheme of art education may be briefly indicated. The "primary æsthetic," or starting-point of absolute crudeness, is given for us not only by the child or the negro, or even the average exhibition "trophy," but in most of the surroundings of our everyday lives. The simplicity and vividness of the only art of mural decoration extensively employed in modern cities—that of the bill-sticker, need not be insisted on, although his eye-impressing methods might be shown to furnish the keynote to our artistic surroundings, exactly as do his announcements to our lives. *The start must be from a lower level; even the gaudiest bill mainly impresses the mind of youth; the average adult*

man or woman of a British industrial town has had even that earliest stage of colour appreciation destroyed, partly by discords, partly by total starvation of the sense, and is only appealed to by the primeval stimulus of simple light, which contemporary industrial processes have indeed ignored as a necessity but all the more converted into a luxury. Here is the explanation of the gigantic windows, gilded mirrors, and innumerable gas-jets which, equally in the typical gin-palace or drawing-room, mark the average taste of the community, and on this principle may be explained the substitution of Birmingham "cut glass" ornaments for the richly coloured and subtly curved blown ware of old or new Venice, or the replacement of the art of carving by that of French polishing during the past century. For every eye must begin by preferring to the dull and intricate surface of the one, the glossy simplicity of the other. Such considerations have ruled modern architectural decoration, clothing, and the like; hence house-fronts are levelled and smoothed, with, at most, occasional intervals of rustication; hence also the fixity of evening dress and of the shiny "chimney-pot." The same effort to startle the dulled modern eye is everywhere discernible; not only the rules of the flower-show compel the selection of the crudest colours and forms, but the amateur and the professional gardener replace the old-fashioned roses and lilies of the flower-garden by a monotonous gaiety of "bedding out" in stripes and circles of pure red, blue, and yellow around a spiky araucaria. It needs some measure of "success" to reach this plane of primitive colour enjoyment even late in life; the disappearance of higher forms of art from among modern communities is not, therefore, to be wondered at. Yet there is no reason for despondency; to convert the national nineteenth century style of architecture and decoration from an average organic necessity, as it is at present, into the average organic impossibility it should be, we have merely to pass our school children through this primitive stage of enjoyment and production into those still higher, so far as their respective individual capacities allow. *At first in some cases this would not be very far, but it would, at any rate in a dozen years, be as impossible for any boy*

who should become an architect or a cabinet-maker to produce work of the present conventional type, as for any one who had been encouraged at the right age to play with the school box of bricks to accept it of him.

[The details of higher decorative and industrial stages of juvenile life need not be discussed here. It is sufficient to point out that the art committee of any exhibition has in its power, with the assistance it could readily obtain from the educational authorities and from voluntary societies like the "Home Arts," and the "Recreative Schools," or from the many private individuals who are working in this direction, to give the art education of the country a greater stimulus than it has had since 1851.] The "artisan industries" and "women's industries" sections now common in exhibitions, although laudable in aim, do not succeed in this. The women at best show good copies of old designs; the men more frequently, of course, produce something of a more or less original kind, but too commonly useless miracles of ugliness and wasted labour; picture-frames of four thousand pieces of different-coloured wood, when what one wants is four pieces of the same; toy machines, and romantic models of cliff-perched castles under glass shades, are all there in abundance, yet for art or even science, as artists or scientific men understand these, one looks wholly in vain. Yet each of these men is a lost artist: in happier days he would have been, nay, perhaps might often still be, a true captain of industry. Kemp's Scott monument in Edinburgh gives a familiar case in point. In fine, keeping the matter on simply economic grounds, the sense of wasted national resources which follows any thoughtful survey of the artisan section in an exhibition, is no less great or keen than that even of wasted national resources of fuel or sewage, perhaps even of wasted health. Yet there is no department of the vast problem of the organisation of industry which can be more easily grappled with, nor which promises more rich or direct material results: why should not the organisers of our next *Exhibition* make a beginning?

CHAPTER X.

EXHIBITIONS AND SOCIAL PROGRESS.

As we have already seen, the uses of an industrial exhibition are not confined to the furtherance of production; the help of social, as distinguished from merely industrial progress, lies fully within its range. Our final problem, therefore, is, how can our exhibition, while keeping strictly to its character of a museum of industry, and without of course in any way trenching upon the field of political activity, best utilise its opportunities of directing human usefulness in the public service? Here, if ever, is the occasion of doing something to justify our fine inaugural speeches. Nor is it either sensible or practical that exhibition after exhibition should disappear like a soap-bubble, without leaving any definite result or record of its existence. a really instructive and interesting guide-book, and a brief but substantial memorial volume should fairly mark the opening and close of each. In the adaptation of an exhibition to the help of social progress, the appliances of health of course claim the initial place; and that these are best arranged in relation to typical dwellings on various scales will, no doubt, be generally granted. To enlist and combine, in our most important cities, under the enthusiasm generated by the prospect of an exhibition, those constructive occupations whose members so largely furnish the leaders and give the general tone of all industries, and this in the two tasks which essentially epitomise the present needs of civic progress, viz., the production of improved private dwellings, and the supply of increased means of culture and healthy enjoyment, affords an opportunity of social progress which cannot indefinitely continue to be wasted. It is time to give up, if not for the whole, at least for a portion of the exhibi-


tion buildings, the sordid economy of squatting upon a public park, and to see that even with the most moderate reckoning for the loss of productive energies involved by this wholesale exclusion of the community from their already too scanty means of recreation and exercise, and for the saving of wasteful destruction of buildings at the end, it would actually pay the community to do this: while the supreme result of setting before the industrial community a new ambition, a nobler rivalry, and a higher ideal than their everyday personal ones, would have an action even in quickening, not to speak of raising, the production of wealth which the most crudely utilitarian mind would soon appreciate.] To take a single instance, we do not require another Health Exhibition to show that there now exist a few plumbers acquainted with and interested in sanitation; but we have not perhaps as yet in the kingdom a street in which their best work can be seen and tested. Let the exhibition begin such a street; Old London and Old Edinburgh are very well in their sentimental way, but why should we not hear next year of some beginning of a practical New Glasgow or New Melbourne? How long is America to have in Pullman City almost the sole modern attempt at constructing a healthy and beautiful town? Yet we are constantly speaking of the production of wealth as if we seriously desired to practise it. In such a model street the carrying on, not only of the home industries, but even of many of the larger ones, might profitably and instructively be associated, and the great object-lesson of an exhibition would in this way again be brought to bear on practical life. Our ideal street, with its permanent art gallery and recreation halls, with its simple picturesqueness continued from the past, yet its complex supplies of heat, and light, and energy, anticipating the future, would yet be the best practical exhibition of the present; it might be made at once a museum of production, a *Galerie de Travail*, and an Industrial Village.

Passing from the interests of wealth and health to those of education, no longer merely technical but general, we require more than mere rows of school forms and blackboards. A small reference library, a gymnasium in operation, a boys' workshop, where schoolboys could assemble

regularly to learn the use of hands and tools for a trifling fee—such are some of the desiderata. Again, let the members of the Societies of Arts, the architects and engineers, the learned societies, the universities, be invited to furnish from among their numbers an occasional guide for teachers through their various departments, and let these again take their pupils. Lectures, scientific and technical, are of course also wanted; and as for the sciences these may be easily illustrated not only in detail, but what is now becoming more important, in synthesis. Astronomer and chemist, geologist and biologist, would all gladly co-operate: a small telescope might be planted in one corner of the exhibition, a tiny patch of garden plot might be saved from bedding out, and kept clear of araucarias, to make a type botanic garden, where the hundred plants of most practical use and human interest might for the first time be set simply and intelligibly before all men, and so on. It is not the fact that such innovations might cost £10 apiece that makes them “unpractical,” they would in fact be cheaper than what they should replace: the well-nigh insuperable difficulty to their adoption by our present organisers of exhibitions is at bottom simply a sentimental one; happily, however, in the long-run, utility may be expected to prevail. The claims of anthropology are so far set forth by the Indian Village or the like; those of history by the retrospective exhibitions, all of them good things capable of much improvement; while the specialist congresses of various exhibitions furnish an example which should be adapted to the particular needs and opportunities of the district.

(Coming finally to the problems of civic and public life, efficient means of widening and steadying the average conception of human society by some clear exposition of its slow growth and complex working were never so much needed in the world before.) The Exhibition of the City of Paris in 1878, and the Government House at Philadelphia, have been already mentioned as examples of this, but the very richness of this field of economic and social possibilities forbids our entering upon it; suffice it to point out that that admirable movement for supplying the local wants and de-

veloping the local completeness of even the smallest towns, which has awakened to such active and conscious progress during the present year, should find in the contemporary exhibitions its summary, focus, and new starting-point; while conferences upon the local wants of the city might now profitably become inter-civic. To set forth the "jubilee" schemes of the present year for mutual suggestion and criticism would be one of the most easy and attractive, as certainly also one of the most useful of possible new features of an exhibition. [New inventions and new details of all kinds hardly need exhibitions to bring them before us, our daily life and daily press do this fairly as it is;] but of the vast rise of civilisation which is now silently beginning everywhere around us, literature is as yet hardly conscious, while most men's daily life has as yet come far too little in contact with it to take heed or hope.] Our industrial and civic Renaissance, although beginning, is only just doing so; hence the need and usefulness of a Gallery of Civic Progress. For to make this process conscious and intelligible would be to aid and accelerate it; and in these days of industrial depression and upheaval there is no economic need greater or more pressing than that of replacing crude and vague Utopias by rational and realisable, yet noble and public aims. To this end should converge the opening, closing, and award-giving ceremonials, which already mark in history the institution of the due commemoration and idealisation, the "social cult" of industry. The ode and oration, festival and pageant, with which the great exhibitions have been celebrated, were the natural and fit expression of this higher view of industry, not merely of that thirst for personal and professional honour which often unconsciously underlies and excites the struggle apparently for more profits or higher wages. Thus our exhibitions might open up the means of reconciling industrial progress with industrial order; of combining the ideals of the "Golden Year" with the common-sense activity of the present one; in short, of proving in daily life the truth that



"Unto him that works, and feels he works,
This same grand year is ever at the doors."

