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UNFASHIONABLE CLUBS

It is with a feeling doubtless somewhat analogous to that of the angler, that the London shopkeeper from time to time regards the moneyless crowds who throng in gaping admiration around the tempting display he makes in his window. His admirers and the fish, however, are in different circumstances: the one won't bite if they have no mind; the others can't bite if they should have all the mind in the world. Yet the shopkeeper manages better than the angler; for while the fish are deaf to the charming of the latter, charm he never so wisely, the former is able, at a certain season of the year, to convert the moneyless gazers into ready-money customers. This he does by the force of logic. 'You are thinking of Christmas,' says he—'yes, you are; and you long to have a plum-pudding for that day—don't deny it. Well, but you can't have it, think as much as you will; it is impossible as you manage at present. But I'll tell you how to get the better of the impossibility. In twenty weeks, we shall have Christmas here: now if, instead of spending every week all you earn, you will hand me over sixpence or a shilling out of your wages, I'll take care of it for you, since you can't take care of it for yourself; and you shall have the full value out of my shop any time in Christmas-week, and be as merry as you like, and none the poorer.'

This logic is irresistible. Tomkins banks his 6d. for a plum-pudding and the etceteras with Mr Allspice the grocer; and this identical pudding he enjoys the pleasure of eating half-a-dozen times over in imagination before the next instalment is due. He at length becomes so fond of the flavour, that he actually—we know, for we have seen him do it—he actually, to use his own expression, 'goes in for a goose' besides with Mr Pluck the poulterer. Having once passed the Rubicon, of course he cannot go back; the weekly sixpences must be paid, come what will: it would be disgraceful to be a defaulter. So he practises a little self-denial, for the sake of a little self-esteem—and the goose and pudding in perspective. He finds, to his astonishment, that he can do quite as much work with one pot of beer a day as he could with two, and he drops the superfluous pot, and not only pays his instalments to the Christmas-bank, but gets a spare shilling in his pocket besides. Thus, under the tuition of the shopkeeper, he learns the practice of prudence in provisioning his family with plum-pudding, and imbibes the first and foremost of the household virtues, on the same principle as a wayward child imbibes physic—out of regard to the dainty morsel that is to come afterwards.

Passing one day last autumn through a long and populous thoroughfare on the southern side of the Thames, we happened to light upon Mr Allspice's appeal to the consciences and the pockets of the pudding-eating public. 'If you are wise,' said the admonitory placard, 'you will lose no time in joining Allspice's Plum-pudding Club.' Remembering the retort of a celebrated quack: 'Give me all the fools that come this way for my customers, and you are welcome to the wise men,' we must own we felt rather doubtful of the prosperity of the puddings; but having an interest in the matter, we resolved, notwithstanding, to ascertain, if possible, whether the Wisdom who uttereth her voice in the streets had on this special occasion spoken to any purpose, and whether any, and how many, had proved themselves wise in the acceptation of Mr Allspice. On making the necessary inquiries after the affair had gone off, we learned, to our surprise and gratification, that the club had been entirely successful. Upwards of a hundred persons of a class who are never worth half-a-crown at a time, had subscribed 6d. a week each for eighteen weeks, and thus entitled themselves to 9s. worth of plum-pudding ingredients, besides a certain quantity of tea and sugar. Thus the club had prospered exceedingly, and

had been the instrument of introducing comfort and festive enjoyment to no small number of persons who might, and in all probability would, have had little to eat or drink, and, consequently, little cause for merriment, at that season. This is really a very pleasant fact to contemplate, connected though it be with a somewhat ludicrous kind of ingenuity, which must be exercised in order to bring it about. To anybody but a London shopkeeper, the attempt would appear altogether hopeless, to transform a hundred poor persons, who were never worth half-a-crown a piece from one year's end to the other, into so many 9s. customers; and yet the thing is done, and done, too, by the London grocer in a manner highly satisfactory, and still more advantageous to his customers. Is it too much to imagine that the lesson of provident forethought thus agreeably learned by multitudes of the struggling classes—for these clubs abound everywhere in London, and their members must be legion—have a moral effect upon at least a considerable portion of them? If one man finds a hundred needy customers wise enough to relish a plum-pudding of their own providing, surely they will not *all* be such fools as to repudiate the practice of that very prudence which procured them the enjoyment, and brought mirth and gladness to their firesides! Never think it! They shall go on to improve, take our word for it; and having learned prudence from plum-pudding, and generosity from goose—for your poor man is always the first to give a slice or two of the breast, when he has it, to a sick neighbour—they shall learn temperance from tea, and abstinence, if they choose, from coffee, and ever so many other good qualities from ever so many other good things; and from having been wise enough to join the grocer's Plum-pudding Club, they shall end by becoming prosperous enough to join the Whittington Club, or the Gresham Club, or the Athenæum Club, or the Travellers' Club; or the House of Commons, or the House of Lords either, for all that you, or we, or anybody else, can say or do to the contrary.

We know nothing of the original genius who first hit upon this mode of indoctrinating the lower orders in a way so much to their advantage; we hope, however, as there is little reason to doubt, that he found his own account in it, and reaped his well-deserved reward. Whoever he was, his example has been well followed for many years past. In the poorer and more populous districts of the metropolis, this practice of making provision for inevitable wants, by small subscriptions paid in advance, prevails to a large extent. As winter sets in, almost every provision-dealer, and other traders as well, proffers a compact to the public, which he calls a club, though it is more of the nature of a savings-bank, seeing that, at the expiration of the subscribing period, every member is a creditor of the shop to the amount of his own investments, and nothing more. Thus, besides the Plum-pudding Clubs, there are Coal Clubs, by which the poor man who invests 1s. a week for five or six of the summer months, gets a ton of good coal laid in for the winter's consumption before the frost sets in and the coal becomes dear. Then there is the Goose Club, which the wiser members manage among themselves by contracting with a country dealer, and thus avoid the tipsy consummation of the public-house, where these clubs have mostly taken shelter. Again, there is the Twelfth-cake Club, which comes to a head soon after Christmas, and is more of a lottery than a club, inasmuch as the large cakes are raffled for, and the losers, if they get anything, get but a big bun for their pains and penalties. All these clubs, it will be observed, are plants of winter-growth, or at least of winter-fruiting, having for their object the provision of something desirable or indispensable in the winter season. There is, however, another and a very different species of club, infinitely more popular than any of the above, the operations of which are aboundingly visible throughout the warm and pleasant months of summer, and which may be, and sometimes is, called the Excursion Club.

The Excursion Club is a provision which the working and labouring classes of London have got up for themselves, to enable them to enjoy, at a charge available to their scanty means, the exciting pleasures—which are as necessary as food or raiment to their health and comfort—of a change of air and scene. It is managed in a simple way. The foreman of a workshop, or the father of a family in some confined court, or perhaps some manageress of a troop of working-girls, contracts with the owner of a van for the hire of his vehicle and the services of a driver for a certain day. More frequently still, the owner of the van is the prime mover in the business, but then the trip is not so cheap. The

members club their funds, the men paying 1s. each, the wives, 6d., the children, 3d. or 4d.; and any poor little ragged orphan urchin, who may be hanging about the workshop, gets accommodated with a borrowed jacket and trousers, and a gratuitous face-washing from Mrs Grundy, and is taken for nothing, and well fed into the bargain. The cost, something over a guinea, is easily made up, and if any surplus remains, why, then, they hire a fiddler to go along with them. On the appointed morning, at an early hour, rain or shine, they flock to the rendezvous to the number of forty or fifty —ten or a dozen more or less is a trifle not worth mentioning. Each one carries his own provisions, and loaded with baskets, cans, bottles, and earthen-jars, mugs and tea-kettles, in they bundle, and off they jog—pans rattling, women chattering, kettles clinking, children crowing, fiddle scraping, and men smoking—at the rate of six or seven miles an hour, to Hampton Court or Epping Forest. It is impossible for a person who has never witnessed these excursions in the height of summer, to form an adequate notion of the merry and exciting nature of the relaxation they afford to a truly prodigious number of the hardworking classes. Returning from Kingston to London one fine Monday morning in June last, we met a train of these laughter-loaded vans, measuring a full mile in length, and which must have consisted of threescore or more vehicles, most of them provided with music of some sort, and adorned with flowers and green boughs. As they shot one at a time past the omnibus on which we sat, we were saluted by successive volleys of mingled mirth and music, and by such constellations of merry-faced mortals in St Monday garb, as would have made a sunshine under the blackest sky that ever gloomed. Arrived at Hampton Court, the separate parties encamp under the trees in Bushy Park, where they amuse themselves the livelong day in innocent sports, for which your Londoner has at bottom a most unequivocal and hearty relish. They will most likely spend a few hours in wandering through the picture-galleries in the palace, then take a stroll in the exquisite gardens, where the young fellow who is thoughtless enough to pluck a flower for his sweetheart, is instantly and infallibly condemned to drag a heavy iron roller up and down the gravel-walk, to the amusement of a thousand or two of grinning spectators. Having seen the palace and the gardens, they pay a short visit, perhaps, to the monster grape-vine, with its myriads of clusters of grapes, all of which Her Gracious Majesty is supposed to devour; and then they return to their dinner beneath some giant chestnut-tree in the park. The cloth is spread at the foot of the huge trunk; the gashed joints of the Sunday's baked meats, flanked by a very mountainous gooseberry pie, with crusty loaves and sections of cheese and pats of butter, cut a capital figure among the heterogeneous contribution of pitchers, preserve-jars, tin-cans, mugs and jugs, shankless rummers and wineglasses, and knives and forks of every size and pattern, from the balance handles and straight blades of to-day, to the wooden haft and curly-nosed cimeter of a century back. Their sharpened appetites make short work of the cold meats and pies. Treble X of somebody's own corking fizzes forth from brown jar and black bottle, and if more is wanted, it is fetched from the neighbouring tavern. Dinner done, the fiddle strikes up, and a dance on the greensward by the young people, while the old ones, stretched under the trees, enjoy a quiet gossip and a refreshing pipe, fills up the afternoon. There is always somebody at this crisis who is neither too old to dance nor too young to smoke a gossipping pipe, and so he does both at intervals—rushing now into the dance, drawn by the irresistible attraction of the fiddle, and now sidling back again to his smoke-puffing chums, impelled by the equally resistless charms of tobacco. Then and therefore he is branded as a deserter, and a file of young lasses lay hands on him, and drag him forth in custody to the dance; and after a good scolding from laughing lips, and a good drubbing from white handkerchiefs, they compromise the business at last by allowing him to dance with his pipe in his mouth.

By five o'clock, Mrs Grundy has managed, with the connivance of Jack the driver, somehow or other to boil the kettle, and a cup of tea is ready for all who are inclined to partake. The young folks for the most part prefer the dance: they can have tea any day—they will not dance on the grass again till next year perhaps; so they make the most of their time. By and by, the fiddler's elbow refuses to wag any longer: he is perfectly willing himself, as he says, 'to play till all's blue; but you see,' he adds, 'bones won't do it.' 'Never mind,' says the Beau Nash of the day: 'sack your badger, old boy, and

go and get some resin. Now, then, for kiss in the ring!' Then while the fiddler gets his resin, which means anything he likes to eat or drink, the whole party, perhaps amounting to three or four van-loads in all, form into a circle for 'kiss in the ring.' The ring is one uproarious round of frolic and laughter, which would 'hold both its sides,' but that it is forced to hold its neighbours' hands with both its own, under which the flying damsel who has to be caught and kissed bobs in and out, doubling like a hare, till she is out of breath, and is overtaken at last, and led bashfully into the centre of the group, to suffer the awful penalty of the law. While this popular pastime is prolonged to the last moment, the van is getting ready to return; the old folks assist in stowing away the empty baskets and vessels; and an hour or so before sun-down, or it may be half an hour after, the whole party are remounted, and on their way home again, where they arrive, after a jovial ride, weary with enjoyment, and with matter to talk about for a month to come.

At Epping Forest, the scene is very different, but not a whit the less lively. There are no picture-galleries or pleasure-gardens, but there is the Forest to roam in, full of noble trees, in endless sinuous avenues, crowned with the 'scarce intruding sky,' among which the joyous holiday-makers form a finer picture than was ever painted yet. Then there are friendly foot-races and jumping-matches, and leap-frogging, and black-berrying, and foot-balling, and hockey-and-trapping, and many other games besides, in addition to the dancing and the ring-kissing. Epping and Hainault Forests are essentially the lungs of Whitechapel and Spitalfields. Their leafy shades are invaded all the summer long by the van-borne hosts of laborious poverty. Clubs, whose members invest but a penny a week, start into existence as soon as the leaves begin to sprout in the spring; with the first gush of summer, the living tide begins to flow into the cool bosom of the forest; and until late in the autumn, unless the weather is prematurely wintry, there is no pause for a day or an hour of sunshine in the rush of health-seekers to the green shades. The fiat has gone forth from the government for the destruction of these forests, for the felling of the trees and the enclosure of the land. Will the public permit the execution of the barbarous decree? We trust not.

Notwithstanding all that has been said, and so justly said, of the notorious improvidence of the poor, it will be seen from the above hasty sketches, that they yet can and do help themselves to many things which are undeniably profitable and advantageous to them: they only want, in fact, a motive for so doing—a foregone conviction that the thing desiderated is worth having. Now, here is ground for hope—an opening, so to speak, for the point of the wedge. That the very poor may be taught to practise self-denial, in the prospect of a future benefit, these clubs have proved; and we may confess to a prejudice in their favour, not merely from what they have accomplished, but from a not unreasonable hope, that they may perchance foster a habit which will lead to far better things than even warm chimney-corners, greenwood holidays, roast geese, and plum-pudding.

ARAGO ON THE SUN

In the Annuaire of the *Bureau des Longitudes*, recently published in Paris, appears a paper by the distinguished astronomer Arago—'On the Observations which have made known the Physical Constitution of the Sun and of different Stars; and an Inquiry into the Conjectures of the Ancient Philosophers, and of the Positive Ideas of Modern Astronomers on the Place that the Sun ought to occupy among the Prodigious Number of Stars which stud the Firmament'—in which all that appertains to the subject is so ably condensed, as to afford material for a popular summary, which we purpose to convey in the present article. The eclipse of the sun of last July, by enabling observers to repeat former observations and test their accuracy, furnished some of the results which serve to complete the paper in question, and which may be considered as settled, owing to the improvements continually taking place in the construction of instruments. Although astronomy is the exactest of sciences, its problems are not yet all fully solved; and for the determination of some of these, observers have to wait for years—in certain instances, for a century or more, until all the circumstances combine for a favourable observation. From the days of the Epicurean philosopher, who, judging from appearances, declared the sun to be no more than a foot in diameter, to those of living calculators, who give to the orb a diameter of 883,000 miles, there has been a marvellous advance. In these dimensions, we have a sphere one million four hundred thousand times larger than the earth. 'Numbers so enormous,' says M. Arago, 'not being often employed in ordinary life, and giving us no very precise idea of the magnitudes which they imply, I recall here a remark that will convey a better understanding of the immensity of the solar volume. If we imagine the centre of the sun to coincide with that of the earth, its surface would not only reach the region in which the moon revolves, but would extend nearly as far again beyond.' By the transit of Venus in 1769, it was demonstrated that the sun is 95,000,000 miles from the earth; and yet, distant as it is, its physical constitution has been determined; and the history of the successive steps by which this proof has been arrived at, forms one of the most interesting chapters in the progress of science.

It was in 1611 that Fabricius, a Dutch astronomer, first observed spots on the eastern edge of the sun, which passed slowly across the disk to the western edge, and disappeared after a certain number of days. This phenomenon having been often noted subsequently, the conclusion drawn therefrom is, that the sun is a spherical body, having a movement of rotation about its centre, of which the duration is equal to twenty-five days and a half. These dark spots, irregular and variable, but well defined on their edge, are sometimes of considerable dimensions. Some have been seen whose size was five times that of the earth. They are generally surrounded by an aureola known as the *penumbra*, and sensibly less luminous than the other portions of the orb. From this penumbra, first observed by Galileo, many apparently singular deductions have been made: namely, 'The sun is a dark body, surrounded at a certain distance by an atmosphere which may be compared to that of the earth, when the latter is charged with a continuous stratum of opaque and reflecting clouds. To this first atmosphere succeeds a second, luminous in itself, called the *photosphere*. This photosphere, more or less remote from the inner cloudy atmosphere, would determine by its outline the visible limits of the orb. According to this hypothesis, there would he spots on the sun every time that there occurred in the two concentric atmospheres such corresponding clear spaces as would allow of our seeing the dark central body uncovered.'

This hypothesis is considered by the most competent judges to render a very satisfactory account of the facts. But it has not been universally adopted. Some writers of authority have lately represented the spots as scoriæ floating on a liquid surface, and ejected from solar volcanoes, of which the burning mountains of the earth convey but a feeble idea. Hence observations become necessary as to the nature of the incandescent matter of the sun; and when we remember the immense distance of that body, such an attempt may well appear to be one of temerity.

The progress of optical science, however, has given us the means of determining this apparently insoluble question. It is well known, that physicists are enabled at present to distinguish two kinds of light—natural light and polarised light. A ray of the former exhibits the same properties on any part of its form; not so the latter. A polarised ray is said to have sides, and the different sides have different properties, as demonstrated by many interesting phenomena. Strange as it may seem, these rays thus described as having sides, could pass through the eye of a needle by hundreds of thousands without disturbing each other. Availing themselves, therefore, of the assistance of polarised light, and an instrument named the polariscope, or polarising telescope, observers obtain a double image of the sun, both alike, and both white; but on reflecting this image on water, or a glass mirror, the rays become polarised; the two images are no longer alike or white, but are intensely coloured, while their form remains unchanged. If one is red, the other is green, or yellow and violet, always producing what are called the complementary colours. With this instrument, it becomes possible to tell the difference between natural and polarised light.

Another point for consideration is, that for a long time it was supposed, that the light emanating from any incandescent body always came to the eye as natural light, if in its passage it had not been reflected or refracted. But experiment by the polariscope shewed, that the ray departing from the surface at an angle sufficiently small was polarised; while at the same time, it was demonstrated that the light emitted by any gaseous body in flame—that of street-lamps, for instance—is always in the natural state, whatever be its angle of emission. From these remarks, some idea will be formed of the process necessary to prove whether the substance which renders the sun visible is solid, liquid, or gaseous. On looking at the sun in the polariscope, the image, as before observed, is seen to be purely white—a proof that the medium through which the luminous substance is made visible to us is gaseous. If it were liquid, the light would be coloured; and as regards solidity, that is out of the question—the rapid change of spots proves that the outer envelope of the sun is not solid. On whatever day of the year we examine, the light is always white. Thus, these experiments remove the theory out of the region of simple hypothesis, and give certainty to our conclusions respecting the photosphere.

Here an example occurs of the aids and confirmations which science may derive from apparently trivial circumstances. Complaint was made at a large warehouse in Paris, that the gas-fitters had thrown the light on the goods from the narrow, and not from the broad side of the flame. Experiments were instituted, which proved that the amount of light was the same whether emitted from the broad or narrow surface. It was shewn also, that a gaseous substance in flame appears more luminous when seen obliquely than perpendicular, which explains what are known as *faculæ* and *lucules*, being those parts of the solar disk that shew themselves brighter than other portions of the surface. These are due to the presence of clouds in the solar atmosphere; the inclined portions of the clouds appearing brightest to the spectator. The notion, that there were thousands on thousands of points distinguishing themselves from the rest by a greater accumulation of luminous matter, is thus disposed of.

Still, there remained something more to be determined. The existence of the photosphere being proved, the question arose—was there nothing beyond? or did it end abruptly? and this could only be determined at the period of a total eclipse, at the very moment when the obscuration of the sun being greatest, our atmosphere ceases to be illuminated. Hence the interest felt in an eclipse of the sun of late years.

In July 1842, at a total eclipse of the sun visible in several parts of the continent, the astronomers noticed, just as the sun was hidden by the moon, certain objects, in the form of rose-coloured protuberances, about two or three minutes high, astronomically speaking, projected from the surface of the moon. These appearances were variously explained: some supposed them to be lunar mountains; others saw in them effects of refraction or diffraction; but no precise explanation could be given; and mere guesses cannot be accepted as science. Others, again, thought them to be mountains in the sun, the summits stretching beyond the photosphere; but at the most moderate

calculation, their height would have been about 60,000 miles—an elevation which, as is said, the solar attraction would render impossible. Another hypothesis was, that they were clouds floating in a solar, gaseous atmosphere.

M. Arago considers the last as the true explanation: it remained the great point to be proved. If it could be ascertained, that these red protuberances were not in actual contact with the moon, the demonstration would be complete. Speculation was busy, but nothing could be done in the way of verification until another eclipse took place. There was one in August 1850 total to the Sandwich Islands, at which, under direction of the French commandant at Tahiti, observations were made, the result being that the red prominences were seen to be separated by a fine line from the moon's circumference. Here was an important datum. It was confirmed by the observations of July 1851, by observers of different nations at different localities, who saw that the coloured peaks were detached from the moon; thus proving that they are not lunar mountains.

If it be further ascertained, that these luminous phenomena are not produced by the inflexion of rays passing over the asperities of the moon's disk, and that they have a real existence, then there will be a new atmosphere to add to those which already surround the sun; for clouds cannot support themselves in empty space.

We come next to that part of the subject which treats of the true place of the sun in the universe. In the year 448 b.c., Archelaüs, the last of the Ionian philosophers, without having made any measurements, taught that the sun was a star, but only somewhat larger than the others. Now, the nearest fixed star is 206,000 times further from us than the sun: 206,000 times 95,000,000 of miles —a sum beyond all our habits of thought. The light from the star *Alpha* of the Centaur is three years in its passage to the earth, travelling at the rate of 192,000 miles per second; and there are 86,400 seconds in a day, and 365 days in a year. Astounding facts! If the sun, therefore, were removed to the distance of a Centauri, its broad disk, which takes a considerable time in its majestic rising and setting above and below the horizon, would have no sensible dimensions, even in the most powerful telescopes; and its light would not exceed that of stars of the third magnitude—facts which throw the guess of Archelaüs into discredit. If our place in the material universe is thus made to appear very subordinate, we may remember, as M. Arago observes, that man owes the knowledge of it entirely to his own resources, and thereby has raised himself to the most eminent rank in the world of ideas. Indeed, astronomical investigations might not improperly excuse a little vanity on our part.'

Among the stars, Sirius is the brightest; but twenty thousand millions of such stars would be required to transmit to the earth a light equal to that of the sun. And if it were difficult to ascertain the nature and quality of the sun, it would appear to be still more so to determine these points with regard to the stars; for the reason, that the rays, coming from all parts of their disk, at once are intermingled, and of necessity produce white. This difficulty did not exist in similar investigations on the sun, because its disk is so large, that the rays from any one part of it may be examined while the others are excluded. Under these circumstances, further proof might seem to be hopeless; but advantage was taken of the fact, that there are certain stars which are sometimes light, sometimes dark, either from having a movement of rotation on their own axis, or because they are occasionally eclipsed by a non-luminous satellite revolving around them. It is clear, that while the light is waxing or waning, it comes from a part only of the star's disk; consequently, the neutralisation of rays, which takes place when they depart from the whole surface at once, cannot then occur; and from the observations on the portion of light thus transmitted, and which is found to remain white under all its phases, we are entitled to conclude, in M. Arago's words, that 'our sun is a star, and that its physical constitution is identical with that of the millions of stars strewn in the firmament.'

Конец ознакомительного фрагмента.