

associating themselves together, it is soon discovered, not only that there are various desires in the different members of the community, which are now readily met by coöperation and mutual exchange, but also that there are very different powers in the different individuals in relation to those obstacles which are to be surmounted. The tastes and aptitudes of different men are very diverse. There is a great diversity in natural gifts. One man has physical strength, another mechanical ingenuity, a third a philosophical turn, and a fourth a bent and genius for traffic. Now, then, Nature speaks in as loud a voice as she can utter, in favor of such a degree of association and exchange as shall allow a free development of these varying capacities, while they work upon the obstacles to the gratification of men's wants, which lie appropriately opposite to them.

Men must come together either locally or commercially, must learn each other's wants, must compare with each other powers and tastes and opportunities, must come to have some confidence in each other, and then they will begin by rendering mutual services back and forth to experience the better satisfactions and the new strength that exchanges bring. Whatever improves the character of men, and thus leads to greater confidence among them, will enlarge their commerce, and knit closer and wider ties of association and production. Neighborhood associations and productions soon create a surplus to be exchanged for something else with other neighborhoods; parts of single nations however remote from each other find a relative diversity of advantage and an increasing profit in connecting themselves by the ties of trade; and the separate nations learn, though late, that they are only one great family for the grand ends of production and progress. Even within the single nation, there is a strong

tendency for particular trades to localize themselves in one spot, as for instance, the manufacture of skin gloves has centered itself for the United States in Gloversville, N.Y.; and so in the great cities that are centres of distribution, for example, the wholesale grocers of St. Paul are on one street, the dry goods houses of Boston are in close proximity, and the booksellers of New York are tending towards each other in place.

Now, this broad association as between persons and nations, instead of detracting at all from the individuality and power of each, is the very thing that brings out the individuality and intensifies the power of each; because it is only thus that full scope is given to the exercise and development of each peculiar power whether of the individual or the nation. Hence the strong tendency everywhere visible in the world of commerce towards Specialties: the old single trades and vocations and professions are constantly breaking themselves up into parts, and each man is taking up that for which he is naturally best fitted and has specially trained himself, and all to the great advantage of individuality and personal power and progress. Mr. Carey is certainly right in his principle (much insisted on in all his books), that the degree of individuality depends on the degree of association, each advancing hand in hand with the other; and he is as certainly wrong in lacking confidence in the natural forces at work tending to the highest degree of association and consequently to the highest degree of individuality. These forces are immensely strong. Men come together as it were by instinct, being conscious of individual feebleness; personal interest is soon seen to follow the bent of social attraction; a just sense of personal dignity and importance in being a substantive part in the ongoings of society enormously strengthens the impulse to association and indi-

viduality; the progress of each and all in achievement and elevation still further knits the ties of union; and lastly, a strong feeling of social justice, of what is *due* to others as well as to one's self, — that every man has an inalienable right to his full *opportunity* and all that that implies, to buy and sell and get gain, to life and liberty and the pursuit of happiness. When motives and powers and potencies such as these, proven to be universal by broad and constant inductions, fail as economical forces to secure association and individuality, then it will be time to look around with Mr. Carey for some inferior and factitious force.

(b) Invention. This is the second main condition in the production of commodities; because production is processes, getting something ready to sell and selling it; and Nature stands ever ready with her free agencies to facilitate these processes, just so far as the inventive brain of man can contrive to unite the two. Invention is the marriage of a gratuitous force to an onerous process, and the fruit of that union is an easier way and multiplied utilities. There are some in every considerable community, and more in every community enlarged by the natural association but just now described, who have the knack of contrivance, who find their joy in finding a new power in Nature or some new application of an old power; were it not for unhindered association and free exchange, the individuality of these would be effectually repressed, and they would have to drudge for their daily bread; but the importance of inventors is well understood in every progressive community, and under advanced exchanges their livelihood is guaranteed by those who hope to profit by its results while their work is maturing; and Production rejoices and grows strong and throws out unnumbered hands to make instant use of the new power and the easier

processes, in order to multiply commodities in number and variety.

As an illustration of all this, the reader will be interested in a brief account of the series of Inventions made in Great Britain during the last third of the eighteenth century, in consequence of which the Cotton Industry was established in that country in such preëminence as has to this day baffled the attempts of all other countries even to approximate it.

We catch our first glimpse of Cotton in the pages of Herodotus, who wrote more than 400 years B.C. in relation to India as follows: "*There are trees, which grow wild there, the fruit whereof is a wool exceeding in beauty and goodness that of sheep. The natives make their clothes of this tree-wool.*" This passage is interesting, as showing that the first comparison of cotton with wool exhibited their resemblance in whiteness and in *kinkiness*, which latter quality enables them both to be spun into yarn; as showing also, that the Hindoos very early both spun and wove cotton, and then made it into clothes; and as showing lastly, the appropriateness of the original name given to cotton in Europe, namely, "tree-wool," a name by which the Germans still designate it (*Baumwolle*). If the extreme East furnishes the first notice of cotton, the extreme West follows it next in order. When the Spaniards discovered Central and Southern America in the first quarter of the sixteenth century, they reported that they found the Mexicans clothed in cotton cloth.

But wool was the staple of England. Parliament and people were jealous of cotton, lest it might prove a rival to wool, and actually prohibited the introduction of printed calicoes (so called from Calicut in India whence they were exported). The taste, however, for calicoes increased in spite of the prohibition, which was afterwards

intermitted for a revenue duty on plain cotton, which was then rudely printed on blocks in London, Manchester, and elsewhere; but the prohibition of Parliament against wearing printed calicoes was first repealed in 1736. Fifteen years later the United Kingdom imported only 2,976,610 lbs. of raw cotton, and exported only £45,986 of cotton goods; in one century the import of cotton became 500 times larger than that, and the export of cottons 1300 times larger than that; and this prodigious result was due mainly to three or four inventions occurring within short times of each other, by means of which the free forces of nature took the place of the onerous efforts of men.

John Hargreaves, a poor weaver in the neighborhood of Blackburn in Lancashire, was returning home from a long walk, in which he had been purchasing a further supply of yarn for his own loom. Spinning at that time only admitted of one thread spun at a time by one pair of hands, one of which turned the wheel and thus made the single spindle rapidly revolve, and the other hand pulled gently upon the "roving" attached to the spindle and thus drew it out to the requisite tenuity twisted into yarn. The "carding," then effected by rude instruments called hand-cards, by means of which the fibres of the cotton were disentangled and straightened and laid parallel with each other; and the "roving," a process by which the short fleecy rolls stripped off the hand-cards were applied to the spindle and made into thick threads only slightly twisted, were the two preparatory operations for the spinning. All these operations were slow and clumsy, and the consequent expensiveness of the yarn formed a great obstacle to the establishment of the cotton manufacture in England. The improvements made in the loom of that period by Kay, father and son, had shortly before doubled the power of each weaver, and the spinners could not keep up in furnishing material to the weavers.

As Hargreaves entered his cottage from this excursion to get yarn to keep his loom agoing, his wife, Jenny, accidentally upset the spindle, which, as was her wont, she was diligently using. Her husband noticed that the spindle, which was now thrown into an upright position, continued to revolve just as when horizontal, and that the thread was still spinning in his wife's hands. The idea immediately occurred to him, that it might be possible to connect a considerable number of upright spindles with the revolutions of one wheel, and thus multiply the power of each spinster. *"He contrived a frame in one part of which he placed eight rovings in a row, and in another part a row of eight spindles. The rovings, when extended to the spindles, passed between two horizontal bars of wood, forming a clasp which opened and shut somewhat like a parallel ruler. When pressed together this clasp held the threads fast; a certain portion of roving being extended from the spindles to the wooden clasp, the clasp was closed, and was then drawn along the horizontal frame to a considerable distance from the spindles, by which the threads were lengthened out and reduced to the proper tenuity; this was done with the spinner's left hand, and his right hand at the same time turned a wheel which caused the spindles to revolve rapidly, and thus the roving was spun into yarn. By returning the clasp to its first situation and letting down a piercer wire the yarn was wound upon the spindle."*

The powers of Hargreaves' machine soon became known among his ignorant neighbors, notwithstanding his strenuous efforts to keep his admirable invention a secret, and these neighbors naturally enough concluded that a contrivance, which enabled one spinster to do the work of eight, would throw many people out of employment. A mob broke into his house and destroyed his machine. Hargreaves retired in disgust to Nottingham, where by

means of the friendly assistance of one other person he was enabled to take out a patent for his invention, which he called in compliment to his industrious wife the "*Spinning-Jenny*." This invention gave a new impulse to the cotton manufacture, but had it been unaccompanied by other improvements, no purely cotton goods could have been made in England; because the yarn spun by the new jenny, like that previously spun by hand, was not fine enough nor hard enough to be used as warp, and linen or woollen threads had consequently to be employed for that purpose.

In the very year, however, in which John Hargreaves, the poor weaver, migrated to Nottingham, Richard Arkwright, a poor barber's assistant, took out a patent for his still more celebrated machine for spinning by rollers. In one respect Arkwright was much worse off than Hargreaves: the latter had a helpmate meet for him, the former had a wife who is said to have destroyed the models her husband had made and to have opposed him in every step of his career. But Arkwright was not deterred from his life pursuit by the poverty of his circumstances or the scandalous conduct of his wife. After many years of intense and opposed devotion to the possible application of a simple principle he had conceived in his mind, namely, that of spinning by means of rollers revolving at varying rates of rapidity, he succeeded in contriving and patenting his memorable machine, which, more than any other one invention, localized and concentrated in England the gigantic cotton-industry of the world. Arkwright's idea and achievement was to pass the coarse thread drawn out from the rovings over two pairs of rollers in succession, the first of which revolving slowly fined the thread down evenly and gradually, and then this thread was passed over a second pair of rollers turning with a high velocity and

drawing out the line into any requisite tenuity. Thus a cotton thread was spun capable of being used as warp. Cotton cloth as such could now be manufactured in England.

From the circumstance that the mill, at which Arkwright's machinery was first erected, was driven by water power, the machine received the inappropriate name of the "water-frame"; and the thread spun on these rollers was commonly called the "water-twist." The old mode of carding the cotton by hand now furnished the "rovings" too slowly to meet the wants of the new spinning-jenny and the new water-frame; and these great inventions would consequently have proven comparatively useless, had not a more efficient and rapid process of carding the cotton superseded just at the right time the old system of hand-carding. Lewis Paul introduced revolving cylinders for carding the raw cotton into rovings preparatory to spinning, in partial imitation perhaps of Arkwright's principle of spinning the rovings by the rotatory motion of rollers. Paul's machine consisted "*of a horizontal cylinder, covered in its whole circumference with parallel rows of cards with intervening spaces, and turned by a handle. Under the cylinder was a concave frame, lined internally with cards exactly fitting the lower half of the cylinder, so that when the handle was turned, the cards of the cylinder and of the concave frame worked against each other and carded the wool. The cardings were of course only of the length of the cylinder, but an ingenious apparatus was attached for making them into a perpetual carding. Each length was placed on a flat broad riband, which was extended between two short cylinders, and which wound upon one cylinder as it unwound from the other.*"

While the foregoing series of inventions placed an almost unlimited supply of cotton yarn at the disposal

of the weaver, the machinery as yet introduced was still incapable of providing yarn fit for the finest grades of cotton cloth. The "water-frame" indeed spun abundant twist for warps, but it could not furnish the finest qualities of yarn, because these were too tenuous to bear safely the pull of the rollers while they wound themselves on the bobbin. Samuel Crompton, a young weaver living near Bolton, possessed the ingenuity needful to remove this difficulty. He succeeded in combining in one machine, which from its nature is happily called the "mule," the several excellences of Hargreaves' spinning-jenny and Arkwright's water-frame. Copying after the latter, the mule has a system of rollers to reduce the roving; copying after the former it has spindles without bobbins to give the twist; and the thread is stretched and spun at the same time by the spindles after the rollers have ceased to give out the rove. *"The distinguishing feature of the mule is that the spindles, instead of being stationary, as in both the other machines, are placed on a movable carriage which is wheeled out to the distance of fifty-four or fifty-six inches from the roller beam, in order to stretch and twist the thread, and wheeled in again to wind it on the spindles. In the jenny, the clasp which held the rovings was drawn back by the hand from the spindles; in the mule, on the contrary, the spindles recede from the clasp, or from the roller-beam which acts as a clasp. The rollers of the mule draw out the roving much less than those of the water-frame, and they act like the clasp of the jenny by stopping and holding fast the rove, after a certain quantity has been given out, whilst the spindles continue to recede for a short distance farther, so that the draught of the thread is in part made by the receding of the spindles. By this arrangement, comprising the advantages both of the roller and the spindles, the thread is stretched now gently and equably, and a much finer quality of yarn can therefore be produced."*

The ingenuity of Hargreaves, Arkwright, and Crompton had been exercised to provide the weaver with yarn, and had now indeed provided him with more yarn than he could use; the spinster had beaten the weaver, just as the weaver had previously beaten the spinster; and the making of cotton cloth seemed likely to continue sluggish, because the yarn could not be woven any faster than a skilled workman could weave it with Kay's improved fly-shuttle. In the summer of 1784, a Kentish clergyman named Edmund Cartwright, being in conversation with some Manchester gentlemen, one of whom observed that, "as soon as Arkwright's patent expired so many mills would be erected and so much cotton spun that hands would never be found to weave it," replied, "Arkwright must then set his wits to work to invent a weaving-mill." Notwithstanding the unanimous opinion expressed by the Manchester gentlemen, that such a weaving-machine was wholly impracticable, the clergyman himself within three years had invented and brought into successful operation the "power-loom." Subsequent inventors improved the idea which Cartwright originated, and before 1834 there were not less than 100,000 power-looms at work in Great Britain alone.<sup>1</sup>

Substantially the same machinery invented for carding and spinning and weaving cotton was very shortly and successfully applied to the carding and spinning and weaving of wool, because the wisdom of Nature imparted to them both the same sort of tenacity of fibre, the same capacity in that fibre to be spun into a thread of indefinite length by means of the little loops or kinks easily interlocking contiguous fibres into a single thread, which two obvious resemblances gave an identical name to the animal

<sup>1</sup> Baines' History of the Cotton Manufacture, as condensed and quoted in Walpole's History of England, Vol. I.

and vegetable products otherwise so different from each other.

The spirit of Invention, one of the chief conditions in the production of material commodities, thus simply illustrated along the line of a single manufacture, may serve us for a sample of similar improvements taken and taking place in scores upon scores of other lines of effort and production. The principle is the same in all cases past and present and still to come, namely this, to throw the strain from the mind and muscles of men upon the forces and agencies of free Nature, with which the world around us is crowded in our behalf, and which are waiting to slave in the service of mankind without rest and without fatigue, — without money and without price.

(c) Freedom. By far the most important of all the conditions, under which the production of material commodities goes broadly forward, is liberty of action on the part of the individual; because, wherever such liberty is conceded, association and invention and all other needful conditions follow right along by laws of natural sequence. By liberty of individual action is meant the practical right of every man to employ his own efforts for the satisfaction of his own wants in his own way, whether directly or through exchange. Each man's right of individual freedom is limited of course by every other man's right to equal freedom, which the first man is not at liberty to infringe; and also, in certain few and limited respects, by what is sometimes called the "general good," the judge of the application of which must be the government under which the man lives. With these limitations, which are few in number and never serious in degree when rightly applied, and which limit in common all other rights whatsoever, the right of every man to buy and sell and get gain is just as fully a right as the right of breathing. It

stands on the same impregnable ground. It is a natural and self-evident and inalienable right, with which each man has been endowed by his Creator, to put forth efforts for his own well-being and for those dependent upon him, either directly or by means of efforts exchanged with other men equally free; and he is a slave in spirit and position, who tamely submits to have his own rights of buying and selling curtailed, or to stand by and see the rights of his fellow-citizens similarly curtailed, unless such act of interference and curtailment on the part of his Government be justified by a solid proof that some other public or private rights, which are at least as well based as his own, would be endangered by the exercise of his own.

In what cases may a Government properly step in to regulate or prohibit the buying and selling of its citizens? Hundreds of inductions extending through hundreds of years have been carefully and logically conducted in order to reach a just and comprehensive answer to this question; and in all probability the cases have been inductively ascertained for all time, and they are these: *such buying and selling may be controlled and prohibited, as are proven to be contrary (1) to the public Morals, (2) to the public Health, (3) to the public Revenue.* All other buying and selling may be safely assumed to be both profitable to the parties to it, and also useful to the Commonwealth in general; and any interference with it by public authority is a high-handed infringement of natural rights, a blow aimed at the life and source of property. These wrongful strokes at private rights, this restriction on the freedom of individuals to exchange products for their own welfare, is now mostly confined in civilized countries to the region of Taxation. Within this region the wrongs are still frightful. Judge Cooley, in his "Principles of Constitutional Law," states the matter as follows: "*Con-*

*stitutionally a tax can have no other basis than the raising of revenue for public purposes; and whatever governmental action has not this basis is tyrannical and unlawful. A tax on imports, therefore, the purpose of which is not to raise a revenue, but to discourage and indirectly prohibit some particular import for the sake of some home manufacturer, may well be questioned as being merely colorable, and therefore not warranted by constitutional principle."*

Formerly, governments interfered almost beyond belief with the freedom of their people in all industrial and commercial action; dictating what should and what should not be grown and manufactured, what should and what should not be exported and imported; decreeing by proclamation or enacting by statute, the number of apprentices each artisan might employ, and the years during which these must serve as such, and the conditions under which they might then work as journeymen; the materials to be used in woven fabrics, and even the widths and other minor features of such fabrics, were prescribed in the foremost of the European nations; in the reign of St. Louis of France, a "Book of Trades" was issued under royal authority and is still extant, which organizes minutely and subjects to cumbersome rules more than one hundred separate industries as then practised; England was the country of the great trading "Companies," and of all of these the same may be said as Adam Smith said of the Turkey Company formed in 1579, namely, it was "a strict and oppressive monopoly"; among others there were the African Company established in 1530, the Russia Company beginning its operations in 1553, the East India Company chartered on the very last day of the seventeenth century and going out of existence in our own time, and the Hudson's Bay Company, chartered in 1670 and so having the sole control in trade of a region forty times larger than all England;

while the colonial system prevailing for two centuries in all the countries of Western Europe regulated the commerce and controlled the manufactures in the colonies with a single eye to the benefits of the mother country, as those were conceived of under the wretched Mercantile system.

Happily, since governments have become more enlightened than formerly, they are perceiving for the most part that they have not the least right to interfere in those ways or in any ways with the natural right of their people to make and grow freely all material commodities, and to buy and sell these freely in the best markets wherever these markets are to be found; and they are also perceiving, that by such interference incalculable losses of property and indefinite retardations of progress are caused to their people, as well as weakness to themselves as governments through a more difficult gathering of taxes and a harder maintenance of prestige and power.

The only motive to a mutual exchange of services, whether in one or in all of their three kinds, that is to say, to a free production of commodities and services and credits, is always and everywhere the mutual benefit of the two parties exchanging. After all the processes have been gone through with and the exchanges are consummated, all the parties are richer than before, that is, they have more *satisfactions*, otherwise the processes and exchanges would instantly cease. Therefore, a universally free production benefits everybody, and harms nobody. Moreover, under a system of free production, every man is allowed under the stimulus of self-interest to work away at those obstacles to the gratification of human desires which he feels himself best able to overcome, to follow the bent of his own mind, and to avail himself of all those free helps in his peculiar work which Nature offers to

him. Under these circumstances, obstacles give way in all directions; the amount of material products produced is vastly augmented, the number and variety and excellence of personal services proffered are indefinitely increased, and credits compelling the Future to pay tribute to production are multiplied; the diversified and rapidly increasing desires of all persons in such a community are readily met through profitable exchanges; while all peculiar facilities natural and acquired are taken immediate advantage of, the diversities of relative advantage in production become marked in all directions, and a new day of industrial and commercial prosperity is ushered in. Because under freedom all men are sure to dispose of their industrial efforts to the best advantage, they have the strongest possible motives to put them forth; since they can purchase with them what they will and when they will, and where they will. Thus freedom leads to extended association, and also to the invention of machinery and all labor-saving appliances.

3. We are now in position to understand thoroughly the ultimate GROUNDS of the production of material commodities. We have seen, that these commodities have been multiplying in number and variety and excellence ever since the beginnings of history, that they are everywhere multiplying now at a rate hitherto unprecedented and undreamed of, and that improved and improving methods of transportation by land and sea are now carrying these back and forth to the ends of the earth. What is the *principle*, under which these things have been done, are now being done, and are certain to be done in the time to come?

The physical and moral obstacles, that Nature has interposed to the gratification of the multitudinous and constantly increasing desires of men, are so great in all

directions, that the powers of the individual man are utterly unable to surmount any considerable number of them; while at the same time, the physical and moral powers, adapted under sufficient motives to overcome these obstacles, are very diverse in the different individuals of mankind. Not only is there a surprising diversity in original gifts, but also the powers acquired by gradual concentration of personal effort upon one set of obstacles become exceedingly diverse, as does moreover familiarity in the use of the gratuitous forces of nature which lend their aid towards overcoming these particular obstacles. As the result of one or two or all of these, one man naturally comes to have a vast advantage over others in his particular branch of business, whatever that may be; each of these others by precisely the same means comes to have a legitimate advantage over the first in his own branch of effort, whatever that may be; and if, as always happens practically, the first has desires which the varied efforts of the others can satisfy, and they too desires which his efforts can satisfy, nothing more is necessary to profitable exchanges between them than this diversity of relative advantage at different points.

It is solely because a given effort irksome in itself put forth for another person, in view of and for the sake of a return-service from him, realizes more of satisfaction to both parties than when put forth for one's self directly, that commercial exchanges ever take place among men. The sole ground of these, the principle underlying them everywhere, is DIVERSITY OF ADVANTAGE BETWEEN DIFFERENT MEN AND BETWEEN DIFFERENT NATIONS IN DIFFERENT RESPECTS. All exchanges whatsoever depend on diversity of relative advantage in the production of commodities or services or credits as between the persons exchanging; and this diversity of relative advantage exists



by God's appointment primarily among individual men as such, and only secondarily on the ground of the varied soil and climate and position and natural gifts of different parts of the earth. Reserving these secondary considerations, which are quite secondary in importance also, to a later detailed discussion, it is very clear and of central consequence in our science that a diversity of relative advantage in different things displays itself as between the individuals of every community and country large and small. There is no hamlet in any land in which one man has not an advantage over his neighbors in the making of clothes, another in the making and setting of horse-shoes, a third in the building of houses, a fourth in the curing of diseases, and another in the keeping a school; while each of those neighbors has undoubtedly some advantage or other over each of these in some trade or means of livelihood. As a natural result of this diversity any two of these villagers may profitably exchange their respective efforts with each other, provided of course each has a desire for the product of the other, to the manifest lessening of the effort of each relatively to the satisfaction of each, and the more so as the relative superiority of each to the other in his own trade is the greater.

This point will repay some pains in minute illustration. If the blacksmith can make and set horse-shoes only a trifle better than the tailor could do this if he tried, and the tailor can make coats only a little better than the blacksmith could make one if he chose, there will be but a slight benefit to each in their changing works with one another. For the sake of definiteness, let us say, that the tailor's capacity for making coats is 6, and his capacity in making and setting horse-shoes is 5; and also that the blacksmith's capacity for shoeing horses is 6, and his ability in making coats is 5. Each has a relative superiority to the other

of 1 in his own trade; and if they exchange efforts, as they probably would under these circumstances, there is only an advantage of 2 to be divided between them.

Now let us suppose (what might easily become a fact), that the tailor by exclusive and augmented attention to the conditions of his own craft carries up his capacity for making coats to 15, the blacksmith's efficiency in both the trades remaining the same as before. There will now be an increased motive to both the artisans for exchanging products with one another, and a larger gain to each than before as the result of such exchange. The diversity of relative advantage as between the two has now gone up from 2 to 11. The tailor can now make a coat much better and quicker than before; and though the blacksmith owing to his inertness can neither make nor set horse-shoes any better than before, still less make coats any better, he will after all by still trading with the tailor reap a part of the benefit of the latter's increased efficiency in making coats; the new coat is at once better and costs less than the previous one; the tailor is still less inclined than before to leave his new and greater advantage over the blacksmith to set himself to shoeing his own horse; even on the old terms the blacksmith can do that 1 better than he himself can, and rather than forego the trade he will naturally offer the blacksmith somewhat better terms than before, or in other words will feel impelled to share with the blacksmith a part of the proceeds and rewards of his own now superior skill and diligence. The trade began on the sole basis of a relative diversity of advantage as between the two mechanics, each in his own craft; this relative diversity, without which no exchange ever takes place between any two persons, has now gone up as between these two from 2 units of advantage to 11 units of advantage; how will these 11 units be divided in this case? Nobody can tell

exactly how they will be divided. Two things about it, however, are *certain* at least in their tendencies and potencies. The blacksmith is sure to get some part of the extra fruit of his neighbor's new push and spirit, while the tailor is sure to get as his own reward by much the larger part of the whole blessed 11.

We must by no means omit to notice the logical inference from this instance, nor fail to make the proper inductive generalization from a sufficient number of similar instances. It is this: no man can make any essential improvement in any of the methods of producing material commodities, without at the same time benefiting other people as well as himself. Under natural law, which is no respecter of persons, he can by no possibility selfishly take to himself the entire fruits of his own growing skill and vigor. The only way in which he can gather in at all the fruits of these is to sell their proceeds in the open market. To broaden his own market for now better and more abundant goods he must offer them to everybody on somewhat better terms than formerly — and the better the terms the broader the market — and he can well afford to do this, because the goods now cost him less of irksome human effort. Every improvement in the production of commodities is precisely of that complexion. The issue of every invention, of every improved process of every kind, is, so far forth, a cheaper product. And this public gain follows, must follow, individual enterprise at single points, even when the great mass of exchangers remain at the old stage of sluggishness. Whatever increases at one point even, and *a fortiori* at two points, the diversity of relative advantage as between any two exchangers, is of benefit to them both, and the greater this relative diversity becomes the greater the benefit to both.

Now let us see how the matter stands, when tailor and

blacksmith at the same time feel and obey the impulses to a more skilled and vigorous artisan life. Suppose the blacksmith too carries up his efficiency in his own trade to 15, just as the tailor has done, the potency of each in the trick of the other remaining as before at 5; under these circumstances when the two come to trade with each other, each has a relative superiority over the other of 10, and there is an advantage of 20 points to be divided between the two; the trade is now ten times more profitable to each than it was at the outset, when there was only an aggregate of 2 units for the division between two parties; and accordingly the motive to an exchange and the gain of an exchange as between tailor and blacksmith are ten times greater than they were before. Therefore we lay down the principle, as inductively ascertained and as universally applicable to all exchanges, that the greater the relative superiority at different points as between the parties exchanging, the more beneficial and profitable do the exchanges become to all the participators in them. If this principle be just, and we may well flatter ourselves that it will be found to be just, it follows, that every man who has anything to buy or sell, is directly interested in the highest success of his fellow-exchangers, that every trade finds its own advantage in the success of all other trades, and that all discoveries and inventions by which Nature is made to pay tribute to art is, restrictions apart, so much clear gain to the world at large. In the light of sound and broad principles, what David Hume called the "Jealousy of Trade" is simply silly.

The mainspring that impels all buyers and sellers to quicken their movements and to improve their methods and thus and otherwise to cheapen their costs of production, is the natural press of *competition*. Somebody else is offering this product, or will offer it, for less than we are

now selling it for, and we must contrive some way by shortened times or cheaper processes or a quicker zeal not to be beaten in this market-race, is the silent argument ever making itself felt on the mind and hand of the producer. Such natural action always increases the general diversity of relative advantage as among buyers and sellers.

But, on the other hand, whatever lessens or threatens to lessen this natural and most beneficial stress of competition among producers of similar commodities at home or abroad, necessarily lessens the motive on the part of these producers to excellence of quality in their goods and to cheapness of their cost, because it makes less the diversity of relative advantage as between these producers and those producers of other commodities against which the first exchange. The units of advantage that would otherwise be divided between the exchangers are diminished; the motives to trade and the rewards of trade are thus lessened to each pair of parties subject to such diminution of competition, and consequently to the community, or nation, or family of nations, as a whole; and accordingly this is the precise place for us to look into the nature and effects of *Monopoly*, so called, and to perceive once for all, that Monopoly is the enemy of mankind.

Monopoly is a word derived from two Greek words, which mean when combined *selling alone*, that is, the privilege of selling one's commodity free from the competition to which it is naturally subject by other sellers than the privileged one. Monopoly is thus artificial restraint imposed on some buyers and sellers for the supposed benefit of other buyers and sellers. It is wholly unnatural. It is usually enjoyed under the forms of law. Its beneficiaries commonly cajole or extort from Government by hook or by crook the exclusive privilege of selling certain commodities in a designated market. Their motive is purely

selfish: it is simply and solely to get for themselves a return-service artificially enhanced by selling commodities in a legally restricted market. The effect in the first instance usually corresponds to their expectations. The public are at their mercy so far as the designated commodities are concerned.

The general story of monopolies is a dreary stretch of record of human greed and wrong on the one hand, and of wide-spread poverty and suffering and slowly-gathering resistance on the other. We will look at only two instances at present in the long account, premising that, the motives of greed and grab are the same in all instances, and the results of wrong and hate on the part of those oppressed by them are the same also in all instances. Let Macaulay (I, 40) tell us something of the first instance selected for illustration. "*But at length the Queen took upon herself to grant patents of monopoly by scores. There was scarcely a family in the realm which did not feel itself aggrieved by the oppression and extortion which this abuse naturally caused. Iron, oil, vinegar, coal, saltpetre, lead, starch, yarn, skins, leather, glass, could be bought only at exorbitant prices. The House of Commons met in an angry mood. It was in vain that a courtly minority blamed the Speaker for suffering the acts of the Queen's Highness to be called in question. The language of the discontented party was high and menacing, and was echoed by the voice of the whole nation. The coach of the chief Minister of the Crown was surrounded by an indignant populace, who cursed the monopolies, and exclaimed that the prerogative should not be suffered to touch the old liberties of England. There seemed for a moment to be some danger that the long and glorious reign of Elisabeth would have a shameful and disastrous end. She, however, with admirable judgment and temper, declined the contest, put herself at the head of the reforming*