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## CHEAP WORKMEN MAKE DEAR WORK

It is a common complaint,among those who have paid but superficial attention to the relations of work and wages, that bigh wages in this country make it very hard, if not quite impossible, for our farmers and manufacturers to com pete successfully with the cheap labor of other countries. Such complainers fail to comprehend the economic paradox that the cost of labor affordis no criterion of the cost of work.
Of course there are limits both ways. Labor must not be so Of course there are limits both ways. Labor must not be so cheap that the laborer cannot subsist on the proceeds of his toil, nor so dear that the product is swallowed up in wages, Within these limits, especially where machinery is involved the ecovomic law is universal; the cost of production roughly speaking, varies inversely as the wages paid.
This fact comes out very strongly in the special report of Comm'ssioner Wells to Congress in 1868, wherein the relation of work to wages is discussed in minute detail. As a rule the productiveness of the laborer increases with the increase of his pay, and gencrally at a more rapid rate; and -though modified by other conditions-the economy in pro. duction increases accordingly. Taking the puddling of iron as the representative process of the iron trade, Mr. Wells found the average price of labor per day for puddlers was from \$1. 80 to $\$ 1.88$ in Staffordshire, $\$ 138$ in France, and from $\$ 1.14$ to $\$ 1.25$ is Belgium. The average price of merchant bar iron was $\$ 32.50$ in England, $\$ 35$ in Belgium, and $\$ 40$ in France
In an address read before a meeting of the ironmasters of the north of England, Mr. Lowthian Bell gave the results of his investigations as to the cost of smelting pig iron in sereral countries of Europe. Everywhere cheap workmen were in a French establighment to carry out the same amount of work which twenty-five men were able to do in Engliph fac tories. With labor twenty per cent cheaper, the cost of pro ducing pig iron in France was $\$ 5$ to $\$ 6$ more per tun than at Clıveland
In Germany, as in France, though the nominal rates of wages were still lower, the actual cost of work was greate
than in England. Thus in Westphalia, where labor was wenty-five per cent lees than in England, the cost of smelt ing a tun of iron was $\$ 375$ more than on the Tees.
The same contrast of cheap labor and dear work was ex hibited in the report of Mr. Redgrave on the condition of the textile industries in England. Where labor is cheap, the number of hands required to perform a given amount of work more than offst th the advantage in individual wages In France, one person is employed on the average to four tean spindles; in Russia one to twenty-eight ; in Prussia one to thirty seven; in Great Britain one to seventy four, avd not unfrequently mules containing 2,200 spindles are man aged by one minder and two arsistants. Wages were lesf in Germany and the hours of labor longer, yet the weight of work turned off was less than would be produced by th ame machinery in England, with much fewer opera ivee,
In Rusbia the inefficiency of the operatives as compared wlth
those of England was still more strikingly manifest. Their wages hour for hour were less than one fourth the amount arned in Eugland; yet the productive powtr of the Eng
operatives throws the ad vantage greatly in theirfavor.
The same condition of things is noiiced by Mr. Wells, who shows that, while female labor in the cotton manufacture is paid from $\$ 3$ to 3.75 a week in Great Britain, from $\$ 1.67$ to $\$ 2.30$ in France, Belgium, and Germany, and from 56 cent to 70 cents in Russia, the one thing most dreaded by conti nental manufacturers every where is British competition
In the carrying.out of his railmay and other contracts in everỳ quarter of the globe, the late Mr. Brassey had occasion to employ great numbers of laborers of almost every nationality, at widely different rates of daily wages; yet it was found to be the almost invariable rule that the cost of exe cuting a given amount of work wat everywhere much the ame. It anything, the advantage in cheapnees lay where labor was dearest. Thus the wag a paid ia Eogla ad were
bigher than in azy other country : yet bridges, viadacta, tunhigher than in any other country: yet bridges, viadacts, tun-
nele, and all works of art on railw*ye were executed there nels, and al works of art on railw*ye were extcuted
more cheaply than in any ocher pariz of the world. Wher labor was plentiful and very cheap, as in It ily or India, sim ple earth works might be erectad at a cheaper rate than in Evgland; but this advantage could not wore than make up for the greater cost of the more d flicuit wotk.
.Numerous illustrations of this fact, and of the law that cheap labor does not recesaarily imply cheap work, are given in the interesting volume "Work and Wages," in which Mr. Thomas Brasesy, M.P..evms up the results of his father's ex perience as an enploy er of labor. Mr. Braseey's first great contract on the cootionent was on the Paris and Rouen Railway. A bout 10,000 men were employed, 4.000 of them being Eaglishmen. The Fre ch laborers, working from 5 A. M. to 7 P. M, were pa'd 60 cents a day; the English navy, be ginning at 6 A . M. and leaving off at 5.30 P . M., received $\$ 125$ a day; yet it was found on comparing the cost of adjacest cuttioga, in precieely similar circumstances, that the excavation was дiadeata lowerchat per cubic yard by the Erglith than by the French. In the same quarry, at Bonni $\mathrm{r} s \mathrm{e}$, Fronchmen, Irishmen, avd Engliehmen were em. nirfes, Frunchmen, Irishmen, avd Engiziahmen were em
plojed side by side, reciving reapectively 60 cents, 80 ploged side by side, recsiving respectively 60 cents, 80
ceste, snd $\$ 1.20$ a day. The ligh priced Englishman was cesta, snd $\$ 1.20$ a day. The bigh priced
the wost proftable workman of the three
The D.eppe Railway was executed principally by native labor. The French earned from 50 cents to 60 cents a dsy when doing piece work their earnings advacced to 70 cen's A large number of Belgians,somewhat familiar with railway work, were employed and earned 90 cents a day. The Eog ish were considered to be worth $\$ 1$. Ten years later, when the Caen line was consuructed, Engliehwen Were atill employed for tipping a ad plate laying, apd on cifficult work on erp rock catting. Thoir wages wero $\$ 1$ a day as before While the usual eafrings of the French laburers ranged from 55 centa to 70 cents. The Etglish aere employed by experienced sub.contractors directly interosted in the closest poseible reduction of ex pendi, ure. Simitarly on the Grand
Trunk Railway, in Can ada, where a large number of French Trunk Railway, in Canada, whese a large number of French Canadians were employed at 84 cents a d $\alpha y$, Eaglish navvis were paid from $\$ 1.25$ to $\$ 1.50$ a ciay, and did the greatest
mount of work for their moncy. Extending the investigation to Mr. Brasesy's other contracts in France, Italy Austria, Switzerland, Spain, Germany, Brlgium, and Holland, the approximate uniformity of cost for railway work is oxhibited in all casee, notwithstanding great differences in rates of daily wages. So, too, in India. On the Delhi and Uniritzer Railway, it was found that, mile for mile, the cost was about the same as in England, although the cost of labor, estimated by its 8 cents to 12 cents a day, was marvelously low. Each laborer did his money's worth, and no more. Skiiled labor was scarce and high,and in the absence of experienced sub.contractors the cost of supervision was very great, averaging twenty per cent on the entire outlay In Southeastern Europe the same state of things pre vailed. Unskilled labor was cheap; but in proportion as kill and manual dexterity were required, ihe difference in he cost of eng ineering work disappeared. So too in Italy, in the Mauritius, and elsewhere
But, it may be objected, in all these examples weak men were pitted against strong men, unskilled against skilled abor; there is nothing paradoxical in the assertion that one hearty, well trained, and well fed workman may accomplish more than two or three untrained and ill fed men, costing ach one half or one third as much for daily wagee.
The objection may be well taken, but it fails to meet cases like the following, given by Mr. Berssey to thow that it is quite possible that work may be more ches ply executed by he aame workmen, notwithstanding that their wages have ighly increased. At the commence asedt of the North Daron Railway, thelaborers received 48 cen's a day. Daring the progress of the work their wages wers raised to 63 cen:s and 72 cents a day. Nevertbeless it was fouvd that the work was executed more cheaply when the men were earning the bigher rate of wages than when they wers paid the lower. Again, in carrying out a part of the Metropolitan Drainage Works in London, the wages of the bricklayers were gradually raised from $\$ 150$ to $\$ 2.50 \mathrm{a}$ day; yet it was found that he brickwork was constructed at a cheaper rate per cubic ard after the priç was raied tban before.
An indirect wey of rasing wages is to reduce the hours of labor. The evidence is very strong to prove that, with the ame men, euch advancas in the cost of labor do not necessa fily increare the coet of work. Iudeed it may be said to be the univeral rule that beyond ten hours a day the produc ion d'minishes as the time increases. With proper diligence, ght boure are enough for a man to do all he is capable o oing daily, with profit to himself and his employer.
the relation of alcohol to physical strength A correspondent asks: (1) Is there not a clayking of
uthorities in regard to the relation of alcohol to phyoical streng hh, as indieated in our rect nt article on alcobol. P Jod, and force? (2) Whose experiments were therein referred to? (3) How it is possible for a dose of alcohol to increase oute's working power, if, as Toddand Bowman state, " the uze of alcoholic stimulants retards digestion by coagulating the pepsin of the gastric juice, thereby interfering with its action?" He adds that be does not find in his text books any authority for the position that alcohol is a force producer.
There is a serious clashing to be observed among cur ent opinions in regard to the action of alcohol in the humad ey ${ }^{3}$. tem, due very largely to the fact that the effects of alcotol vary immensely with the dose, but more perhaps to the tendency of men to come to decided conclusions from one-sidtd or insufficient evidence, and to hold to such conclusions in apite of every evidence to the contrary.
Regarding authority in the only sense admisesible in Ssi-once-that is, as the overwhelming weight, not of haman testimony, but of facts, critically determined-*e canyot say that the alleged clashing is at all serious. The phy oological action of alcohol has been determined with as close an approximation to accuracy, probably, as that of ary other substance; and while it is never possible to epeak with absolute certainty in such matters, we are jusificd by fact in saying that the grounds for regarding alcobol as a force producerare quite as substantial as those on which we rest our bolief that beef, or bread, or any other food is a force pro. ducer.
The failure of our correspondent's text books $t$, recogn'ze this result of recent investigationsis due very l.ksly to thtir having been written before the investigationa were made. The latest work of eminence in this field- $\mathrm{Pa}_{\mathrm{a}} \times \mathrm{y}^{\prime}$ ' "Trestise on Food and Dietetics, Physiologically and Teorafeuticelly Considered"-gives a very good discussion of the role of aleohol within the organism, and admits that, np to the time of its publication, the probabilities were, on the whole, in favor of the belief thatalcohol is a force producing food. Investigations still more recently published, ro:ably by Drs, Anstie and Dupré, carry the discuesion to the fo'nt of pracical demonstration, as we have shown in apother coluonn. The experiments,about which our correspordent irquires, were those narrated by Dr. Hammond in the addreas then under review
As for the quotation from the works of Todd and $B$,wman, the facts would seem to prove it perteutily corr-c, wi h the addition of the first two letters of the alptabet. It is not the use but the abuse of alcoholic etimulan's wh ch has the effect desiribed as every drunkard's a'omach st owo aftry a debruch. In excess alcobol arresta digeatiod. se it arreats all the other bodily functions. In ixcees it is a poisor, a very dangerous iarcotic poison. N-veribel. se in piop+r doses, properly administered, its uee bae quite the cou rary effect. Is facilitates digestion and is othtrwise surikionly beneficial. Its indiscrimivate use, however, is always aud everywhere to be deplored, aince coiy the fow are able to une it witbout abusing it and themeelves at the cauie t'm.
Because a little at the proper tive is pcoy, tos mary people are apt to infer that a great deal at ary uma must be better. It is the logical weskness, so happi'y bit off in $\mathbb{E}$ op's fable, of the old woman with her ben. Bjcause wilh one measure of barley the $b \cdot n$ liad an egg a cay, the thrify dame reasoned that two measures of bar ey woud dabeber lay two egge a day. But they did'ni. The hen sin ply got fat, and quit laying altogetber
As with alcobol, so with tobaceo, so with arvicles of food like tea, coffee, spices and the rest, so with $\mathbf{c}$ mmon necee a aries like pure air, cold water, exercise, sleep, plearure there are ill balanced people who are never able to di. cs wi nate between wholesome use and excess. In time, wi b the spread of real knowledge, with increasing mental axd woral culture and the general elevation of the race,such wes kneeses may be outgrown. Till then they must be borne wich. To attempt their repression by force is more likely to be wis chievous than beneficial, more likely to hinder than help the real advancement of society.

## the labor prospects for the winter.

The condition of the labor market in this city is su h as to
 during the comiag winter. Thouranda eady clamoring for work. So far from being better than during the darkest days of the panic, the laborers are efr ainly woree off; and for this gloomy and stagnan
affairs no definite and certain reason can be assigned.
The New York World has investigated this eubjoct very carefully, and the long detailed report which appears in the columns of that journal bears out by actual ggures the sin ister opinions above given. In rough numbere, there ar 30,000 ordinary laborers in this city, on whose work the ex istence of an aggregate of 150,000 people deperds. To de termine how large a proportion of this part of the popula. tion is idle, recourse has been had to the sources of employment of the greatest numbers, beginning with the city itself. The employees in the municipal service, it appears, have fallen off fully one third; or in other worde, 2.000 mes , out of the aggregate formerly employed, are out of work. Tue pay rolls of the Fourth Avenue Uuderground Railway im provemant, by reason of the approaching completion of tha work, have been reduced by about the sacce number; and farther examination shows that the ratio of redoction is these two largest sources hoids in the canes of sualler op rations. Building is stagnaxt, and but few improvem-nts are bring made on lot prop-rty; contractors are Lamptred fins funds, owing to the dificulty in raisirg eecurity, and the

