

It is the purpose of this paper to attempt an answer to these questions. It is my intention to answer very briefly, and in answering I will hardly do more than suggest by a few examples, conclusions which you will have ample means at hand of verifying. Thereafter I will pass to a consideration of a new subject, which will ere long engage much attention in the medical world, this subject being a phenomenon of the highest civilization.

I will now proceed to discuss briefly the physical aspect of my subject. That the power of man, exerted through tools, has increased beyond computation, is a fact too obvious to be disputed. Has he increased physically? I think he has. I discard at once all mythological stories. In the days of Hercules and Milo they did not scrutinize the records as they do now; so we will come down somewhat nearer to our own time. Walking, I think, is the finest test of our physical endurance. Until O'Leary, the Chicago postman, revived long-distance walking, the feat of Capt. Barclay was looked upon as something that, having been achieved once, had been achieved for all time. The captain walked 1,000 miles in 1,000 hours, being allowed to walk two miles consecutively. Thus he could have an hour and a half's rest. In the last year or two, William Gale, a midget of a man, has walked 4,000 quarter miles in 4,000 quarter hours, beginning each quarter mile on the stroke of each quarter. Thus he never had more than ten minutes' sleep consecutively in nearly 42 days. This, to my mind, proves that physical endurance to-day is greater than it has hitherto been. Twenty years ago a man would have been regarded as a lunatic who would have ventured the opinion that a man could walk 520 miles in six days, or run 560 odd miles in the same time. Yet O'Leary and Rowell have done this. Dr. Winship has lifted 3,000 lbs. in our own day, a feat of strength unexcelled by any other authenticated record. Hanlan

has rowed faster than ever man rowed before. Myers has cut down all the short distance sprint records. Donald Dinnie, Rory McLennan, and others, have surpassed all previous recorded feats in heavy weight athletics. And so I might cite instances, in all the round of muscular tests, down even to prize-fighters. The prize ring, we are accustomed to think, is dead, and there remain no longer the men who could equal the great brutes of days gone by. Yet those who are said to be well informed upon such matters are of opinion that in the man Sullivan, who is to fight with the man Ryan a few months hence, there is a physical type equal, if not superior, to any of the notable prize-fighters whose doings are recorded in *Bell's Life*. I think a survey of the field of athletics will convince any one that the representative muscular men of to-day excel those of any preceding period in the history of our race.

But it may be urged that, though isolated instances show a pre-eminence, the common run of men do not show any increase of physical capacity over their forefathers. I think they do most unmistakably show a marked advance. If we turn to the army, I think it will be admitted that the Abyssinian, Ashantee, and Afghan campaigns, and the Indian mutiny, show instances of forced marching under difficulties excelled by none of the marches in the Peninsular campaign. If we turn to the fields, we see harvesters working during longer hours, and with greater rapidity, than our grandfathers ever dreamt of. The English navy undergoes greater physical fatigue than four men could have stood a century ago. The mechanic no longer has time to whistle and smoke, and talk village politics when he is at work. The steam-engine sets the factory in motion. Every operative springs into position, and stand by he must or fall, while the engine moves—he does not fall, but bears the inexorable strain; it may be with difficulty, but he bears