This Thing Called Science

(Continued from page 1.)

do not turn out to be improvements. It is indeed the method of Nature herself, for she, too, tries experiments, and discards those which do not turn out to be useful improvements. Many instances of this kind are known.

For instance, Nature at one time was trying to make a being to stand erect, and so to support the body she put struts between the ribs, but afterward found these were unnecessary, and they were discarded, or rather shall we say they discarded themselves.

Nature's method of elimination is by the survival of the fittest. She tries many new dodges of producing the results, but only those which are in some way better than others survive, and so, too, does man, or rather he should. Take any process or piece of machinery you please and think about it.

Take a bicycle for instance. The first thing they had had two almost equal-sized light carriage wheels. This, though it worked, was awkward and heavy, and wire spokes were substituted for wooden ones, then to lighten it still more and to make it easier to drive one wheel was made big and the other small. This had disadvantages, as one found out when one had a spill, and so the front wheel was reduced in size, but still it was thought that the rider must drive the front wheel, and so the front wheel forks were prolonged to carry the driving gear, which still geared on to the hub of the front wheel. After some years of this some one tried driving the back wheel, and after a few trials got on quite well with it, and so what we know now so well gradually developed.

Any other process or machine will show the same thing. Thought added to the conviction that in some way or other the thing was capable of improvement, experimenting with new ideas, and discarding dodges which however ingenious were found not to be satisfactory, these are what is implied by science and the scientific method, and they are applicable not only in what we narrowly know perhaps as "the sciences," but in every other department of human progress.

The word science comes from a Latin word meaning to know, and in order to actually know we must try experiments, test other ways of doing things, seize upon any improvement we may come upon, and discard the failures, though they may be more numerous than the successes. In order to improve her stock, Nature is wonderfully lavish in the distribution of seed, but unless it be owing to the intervention of man, only those survive which find themselves more suitable to the surroundings than their fellows.

I am a little afraid that recent humanitarian ideas—good in most respects though they certainly are—are leading to the survival (which would not matter) of the unfit, but also to the propagation and continuance of their unfitness (which does matter). The world has progressed from its initial darkness owing to what we might perhaps consider when it is applied to humanity to be a somewhat ruthless law. But it is a law all the same, and it is one, the operation of which can be seen in the development and improvement of our machinery, our processes, our institutions, and our farm stock.

Divine discontent, the conviction that there are few processes, institutions, or things which cannot be improved, experimentation to see what are and what are not improvements, the discarding of failure, these are the factors which go to make the scientific method.

This law of the survival of the fittest, which was discovered by Darwin and Wallace in the middle of last century, is the law by which the world progresses by evolution, and it has its implications. It teaches us to make ourselves, our children, our institutions and our machinery and our stock fit—fit, that is to say, for a job that each particular, unit has to do. Mankind, civilised mankind more particularly, but also mankind in general, differs from others of the animal kingdom in many respects of course, but in one great respect by having a larger and more efficient brain, and his job in life therefore is more the direction by means of his brain of the forces of nature of all sorts.

It therefore behoves him to make his brain efficient to cultivate it, to educate it, so as to fit him for the actual work he will have to perform, whatever that work may be. It also behoves him to select his partner in life with due regard to efficient and healthy offspring, and this I am afraid he does not do at present. If he continues to neglect this precaution it must lead to the deterioration of the race. What phenomenal results could be produced if some superman took charge of man and directed him as he directs and controls his stock and his plants. But man, having free will, would resent what he would call this unwarrantable interference with his freedom of choice. Seeing that this would be undoubtedly his attitude he must exercise this great gift of freedom of choice—a gift which he denies to his stock and his plants with wisdom and discretion, or else he must take the consequences, and these consequences, whilst they will come upon his own head, will also make their effect felt on the race to which he belongs.

Fitness, therefore—fitness of every part—is the message of science to civilisation. As the bolt must fit its bearings, or racket and noise and ultimate breakdown will result, so must every pin and cog and child and man in civilisation's most complicated mechanism fit the job, be it small or large which it has to perform, and as the bolt can only fit the hole by being turned carefully, and fitted truly, so the man can only fit his job by being educated so that he can perform it efficiently.

When a man is spoken of as a round pin in a square hole, it is another way of saying that he does not fit his job, there is racket and trouble, and there will be ultimate breakdown.

Know ye not that they which run in a race run all, but one receiveth the prize—the fittest. The fittest race, the fittest woman, the fittest motor-car, the fittest sheep, the fittest horse. So run that ye may obtain.

Music Lovers' Competitions

More than 6,000 Entries

ENTRIES in the Music Lovers' Competitions closed on the 31st ultimo, and the widespread interest in the competitions is abundantly evidenced in the fact that over 6000 entries have been received. When it is considered that for every entry received many other listeners took part in the competition without forwarding an entry, some idea may be gained of the intense interest in the competition throughout the Dominion. Nor was this interest confined to New Zealand alone, one entry being received from a competitor in Fiji.

In view of the remarkable interest evinced, and the large number of entries, it will be appreciated that the work of checking the answers is one of considerable magnitude, and, in the circumstances, it has not been possible to announce the results in this issue. However, the correction of the 6000 papers received is well in hand, and it is hoped that the final position will be arrived at to enable the list of prize-winners to be published in next week's issue.

The correspondence received in connection with the competitions, apart from the entries, has been terrific, and we trust readers will excuse us for not giving individual acknowledgments, which, in the circumstances, has been clearly impossible. Without exception, the comments received have been in a congratulatory strain, and many writers have suggested further competitions of a similar nature. We purpose going into this matter immediately, and hope to be able to announce something of an interesting nature very shortly.

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Radio and Music

Moiseivitsch Expresses His Opinion

IN an interview with the Auckland "Herald," Mr. Benno Moiseivitsch said a few heartening things about the future of music and the effect of wireless upon its prospects, those of the piano and orchestras in particular. The famous pianist's remarks are somewhat of a challenge to the pessimists. Mr. Moiseivitsch said: "The complaint sometimes heard that broadcasting is damaging concerts and the livelihood of musicians will not bear examination. Pianoforte tuition is at present in a transitory stage, due partly to the invention of wireless and partly to the prevailing depression, but the temporary disturbances caused by these conditions will end, and will be replaced by a vast extension of musical culture and appreciation.

"Before wireless became general, about four or five years ago, the promising sons and daughters of a family were sent to a music teacher for tuition.

"When broadcasting became popular, parents thought it better to switch on to the wireless than to listen to the playing of their children. It is no use saying that is bad. We are in a state of transition, and the future will be very different. Wireless is expanding the universe of musical appreciation to an extent never dreamed of, and in the long run may prove to be a blessing in disguise.

"Broadcasting in England is encouraging good musicians, because the B.B.C., being a wealthy institution, is able to afford tremendous fees to secure the services of top-liners. Before the advent of wireless, England could not boast a single good symphony orchestra. Those orchestras that subsisted had to depend upon small specialised audiences, and consequently could not afford high-salaried conductors nor an adequate number of rehearsals. Wireless popularised such concerts among the masses, with the result that orchestras were subsidised by the B.B.C., and now ranked among the greatest in the world.

"From 24 to 26 symphony concerts were now given in London each season, the artists were paid higher salaries than they had ever been paid before, and 80 per cent. of the seats were sold in advance. Yet all these concerts were broadcast. The fact was that once people really came to enjoy good music, they were not satisfied to stay at home; they had to go to the concert and hear and see the real thing."

Mr. Moiseiwitsch said he would like to see more symphony orchestras in New Zealand. "Naturally, such an orchestra costs money and conditions are such," he continued, "that only State or municipal subsidies will make it possible. Unfortunately, the importance of musical culture is not usually appreciated by national and civic authorities. They need to be impressed with the fact that music is just as important to a city as art galleries, museums, recreation and playing grounds. Musical appreciation cannot be what it should until you have a first-rate orchestra with a reputation."