FOR THE BLOOD IS THE LIFE."—See Deuteronomy, chap. xii., verse 23.

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leans the Blood from all Impure Matter
rom whatever cause arising
s this mixture is pleasant to the taste, and vessed free from anything injurious to the most delicate constitution of either sex, the Proprietor feels sufficient to give it a trial to test its value.
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VERY PLEASANT.—Mr William Morris who has given much attention to parasitic forms of disease has introduced to the notice of the "Sydney Morning Herald" a worm sent to him in some meat served to Mr Pottie, the veterinary surgeon, at one of the restaurants in the city. The meat presents the appearance of a piece of the flank or brisket of beef, and the worm is about an inch in length, of the Filaria family. This is one only of many in the same plate supplied. No life was discovered in it, the cooking having extinguished that; but it may be otherwise with the ova.

DOUBLE WAISTED.—The "Ballarat Courier" says that a more ridiculous exhibition could scarcely be imagined than was made by an inveterate drinker of Bunning a few nights ago. The man started from Beechworth about six in the evening, very much muddled, and was discovered about twelve o'clock by some passers-by in a clump of saplings with his clothes in ribbons. It appeared that he had taken off his belt, and when putting it on again he fastened one of the saplings to his body without noticing his mistake. He had fought hard, however, for he had spread destruction on everything within his reach, besides the sapling to which he was tied.

THE PERILS OF BALLOONING.—A Frenchman, M Duruof, recently laid a wager that he would cross the Channel from Calais in a balloon, and accordingly, on August 31st, he fitted the car to the balloon, mounted into it, seated his wife by his side, and the two together rose into the darkness of night. Hardly had they departed, when a cry rose through the whole town; people rushed to the jetty, and were just in time to see the balloon mounting rapidly into space, and journeying quickly towards the North Sea. The general emotion was indescribable, and more than one of the spectators was moved to tears. At seven on this gloomy evening the balloon was lost sight of in the mists which veiled the horizon. The unfortunate Duruof and his wife had with them no provisions but one kind of warm covering. The balloon though a new and excellent one, was very small, its cubic capacity being but 900 metres, and it could not, therefore, sustain them for any length of time. The only hope was that the wind might change, and take the balloon in the direction of Yarmouth, or the coast of Holland. The chance of reaching Norway was very slight indeed. Telegrams were, however, at once sent to England, Norway, and Holland, in order that a good look-out might be kept.

"BRENDERY, September, 1873.—Gentlemen,—I feel it a duty I owe to you to express my gratitude for the great benefit I have derived by taking 'Norton's Camomile Pills.' I applied to your agent, Mr Bell, Berkeley, for the above-named pills, for wind in the stomach, from which I suffered excruciating pain for a length of time, having tried nearly every remedy prescribed, but without de-

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In all the above cases, arising from errors and the yielding to the passions, no time should be lost in at once arrest the progress of the disease.
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Dr L. L. SMITH hereby informs the public that he is the only legally-qualified medical man in this city of his profession; that others advertising are unqualified, and that, therefore, in pretending to be qualified are obtaining money under false pretences.
Dr. L. L. SMITH also warns the public against quackeries advertised. If the taker of any of these advertised nostrums escape with his life, or his system be not thoroughly and irreparably undermined by them, he may look upon himself as the most fortunate mortal.
Dr. L. L. SMITH has been applied to by so many unfortunate broken-down young old men, utterly crushed in spirit, ruined in body, and diddled in pocket, that he deems it a duty to publish this to the world.
Those men and women who have been the victims of unprincipled charlatans frequently seek that recovery which is often beyond Dr. SMITH's control. When will the public understand that it is to their interest to consult a duly qualified medical man, who has made this his sole study, rather than apply to a number of ignorant impostors, who merely harp and peep upon their pockets and health!
Dr. L. SMITH has always stated that to warn the public of these quicksands is his chief reason for advertising.
In all cases of nervous debility, lowness of spirits, loss of power, pimples on the forehead, lassitude, inaptitude for business, impotency, drainage from the system, and the various effects of errors of youth and bloodpoisoning from diseases previously contracted, Dr. L. L. SMITH invites sufferers to confault him, as he has a no hesitation in stating that no medical man, either here or in England, has had the opportunities of practice and extraordinary experience which he had. Therefore, those who really desire to be treated by one who is at the head of his profession in this branch of medical practice should lose no time in seeking his advice. Nor should anyone marry without first consulting him.
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CONSULTATION FEE (by Letter) £1
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FOR THE GOOD OF FOR NERVOUS SUFFERERS
Eleven Years' Colonial Experience. Seventh Edition 1874.
DR. BOTTRELL
Member of the Edinburgh University, by 4 diplomas
Has just published 30,000 copies of the
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Largely illustrated with wood engravings, and containing 200 pages; cloth binding, 2s.
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"SELECTION—NATURAL AND ARTIFICIAL."

late

ON Monday, the 26th instant, Mr H. K. Rusden, secretary to the Royal Society of Victoria, delivered a lecture at the Wangaratta Athenæum, in aid of the funds of that institution.

The chair was occupied by Mr A. TONE, president of the Athenæum and mayor of Wangaratta, who briefly introduced the lecturer.

The following is a copy of Mr Rusden's

LECTURE.

"Are [man] and nature then at strife,
That nature lends such evil dreams?
So careful of the type she seems,
So careless of the single life;
That I considering everywhere
Her secret meaning in her deeds,
And finding that of fifty seeds
She often brings but one to bear."
TENNYSON'S *In Memoriam*, LIV.

"This surely means that she intends—
Though fifty times we fail to find
The hidden meaning of her mind—
The next time to reveal her ends."
New Song.

It is now nearly thirty years since I was at Wangaratta, and it is with but few of its inhabitants that I can pretend to any acquaintance. I will not presume to say whether they know more or less of me than I of them. But some explanation may be due to you of my appearance here, because I am really no lecturer. I never delivered a *bona fide* lecture in my life, and I possess no special knowledge to warrant my presuming to instruct others. But I *have* something to say in sober earnest, in calling attention to conditions of present society, which strike me as being of grave importance, and at the same time generally overlooked. I shall propose remedies for evils, the existence of which, I conceive, has only to be indicated to be admitted; and if my proposals do not meet with your approval, I shall still be satisfied if I succeed in awakening interest in topics fitly described in the saying—what is everyone's business is nobody's business. I may be the nobody—but the business is not only yours, but emphatically everybody's. That it is transcendently important is even less my reason for venturing to ask your attention to it than that it is so generally disregarded. There are many far more competent than I am to treat of such matters, and if they would only teach, I should gladly listen and learn. Their silence, however, renders it my duty to speak.

I hope to be able to say what I have to say in less time than a lecture usually occupies. If you should not like my paper, its shortness will, therefore, be at least one redeeming point in it. But I do not think you can like it, unless you do more than hear it. It will be necessary for you to recognise the great importance of the subject, and the need of some remedial action; as well as to weigh and judge my suggestions to that end. I should therefore be much gratified if some discussion were to follow my paper; in fact I, never read one except upon that condition. I should consider it an act of colossal presumption to stand here to propound my own views without inviting question, criticism, and reply upon the spot; and I am convinced that no lecture, not even an exposition of physical fact or scientific method, can have a tithe of the value or benefit, to any auditory, unless questions be raised and answered on the spot upon obscure points—to remove misunderstanding, not only of what has been said, but what may be supposed to have been implied or involved. Let me also plead for my own advantage. I wish to correct my own views; which I have never failed to do, more or less, by a discussion on a paper of my own. If it should turn out—which I do not expect—that we agree in everything, it would, perhaps, be very agreeable; but I am satisfied that much more benefit would accrue to us all by the discovery and comparison of *differences*, and the *selection* of resultant accordances—reciprocal rationalisation, in fact. It is thus in discussion of ideas—as in the struggle of species for existence—that *natural selection* and competition ensure the *survival of the fittest*.

Another reason for mentioning that I have never lectured except when the subject was to be debated on the spot, is, that I may have acquired a somewhat dogmatic style of expression, which among strangers may appear to require apology; I therefore make mine at once, though for my part I prefer a dogmatic tone. A man who has opinions of his own—pronounced opinions—is entitled to any hearing he can get, and society is fully entitled to hear them, be they good or bad. If good, to select them at once for their intrinsic value; if bad, that they may be refuted and extirpated as soon as possible; and that either may be done to the best advantage, it is best supposed exceptional cases, and the consequent qualification or alteration of the rules. In ancient times no durable classification *could* be established, for observations were too limited, and there were no adequate records of others to make system possible; and therefore the old records of observations—such as those of Hippocrates, Aristotle, Hipparchus, and Pliny—have hitherto proved of far greater value that the theoretical works of systematizers like Pythagoras, Democritus, and Plato, or even Aristotle himself. This was so, in spite of the fact that the intellectual capacity of many of those ancient philosophers was—as I cannot but imagine—superior to that of any that have arisen since. Duly considering the previous state of science, I venture to doubt whether the intellectual equals of Euclid and Aristotle have since appeared. The subsequent progress of science has transparently been due far less to the transcendent genius of individuals like Newton, Cuvier, &c., than to the careful, patient labor of almost unknown men, who, not even dreaming of the ultimate particular value of their observations, were so thoroughly possessed by the *genuine scientific spirit of confidence in general principles*, that they allowed no single important observation, made within their knowledge, to pass unrecorded. Professor Huxley thus expounds the same idea in his lecture on the "Physical Basis of Life":—"Anyone who is acquainted with the history of science will admit that its progress has in all ages, meant, and now, more than ever, means, the extension of the province of what we call matter and causation, and the concomitant gradual banishment from all regions of human thought of what we call spirit and spontaneity." He asks "what is the difference between the conception of life as the product of a certain disposition of material molecules, and the old notion of an Archæus, governing and directing blind matter within each living body, except this—that here as elsewhere, *matter and law* have devoured spirit and spontaneity? And as surely as every future grows out of past and present, so will the physiology of the future gradually extend the realm of *matter and law* until it is co-extensive with knowledge, with feeling, and with action." The selection of rules for understanding the various relations of matter and law, is now determined upon a really scientific basis; namely, upon that of the widest range of exact observations, and the greatest possible multiplication of instances. This is why Darwin is unanswerable. He affirms nothing which he does not support—not only by a multitude of his own observations of unrivalled minuteness, but also by an enormous mass of the observations of others; and he patiently weaves the whole into a web of proof that is absolutely impregnable.

But the age produced Darwin. Had Darwin appeared before humanity had arrived at a condition in which appreciation of general principles was possible, his doctrine would not have met with wide acceptance. Darwin did not create—though he has helped to confirm—the capacity to recognise and admit general principles. It had "growed" like Topsy. Darwin took advantage of it and fed it, but he only partially satisfied the demand. The present age will produce hosts of Darwins who will meet with due and increasing appreciation. Everyone has insensibly imbibed, more or less, of this spirit of confidence in general principles, or Darwin would not be appreciated as he is. This spirit now permeates all society, and no one is exempt from its absorbing influence; no—not even Darwin's most strenuous and bitter opponents. For I do not forget that Darwin meets with detraction and opposition. That was to be expected. The intellects of men are as various as their conditions, and many seem to have been born but to struggle impotently against the current which sweeps them away. Huxley says of them, "The consciousness of this great truth weighs like a nightmare, I believe, upon many of the best minds of these days. They watch what they conceive to be the progress of materialism, in such fond powerless anger as a savage feels, when, during an eclipse, the great shadow creeps over the face of the sun. The advancing tide of matter threatens to drown their souls; the tightening grasp of law impedes their freedom; they are alarmed lest man's moral nature be debased by the increase of his wisdom." The great shadow will soon pass, and their fear and alarm prove but idle superstition. They must await the return of light, whether patiently or not, and they, or their successors, will at last discern that man's moral nature has only passed through a necessary phase of the process of evolution, and that in so far transposed. My enquiry may yet throw some light upon the reason.

Darwin, however, has conclusively explained the universality of the law of natural selection just as Newton expounded the law of gravitation. I do not propose to dwell upon the doctrine of *natural selection*, further than may be desirable for exhibiting in relief or contrast the distinctive characteristics of *artificial selection*. For this purpose a short statement of the former is necessary.

1st. Variation of progeny from the parental type is a certain rule without any exception whatever. Whether in a state of nature or of civilization, no progeny is the exact copy of the parent, nor are any two offspring of the same parents exactly alike. Hence, necessary—though minute—variation. The duplication of parentage, and the diversity of their characteristics, ensure this certain perpetual variation, which is the broad basis of the doctrine of natural selection; and as this variation, however slight, occurs in every generation, the ultimate amount of it must be simply a question of time, of which past eternity furnishes half an infinity. The question thus becomes simply one of arithmetic. As one is to infinity, so is the variation of one child from its parent to the aggregate variations or differences in the whole organic kingdom.

2nd. All species are enormously prolific, far beyond their necessities for perpetuation, though throughout Nature one kind of organism preys upon another, and in fact many kinds form the staple sustenance of others. The proportion of seeds which germinate is almost infinitely small; of those which do germinate, a vast proportion never attain maturity; while enormous quantities exist but to be devoured. Yet the production is more than ample. Natural selection simply determines which individuals among these enormous masses of beings or plants are best fitted to survive and which to be obliterated; and by such plain processes as these, The swiftest and most agile escape pursuit; the slowest are exterminated. The strongest secure the most and best food; the most hardy alone survive privation, and beget offspring like themselves. It is plain also that when any species increases largely in number, its means of sustenance must become less in proportion. In the consequent competition for a share, the weakest are starved out, and the species is continued by those only which are the strongest and best suited to survive, By this the species is benefited in competition with others, and this constitutes Natural Selection. In fact variation is so universally the rule, that the wonder would rather be that species are so persistent, *but*—that like can but produce like; and that also, in spite of constant divergence, there is also a constant tendency towards mediocrity and the original type.

For as every offspring proceeds from two parents slightly differing from each other, the tendency of their conjunction is to produce a mean in all points of difference, and to exaggerate only those of mutual resemblance. Such of those points of resemblance of two parents as are exaggerated beyond the typical average, and conduce to the greater prosperity and multiplication of the species,—become more exaggerated in their posterity and tend in time to form varieties, of which, however, those only survive, to the existence of which surrounding conditions are most favorable. The general tendency to a mean is of course calculated to perpetuate the species intact, provided surrounding conditions remain unaltered (which they never do) or favorable. Thus notwithstanding constant slight variations of individual progeny, the tendency is still towards persistence of the normal type, and hence Natural Selection can produce distinct varieties of species, *solely* in very protracted periods of time. The doctrine of Natural Selection requires therefore again, nothing but the application of the simplest principles of arithmetic to the most extensively verified facts. As the one acorn—which out of all that fall from an oak in a season, fructifies and becomes a tree,—is to the millions which perish, so is a successful, naturally selected variation to the millions exterminated by inherent inferiority or unfavorable conditions. If the whole theory of *evolution* is alle involved in these established premises, it behoves those whom it offends to accept it or allow cause for their opposition. It seems to me that they might as well dispute that they *themselves* have passed—like every other organism—through all the gradations of form and growth between a simple cell and a human moral being.

The practice by man of artificial selection adds experimental demonstration to historical and arithmetical proof, and hastens the re-

type is explained by unity of descent." (Nat. Sel. p. 247.)

I am less concerned, however, to defend or expound the theory of natural selection, than to make an application of it to human sociology. Natural selection has done its work, for probably many millions of years, in human development. Races have been produced, have flourished, and been exterminated. There is, however, strong reason for believing that some races have in pre-historic intervals attained to a civilisation very much superior to subsequent conditions of society, if not in some respects even to our own; and we know that in historic time the progress of civilisation has been intermittent. We know that the intellectual condition of Europe in the middle ages was far inferior to the under the Roman Empire, and to the of Greece, in the days of Pericles and Plato; and that the builders of the great pyramid must have possessed some scientific knowledge, at least equal, perhaps superior to our own. If the Chinese have not retrograded much, they certainly have not advanced, while in India decadence is but too apparent. Its architecture is a thing of the past, and its astronomy is not only almost forgotten, but presents indications of belonging to a higher latitude, where it is now altogether unknown. We know little of the great mound-builders and copperworkers of North America, and of the early civilised people of Mexico, beyond the fact that they gave way before inferior races. The disinterred cities of the valleys of the Nile and the Euphrates bear as heavy witness to the complete annihilation of their ancient civilisations as that which history furnishes in the case of Europe, where the millenium, which succeeded the advent of christianity, may be fairly described as the age of social monstrosity and intellectual abortion. No phœnix arose from the ashes of these former glories. In each case selection seemed to favor savagery, ignorance, and stupidity; and if brutal wars had not tended to maintain some physical efficiency, the productions of the dark ages would seem to have been unmitigatedly evil. To the Moors we probably owe the materials of after progress. If something more substantial seems now to have been retrieved, that is apparently due to the vast accumulation rather of materials and data than of the knowledge of their use; to the almost accidental discovery of one little material advantage here and another there; each infinitesimal inventor adding his puny quota, and merely assisting to prepare and dispose things for the little further contributions of his successors, who added their mites to the aggregation of knowledge and its results, while really only struggling for their own existence. And it is plain that the greatest existing means towards ultimate general progress consist in the material facilities for recording all the minute steps in discovery, so as to make them at once the common property of the race, that no progress now made may be lost. The first great step, of course, was the invention of writing; but from what we now know, we may rest satisfied that ages intervened between many first attempts, and before any such thing as an alphabet was even thought of. The invention of printing, which has consolidated and established knowledge, was not altogether a sudden leap, though the results accumulated rapidly. The perpetuation of an idea by a physical record saves everyone the task of re-discovering for himself all that has been previously learned, and the general dissemination of the power of deciphering the records, now prevents the loss, from lack of means, of any inventive power to spread its little achievements. If one loses an opportunity, another takes it, and many a one loses by slowness what another, incapable of inventing, takes by mere quickness. Knowledge is thus now the property of the race, and the individual is almost suppressed. It is the work of nature, "So careful of the race she seems, so careless of the single life." It is as if she had work to perform and used individual men merely as instruments, and those as if of the smallest value too. One Babbage's difference engine, not only does more intellectual difficult work in an hour than an expert computer could in a month, but does it with a certainty, an ease, and still more, a guarantee against error which no human calculator could possibly give or possess. One steam engine is worth several hundreds of laborers, and is far more reliable.

So nature now may be regarded as discouraging war, not from care for men, but because it checks civilisation and wastes energy. Men are of no consequence in the march of progress, and almost as many valuable (or valueless) workers are drowned in rotten ships, killed by factory explosions, smothered in mines, starved by poverty, emasculated by wealth, or exterminated by specific disease, as were formerly wasted

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This, in fact, the most valuable colonial production issued on the treatment of Nervous Debility, Loss of Energy, Dimness of Sight, Lassitude, Pains in the Back, Local Weakness, Depression of Spirits, &c., with directions for perfect restoration to health, strength, and manhood.
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VERY PLEASANT.—Mr. William Morris who has given much attention to parasitic forms of disease has introduced to the notice of the "Sydney Morning Herald" a worm sent to him in some meat served to Mr Pottie, the veterinary surgeon, at one of the restaurants in the city. The meat presents the appearance of a piece of the flank or brisket of beef, and the worm is about an inch in length, of the Filaria family. This is one only of many in the same plate supplied. No life was discovered in it, the cooking having extinguished that; but it may be otherwise with the ova.

DOUBLE WAISTED.—The "Ballarat Courier" says that a more ridiculous exhibition could scarcely be imagined than was made by an inveterate drunkard of Dunolly-road a few nights ago. The man started from Scotchmans about six in the evening, very much muddled, and was discovered about twelve o'clock by some passers-by in a clump of saplings with his clothes in tatters. It appeared that he had taken off his belt, and when putting it on again he fastened one of the saplings to his body without noticing his mistake. He had doubtlessly, however, for he had spread destruction on everything within his reach, besides the sapling to which he was tied.

THE PERILS OF BALLOONING.—A Frenchman, M Duruof, recently laid a wager that he would cross the Channel from Calais in a balloon, and accordingly, on August 31st, he fitted the car to the balloon, mounted into it, seated his wife by his side, and the two together passed into the darkness of night. Hardly had they departed, when a cry rose through the whole town; people rushed to the jetty, and were just in time to see the balloon mounting rapidly into space, and journeying quickly towards the North Sea. The general emotion was indescribable, and more than one of the spectators was moved to tears. At seven on this gloomy evening the balloon was lost sight of in the mists which veiled the horizon. The unfortunate Duruof and his wife had with them no provisions nor any kind of warm covering. The balloon though a new and excellent one, was very small, its cubic capacity being but 800 metres, and it could not therefore sustain them for any length of time. The only hope was that the wind might change, and take the balloon in the direction of Yarmouth, or the coast of Holland. The chance of reaching Norway was very slight indeed. Telegrams were, however, at once sent to England, Norway, and Holland, in order that a good look-out might be kept.

"BERKELEY, September, 1873.—Gentlemen,—I feel it a duty I owe to you to express my gratitude for the great benefit I have derived by taking 'Norton's Camomile Pills.' I applied to your agent, Mr Bell, Berkeley, for the above-named pills, for wind in the stomach, from which I suffered excruciating pain for a length of time, having tried nearly every remedy prescribed, but without deriving any benefit at all. After taking two bottles of your valuable pills, I was quite restored to my usual state of health. Please give this publicity, Sir, for the benefit of those who may be afflicted.—I am Sir, yours truly, HENRY ALLPASS.—To the Proprietors of NORTON'S CAMOMILE PILLS."

A MYSTERY.—It is indeed a mystery how some people, otherwise sensible, are so short-sighted and foolish as to go on from day to day and month to month, suffering with the stings and pains of disease, which, by the use of a few bottles of BRAND'S SANSAPARILLA AND PILLS, would be a perfect certainty be radically cured. Do not stand in your own light.

A WONDERFUL CURE.—During a period of nearly twenty-five years, one medicinal stimulant has exclusively enjoyed the confidence of the most experienced physicians on this side of the Atlantic Today, as from the time of the introduction, UNDERWOOD'S SCHIEDAM AROMATIC SCHNAPPS takes the lead of every other tonic and diuretic in the estimation of the public and of scientific men. Its purity, its agreeable flavor, its invigorating effect upon the digestive organs, its extraordinary efficacy in diseases of the kidneys, the rapidity with which it restores the strength of the debilitated, and its soothing influence in nervous diseases, have deservedly rendered it the most popular preparation of its kind in this or any other country.

WOLFE'S SCHIEDAM SCHNAPPS.—We have heard highly favorable opinions expressed upon this remarkably popular spirit, for which is claimed that it is as excellent when taken as an ordinary stimulant as it is medicinally. As will certainly be the case when an article once acquires a high reputation, it is of course imitated by dishonorable manufacturers, but we believe that the manner adopted by the proprietors of the genuine article to ensure the consumer against fraud is as such that the most ordinary precautions will suffice. When we consider the extent to which adulteration is carried on by unprincipled manufacturers of spirits, it is a matter of congratulation that in this sub ect we have an article entirely free from all impure ingredients.

HOSKINGWAY'S PILLS.—Weary of Life.—Derangement of the liver is one of the most formidable causes of deep seated disease and drive suicidal minds to those melancholy forebodings which are worse than death itself. A few doses of these noted pills unerringly do dispel the spirits and repelling the covert attacks made on the nerves by excessive heat, impure air, a sphere, over indulgence, or exhausting excitement. The most shattered constitution may derive some aid from Holloway's Pills, which will regulate the reduced action, brace the nerves, increase the energy of the intellectual faculties, and revive the failing memory. By a sensitive studying these instructions and checkingly putting them in practice, the most desponden will soon feel confident of a perfect new story.

That it is true, even less my reason for venturing to ask your attention to it than that it is so generally disregarded. There are many far more competent than I am to treat of such matters, and if they would only teach, I should gladly listen and learn. Their silence, however, renders it my duty to speak.

I hope to be able to say what I have to say in less time than a lecture usually occupies. If you should not like my paper, its shortness will, therefore, be at least one redeeming point in it. But I do not think you can like it, unless you do more than hear it. It will be necessary for you to recognise the great importance of the subject, and the need of some remedial action; as well as to weigh and judge my suggestions to that end. I should therefore be much gratified if some discussion were to follow my paper; in fact I, never read one except upon that condition. I should consider it an act of colossal presumption to stand here to propound my own views without inviting question, criticism, and reply upon the spot; and I am convinced that no lecture, not even an exposition of physical fact or scientific method, can have a tithe of the value or benefit, to any auditory, unless questions be raised and answered on the spot upon obscure points—to remove misunderstanding, not only of what has been said, but what may be supposed to have been implied or involved. Let me also plead for my own advantage. I wish to correct my own views; which I have never failed to do, more or less, by a discussion on a paper of my own. If it should turn out—which I do not expect—that we agree in everything, it would, perhaps, be very agreeable; but I am satisfied that much more benefit would accrue to us all by the discovery and comparison of *differences*, and the *selection* of resultant accordances—reciprocal ratiocination, in fact. It is thus in discussion of ideas—as in the struggle of species for existence—that *natural selection* and competition ensure the *survival of the fittest*, etc.

Another reason for mentioning that I have never lectured except when the subject was to be debated on the spot, is, that I may have acquired a somewhat dogmatic style of expression, which among strangers may appear to require apology; I therefore make mine at once, though for my part I prefer a dogmatic tone. A man who has opinions of his own—pronounced opinions—is entitled to any hearing he can get, and society is fully entitled to hear them, be they good or bad. If good, to select them at once for their intrinsic value; if bad, that they may be refuted and extirpated as soon as possible; and that either may be done to the best advantage, it is best that they be exposed in the most frank and unmistakable language that speech affords. Dogmatism, when it consists in plain speaking, simply, is, I think, a virtue. It becomes a vice only when offence is taken, or impatience betrayed at equally free criticism, and the expression of diverse views. It is now many years since Darwin first unfolded the great principle of Natural Selection. I say unfolded, not discovered. For Darwin only told us what we mainly knew before. Everybody knew before that in a race the swiftest as a rule win; that the weak have to give way to the strong; that, as a rule, qualities are transmitted hereditarily; and that, in certain circumstances, species of plants, insects, or animals, flourish at the expense of others less fitted to encounter them. This, experience and observation had amply proved. What then was there peculiar in Darwin's teaching? How is it that, if he told us mere details beyond what we ourselves did know, there can have been any contention respecting it, or any opposition to his doctrine? Simply this—that he put it in a scientific form, and showed that what all had observed in isolated instances, is true universally and without exception. This is what constitutes the difference between scientific knowledge and knowledge falsely so called. Science is simply knowledge reduced to rule. Doubtless knowledge has been reduced to rule for thousands of years, and the rules, even now, it is constantly found necessary to supersede and change. For the first rules were necessarily crude and tentative generalisations; and the progress of science has since mainly consisted of the gradual elimination of

extend the realm of matter, and that it is co-extensive with knowledge, with feeling, and with action." The selection of rules for understanding the various relations of matter and law, is now determined upon a really scientific basis; namely, upon that of the widest range of exact observations, and the greatest possible multiplication of instances. This is why Darwin is unanswerable. He affirms nothing which he does not support—not only by a multitude of his own observations of unrivalled minuteness, but also by an enormous mass of the observations of others; and he patiently weaves the whole into a web of proof that is absolutely impregnable.

But the age produced Darwin. Had Darwin appeared before humanity had arrived at a condition in which appreciation of general principles was possible, his doctrine would not have met with wide acceptance. Darwin did not create—though he has helped to confirm—the capacity to recognise and admit general principles. It had "crowed" like Topsy. Darwin took advantage of it and fed it, but he only partially satisfied the demand. The present age will produce hosts of Darwins who will meet with due and increasing appreciation. Everyone has insensibly imbibed, more or less, of this spirit of confidence in general principles, or Darwin would not be appreciated as he is. This spirit now permeates all society, and no one is exempt from its absorbing influence; no—not even Darwin's most strenuous and bitter opponents. For I do not forget that Darwin meets with detraction and opposition. That was to be expected. The intellects of men are as various as their conditions, and many seem to have been born but to struggle impotently against the current which sweeps them away. Huxley says of them, "The consciousness of this great truth weighs like a nightmare, I believe, upon many of the best minds of these days. They watch what they conceive to be the progress of materialism, in such bad powerless anger as a savage feels, when, during an eclipse, the great shadow creeps over the face of the sun. The advancing tide of matter threatens to drown their souls; the tightening grasp of law impedes their freedom; they are alarmed lest man's moral nature be debased by the increase of his wisdom." The great shadow will soon pass, and their fear and alarm prove but idle superstition. They *must* await the return of light, whether patiently or not, and they, or their successors, will at last discern that man's moral nature has only passed through a necessary phase of the process of evolution, and that in so far as they have vainly endeavored to obstruct its free exercise and development, so far they have wasted their own energies and demonstrated the futility of their opposition. Have we not already learned to perceive how fact extinguishes fable? and that the imputation to our innocent parents—as faults—of the errors by which alone the knowledge of good and evil could be achieved for us, is but a relic of the primitive ignorance which was inseparable from their condition? The inexhaustible fruit of the allegorical tree of paradise is ever before us, and in the interest of our children and our grandchildren it is demanded of us that we *pluck all within our reach*; and defraud them not of any of their inheritance in the ever-ripening harvest. Thus—I rather invert the tenor of the old story of Eden, but surely we have now arrived at a stage of moral perception where we cannot hesitate to decide that our highest ideal of goodness *could not* prohibit the knowledge of good and evil to man; or impute sin to those who, wanting that knowledge, *could* not know—and certainly could not do—better than seize upon it; we feel that the spirit of truth could not foretell a result which did not follow; we now know also that it could not be any representative of evil that helped man to that invaluable and indispensable knowledge, and that accurately foretold the absolute truth respecting its results.† Could man ever have become a moral being without the knowledge of good and evil? It cannot be but that the characters of their acts in the old fable are entirely

spring like themselves. It is plain also that when any species increases largely in number, its means of sustenance must become less in proportion. In the consequent competition for a share, the weakest are starved out, and the species is continued by those only which are the strongest and best suited to survive. By this the species is benefited in competition with others, and this constitutes Natural Selection. In fact variation is so universally the rule, that the wonder would rather be that species are so persistent, *but*—that like can but produce like; and that also, in spite of constant divergence, there is also a constant tendency towards mediocrity and the original type.

For as every offspring proceeds from two parents slightly differing from each other, the tendency of their conjunction is to produce a mean in all points of difference, and to exaggerate only those of mutual resemblance. Such of those points of resemblance of two parents as are exaggerated beyond the typical average, and conduce to the greater prosperity and multiplication of the species,—become more exaggerated in their posterity and tend in time to form varieties, of which, however, those only survive, to the existence of which surrounding conditions are most favorable. The general tendency to a mean is of course calculated to perpetuate the species intact, provided surrounding conditions remain unaltered (which they never do) or favorable. Thus notwithstanding constant slight variations of individual progeny, the tendency is still towards persistence of the original type, and hence Natural Selection can produce distinct varieties of species, *solely* in very protracted periods of time. The doctrine of Natural Selection requires therefore again, nothing but the application of the simplest principles of arithmetic to the most extensively verified facts. As the one acorn—which out of all that fall from an oak in a season, fructifies and becomes a tree,—is to the millions which perish, so is a successful, naturally selected variation to the millions exterminated by inherent inferiority or unfavorable conditions. If the whole theory of *evolution* is *also* involved in these established premises, it behoves those whom it offends to accept it or show cause for their opposition. It seems to me that they might as well dispute that they *themselves* have passed—like every other organism—through all the gradations of form and growth between a simple cell and a human moral being.

The practice by man of artificial selection adds experimental demonstration to historical and arithmetical proof, and hastens the results enormously—by restricting propagation to parents—selected as exhibiting the same desired points of resemblance; and preventing reversion of their progeny to the original type, by discarding in successive generations all those individuals who do not inherit them in sufficient exaggeration; and also by maintaining such general surrounding conditions as favor the development of the selected variation. But the actual process of variation cannot be hastened. The moment this is attempted, sterility or hybridity prevents too sudden a variation. The development, in time, of each individual organism, passes through stages microcosmically representative of the slow gradual changes through which the race has come through cosmical ages, exhibiting a brief epitome of its past history. And how could two distinct histories be represented by one individual? Only—as we see it—by a collapse. Mr Darwin says, "on my theory *unity of*

something more abundant than seems to have been retrieved, that is, apparently due to the vast accumulation rather of materials and data than of the knowledge of their use; to the almost accidental discovery of one little material advantage here and another there; each infinitesimal inventor adding his puny quota, and merely assisting to prepare and dispose things for the little further contributions of his successors, who added their mites to the aggregation of knowledge and its results, while really only struggling for their own existence. And it is plain that the greatest existing means towards ultimate general progress consist in the material facilities for recording all the minute steps in discovery, so as to make them at once the common property of the race, that no progress now made may be lost. The first great step, of course, was the invention of writing; but from what we now know, we may rest satisfied that ages intervened between many first attempts, and before any such thing as an alphabet was even thought of. The invention of printing, which has consolidated and established knowledge, was not altogether a sudden leap, though the results accumulated rapidly. The perpetuation of an idea by a physical record saves everyone the task of re-discovering for himself all that has been previously learned, and the general dissemination of the power of deciphering the records, now prevents the loss, from lack of means, of any inventive power to spread its little achievements.. If one loses an opportunity, another takes it, and many a one loses by slowness what another, incapable of inventing, takes by mere quickness. Knowledge is thus now the property of the race, and the individual is almost suppressed. It is the work of nature, "So careful of the race she seems, so careless of the single life." It is as if she had work to perform and used individual men merely as instruments, and those as if of the smallest value too. One Babbage's difference engine, not only does more intellectual difficult work in an hour than an expert computer could in a month, but does it with a certainty, an ease, and still mere, a guarantee against error which no human calculator could possibly give or possess. One steam engine is worth several hundreds of labourers, and is far more reliable.

So nature now may be regarded as discouraging war, not from care for men, but because it checks civilisation and wastes energy. Man are of no consequence in the march of progress, and almost as many valuable (or valueless) workers are drowned in rotten ships, killed by factory explosions, smothered in mines, starved by poverty, emasculated by wealth, or exterminated by special disease, as were formerly wasted in *national murder*. Death itself proves that men are not the peculiar care of nature. She discards effete material of human kind like any other, and substitutes more effective tools in utter indifference provided that her unceasing work be done.

Is not this the universal law? Nature everywhere teems with life, the function of its possessor being—to subsist upon, or become the food of others. One kind preys upon another, and the latter forms only sustenance for a third, and that third for a fourth. Animals and birds prey upon each other and upon whatever else is adapted to their digestion. Insects feed upon plants—upon each other—and upon us—and Dr Hooker has just shown the motives, as he says, of some plants that deliberately decoy, seize, devour, and digest, insects in return, and are fully as capable as man of discriminating and selecting appropriate aliment.* Man preys upon more than all the rest; but it is really in self-defence, or rather instinctively, in him as in all beings. Existence depends upon it. For ages his wild struggle was with the beasts of the forest, his fellow-men among the number. In civilisation, where he has so far mastered other objects, the struggle is mainly with mankind. The pressure of human population is the great antagonist, and a man's foes are emphatically they of his own household, more than ever at the very time that he has learnt the complete identity of his

† Note.—This interpretation accords best with the rational view that the *Serpent* was recognised as the superior benevolent deity when the story was first written, and that that story was subsequently embellished or distorted to suit after innovations. The Bible plainly tells us that the Jews *worshipped* the *Serpent* (which was the emblem of cunning as well as *eternity*) from Moses' time (Numbers xxx., 9.) till Hezekiah's. (2 Kings, xviii., 4.) Would a good being maleviolently prohibit the knowledge of good and evil; impotently curse man and the serpent, and long after send deadly serpents among the people? No! The success, the truthfulness (Gen., iii., 4 5, and iv., 22.) and beneficence of the Serpent of Genesis justify this conclusion; the defeat, the falsehood, (Gen., ii. 17) and the malevolence attributed to the Deity, forbid the contrary ordinary, but impious interpretation.

* See Dr Hooker's address "On Carnivorous Plants" before the British Association at Belfast, 21st August, 1874.

* Gen. ii., 17.
† Gen. iii., 4-5, '22.

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[torn] interest with theirs. This is the [pro]blem of the age. To put the ultimate [torn]: a man's children are necessary [to h]im that he actually creates them, yet [for] them he has to struggle harder and more painfully than for himself. All his social relations involve the same difficulty in greater or less degrees. It may be unfit to those whose means are proportioned to their liabilities, but I believe that a large majority are in a very different position. Thousands in Europe, and particularly in England, are now daily overcome in the struggle. The solution of this difficulty lies rather in the adoption of artificial selection than in its exercise, and is, therefore, but indirectly connected with my subject. But the remedy happens to be the same as one which I propose for the other difficulty, namely, the general spread of knowledge particularly of physiology, and the complete abolition of monopolies and restrictions upon its universal study.

I have mentioned, as the most conclusive demonstration of the doctrine of natural selection, the fact that it has been put to experimental proof by man in artificial selection. Those who have actually and systematically tried the experiment are surely the best witnesses; "and they," says Mr Darwin (Nat. Sel., p. 32), "habitually speak of an animal's organisation as something quite plastic, which they can model almost as they please." They hold that the agriculturist (p. 33) is, by natural selection, enabled "not only to modify the character of his flock, but to change it altogether. It is the magicians wand, by means of which he may summon into life whatever form and mould he pleases." Sir J. Sebright said of pigeons, he "would produce any given feather in three years, but it would take him six years to obtain head and beak." Mr Darwin adduces an argument of an undeniably practical kind, when he says (ib.), "What English breeders have actually effected, is proved by the enormous prices given for animals with a good pedigree; and these have been exported to almost every quarter of the world."

For precision's sake, I will just repeat here the principle of artificial selection as I apprehend it. If a breeder desire to perpetuate any particular bodily or mental characteristic, he selects two parents exhibiting that characteristic; and if they both possess it in any degree above the ordinary *average*—below the maximum perhaps—of their kind, that characteristic will infallibly appear in some offspring in an exaggerated degree. Of those he then selects those which exhibit it most prominently to propagate his variation, and discards the others. It suffices in subsequent crosses to select a fresh parent with an average degree of the same characteristic, but of course the effect will be largely increased and accelerated by the selection of parents possessing the maximum development of the special, desired characteristic. This is, of course, in strict accordance with the arithmetical principle, that things that are equal to the same thing are equal to each other, and that if unequals be added to equals, the whole will be unequal, &c. I may add a common observation with regard to mankind, that corroborates what I before stated, to the effect that in reproduction by pairs, there is always a tendency to a mean—that mean being of course a variation—in the progeny. That is, that in general, opposites attract one another; and we are often amused at seeing what appear at the first glance incongruous, but are really natural associations of tall with short, dark with fair, fibrous with lymphatic, clever with foolish, medium with medium, and good with bad. Thus the mean is preserved even more closely than it would be by unions without any such directly compensating tendency. The color of half-castes is an ample illustration of the tendency towards a mean; and Frederick the Great's success in producing tall guardsmen sufficiently proves variation, and the general amenity of human kind to the law of selection artificially applied.

The question I now raise is this. Does natural selection operate, as it otherwise universally does to the advantage of species, in furthering man's civilisation—his moral and intellectual improvement? I have already shewn that his progress in civilisation is at least unequal, intermittent, and even sometimes retrogressive. Is this from a failure of the principle of natural selection? Does it arise entirely or in part from its misapplication by man in the form of injudicious artificial selection? or—civilisation being the unique work of man, extra and additional to Nature—does its maintenance demand, as special, an adaptation of Nature's method of natural selection—artificial selection? And is the failure a result of man's inexperience in its application, or in his neglect to apply it to his own case? And why does he neglect this? Mr Darwin admits that a single clear case of the production, by natural selection, of a modification in any degree injurious to its possessor, would be fatal to his theory; extinction being the alternative ("Wallace's Natural Selection," p. 334; "Darwin's Origin of Species," chap. iv. and vi.). And I am confident that this is true, and further that any apparent failure of selection to produce unalloyed benefit in the development of man is solely due to man's interference with that law—in artificial misapplication of it to his particular case. The result of man's artificial selection in the cases of plants, birds, and animals, have proved a decided and brilliant success. The horses, the cattle, the sheep, the dogs, the rabbits, the fowls, the pigeons, the canaries, the plants of every description—produced by artificial selection,—and the extent to which such of their qualities as are useful to man, have been expanded, and undesired ones suppressed—*by careful selection*,—amply prove to my mind that the defect is not in any radical inadequacy of human intellect to discover the means proper to secure its own social and intellectual improvement, but is simply in the failure to apply to that object the same principles which have proved so strikingly efficacious when directed to the modification—for his own advantage—of other organised beings. My object therefore is to point out how this occurs, and how it may be remedied. The means I propose are certain and simple, and I am satisfied that their adoption will be a mere question of time.

It is an important but much neglected question, whether modern civilisation exhibits signs of stability as compared with more ancient ones which proved evanescent? The condition of greatest prosperity of an organism, is that in which it exhibits the most thorough adaptability by natural selection to its surrounding conditions. Those conditions are ever changing, and immobility or intractability in accommodating itself to those changes, means that a point in its history has arrived at which natural selection is no longer competent to modify it so as to bring it into appropriate relations with its natural conditions; and that it is therefore on the road to extinction. It may be as well for me to repeat, here, that I think that civilisation — being artificial — requires artificial selection to perpetuate it, and that the cause of the failure of various civilisations was the neglect of man to apply to his own case what he found to succeed so well in that of animals. We can only account in this way for the evident relapses, into semi-savage conditions, from those of apparently flourishing civilisation, that have constantly taken place in various parts of the world in past times. Now one of the most striking features in modern civilisation is its apparent viability. Inferior races vanish before the wealth accumulating, and machinery employing European, as the light of the stars is extinguished by that of the sun. It presents no immediate signs of approaching extinction. At the same time its mobility seems scarcely equal to the demands of its rapidly changing conditions. It seems to owe its vigour mainly to its unprecedented employment of material, tools, and machinery by which its working power is so enormously multiplied; to the fact that the invention of printing has secured the means of establishing permanently every achievement of man, whether of discovery or invention; and to the more general spread of education, which has to a much greater extent than formerly, brought those means of permanent record within the reach of every discoverer and inventor. Nevertheless the refractory constituents of our society not only impede the general march of civilisation, but they themselves live very hard, or die very hard, in the struggle.

The persistence of type is too strong for the tendency to variation. In artificial selection, which we well know requires the conduct of an expert, man has proved that he can materially assist nature by availing himself of the tendency to variation, which is his source of profit. In the production of useful varieties of plants and animals, he has reached in many instances the natural boundary to immediate variation—hybridity; but has ascertained that, as in his own personal growth he absolutely represents infinitely greater changes of ancestral structure, which it probably took millions of millions of years to accomplish, so it is impossible for him to dispense with the necessary element of time, or to lead the capacity for variation to encroach upon the limit imposed by inheritance and the persistence of type. In his social and moral development however, he has as yet met with no such abrupt check to variation. In fact civilisation has as yet had no persistent type. Its late renovation has not extended over more than four or five centuries; a period which—judging by previous developments, is of itself wholly inadequate to secure it against relapse. This being the case, our civilisation cannot be regarded as securely and permanently established, and it is evidently desirable to learn the causes of former collapses of civilisation, to enable us to avoid similar catastrophes in future.

I have come to the conclusion that the evanescence of former civilisations was due to two main inherent causes, irrespective of foreign aggression, which I think was of less importance. The principal one I think was the *monopoly of knowledge*, relics of which still exist among us. Though mainly in the form of conventional restrictions upon its acquisition. The other I think was the neglect to apply artificial selection to the human family, the natural and persistent tendency being to select the savage varieties only.

We know that the small numbers of persons in Egypt, Chaldea, &c., for instance, who anciently possessed knowledge—guarded it as jealously as they cultivated it vigorously. They not only kept the masses ignorant, but taught them, not what was true, but only such things as they thought would make them docile, and subservient to their masters. They feared to trust the people with knowledge. It was, they thought, too precious, and so *they lost it themselves*. The monopolists were then, and always must be a comparatively small number, and when any circumstances led the ignorant masses to try and feel their physical strength—they used it,—knowing no better; knowing only that they had been vilely deceived and the victims of tyranny, they were unlikely to show mercy to those who had withheld from them *the knowledge of good and evil*. Is not the prohibition of that knowledge in Eden an apt illustration of my point? Was not the story evidently written to deter simpletons from aspiring to break the monopoly? Does not the serpent typify a [illegible] renegade from the monopolist's ranks? Is not the story of Prometheus a humanised edition of the same allegory? Are there not actually to-day advocates for prohibitions and restrictions upon knowledge? We know that allegory and parable were the staple form of popular instruction. When it was desired to inculcate, in the style of Æsop's fables, the changes of the seasons, the priests did so by teaching mythical stories of deified animals or heroes, who had been translated into constellations. Hence, the twelve signs of the Zodiac, into which it was found convenient to divide the annual revolution of the heavens, represent the twelve labors of Hercules, and those of Samson, the sons of Jacob, Tribes of Israel, &c.† The adventures of Isis and Osiris, of Mithra, Bacchus, Adonis, Atys, &c., who were all born with the New Year, and died and rose again at the vernal equinox, are relics of the devices by which the pernicious monopoly of knowledge was maintained by the mistaken protectors of it to their own destruction. The people having been taught these fables to guide them to seed time and harvest, but still more to intimidate them with oracles and miracles, sometimes rose in their numerical might and annihilated their oppressors. That might, however, was merely physical, and could not free them from the tyranny of the superstition which enthralled them, and which they therefore only perpetuated; which also is now far from extinct. I am satisfied that similar circumstances have had much, if not everything, to do with every extinction of civilisation; and no more remarkable instance of it than the great French revolution has ever occurred. The antagonism of classes which grew till it culminated in that revolution, and which is a salient feature of the system, is slowly increasing day by day in England, and must eventually produce a revolution there, unless means be taken to give the working class the knowledge which they want. From the destruction, with the civilisation, of its records, history cannot furnish us with particulars of all such revolutions, so that its silence is no disproof, and the esoteric system is not yet extinct. The use of dead languages till recently, the superfluous use now of technical terms, priestly systems, freemasonry, are living relics of the evil system. The spread of education, and still more the popularisation of science, independent thinking, and unrestricted discussion, are the great antidotes to the evil of the monopoly of knowledge.

The neglect to apply artificial selection to the human family I have named as another and the most important cause of the vicissitudes of civilisation. Natural selection makes fine savages, but therefore, by debasing their type, tends to retard civilisation. Man's civilisation is essentially *his own work*; and unless he practise selection, the modifications of his structure, favorable to the development of civilisation can never be [illegible]. Plato and Aristotle were fully alive to the necessity of such selection, and wisely provided for its enforcement in their "Republic" and "Politics" respectively. The reasons for the failure in practice of Plato's "Republic" are not precisely known, but in any case it was not a failure of artificial selection *in practice*, but a failure—for any reasons—*to put it in practice*. The wider distinction now between the civilised man and the savage makes artificial selection more than ever indispensable, as without it, in spite of the great advantage of the more general education of the people, their status in civilisation rather retrogrades than otherwise. Their education certainly increases their *power* to contribute to the general civilisation, but quite as much also to retard it. If the poor are rendered more efficient workers, the pressure of poverty upon a large proportion of them is much greater, and it is doubtful whether their moral condition is not therefore worse. I say doubtful—but contact with civilisation multiplies ideas and promotes intelligence, without which there could be no morality. There can be no doubt whatever that the demoralising conditions to which the poor are constantly exposed, produce a generally deteriorating effect.

One great cause of this, which was unknown, I believe, to the ancients, is *morbid sensibility*, and consists in the undue subordination of the intellect to unreflective feelings. Reason is dethroned, and sentimentality usurps its place. This error is demonstrable, because it can be shown that a more expanded view of the consequences proves that the sympathetic sensibilities—if under the direction of the intellect—would realise a *far larger and purer satisfaction*. The wealthy classes are not exempt from the evil effects, but the poor are as usual the principal victims. To such an extent has this morbid sentimentality been carried on in the last hundred years, that I think that all the advantage of the spread of education has been more than negatived. It has in any case been much restricted. It is not that the good and the bad are placed indifferently upon a level, when natural selection might maintain an average. Far from it. Our legal systems and conventional customs combine to select the worst specimens to perpetuate the race. X Any exceptional success of superior specimens is effected by natural selection through individual vigor. But these are, I think, indisputably far below the average *in number*; so much below it as scarcely to affect the average, even if no extra protection were afforded to those below it. The main characteristics, which I think it is desirable to develop and improve, are health, vigor, self-respect, prudence, truthfulness, honesty, moral or social feeling, and intellect. But our penal administration and conventional habits both tend to protect and exaggerate the very opposite, and to encourage the consequent degeneration of posterity.

As regards health, the follies are as glaring as interminable. We lay embargoes upon progress in medical science, by prohibiting experiments upon the only suitable objects, and on the other hand the chief results accomplished are the prolongation of the agonies of death, and the preservation of those afflicted with radical defects, and dire diseases, to innoculate others while they live, and transmit them to posterity when they die. Thus short-sighted sympathy for one, results in cruelty and misery to many.

As regards prudence, self-respect, and vigor, our so-called charitable institutions offer premiums to the imprudent and the helpless, and preserve their evil qualities to posterity at the expense of the industrious and prudent, who are thereby more or less deterred from perpetuating their better qualities. Thus charity to inferior and degenerate individuals, is needlessly suffered to ensue in uncharitableness, and injury to our posterity and our race. Let the objects of charity be supported in the greatest comfort that those who sympathise most with them desire—in clover if they like. But are we right to suffer them to crowd the world with their inferior type, and double the severity of the struggle for existence, of the posterity of their superiors? Is this not a crime?

Next, as regards truthfulness, honesty, and moral feeling. The most flagrant errors of sentiment are shown in our treatment of our perjurers, forgers, thieves, outragers of persons, and murderers. But I need not test your patience now by dilating much on this, which is the strongest part of my position, and involves the most direct and disastrous effects upon the human race. I have already specially exhibited these evils in a discourse "On the Treatment of Criminals in Relation to Science," which is in your library, and to which I beg to refer. To give connection to my present argument, I will quote from it two or three passages:*—

"The present state of things is notoriously unsatisfactory, but the full extent of the mischief produced can scarcely be apprehended, for it is of daily increasing proportions. A worse than foreign enemy is maintained by us in our midst, and favored with every advantage that our civilisation can furnish. We endow the criminal—known or unknown—with every protection from the ministers of the law, which is accorded to the honest citizen, and actually assume that he has not done what we know he has done, until a certain complex method of proof has been fulfilled; and any loophole that a clever lawyer can find, is made effectual to save him from the legal consequences. But if, by force of circumstances, a conviction follow, the consequences tend rather to confirm him in his evil career, and perfect him in his profession. He lives, as before, at the cost of his honest neighbors, with medical, and every other attendance free; the most select of the society he prizes most; and no more work than is exactly calculated to keep him in health. He is far better fed, housed, and cared for, than many honest laborers; and he not only knows it, but proves, by returning to it as soon as possible, that he appreciates it. But this is not all. Exactly in proportion to his *reward for his crime*, is the discouragement to the honest laborer, who cannot but be made too well aware of the difference in their fortunes, on every fresh liberation of the protected idler, to whose support he knows he has to contribute! The only wonder is that crime is not more general than it is." These are the demoralising influences to which I before alluded. "It is characteristic of the criminal classes, that they are both unscrupulous, and improvident, and set at nought the restrictions which society imposes upon the numerical increase of morally disposed persons. An enormous impediment to the moral progress of the people would be at once removed, were convicted criminals never liberated to propagate their evil kind; the honest poor would be so far relieved from competition—at an immense disadvantage—with such as scruple not to avail themselves of means of subsistence from which honesty excludes; a part—more or less—of the burden of foundling and reformatory asylums would be saved to society; the proportion of uneducated—or rather mis-educated—children would be largely reduced; and the first direct step probably in the history of the world would have been taken to improve, or rather stay the deterioration of, the race of human beings. For it must be obvious that if those below the general average of morality and intelligence multiply—as we know they do—far more rapidly and promiscuously than those above it, the tendency *must be* to lower the general average. And that tendency is enormously enhanced by the consequently increased competition, against which the honest poor have to contend in living, and in educating their children. The highest authorities agree, not only that the majority of criminals are the children of criminals, but that the large majority of the children of criminals become criminals themselves. And this is only what might naturally be expected by those who believe in cause and effect. It is inevitable, by that law of the persistence of force, which is as much the explanation of habit as the cause of heredity. And for all these reasons, a criminal *by habit* should never be released under any circumstances." I now further say that I consider his release a crime against our children, and the human race. At page 24, I concluded by saying that "the permanent incarceration of all criminals would be a far better protection to society in every way than the current penal system; that it would tend to reduce crime to a minimum; that the cost would be much less than might be supposed; if not less than the present expenditure;" (and experts assert that criminals cost society far more when at large than in confinement;) "and that by preventing the indiscriminate propagation of, and general contamination by criminals, a direct and certain moral improvement in the human race would be effected. But I have pointed out that a [illegible] objection to perpetual imprisonment, and all reformatory institutions, lies in the fact that they offer a premium to the criminal and lazy, and misteach the honest poor that crime would solve all their difficulties and secure them state support, in comparative clover." My last proposition to utilise criminals generally for scientific experiments, entirely obviates this objection to, while enhancing the advantages of my first. It would offer stronger deterrents; it would reduce the cost; it would be more extensively and discriminatively humane, and wisely admonitory and it would besides secure, by the inevitable impulse to medical knowledge, incalculably beneficent effects upon the health, longevity, and morals, of the human race. X Finally as regards intellect. The gradations between crime and lunacy are held by experts to be quite indistinguishable, and I am clearly of opinion that criminals and lunatics should receive indiscriminate treatment. We cannot—by any process—discern the particular motives of any individual; we know absolutely nothing of the strength of his temptation, or of his power of resistance. But we certainly know—as far as we can learn anything on the subject, that the acts of a criminal, as much as those of a lunatic, are the outcome of the history of his ancestry as much as of himself, and that every act of man, sane or insane, philosopher or thief, is in the last resort, simply a necessary process of adjustment of an organism to its environment.† Thus the idea of punishment is as inappropriate to the case of the criminal as to that of the lunatic. But, when we are conscious that it lies in our power to condemn our posterity to contamination, and moral putrefaction, or to save them from these evil conditions, I think that to sacrifice such objects to the tender cultivation of beings without intelligence or moral sense, is simply *both lunatic and criminal*. Our treatment of lunatics is such that it often suggests to me the applicability of the household phrase, "A fellow feeling makes us wondrous kind." But there is kindness and kindness. Kindness is good, if well bestowed. Kindness to one, involving unkindness to many, yields a large balance of unkindness to many, which is bad; and kindness to an object incapable of appreciating or feeling it, and involving unkindness and deadly injury to our childrens' children, is not only unkindness, but a crime. Must we not be half-lunatic ourselves to be blind to this? Ought not a person, once lunatic or criminal, and therefore with increased liability to become so again, to be precluded from opportunities of perpetuating his variety, and deteriorating posterity? Can we not discern our direct responsibility in the case? People shut their eyes to the fact that a human being without intelligence or moral sense, is not a human being at all—he hath no pre-eminence above a beast. I do not protest against the enormously greater and insanely extravagant expenditure upon lunatics or criminals, than is ever devoted to help struggling honesty and virtue. I protest against the moral and intellectual destruction of our children's children, and plead the cause of those who cannot plead their own.

Artificial selection may be considered in relation to individual action, or to state action. As regards individual action there can be little hope that it will be attempted, until familiarity with physiological and social science shall have conferred a larger grasp of general principles and a more expanded social feeling—than is now but rarely possible. But I have no fear of any deficiency in these respects ultimately, when the intellect shall have been sufficiently developed and restored to its due supremacy; when also the pernicious exaggeration of senseless sentimentality shall have subsided. For that we must wait. There can, however, be no possible doubt that the advantages to society, as well as to individuals, would be incalculable, if special modifications of mental and physical excellence could be handed down for many generations, without admixture of irrelevant tendencies. The family that first adopts and maintains the practice must soon eclipse its neighbors. As the cultivated English racehorse excels the American mustang, or the Timor pony, so, were we to practise individual artificial selection, would our mathematicians, engineers, doctors, financiers, and laborers excel all others, till they follow suit. A consummation devoutly to be wished, but not soon to be expected.

But artificial selection by the State is not only perfectly practicable now, but it is imperatively demanded for the security and preservation of society. It is not so much a question of im[illegible], as of prevention of re[illegible] disastrous deterioration. X If [illegible] until the general spread of [illegible] and individual confidence [illegible] principles enable every one [illegible] necessity for it, the type will have degenerated enormously [illegible] much lost ground will have [illegible] covered.

I have myself perfect confidence that our civilisation *will* endure, that much ground *will not* be lost. Artificial selection is sure—at no very distant date—to be practised by the individual as well as by the State. No criminal or lunatic inheritances will then pollute posterity, and medical science will enjoy many more advantages than it ever entered into my imagination to conceive. But before that prosperous time arrives, conventional monopolies of all kinds must disappear, and the whole structure of moral science must be erected upon physiology as its basis. Happy he who contributes in ever so humble a degree to expedite this consummation.

The lecture was listened to with great interest from beginning to end, by a very large audience.

Mr DATE moved, and Mr J. B. RUNDLE seconded the customary vote of thanks to the lecturer, and this was carried by acclamation.

Mr RUSDEN shortly responded, and the proceedings then terminated.

† See Sir W. Drummond's Œdipus Judaicus, and Dupuis' Origines de tous les Cultes.

* Treatment of Criminals in Relation to Science. By H. K. Rusden. Melbourne, 1874. Geo. Robertson. pp. 25—12.

† To use Mr Spencer's phrase quoted by Professor Tyndall in his late address to the British Association, 19th September, 1874.

PRESBYTERIAN CHURCH, OXLEY.

Had any stranger ridden across Oxley Plains on Wednesday evening last, he would have wondered what was the matter, and also where so many people came from. Outside the Presbyterian Church were to be seen scores of horses and buggies, and moving about [illegible] dozens of well-dressed [illegible] looking men and women. The occasion was the annual gathering of the members and friends of the Oxley Presbyterian Church, and, as usual, an immense crowd were gathered to partake of the good cheer provided, and listen to the [illegible] of soul [illegible] The CHAIRMAN spoke of the privileges he enjoyed through occupying the [illegible] inasmuch as he was not [illegible] to make a speech, but merely [illegible] and regulate the speeches of [illegible] friend of his, Mr Crone, had, [illegible] understood, said that tea meetings consisted of tea and twaddle, but he hoped there would be none of the latter commodity at that meeting, although he had heard twaddle talked even in law courts, councils, and many other places. He also hoped there would be no butter. During the year and a half he had laboured amongst them, he had formed many pleasant associations, and he was pleased to see a growing earnestness, and an increased attendance at the church, and he looked upon the large gathering

[illegible] dren only on festive occasions like the present one? No; for that was [a] religious society. [illegible] neighbors. They should look to the [illegible] minister of the gospel, ignoring all differences of opinion. The reverend gentleman then earnestly advocated an exchange of pulpits between the ministers of various denominations, and concluded by hoping that the time was not far distant when a real unity would exist where character was the only qualification for membership.

The Rev. J. COWPERTHWAITE, of Wangaratta, agreed thoroughly with the catholic views expressed by the previous speaker, and hoped that the bright vision foreshadowed, would soon become a reality. In an able speech, he specially alluded to the contrast between the christian's view of life, and that of the materialists, and the leaders of secular thought; the latter spoke of life as a vapid thing, as a bubble borne along the stream of time soon to burst and pass into nothingness, as a journey to be got over as quickly as possible, but he did not believe in such a view. [illegible]

[illegible] rates—after calculating carriage were considerably cheaper, he very wisely returned to Orange, and bought all the goods he required at our local warehouses. He says that the result to himself was a saving of fully 12½ per cent. [illegible] Having stated his inability to account for this, as it seemed to him, strange circumstance, he was told that the [illegible] was very easily explained. He was informed that the reason why the Orange storekeepers could undersell the Sydney tradesmen, was that our Orange merchants did business on their own [illegible] [illegible]

The fact that [illegible] insurmountable obstacles [illegible] to the general and consistent practice of artificial selection, makes it all the more [illegible] that the State should [illegible] enforce it [illegible] in the only [illegible] practicable manner by preventing the release of every criminal or lunatic to propagate his evil type.

The improvident — the immoral — the intemperate — and the criminal multiply incomparably more quickly and indiscriminately than the prudent — the moral — the temperate — the healthy — and the virtuous; at whose cost also the evil minorities have mainly to be supported. X

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Wanted,

MINERS and NAVVIES, well up in the use of powder, good pick and shovel men. Good wages, good climate, and good country open for selection. Railway Works, Yass to Wagga Wagga. A. and R. Amos and Co., contractors.

SPLITTERS, SQUARERS, and FENCERS WANTED on Railway Works, Yass to Wagga Wagga. Good iron-bark and box bush, good climate, and good prices. A. and R. Amos and Co., contractors.
Sydney, 9th October, 1874. 133 47 th s

Assisted Immigration

WANTED to PURCHASE an old PASSAGE WARRANT. Apply to C. Holloway, Barnawartha. 187 45

Wangaratta Athenæum.

THE Committee of the above Institution have pleasure in announcing that Mr HARWOOD, of Melbourne, has kindly consented to give one of his attractive ENTERTAINMENTS on the 16th NOV., for the benefit of the Wangaratta Athenæum. Local Talent will assist. Further particulars in future advisements.
M. FOXCROFT,
186 Secretary.

Wanted to Purchase

A 20 Horse-power ENGINE, with Cornish Boiler and a Battery of Five Stamps, complete. Address, stating price, to H. S. Smith, Oriental Bank, Stanley. 180 45

Notice.

APPLICATIONS for the HERDSMANSHIP of the Myrtleford Common will be received by the Bright Shire Council up to the 5th of November.
Salary: The nett Receipts from the Fees, up to £60 per annum.
By order,
LEWIS C. KINCHELA,
Shire Secretary.
Shire Hall, 22nd Oct., 1874. 181 45

Wanted.

STEADY GENERAL BUTCHER; reference required; good wages given. Apply Willis Little, Benalla. 177 44

M. U. I. O. O. F.

LOYAL BEECHWORTH LODGE.

THE usual FORTNIGHTLY MEETING of this Lodge will be held in the ODD FELLOWS' HALL, Loch-street, Beechworth, on MONDAY EVENING, at 8 o'clock.
G. MASON,
Secretary.

V. R.

Department of Railways and Roads,
Melbourne, 22nd Oct., 1874.

Victorian Railways.

OPENING OF NEW STATION.

ON and after the 2nd November next, GLENROWAN, on the North-Eastern Line, will be OPENED for TRAFFIC.
For particulars see Time Tables.
D. GILLIES,
Commissioner of Railways and Roads.
170 44

LIVE AND LET LIVE!

When Gold is scarce, the Cheap Grocery Store is the Poor Man's Friend.

JAMES YOUNGER,
FORD STREET, BEECHWORTH,
KEEPS THE
CHEAPEST STORE!
IN THE DISTRICT.

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NO INFERIOR GOODS.
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Flour, 28s per bag
Pollard Oats
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Try Younger's 2s Tea

Finest Pekoe, flavored, 2s 6d
Fresh Ground Coffee.

Fine Assortment of Stationery, Slates, School Books, &c.

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Two Seas
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Virginia Tens
Meerschaum Pipes.

PATENT MEDICINES.
Kram's Celebrated Pills
Citrate of Magnesia
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Goods Delivered Free within Five Miles of Beechworth.
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FURNISHING UNDERTAKER,
Builder, Contractor, and Valuator,
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BUILDING MATERIALS OF ALL KINDS ON SALE.
MARBLE HEADSTONES AND CAST-IRON RAILINGS FOR GRAVES,
All Patterns, supplied at Cheapest Rates.

"Everything the miner uses is heavily taxed."—*Argus*, 7th September.

THE exception is the VICTORIAN PATENT SAFETY BLASTING POWDER, the ingredients of which are chiefly colonial productions. The miner gets the benefit of the exemption from duty, as the powder is sold at 2d per lb under Hall's. It is 25 per cent. stronger; no miner has been injured by it. Sold wholesale by the Proprietors, 8½ Little Collins-street East, Melbourne, and by Messrs J. and R. Cunningham, Beechworth.
51 jan 8—c

Steam Saw Mill to Let or for Sale

AT

ONE MILE CREEK, WANGARATTA,

Lately owned by Mr Christopher Dockendorff.

TENDERS will be received for the TIMBER until noon on Saturday, the 31st instant, endorsed "Tenders for Timber," by

ARTHUR J. SMITH,
141 oct 22 31 Wangaratta.

THE APOLLO
STEARINE CANDLE COMPANY,
(LIMITED.)

Offices: 10 Market Buildings, WILLIAM-STREET, Melbourne. TRADE MARK. FACTORY: FOOTSCRAY.

THE attention of consumers is directed to the very superior quality of the APOLLO CANDLE, manufactured at Footscray.
Their ILLUMINATING power is admitted to be far beyond the best imported, and for MINING and HOUSEHOLD purposes cannot be equalled. They are BETTER and CHEAPER than the imported article, and those who have tried them will use no other. They are to be had of all the Wholesale and Retail Grocers throughout the colony. The following are a few of the many testimonials which have been received:—
REPORT OF THE GOVERNMENT ANALYTICAL CHEMIST, MR WILLIAM JOHNSON.
I have examined some Stearine Candles manufactured by the APOLLO STEARINE COMPANY, Melbourne, and have compared them with some purchased by myself branded De Roubaix, Odenkoven, and Co. Both samples had precisely the same melting point; both burnt so far as I could see exactly alike. Those manufactured in Melbourne were rather whiter, and the material of which they were composed dissolved entirely in ether, forming a perfect transparent liquid, showing the complete absence of all foreign matter. In view of the above facts I have no hesitation in saying that this manufacture is a complete success, and the goods fully equal in quality to the best of the same kind imported, which indeed they entirely resemble

REPORT OF MR J. COSMO NEWBERY, B.Sc.,
TECHNOLOGICAL MUSEUM.
Technological Museum Laboratory,
Melbourne, 6th December, 1873.
I have examined a sample of Candles received from the APOLLO STEARINE CANDLE COMPANY, and find that in colour, hardness, and purity of composition they are fully equal to the best imported candles. The melting point is exactly the same as the De Roubaix Candles, the flame slightly more luminous, and the time occupied in burning is in favour of the Apollo Candle.
When placed in a current of air with a number of other Candles of other brands, the Apollo wasted least, showing that the Candle is well suited for use in mines
There can be no doubt that these Candles are the best manufactured in the colonies, and that they are equal to the best imported.
J. COSMO NEWBERY,
Superintendent of the Museum.

FROM THE MINING MANAGER OF THE LORD MALMSBURY GOLD MINING COMPANY, Limited Malmsbury.
I have to report on the Candles last sent, made by the APOLLO STEARINE COMPANY, that I have no fault to find. They are superior Candles for underground consumption to the general run of Sperm Candles. I find they do not waste so rapidly away if used in a draught, and to place them stationary the Candles will burn for fully eight hours. I have tried them several times in the chamber and other places underground with the same result. The Captains of the various shifts all speak highly of them.
(Signed) THOMAS BROADBENT,
Mining Manager.

FROM THE MINING MANAGER OF THE LAZARUS NEW CHUM MINING COMPANY, Registered.
Sandhurst, 7th Feb., 1874.
I have much pleasure in informing you that we have used your Candles for the past month, and found them equal to the best known brands. They burn exceedingly well, are adapted for draughty mines, and are the cheapest article we have hitherto used.
(Signed) E. J. HARTLEY,
Manager Lazarus New Chum Mining Company,
852 nov 30 s Registered.

Nervousness
Spermatorrhœa
Debility
Loss of Power
Indiscretion of Early Youth
Syphilitic Diseases.
In all the above cases, arising from errors and the yielding to the passions, no time should be lost to at once arrest the progress of the disease.

DR L. L. SMITH

HAS devoted himself for twenty years in the colony to the practice of this branch of his profession, while previously in England, he was the pupil of and practised with the celebrated Dr R. T. Culverwell, the only medical practitioner who ever exclusively adopted this as the sole branch of his profession.
Dr L. L. SMITH hereby informs the public that *he is the only legally-qualified medical man in this speciality of his profession*; that others advertising are unqualified, and that, therefore, in pretending to be qualified are obtaining money under false pretences.
Dr L. L. SMITH also warns the public against the quackeries advertised. If the taker of any of these advertised nostrums escape with his life, or his system be not thoroughly and irreparably undermined by them, he may look upon himself as the most fortunate mortal.
Dr. L. L. SMITH has been applied to by so many unfortunate broken-down young-old-men, utterly crushed in spirit, ruined in body, and filched in pocket, that he deems it a duty to publish this to the world.
Those men and women who have been the victims of unprincipled charlatans frequently seek that recovery which is often beyond Dr. SMITH's control. When will the public understand that it is to their interest to consult a duly qualified medical man, who has made this his sole study, rather than apply to a number of ignorant impostors, who merely harp and prey upon their pockets and health?
Dr. L. SMITH has always stated that to warn the public of these quicksands is his chief reason for advertising.
In all cases of nervous debility, lowness of spirits, loss of power, pimples on the forehead, lassitude, inaptitude for business, impotency, drainage from the system, and the various effects of errors of youth and bloodpoisoning from diseases previously contracted, Dr. L. L. SMITH invites sufferers to consult him, as he has no hesitation in stating that no medical man, either here or in England, has had the opportunities of practice and extraordinary experience which he had. Therefore, those who really desire to be treated by one who is at the head of his profession in this branch of medical practice should lose no time in seeking his advice. Nor should anyone marry without first consulting him.
The new Consulting Rooms are at
182 COLLINS STREET EAST, MELBOURNE,
Opposite the Melbourne Club,
(Late the residence of the Governor). Private Entrance is in Stephen street south.
CONSULTATION FEE (by Letter) £1
Medicines forwarded to all the colonies, so packed as to avoid observation.
Books published by the Dr. can be had on application to him 85 jan 15

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Largely illustrated with wood engravings, and containing 300 pages; cloth binding, &c.
It is, in fact, the most valuable colonial production issued on the treatment of Nervous Debility, Loss of Energy, Dimness of Sight, Lassitude, Pains in the Back, Local Weakness, Depression of Spirits, &c., with directions for perfect restoration to health, strength, and manhood.
This work, based upon the result of eleven years successful practice in the treatment of a painful and distressing class of diseases, will be found, by the non-professional reader, to contain plain and concise indications for the cure of many diseases hitherto abandoned as hopeless; and its perusal will bring comfort to many who have given up all idea of benefit from ordinary routine treatment.
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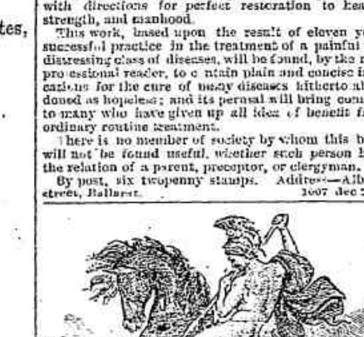

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VERY PLEASANT.—Mr William Morris who has given much attention to parasitic forms of disease has introduced to the notice of the "Sydney Morning Herald" a worm sent to him in some meat served to Mr Pottie, the veterinary surgeon, at one of the restaurants in the city. The meat presents the appearance of a piece of the flank or brisket of beef, and the worm is about an inch in length, of the Filaria family. This is one only of many in the same plate supplied. No life was discovered in it, the cooking having extinguished that; but it may be otherwise with the ova.

DOUBLE WAISTED.—The "Ballarat Courier" says that a more ridiculous exhibition could scarcely be imagined than was made by an inveterate drinker of Buninyong a few nights ago. The man started from Scotchmans about six in the evening, very much muddled, and was discovered about twelve o'clock by some passers-by in a clump of saplings with his clothes in ribbons. It appeared that he had taken off his belt, and when putting it on again he fastened one of the saplings to his body without noticing his mistake. He had fought bravely, however, for he had spread destruction on everything within his reach, besides the sapling to which he was tied.

THE PERILS OF BALLOONING.—A Frenchman, M Durnof, recently laid a wager that he would cross the Channel from Calais in a balloon, and accordingly, on August 31st., he fitted the car to the balloon, mounted into it, seated his wife by his side, and the two together rose into the darkness of night. Hardly had they departed, when a cry rose through the whole town; people rushed to the jetty, and were just in time to see the balloon mounting rapidly into space, and journeying quickly towards the North Sea. The general emotion was indescribable, and more than one of the spectators was moved to tears. At seven on this gloomy evening the balloon was lost sight of in the mists which veiled the horizon. The unfortunate Durnof and his wife had with them no provisions nor any kind of warm covering. The balloon though a new and excellent one, was very small, its cubic capacity being but 800 metres, and it could not, therefore, sustain them for any length of time. The only hope was that the wind might change, and take the balloon in the direction of Yarmouth, or the coast of Holland. The chance of reaching Norway was very slight indeed. Telegrams were, however, at once sent to England, Norway, and Holland, in order that a good look-out might be kept.

"BERKELEY, September, 1873.—Gentlemen,—I feel it a duty I owe to you to express my gratitude for the great benefit I have derived by taking 'Norton's Camomile Pills.' I applied to your agent, Mr Bell, Berkeley, for the above-named pills, for wind in the stomach, from which I suffered excruciating pain for a length of time, having tried nearly every remedy prescribed, but without deriving any benefit at all. After taking two bottles of your valuable pills, I was quite restored to my usual state of health. Please give this publicity, Sir, for the benefit of those who may thus be afflicted.—I am, Sir, yours truly, HENRY ALLPASS.—To the Proprietors of NORTON'S CAMOMILE PILLS."

A MYSTERY.—It is indeed a mystery how some people, otherwise sensible, are so short-sighted and foolish as to go on from day to day, and month to month, suffering with the stings and pains of disease which, by the use of a few bottles of BRISTOL'S SARSAPARILLA and PILLS, would to a perfect certainty be radically cured. Do not stand in your own light

A WONDERFUL CAREER.—During a period of nearly twenty-five years, one medicinal stimulant has exclusively enjoyed the confidence of the most experienced physicians on this side of the Atlantic. To-day, as from the time of its introduction, UDOLPHO WOLFE'S SCHIEDAM AROMATIC SCHNAPPS takes the lead of every other tonic and diuretic in the estimation of the public and of scientific men. Its purity, its agreeable flavor, its invigorating effect upon the digestive organs, its extraordinary efficacy in diseases of the kidneys, the rapidity with which it restores the strength of the debilitated, and its soothing influence in nervous diseases, have deservedly rendered it the most popular preparation of its kind in this or any other country.

WOLFE'S SCHIEDAM SCHNAPPS.—We have heard highly favorable opinions expressed upon this remarkably popular spirit, for which is claimed that it is so excellent when taken as an ordinary stimulant as it is medicinally. As will certainly be the case when an article once acquires a high reputation, it is of course imitated by dishonorable manufacturers, but we believe that the means adopted by the proprietors of the genuine article to ensure the consumer obtaining it are such that the most ordinary precautions will suffice. When we consider the extent to which adulteration is carried on by unprincipled manufacturers of spirits, it is a matter of congratulation that in this schnapps we have an article entirely free from all impure ingredients.

HOLLOWAY'S PILLS.—Weary of Life.—Derangement of the liver is one of the most formidable causes of dangerous diseases and the most prolific in those melancholy forebodings which are worse than death itself. A few doses of these noted ills act magically in dispelling low spirits and repelling the covert attacks made on the nerves by excessive heat, impure atmospheres, over indulgence, or exhausting excitement. The most shattered constitution may derive benefit from Holloway's Pills, which will regulate disordered action, brace the nerves, increase the energy of the intellectual faculties, and revive the failing memory. By attentive studying these instructions and obediently putting them in practice, the most despondent will soon feel confident of a perfect recovery.

"SELECTION—NATURAL AND ARTIFICIAL."

ON Monday, the 26th instant, Mr H. K. Rusden, secretary to the Royal Society of Victoria, delivered a lecture at the Wangaratta Athenæum, in aid of the funds of that institution.

The chair was occupied by Mr A. TONE, president of the Atheneæum and mayor of Wangaratta, who briefly introduced the lecturer.

The following is a copy of Mr Rusden's

LECTURE.

"Are [man] and nature thus at strife,
That nature lends such evil dreams?
So careful of the type she seems,
So careless of the single life;
That I considering everywhere
Her secret meaning in her deeds,
And finding that of fifty seeds
She often brings but one to bear."
TENNYSON'S *In Memoriam*, LIV.

"This surely means that she intends—
Though fifty times we fail to find
The hidden meaning of her mind—
The next time to reveal her ends."
New Song.

It is now nearly thirty years since I was at Wangaratta, and it is with but few of its inhabitants that I can pretend to any acquaintance. I will not presume to say whether they know more or less of me than I of them. But some explanation may be due to you of my appearance here, because I am really no lecturer. I never delivered a *bonâ fide* lecture in my life, and I possess no special knowledge to warrant my presuming to instruct others. But I *have* something to say in sober earnest, in calling attention to conditions of present society, which strike me as being of grave importance, and at the same time generally overlooked. I shall propose remedies for evils, the existence of which, I conceive, has only to be indicated to be admitted; and if my proposals do not meet with your approval, I shall still be satisfied if I succeed in awakening interest in topics fitly described in the saying—what is everyone's business is nobody's business. I may be the nobody—but the business is not only yours, but emphatically everybody's. That it is transcendently important is even less my reason for venturing to ask your attention to it than that it is so generally disregarded. There are many far more competent than I am to treat of such matters, and if they would only teach, I would gladly listen and learn. Their silence, however, renders it my duty to speak.

I hope to be able to say what I have to say in less time than a lecture usually occupies. If you should not like my paper, its shortness will, therefore, be at least one redeeming point in it. But I do not think you can like it, unless you do more than hear it. It will be necessary for you to recognise the great importance of the subject, and the need of some remedial action; as well as to weigh and judge my suggestions to that end. I should therefore be much gratified if some discussion were to follow my paper; in fact I, never read one except upon that condition. I should consider it an act of colossal presumption to stand here to propound my own views without inviting question, criticism, and reply upon the spot; and I am convinced that no lecture, not even an exposition of physical fact or scientific method, can have a tithe of the value or benefit to any auditory, unless questions be raised and answered on the spot upon obscure points—to remove misunderstanding, not only of what has been said, but what may be supposed to have been implied or involved. Let me also plead for my own advantage. I wish to correct my own views; which I have never failed to do, more or less, by a discussion on a paper of my own. If it should turn out—which I do not expect—that we agree in everything, it would, perhaps, be very agreeable; but I am satisfied that much more benefit would accrue to us all by the discovery and comparison of *differences*, and the *selection* of resultant accordances—reciprocal ratiocination, in fact. It is thus in discussion of ideas—as in the struggle of species for existence—that *natural selection* and completion ensure the *survival of the fittest*.

Another reason for mentioning that I have never lectured except when the subject was to be debated on the spot, is, that I may have acquired a somewhat dogmatic style of expression, which among strangers may appear to require apology; I therefore make mine at once, though for my part I prefer a dogmatic tone. A man who has opinions of his own—pronounced opinions—is entitled to any hearing he can get, and society is fully entitled to hear them, be they good or bad. If good, to select them at once for their intrinsic value; if bad, that they may be refuted and extirpated as soon as possible, and that either may be done to the best advantage, it is best that they be exposed in the most frank and unmistakable language that speech affords. Dogmatism, when it consists in plain speaking, simply is, I think, a virtue. It becomes a vice only when offence is taken, or impatience betrayed at equally free criticism, and the expression of diverse views. It is now many years since Darwin first unfolded the great principle of Natural Selection. I say unfolded, not discovered. For Darwin only told us what we mainly knew before. Everybody knew before that in a race the swiftest as a rule win; that the weak have to give way to the strong; that, as a rule, qualities are transmitted hereditarily; and that, in certain circumstances, species of plants, insects, or animals, flourish at the expense of others less fitted to encounter them. This, experience and observation, had amply proved. What then was there peculiar in Darwin's teaching? How is it that, if he told us mere details beyond what we ourselves did know, there can have been any contention respecting it, or any opposition to his doctrine? Simply this—that he put it in a scientific form, and showed that what all had observed in isolated instances, is true universally and without exception. This is what constitutes the difference between scientific knowledge and knowledge falsely so called. Science is simply knowledge reduced to rule. Doubtless knowledge has been reduced to rule for thousands of years, and the rules, even now, it is constantly found necessary to supersede and change. For the first rules were necessarily crude and tentative generalisations; and the progress of science has since mainly consisted of the gradual elimination of supposed exceptional cases, and the consequent qualification or alteration of the rules. In ancient times no durable classification *could* be established, for observations were too limited, and there were no adequate records of others to make system possible, and therefore the old records of observations—such as those of Hippocrates, Aristotle, Hipparchus, and Phug—have hitherto proved of far greater value that the theoretical works of systematizers like Pythagoras, Democritus, and Plato, or even Aristotle himself. This was so, in spite of the fact that the intellectual capacity of many of those ancient philosophers was—as I cannot but imagine—superior to that of any that have arisen since. Duly considering the previous state of science, I venture to doubt whether the intellectual equals of Euclid and Aristotle have since appeared. The subsequent progress of science has transparently been due far less to the transcendent genius of individuals like Newton, Cuvier, &c., than to the careful, patient labor of almost unknown men, who, not even dreaming of the ultimate particular value of their observations, were so thoroughly possessed by the *genuine scientific spirit of confidence in general principles*, that they allowed no single important observation, made within their knowledge, to pass unrecorded. Professor Huxley thus expounds the same idea in his lecture on the "Physical Basis of Life":—"Anyone who is acquainted with the history of science will admit, that its progress has in all ages, meant, and now, more than ever, means, the extension of the province of what we call matter and causation, and the concomitant gradual banishment from all regions of human thought of what we call spirit and spontaneity." He asks "what is the difference between the conception of life as the product of a certain disposition of material molecules, and the old notion of an Archeus, governing and directing blind matter within each living body, except this—that here as elsewhere, *matter and law* have devoured spirit and spontaneity? And as surely as every future grows out of past and present, so will the physiology of the future gradually extend the realm of *matter and law* until it is co-extensive with knowledge, with feeling, and with action." The selection of rules for understanding the various relations of matter and law, is now determined upon a really scientific basis; namely, upon that of the widest range of exact observations, and the greatest possible multiplication of instances. This is why Darwin is unanswerable. He affirms nothing which he does not support—not only by a multitude of his own observations of unrivalled minuteness, but also by an enormous mass of the observations of others; and he patiently weaves the whole into a web of proof that is absolutely impregnable.

But the age produced Darwin. Had Darwin appeared before humanity had arrived at a condition in which appreciation of general principles was possible, his doctrine would not have met with wide acceptance. Darwin did not create—though he has helped to confirm—the capacity to recognise and admit general principles. It had "growed" like Topsy. Darwin took advantage of it and fed it, but he only partially satisfied the demand. The present age will produce hosts of Darwins who will meet with due and increasing appreciation. Everyone has insensibly imbibed, more or less, of this spirit of confidence in general principles, or Darwin would not be appreciated as he is. This spirit now permeates all society, and no one is exempt from its absorbing influence; no—not even Darwin's most strenuous and bitter opponents. For I do not forget that Darwin meets with detraction and opposition. That was to be expected. The intellects of men are as various as their conditions, and many seem to have been born but to struggle impotently against the current which sweeps them away. Huxley says of them, "The consciousness of this great truth weighs like a nightmare, I believe, upon many of the best minds of these days. They watch what they conceive to be the progress of materialism, in such and powerless anger as a savage feels, when, during an eclipse, the great shadow creeps over the face of the sun. The advancing tide of matter threatens to drown their souls; the tightening grasp of law impedes their freedom; they are alarmed lest man's moral nature be debased by the increase of his wisdom." The great shadow will soon pass, and their fear and alarm prove but idle superstition. They *must* await the return of light, whether patiently or not, and they, or their successors, will at last discern that man's moral nature has only passed through a necessary phase of the process of evolution, and that in so far as they have vainly endeavored to obstruct its free exercise and development, so far they have wasted their own energies and demonstrated the futility of their opposition. Have we not already learned to perceive how fact extinguishes fable? and that the imputation to our innocent parents—as faults—of the errors by which alone the knowledge of good and evil could be achieved for us, is but a relic of the primitive ignorance which was inseparable from their condition? The inexhaustible fruit of the allegorical tree of paradise is ever before *us*, and in the interest of our children and our grandchildren it is demanded of us that we *pluck all within our reach*; and defraud them not of any of their inheritance in the ever-ripening harvest. Thus—I rather invert the tenor of the old story of Eden, but surely we have now arrived at a stage of moral perception where we cannot hesitate to decide that our highest ideal of goodness *could not* prohibit the knowledge of good and evil to man; or impute sin to those who, wanting that knowledge, *could* not know—and certainly could not do—better than seize upon it; we feel that the spirit of truth could not foretell a result which did not follow;* we now know also that it could not be any representative of evil that helped man to that invaluable and indispensable knowledge, and that accurately foretold the absoute truth respecting the results.† Could man ever have become a moral being without the knowledge of good and evil? It cannot be but that the characters or their acts in the old fable are entirely transposed,‡ my enquiry may yet throw some light upon the reason.

Darwin, however, has conclusively explained the universality of the law of natural selection just as Newton expounded the law of gravitation. I do not propose to dwell upon the doctrine of *natural selection*, further than may be desirable for exhibiting in relief or contrast the distinctive characteristics of *artificial selection*. For this purpose a short statement of the former is necessary.

1st. Variation of progeny from the parental type is a certain rule without any exception whatever. Whether in a state of nature or of civilization, no progeny is the exact copy of the parent, nor are any two offspring of the same parents exactly alike. Hence, necessary—though minute—variation. The duplication of parentage, and the diversity of their characteristics, ensure this certain perpetual variation, which is the broad basis of the doctrine of natural selection; and as this variation, however slight, occurs in every generation, the ultimate amount of it must be simply a question of time, of which last, eternity furnishes half an infinity. The question thus becomes simply one of arithmetic. As one is to infinity so is the variation of one child from its parent to the aggregate variations or differences in the whole organic kingdom.

2nd. All species are enormously prolific, far beyond their necessities for perpetuation, though throughout Nature one kind of organism preys upon another, and in fact many kinds form the staple sustenance of others. The proportion of seeds which germinate is almost infinitely small; of those which do germinate, a vast proportion never attain maturity; while enormous quantities exist but to be devoured. Yet the production is more than ample. Natural selection simply determines which individuals among these enormous masses of beings or plants are best fitted to survive and which to be obliterated; and by such plain processes as these, the swiftest and most agile escape pursuit; the slowest are exterminated. The strongest secure the most and best food; the most hardy alone survive privation, and beget offspring like themselves. It is plain also that when any species increases largely in number, its means of sustenance must become less in proportion. In the consequent competition for a share, the weakest are starved out, and the species is continued by those only which are the strongest and best suited to survive. By this the species is benefited in competition with others, and this constitutes Natural Selection. In fact variation is so universally the rule, that the wonder would rather be that species are so persistent, *but*—that like can but produce like; and that also, in spite of constant divergence, there is also a constant tendency towards mediocrity and the original type.

For as every offspring proceeds from two parents slightly differing from each other, the tendency of their conjunction is to produce a mean in all points of difference, and to exaggerate only those of mutual resemblance. Such of those points of resemblance of two parents as are exaggerated beyond the typical average, and conduce to the greater prosperity and multiplication of the species,—become more exaggerated in their posterity and tend in time to form varieties, of which, however, those only survive, to the existence of which surrounding conditions are most favorable. The general tendency to a mean is of course calculated to perpetuate the species intact, provided surrounding conditions remain unaltered (which they never do) or favorable. Thus notwithstanding constant slight variations of individual progeny, the tendency is still towards persistence of the nominal type, and hence Natural Selection can produce distinct varieties of species, *solely* in very protracted periods of time. The doctrine of Natural Selection requires therefore again, nothing but the application of the simplest principles of arithmetic to the most extensively verified facts. As the one acorn—which out of all that fall from an oak in a season, fructifies and becomes a tree,—is to the millions which perish, so is a successful, naturally selected variation to the millions exterminated by inherent inferiority or unfavorable conditions. If the whole theory of *evolution* is *also* involved in these established premises, it behoves those whom it offends to accept it or show cause for their opposition. It seems to me that they might as well dispute that they *themselves* have passed—like every other organism—through all the gradations of form and growth between a simple cell and a human moral being.

The practice by many of artificial selection adds experimental demonstration to historical and arithmetical proof, and has sent the results enormously—by restricting propagation to parents—selected as exhibiting the same desired points of resemblance, and preventing reversion of their progeny to the original type, by discarding in successive generations all those individuals who do not inherit them in sufficient exaggeration, and also by maintaining such general surrounding conditions as favor the development of the selected variation. But the actual process of variation cannot be hastened. The moment this is attempted, sterility or hybridity prevents too sudden a variation. The development, in time, of each individual organism passes through stages microcosmically representative of the slow gradual changes through which the race has come through cosmical ages, exhibiting a brief epitome of its past history, and how could two distint histories be represented by one individual? Only—as we see it—by a collapse. Mr Darwin says, "on my theory *unity of type is explained by unity of descent*." (Nat. Sel. p. 247.)

I am less concerned, however, to defend or expound the theory of natural selection, than to make an application of it to human sociology. Natural selection has done its work, for probably many millions of years, in human development. Races have been produced, have flourished, and been exterminated. There is, however, strong reason for believing that some races have in pre-historic intervals; attained to a civilisation very much superior to subsequent conditions of society, if not in some respects even to our own; and we know that in historic time the progress of civilisation has been intermittent. We know that the intellectual condition of Europe in the middle ages was far inferior to that under the Roman Empire, and to that of Greece, in the days of Pericles and Plato; and that the builders of the great pyramid must have possessed scientific knowledge, at least equal, perhaps superior to our own. If the Chinese have not retrograded much, they certainly have not advanced, while in India decadence is but too apparent. Its architecture is a thing of the past, and its astronomy is not only almost forgotten, but presents indications of belonging to a higher latitude, where it is now altogether unknown. We know little of the great mound-builders and copperworkers of North America, and of the early civilised people of Mexico, beyond the fact that they gave way before inferior races. The disinterred cities of the valleys of the Nile and the Euphrates bear as heavy witness to the complete annihilation of their ancient civilisations as that which history furnishes in the case of Europe, where the millenium, which succeeded the advent of christianity, may be fairly described as the age of social monstrosity and intellectual abortion. No phœnix arose from the ashes of those former glories. In each case selection seemed to favor savagery, ignorance, and stupidity; and if brutal wars had not tended to maintain some physical efficiency, the productions of the dark ages would seem to have been unmitigatedly evil. To the Moors we probably owe the materials of after progress. If something more substantial seem now to have been retrieved, that is, apparently, due to the vast accumulation rather of materials and data than of the knowledge of their use; to the almost accidental discovery of one little material advantage here and another there; each infinitesimal inventor adding his puny quota, and merely assisting to prepare and dispose things for the little further contributions of his successors, who added their mites to the aggregation of knowledge and its results, while really only struggling for their own existence. And it is plain that the greatest existing means towards ultimate general progress consist in the material facilities for recording all the minute steps in discovery, so as to make them at once the common property of the race, that no progress now made may be lost. The first great step, of course, was the invention of writing; but from what we now know, we may rest satisfied that ages intervened between many first attempts, and before any such thing as an alphabet was even thought of. The invention of printing, which has consolidated and established knowledge, was not altogether a sudden leap, though the results accumulated rapidly. The perpetuation of an idea by a physical record saves everyone the task of re-discovering for himself all that has been previously learned, and the general dissemination of the power of deciphering the records, now prevents the loss, from lack of means, of any inventive power to spread its little achievements. If one loses an opportunity, another takes it, and many a one loses by slowness what another, incapable of inventing, takes by mere quickness. Knowledge is thus now the property of the race, and the individual is almost suppressed. It is the work of nature, "So careful of the race she seems, so careless of the single life." It is as if she had work to perform and used individual men merely as instruments, and those as if of the smallest value too. One Babbage's difference engine, not only does more intellectual difficult work in an hour than an expert computer could in a month, but does it with a certainty, an ease, and still more, a guarantee against error which no human calculator could possibly give or possess. One steam engine is worth several hundreds of laborers, and is far more reliable.

So nature now may be regarded as discouraging war, not from care for men, but because it checks civilisation and wastes energy. Men are of no consequence in the march of progress, and almost as many valuable (or valueless) workers are drowned in rotten ships, killed by factory explosions, smothered in mines, starved by poverty, emasculated by wealth, or exterminated by special disease, as were formerly wasted in *national murder*. Death itself proves that men are not the peculiar care of nature. She discards effete material of human kind like any other, and substitutes more effective tools in utter indifference provided that her unceasing work be done.

Is not this the universal law? Nature everywhere teems with life, the function of its possessor being—to subsist upon, or become the food of others. One kind preys upon another, that other forms only sustenance for a third, and that third for a fourth. Animals and birds prey upon each other and upon whatever else is adapted to their digestion. Insects feed upon plants—upon each other—and upon us—and Dr Hooker has just shown the motives, as he says, of some plants that deliberately decoy, seize, devour, and digest, insects in return, and are fully as capable as man of discriminating and selecting appropriate aliment.* Man preys upon more than all the rest; but it is really in self-defence, or rather instinctively, in him as in all beings. Existence depends upon it. For ages his wild struggle was with the beasts of the forest, his fellow-men among the number. In civilisation, where he has so far mastered other objects, the struggle is mainly with mankind. The pressure of human population is the great antagonist, and a man's foes are emphatically they of his own household, more than ever at the very time that he has learnt the complete identity of his

* Gen. ii., 17.
† Gen. iii., 4-5, 22.

‡ Note.—This interpretation accords best with the rational view that the *Serpent* was recognised as the superior benevolent deity when the story was first written, and that that story was subsequently embellished or distorted to suit after innovations. The Bible plainly tells us that the Jews *worshipped* the *Serpent* (which was the emblem of cunning as well as eternity) from Moses' time (Numbers xxx., 9.) till Hezekiah's. (2 Kings, xviii., 4.) Would a good being malevolently prohibit the knowledge of good and evil; impotently curse man and the serpent, and long after send deadly serpents among the people? No! The success, the truthfulness (Gen., iii., 4 5, and iv., 22.) and beneficence of the Serpent of Genesis justify this conclusion; the defeat, the falsehood, (Gen., ii. 17) and the malevolence attributed to the Deity, forbid the contrary ordinary, but impious interpretation.

* See Dr Hooker's address "On Carniverous Plants" before the British Association at Belfast, 21st August, 1874.

own interest with theirs. This is the problem of the age. To put the ultimate case: a man's children are so necessary to him that he actually creates them, yet for them he has to struggle harder and more painfully than for himself. All his social relations involve the same difficulty in greater or less degrees. It may be unfelt by those whose means are proportioned to their liabilities, but I believe that a large majority are in a very different position. Thousands in Europe, and particularly in England, are now daily overcome in the struggle. The solution of this difficulty lies rather in the anticipation of artificial selection than in its exercise, and is, therefore, but indirectly connected with my subject. But the remedy happens to be the same as one which I propose for the other difficulty—namely, the general spread of knowledge particularly of physiology, and the complete abolition of monopolies and restrictions upon its universal study.

I have mentioned, as the most conclusive demonstration of the doctrine of natural selection, the fact that it has been put to experimental proof by man in artificial selection. Those who have actually and systematically tried the experiment are surely the best witnesses; "and they," says Mr Darwin (Nat. Sel., p. 32), "habitually speak of an animal's organisation as something quite plastic, which they can model almost as they please." They hold that the agriculturist (p. 33) is, by natural selection, enabled "not only to modify the character of his flock, but to change it altogether. It is the magician's wand, by means of which he may summon into life whatever form and mould he pleases." Sir J. Sebright said of pigeons, he "would produce any given feather in three years, but it would take him six years to obtain head and beak." Mr Darwin adduces an argument of an unmistakably practical kind, when he says (p. 5), "What English breeders have actually effected, is proved by the enormous prices given for animals with a good pedigree; and these have been exported to almost every quarter of the world."

For precision's sake, I will just repeat here the principle of artificial selection as I apprehend it. If a breeder desire to perpetuate any particular bodily or mental characteristic, he selects two parents exhibiting that characteristic; and if they both possess it in any degree above the ordinary average—below the average perhaps—of their kind, that circumstance will infallibly appear in some offspring in an aggravated degree. Of these he then selects those which exhibit it most prominently to propagate his variety, and discards the others. By continuing this process to select a fresh pair with an average degree of the same characteristic, he of course the effect will be largely increased and accelerated by the selection of parents possessing the maximum developement of the sought-for desired characteristic. This is, of course, in strict accordance with the arithmetical principle, that things that are equal to the same thing are equal to each other, and that if unequals be added to equals, the whole will be unequal, &c. I may add a common observation with regard to mankind that corroborates what I before stated, to the effect that in reproduction by pairs, there is always a tendency to a mean—that mean being of course a variation—in the progeny. That is, that in general, opposites attract one another; and we are often amused at seeing what appear at the first glance incongruities, but are really natural accretions of tall with short, dark with fair, fibrous with lymphatic, clever with foolish, medium with medium, and good with bad. Thus the mean is preserved even more closely than it would be by unions without any such directly compensating tendency. The color of half-breeds is an ample illustration of the tendency towards a mean; and Frederick the Great's success in producing tall grenadiers sufficiently proves variation, and the general amenity of human kind to the law of selection artificially applied.

The question I now raise is this. Does natural selection operate, as it otherwise universally does to the advantage of species, in furthering man's civilisation—his moral and intellectual improvement? I have already shewn that his progress in civilisation is at least unequal, intermittent, and even sometimes retrogressive. Is this from a failure of the principle of natural selection? Does it arise entirely or in part from its misapplication by man in the form of injudicious artificial selection? or—civilisation being the unique work of man, extra and additional to Nature—does its maintenance demand, as special, an adaptation of Nature's method of natural selection — artificial selection? And is the failure a result of man's inexperience in its application, or in his neglect to apply it to his own case? And why does he neglect this? Mr Darwin admits that a single clear case of the production, by natural selection, of a modification in any degree injurious to its possessor, would be fatal to his theory; extinction being the alternative ("Wallace's Natural Selection," p. 334; "Darwin's Origin of Species," chap. iv. and vi.). And I am confident that this is true, and further that any apparent failure of selection to produce unmitigated benefit in the development of man is solely due to man's interference with that law—in artificial misapplication of it to his particular case. The result of man's artificial selection in the cases of plants, birds, and animals, have proved a decided and brilliant success. The horses, the cattle, the sheep, the dogs, the rabbits, the fowls, the pigeons, the canaries, the plants of every description—produced by artificial selection, and the extent to which such of their qualities as are useful to man, have been expanded, and undesired ones suppressed—*by careful selection*, amply prove to my mind that the defect is *not* in any radical inadequacy of human intellect to discover the means proper to secure its own social and intellectual improvement, but *is* simply in the failure to apply to that object the same principles which have proved so strikingly efficacious when directed to the modification—for his own advantage—of other organised beings. My object therefore is to point out how this occurs, and how it may be remedied. The means I propose are certain and simple, and I am satisfied that their adoption will be a mere question of time.

It is an important but much neglected question, whether modern civilisation exhibits signs of stability as compared with more ancient ones which proved evanescent? The condition of greatest prosperity of an organism, is that in which it exhibits the most thorough adaptability by natural selection to its surrounding conditions. Those conditions are ever changing, and immobility or intractibility in accommodating itself to those changes, means that a point in its history has arrived at which natural selection is no longer competent to modify itr so as to bring it into appropriate relations with its natural conditions; and that it is therefore on the road to extinction. It may be as well for me to repeat, here that I think that civilisation — being artificial — requires artificial selection to perpetuate it, and that the cause of the failure of various civilisations was the neglect of man to apply to his own case what he found to succeed so well in that of animals. We can only account in this way for the evident relapses, into semi-savage conditions, from those of apparently flourishing civilisation, that have constantly taken place in various parts of the world in past times. Now one of the most striking features in modern civilisation is its apparent viability. Inferior races vanish before the wealth accumulating, and machinery employing European, as the light of the stars is extinguished by that of the sun. It presents no immediate signs of approaching extinction. At the same time its mobility seems scarcely equal to the demands of its rapidly changing conditions. It seems to owe its vigour mainly to its unprecedented employment of material, tools, and machinery by which its working power is so enormously multiplied; to the fact that the invention of printing has secured the means of establishing permanently every achievement of man, whether of discovery or invention; and to the more general spread of education, which has to a much greater extent than formerly, brought those means of permanent record within the reach of every discoverer and inventor. Nevertheless the refractory constituents of our society not only impede the general march of civilisation, but they themselves live very hard, or die very hard, in the struggle.

The persistence of type is too strong for the tendency to variation. In artificial selection, which we well know requires the conduct of an expert, man has proved that he can materially assist nature by availing himself of the tendency to variation, which is his source of profit. In the production of useful varieties of plants and animals, he has reached in many instances the natural boundary to immediate variation—hybridity; but has ascertained that, as in his own personal growth he absolutely represents infinitely greater changes of ancestral structure, which it probably took millions of millions of years to accomplish, so it is impossible for him to dispense with the necessary element of time, or to lead the capacity for variation to encroach upon the limit imposed by inheritance and the persistence of type. In his social and moral developement however, he has as yet met with no such abrupt check to variation. In fact civilisation has as yet had no persistent type. Its late renovation has not extended over more than four or five centuries; a period which—judging by previous developements, is of itself wholly inadequate to secure it against relapse. This being the case, our civilisation cannot be regarded as securely and permanently established, and it is evidently desirable to learn the causes of former collapses of civilisation, to enable us to avoid similar catastrophes in future.

I have come to the conclusion that the evanescence of former civilisations was due to two main inherent causes, irrespective of foreign aggression, which I think was of less importance. The principal one I think was the *monopoly of knowledge*, relics of which still exist among us.*

The other I think was the neglect to apply artificial selection to the human family, the natural and persistent tendency being to select the savage varieties only.

We know that the small numbers in Egypt, Chaldea, &c., for instance, who anciently possessed knowledge—guarded it as jealously as they cultivated it vigorously. They not only kept the masses ignorant, but taught them, not what was true, but only such things as they thought would make them docile, and subservient to their masters. They feared to trust the people with knowledge. It was, they thought, too precious, and so *they lost it themselves*. The monopolists were then, and always must be a comparatively small number, and when any circumstances led the ignorant masses to try and feel their physical strength—they used it,—knowing no better; knowing only that they had been vilely deceived and the victims of tyranny, they were unlikely to show mercy to those who had withheld from them *the knowledge of good and evil*. Is not the prohibition of that knowledge in Eden an apt illustration of my point? Was not the story evidently written to deter simpletons from aspiring to break the monopoly? Does not the serpent typify a cunning renegade from the monopolist's ranks? Is not the story of Prometheus a humanised edition of the same allegory? Are there not actually to-day advocates for prohibitions and restrictions upon knowledge? We know that allegory and parable were the staple form of popular instruction. When it was desired to inculcate, in the style of Æsop's fables, the changes of the seasons, the priests did so by teaching mythical stories of deified animals or heroes, who had been translated into constellations. Hence, the twelve signs of the Zodiac, into which it was found convenient to divide the annual revolution of the heavens, represent the twelve labors of Hercules, and those of Samson, the sons of Jacob, Tribes of Israel, &c.† The adventurers of Isis and Osiris, of Mithra, Bacchus, Adonis, Atys, &c., who were all born with the New Year, and died and rose again at the vernal equinox, are relics of the devices by which the pernicious monopoly of knowledge was maintained by the mistaken protectors of it to their own destruction. The people having been taught these fables to guide them to seed time and harvest, but still more to intimidate them with oracles and miracles, sometimes rose in their numerical might and annihilated their oppressors. That might, however, was merely physical, and could not free them from the tyranny of the superstition which enthralled them, and which they therefore only perpetuated; which also is now far from extinct. I am satisfied that similar circumstances have had much, if not everything, to do with every distinction of civilisation; and no more remarkable instance of it than the great French revolution has ever occurred. The antagonism of classes which grew till it culminated in that revolution, and which is a salient feature of the system, is slowly increasing day by day in England, and must eventually produce a revolution there, unless means be taken to give the working class the knowledge which they want. From the destruction, with the civilisation, of its records, history cannot furnish us with particulars of all such revolutions, so that its silence is no disproof, and the esoteric system is not yet extinct. The use of dead languages till recently, the superfluous use now of technical terms, priestly systems, freemasonry, are living relics of the evil system. The spread of education, and still more the popularisation of science, independent thinking, and unrestricted discussion, are the great antidotes to the evil of the monopoly of knowledge.

The neglect to apply artificial selection to the human family I have named as another and the most important cause of the vicissitudes of civilisation. Natural selection makes fine savages, but therefore, by debasing the type, tends to retard civilisation. Man's civilisation is essentially *his own work*; and unless he practise selection, the modifications of his structure, favorable to the development of civilisation can never be effected. Plato and Aristotle were fully alive to the necessity of such selection, and wisely provided for its enforcement in their "Republic" and "Politics" respectively. The reasons for the failure in practice of Plato's "Republic" are not precisely known, but in any case it was not a failure of artificial selection *in practice*, but a failure—for many reasons—*to put it in practice*. The wider distinction now between the civilised man and the savage makes artificial selection more than ever indispensable, as without it, in spite of the great advantage of the more general education of the people, their status in civilisation rather retrogrades than otherwise. Their education certainly increases their *power* to contribute to the general civilisation, but quite as much also to retard it. If the poor are rendered more efficient workers, the pressure of poverty upon a large proportion of them is much greater, and it is doubtful whether their moral condition is not therefore worse. I say doubtful—but contact with civilisation multiplies ideas and promotes intelligence, without which there could be no morality. There can be no doubt whatever that the demoralising conditions to which the poor are constantly exposed, produce a generally deteriorating effect.

One great cause of this, which was unknown, I believe, to the ancients, is *morbid sensibility*, and consists in the undue subordination of the intellect to unreflective feelings. Reason is dethroned, and sentimentality usurps its place. This error is demonstrable, because it can be shown that a more expanded view of the consequences proves that the sympathetic sensibilities—if under the direction of the intellect—would realise a *far larger and purer satisfaction*. The wealthy classes are not exempt from the evil effects, but the poor are as usual the principal victims. To such an extent has this morbid sentimentality been carried on in the last hundred years, that I think that all the advantage of the spread of education has been more than negatived. It has in any case been much restricted. It is not that the good and the bad are placed indifferently upon a level, when natural selection might maintain an average. Far from it. Our legal systems and conventional customs combine to select the worst specimens to perpetuate the race. Any exceptional success of superior specimens is effected by natural selection through individual vigor. But these are, I think, indisputably far below the average *in number*; so much below it as scarcely to affect the average, even if no extra protection were afforded to those below it. The main characteristics, which I think it is desirable to develop and improve, are health, vigor, self-respect, prudence, truthfulness, honesty, moral or social feeling, and intellect. But our penal administration and conventional habits both tend to protect and exaggerate the very opposite, and to encourage the consequent degeneration of posterity.

As regards health, the follies are as glaring as interminable. We lay embargoes upon progress in medical science, by prohibiting experiments upon the only suitable objects, and on the other hand the chief results accomplished are the prolongation of the agonies of death, and the preservation of those afflicted with radical defects, and dire diseases, to inoculate others while they live, and transmit them to posterity when they die. Thus short-sighted sympathy for one, results in cruelty and misery to many.

As regards prudence, self-respect, and vigor, our so-called charitable institutions offer premiums to the imprudent and the helpless, and preserve their evil qualities to posterity at the expense of the industrious and prudent, who are thereby more or less deterred from perpetuating their better qualities. Thus charity to inferior and degenerate individuals, is needlessly suffered to ensue in uncharitableness, and injury to our posterity and our race. Let the objects of charity be supported in the greatest comfort that those who sympathise most with them desire—in clover if they like. But are we right to suffer them to crowd the world with their inferior type, and double the severity of the struggle for existence, of the posterity of their inferiors? Is this not a crime?

Next, as regards truthfulness, honesty, and moral feeling. The most flagrant errors of sentiment are shown in our treatment of our perjurers, forgers, thieves, outragers of persons, and murderers. But I need not test your patience now by dilating much on this, which is the strongest part of my position, and involves the most direct and disastrous effects upon the human race. I have already specially exhibited these evils in a discourse "On the Treatment of Criminals in Relation to Science," which is in your library, and to which I beg to refer. To give connection to my present argument, I will quote from it two or three passages:—

"The present state of things is notoriously unsatisfactory, but the full extent of the mischief produced can scarcely be appehended, for it is of daily increasing proportions. A worse than foreign enemy is maintained by us in our midst, and favored with every advantage that our civilisation can furnish. We endow the criminal—known or unknown—with every protection from the ministers of the law, which is accorded to the honest citizen, and actually assume that he has not done what we know he has done, until a certain complex method of proof has been fulfilled; and any loophole that a clever lawyer can find, is made effectual to save him from the legal consequences. But if, by force of circumstances, a conviction follow, the consequences tend rather to confirm him in his evil career, and perfect him in his profession. He lives, as before, at the cost of his honest neighbors, with medical, and every other attendance free; the most select of the society he prizes most; and no more work than is exactly calculated to keep him in health. He is far better fed, housed, and cared for, than many honest laborers; and he not only knows it, but proves, by returning to it as soon as possible, that he appreciates it. But this is not all. Exactly in proportion to his *reward for his crime*, is the discouragement to the honest laborer, who cannot but be made too well aware of the difference in their fortunes, on every fresh liberation of the protected idler, to whose support he knows he has to contribute! The only wonder is that crime is not more general than it is." These are the demoralising influences to which I before alluded. "It is characteristic of the criminal classes, that they are both unscrupulous, and improvident, and set at nought the restrictions which society imposes upon the numerical increase of morally disposed persons. An enormous impediment to the moral progress of the people would be at once removed, were convicted criminals never liberated to propagate their evil kind; the honest poor would be so far relieved from competition—at an immense disadvantage—with such as scruple not to avail themselves of means of subsistence from which honesty excludes a part—more or less—of the burden of foundling and reformatory asylums would be saved to society; the proportion of uneducated—or rather mis-educated—children would be largely reduced; and the first direct step probably in the history of the world would have been taken to improve, or rather stay the deterioration of, the race of human beings. For it must be obvious that if those below the general average of morality and intelligence multiply—as we know they do—far more rapidly and promiscuously than those above it, the tendency *must be* to lower the general average. And that tendency is enormously enhanced by the consequently increased competition, against which the honest poor have to contend in living, and in educating their children. The highest authorities agree, not only that the majority of criminals are the children of criminals, but that the large majority of the children of criminals become criminals themselves. And this is only what might naturally be expected by those who believe in cause and effect. It is inevitable, by that law of the persistence of force, which is as much the explanation of habit as the cause of heredity. And for all these reasons, a criminal *by habit* should never be released under any circumstances." I now further say that I consider his release a crime against our children, and the human race. At page 24, I concluded by saying that "the permanent incarceration of all criminals would be a far better protection to society in every way than the current penal system; that it would tend to reduce crime to a minimum; that the cost would be much less than might be supposed, if not less than the present expenditure;" (and experts assert that criminals cost society far more when at large than in confinement;) "and that by preventing the indiscriminate propagation of, and general contamination by criminals, a direct and certain moral improvement in the human race would be effected. But I have pointed out that a fatal objection to perpetual imprisonmant, and all reformatory institutions, lies in the fact that they offer a premium to the criminal and lazy, and misteach the honest poor that crime would solve all their difficulties and secure them stale support, in comparative clover. My last proposition to utilise criminals generally for scientific experiments, entirely obviates this objection to, while enhancing the advantages of my first. It would offer stronger deterrents; it would reduce the cost; it would be more extensively and discriminatively humane, and wisely admonitory and it would besides secure, by the inevitable impulse to medical knowledge, incalculably beneficent effects upon the health, longevity, and morals, of the human race." Finally as regards intellect. The gradations between crime and lunacy are held by experts to be quite indistinguishable, and I am clearly of opinion that criminals and lunatics should receive indiscriminate treatment. We cannot—by any process—discern the particular motives of any individual; we know absolutely nothing of the strength of his temptation, or of his power of resistance. But we certainly know—as far as we can learn anything on the subject, that the acts of a criminal, as much as those of a lunatic, are the outcome of the history of his ancestry as much as of himself, and that every act of man, sane or insane, philosopher or thief, is in the last resort, simply a necessary process of adjustment of an organism to its environment† Thus the idea of puhishment is as inappropriate to the case of the criminal as to that of the lunatic. But, when we are conscious that it lies in our power to condemn our posterity to contamination, and moral putrefaction, or to save them from those evil conditions, I think that to sacrifice such objects to the *tender cultivation* of beings without intelligence or moral sense, is simply *both lunatic and criminal*. Our treatment of lunatics is such that it often suggests to me the applicability of the household phrase, "A fellow feeling makes us wondrous kind." But there is kindness and kindness. Kindness is good, if well bestowed. Kindness to one, involving unkindness to many, yields a large balance of unkindness to many, which is bad; and kindness to an object incapable of appreciating or feeling it, and involving unkindness and deadly injury to our childrens' children, is not only unkindness, but a crime. Must we not be half-lunatic ourselves to be blind to this? Ought not a person, once lunatic or criminal, and therefore with increased liability to become so again, to be precluded from opportunities of perpetuating his variety, and deteriorating posterity? Can we not discern our direct responsibility in the case? People shut their eyes to the fact that a human being without intelligence or moral sense, is not a human being at all—he hath no pre-eminence above a beast. I do not protest against the enormously greater and insanely extravagant expenditure upon lunatics or criminals, than is ever devoted to help struggling honesty and virtue. I protest against the moral and intellectual destruction of our children's children, and plead the cause of those who cannot plead their own.

Artificial selection may be considered in relation to individual action, or to state action. As regards individual action there can be little hope that it will be attempted, until familiarity with physiological and social science shall have conferred a larger grasp of general principles and a more expanded social feeling—than is now but rarely possible. But I have no fear of any deficiency in these respects ultimately, when the intellect shall have been sufficiently developed and restored to its due supremacy; when also the pernicious exaggeration of senseless sentimentality shall have subsided. For that we must wait. There can, however, be no possible doubt that the advantages to society, as well as to individuals, would be incalculable, if special modifications of mental and physical excellence could be handed down for many generations, without admixture of irrelevant tendencies. The family that first adopts and maintains the practice must soon eclipse its neighbors. As the cultivated English racehorse excels the American mustang, or the Timor pony, so, were we to practise individual artificial selection, would our mathematicians, engineers, doctors, financiers, and laborers excel all others, till they follow suit. A consummation devoutly to be wished, but not soon to be expected.

But artificial selection by the State is not only perfectly practicable now, but it is imperatively demanded for the security and preservation of society. It is not so much a question of improvement, as of prevention of rapid and disastrous deterioration. If we wait until the general spread of knowledge and individual confidence in general principles enable every one to see the necessity for it, the type will inevitably have degenerated enormously, and so much lost ground will have to be recovered.

I have myself perfect confidence that our civilisation *will* endure, that much ground *will not* be lost. Artificial selection is sure—at no very distant date—to be practised by the individual as well as by the State. No criminal or lunatic inheritances will then pollute posterity, and medical science will enjoy many more advantages than it ever entered into my imagination to conceive. But before that prosperous time arrives, conventional monopolies of all kinds must disappear, and the whole structure of moral science must be erected upon physiology as its basis. Happy he who contributes in ever so humble a degree to expedite this consummation.

The lecture was listened to with great interest from beginning to end, by a very large audience.

Mr DATE moved, and Mr J. R. RUNDLE seconded the customary vote of thanks to the lecturer, and this was carried by acclamation.

Mr RUSDEN shortly responded, and the proceedings then terminated.

* Though mainly in the form of conventional restrictions upon its acquisition.

† See Sir W. Drummond's Œdipus Judaicus.

* Treatment of Criminals in Relation to Science. By H. K. Rusden. Melbourne, 1872, Geo. Robertson. p.p. 12—13.

† To use Mr Spencer's phrase quoted by Professor Tyndall in his late address to the British Association, 19th September, 1874.

PRESBYTERIAN CHURCH, OXLEY.

Had any stranger ridden across Oxley Plains on Wednesday evening last, he would have wondered what was the matter, and also where so many people came from. Outside the Presbyterian Church were to be seen scores of horses and buggies, and moving about scattered dozens of well-dressed, pleasant-looking men and women. The occasion was the annual gathering of the members and friends of the Oxley Presbyterian Church, and, as usual, an immense crowd were gathered to partake of the good cheer provided, and listen to the 'feast of reason and flow of soul' from the reverend gentlemen who were to address them. Fully 400 persons sat down to the well-spread tables, which were ably presided over by Mesdames Robertson, Jack, Dunlop, Gray, and Wolstenholme, who had hard work to supply the hungry and thirsty folk, who crowded round the tables. After the tables had been cleared, a public meeting was held, when the church was altogether inadequate to hold the people, numbers of whom had to rest contended with outside seats. The chair was occupied by the Rev. A. C. Smith, the pastor of the church, and the proceedings were opened with prayer, by the Rev. R. K. Ewing, of Beechworth.

The CHAIRMAN spoke of the privileges he enjoyed through occupying the position he did, inasmuch as he was not expected to make a speech, but merely to cut down and regulate the speeches of others. A friend of his, Mr Crone, had, he understood, said that tea meetings consisted of tea and twaddle, but he hoped there would be none of the latter commodity at that meeting, although he had heard twaddle talked even in law courts, councils, and many other places. He also hoped there would be no butter. During the year and a half he had laboured amongst them, he had formed many pleasant associations, and he was pleased to see a growing earnestness, and an increased attendance at the church, and he looked upon the large gathering that evening as a sign of progress. He was glad to see so many from other churches, and thought it a good sign when there was such a spirit of unity displayed. He did not wish to see unity as some would have it, as he believed in a healthy denominationalism. The various churches were like the spokes in a wheel, of which Christ was the centre, towards which all converged. He was glad to see such a spirit manifested, and urged all professing christians to work for one end, the winning of souls for the Redeemer.

The Rev. W. C. YELLAND apologised for not being able to say much, as he was suffering from asthma, but expressed his cordial sympathy with the object which had brought them together. A few days before he had been talking with a friend of his, on how best to promote the interests of religion, and they had both concluded that if each minister, in his own church, were to preach only Christ and him crucified, by and by they would all insensibly be united together. The reverend gentleman concluded by speaking of the necessity of making a determinate stand against the rationalism, atheism, and materialism which now-a-days was so rampant.

The Rev. R. K. EWING said that there was one word in the English language which had come to his mind whilst he had been listening to the speakers that had preceded him. The word to his mind was a peculiarly expressive one; it was flabbergaster. He felt so then. From the statements made by Mr Smith, he had been inspired with the fear of butter, the fear of twaddle, and the fear of Crone, for

There is a chiel amang us takin' notes,
An' faith he'll prent them.

It was not always an easy matter to make a speech. Even the most experienced amongst them was liable to get confused and nervous at times, and might get into the same hobble as the clergyman, who, after having got along with his discourse very well for a time, astonished his hearers by informing them that "Peter crowed thrice, and the cock went out and wept bitterly." After speaking of the pleasure he felt at seeing such a gathering, he recommended the Oxley people as soon as possible, to get a hall erected that would be able to hold such a number as was then assembled. He cordially endorsed all that had been said about the spirit of love, charity, and brotherly kindness which he was glad to find existed in Oxley, and which ought to exist everywhere, but he would go even further than Mr Smith or Mr Yelland had gone, and whilst so doing would present an unbroken front, and at the same time a front of power, influence, and energy, which alone could do battle with the rationalism, and scepticism of the present day. What was meant by unity? Did it mean each man working for his own church, and meeting his brethren only on festive occasions like the present one? No; for that was only religious sociality, but was not the true spirit of co-operative and large-hearted unity. True, every minister's first duty was to his own congregation, but all his surplusage of energy and depth, and power should be given to the spread of catholicism. The first principle of unity was a cordial acknowledgment of a true christian brotherhood, and then they would bear with the weaknesses, prejudices, and peculiarities of their neighbors. They should look to the moral and intellectual qualities of every minister of the gospel, ignoring all differences of opinion. The reverend gentleman then earnestly advocated an exchange of pulpits between the ministers of various denominations, and concluded by hoping that the time was not far distant when a real unity would exist where character was the only qualification for membership.

The Rev. J. COWPERTHWAITE, of Wangaratta, agreed thoroughly with the catholic views expressed by the previous speaker, and hoped that the bright vision foreshadowed, would soon become a reality. In an able speech, he specially alluded to the contrast between the christian's view of life, and that of the materialists, and the leaders of scientific thought: the latter spoke of life as a rapid thing, as a bubble borne along the stream of time soon to burst, and pass into nothingness, as a journey to be got over as quickly as possible, but he did not believe in such a view. It was not high-sounding titles or great position that gave to life its dignity, but the connection between this life and the future. The player was proud when he won the notice of royalty; how much greater was the honor when heaven looked down upon, and regarded our efforts to live. Every life should have one strong purpose running all through it, and the man who lived without such, was one who never could possibly rise to greatness, never achieve fame, and never be of use in the world. Let a man but try to do God's will and then he would attain true dignity, and achieve real success. It was needful to impress upon the people the necessity of having a purpose in life, not a selfish one, but one born of what was pure and loving, and if this were effected, future years would witness the development and maturity of true goodness.

The Rev. ALEX. MURDOCH, of Benalla, in an interesting address, spoke of the principles of christian unity, and the need of greater cooperation between pastor and people.

Votes of thanks were then proposed and awarded to the ladies, the choir, who during the evening sang several pieces very effectively, the speakers, and the committee. The meeting broke up about ten o'clock.

Dickens at Home.—A Yankee writer, about Dickens, thus speaks of him:—"The personal habits of Dickens were those of the average English gertleman. He was abstinent from breakfast till half an hour before dinner. This was his working time He told me that four hours at his desk, and four afield—on foot or on horseback rarely in a carriage—was the rule of his working life. He took brandy and seltzer before dinner; drank, as everybody drinks in England, sherry with his meats, and port at dessert; sat long at table; enjoyed his cigar; spent an hour perhaps in the drawing-room at the conclusion of the evening; and then, retiring to his study, read, smoked, and sipped brandy and water till midnight."

SULLIVAN THE MAUNGATAPU MURDERER.

The San Francisco mail has brought intelligence as to what occurred on the voyage of the ship Hindostan, from New Zealand to London, the Maungatapu murderer, Sullivan, being one of the passengers. He went on board under the name of Clarke, and wore a flaxen wig and moustache, but he was recognised on the second day out by a lady passenger, who had photographs of Sullivan and his co-murderers. He was taxed with being Sullivan, and threatened with incarceration, but he denied that he was the man, and dared the captain to imprison him, and he also spoke of an action for defamation of character on his arrival in England. Several times there was nearly a mutiny on board on account of his being left at large. On arriving off Penzance he wanted to go on shore with others of the passengers, but was not allowed. A telegram was sent to London from Penzance stating the fact of his being on board, and there were detectives to meet him when the ship anchored at Gravesend. From that time he has been closely watched, even a female detective being told off for the duty. Before the mail left he was lodging at a coffee house kept by a woman, and he had said that he intended to marry and settle down. He had money, and took his landlady to various places of amusements, but always under surveillance. He had also expressed his intention of leaving for the United States on account of the strict watch kept over him in England. The *Otago Daily Times* expects to hear more of his future movements.

Death in Church.—A very sudden death occurred, on Sunday morning, says the *Telegraph*; during the celebration of divine service at the Temperance-hall, in Russell-street. Just as the preacher commenced his sermon, a man named John Thompson, a contractor, living in Flinders street fell down in a fit. Assistance being at once rendered he was carried out into an adjoining room, when medical aid was rendered by Dr. Robertson, but to no effect, death resulting in a few minutes. The deceased was sixty-three years of age, and had been for some time under treatment for liver complaint. He seemed perfectly well before going to the Temperance-hall and although it is supposed death resulted from disease of the heart, there is as yet no evidence to that effect. The body was removed to the Morgue.

To Destroy Flies.—Get a four-horse power engine; put it in the back kitchen; run shafting in every room, connected with the engine aforesaid by belting. On the shafting place fly-wheels, smear the wheels with treacle, and set the engine going. The flies being attracted by the fly-wheels, will light on them, and the wheel revolving rapidly, they will be whirled off. Have a boy under each wheel with a bat, and let him smite them as they fall, and before they have time to recover from their dizziness A smart boy has been known to kill fifty a day.

Supplies from Sydney.—A squatter informed us during last week that he could purchase his station supplies cheaper in Orange than in Sydney. On his way to Sydney he prudently inquired the "figures" asked for several "leading" lines which he required at our leading wholesale houses. He quietly made a note of the prices named in Orange, and compared them with the prices asked in the metropolis, and seeing that Orange rates—after calculating carriage were considerably cheaper, he very wisely returned to Orange, and bought all the goods he required at our local warehouses. He says that the result to himself was a saving of fully 12½ per cent at least. Having stated his inability to account for this, as it seemed to him, strange circumstance, he was told that the thing was very easily explained. He was informed that the reason why the Orange storekeepers could undersell the Sydney tradesmen, was that our Orange merchants did business on their own premises, built upon their own freeholds, imported their own goods, and had them brought to their doors when carriage was at the lowest rate during the year, bought for cash, lived within their means, and superintended their own business, and were content with quick and ready sale. The gentleman seemed satisfied with the reasons given, paid for his goods, and said that the next time he paid Orange a visit he would take another big parcel.—"Western Advocate"

Who is he?—There is a mysterious foreigner in our midst, and (says the "Telegraph") he gave Collins street a great treat on Friday. The mysterious one should be a lancer in some service, because he wears a lancer's shako, a green tunic faced with magenta, and overalls striped down the seam with the same color. There really is a mystery about this bold sabreur, because it is not usual for officers belonging to any army to parade in full uniform when "on leave" and when lancers do put on "harness," they are not in the habit of toiling their swords, or of forgetting to put on spurs. Can it be that the mysterious dragoon officeris a walking advertisement?

Melbourne Produce Market.—M'Caw, Adamson &Co. report as follows:—The Breadstuffs market has exhibited some slight variations since our last. On the day following its issue, there was an improved feeling in wheat, leading to rather large sales, at from 6s 1d to 6s 2d., and for a few prime parcels, 6s 2½d was obtained. The town millers, being thus supplied, have since held off buying, and as supplies by rail and seaboard are about sufficent for our requirements, there has been again a decline in value. Disposed of some 500 bags fine Northern grain to-day, realizing 6s; at same time, flour was quitted from £12 15s to £12 17s 6d. Have been selling, privately, at £13, during the past week. In feeding grains, maize, in consequence of heavy purchases made during the middle of last week, improved in price, and nothing under 5s 9d would be accepted by importers; nevertheless, there were no buyers over 5s 8d.; and, consequently, business in this cereal has been much restricted; we sold a small lot of choice, for seed purposes, to-day, at 5s 11½d. Ordinary feed oats worth 5s 4d to 5s 6d., and superior to 5s 9d; Cape barley 5s; bran to 1s 8d; medium malting barley disposed of at 5s 6d to 5s 8d. In dairy produce there has been a fair enquiry for cheese, but as a considerable proportion of consignments are rather new, and bruised, and puffed, the average prices are scarcely up to late ones, for a few prime lots full rates were obtained. Potted butter has met with fair sale at 7½d to 8d for new, and 4d to 6d for old. Fresh about same as last week with the exception of a few favourite dairies, which realized up to the highest quotation.

Printed and Published by Richard Wardell, (Sole Proprietor,) at the office of the Ovens and Murray Advertiser, Ford-street, Beechworth, in the Colony of Victoria.

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