

Frenchman can, and to permit his talent for the criticism of society a wider field of observation. The form of corruption directly attacked in the "domestic drama" entitled "Other People's Luxury" is, speaking for all the world, and for power to wreck human happiness, a more common and more serious crime than adultery. In every class of society, domestic disaster is brought about more frequently by a woman's coveting of her fellow-woman's material goods, of anything and everything purchasable that is her neighbor's, than by an irresistible passion for her neighbor's husband. If any particular curse may be specified as the curse of democracy, it is the inevitable prevalence of the wish, often assuming the intensity of a mania, to appear as good—that is, as rich and imposing—as one's neighbor, who, of course, is not by birth, by any grace or strength of nature, or for any reason on earth except the accident of superior wealth, any better than one's self. This corrupting desire is not exclusively feminine, but it attacks women more generally than men, rages more fiercely among women, and is more destructive of feminine morality. M. Bourget's Mme. Le Prieux is not an exceptional instance of that "fever of worldly egoism which compels one for ever to compare herself with her richer neighbor, and to go on increasing expenses, complicating life, foolishly (sometimes tragically) sacrificing the reality to the appearance." Under other names she intrudes herself on the contracted social scene of American country towns, and she dominates the big world's stage.

M. Bourget has drawn the lady broadly and also in delicate detail. Ostensibly, he is persistently tendering assurance of his highest consideration, making the best he can of her without violating a felt obligation to practise "the noble virtue of uncompromising veracity." A distinctly French faculty for converting social observations into literature, and for exciting a feeling for morality without appearing didactic or purposeful, has perhaps never been more cleverly expressed. The more violent tragedy of "The Day of Reckoning" is the consequence of a crime committed by devoted and aspiring parents in order to assure the worldly success of their son. In this drama, as in "Other People's Luxury," the family bond is compelling; no member of a family can shirk participation in a common interest, and the conduct and character of one inevitably affect all. The Corbières, plain honest people, yielding to a terrible temptation, appropriated trust funds. This ill-gotten money was so well expended on the education of Eugène, their son, that when, established in the world, and famous in his profession, he discovered his parents' crime, he then took the burden of sorrow and shame upon himself, and gave his life to repair a hideous wrong for which he was not responsible, but by which he alone had benefited. The character of Eugène, tested by a sequence of most trying incidents, and subjected to incentive to ignoble action, preserves a balance between passion and reason, a firmness tempered by gentleness and sympathy, which one false touch would have reduced to the absurd. But M. Bourget has seen his man clearly, so there is no false touch, no sentimentalizing, only a very sincere presentation of a good man. The remaining dramas are psychological studies of children, and are narrower in view, more characteristically French. We others may

believe that such children may exist, but we don't like them or wish to hear about them; and to analyze precocious or morbid little wretches seems to us a waste of talent, if not a wickedness.

From the biographical sketch introducing "An Eagle Flight," it appears that the author, Dr. José Rizal, was of almost pure Tagalo race. Deeply impressed in his youth by the wretchedness of the Filipinos, most of them in a condition a little worse than literal slavery, believing in their capacity to rise to better things and to enjoy them, his short life was dedicated in one way or another to their cause. Though he was shot for treason, the charge appears to have been trumped up by his enemies, for he did not think his people ready for independence, but, on the contrary, believed that their political safety lay in continued union with Spain. The tyranny he hated and fought against was not that of a king or of the Spanish Government, but the tyranny of a multitude of friars, brown, white, and gray, who for two centuries had had their sandalled feet pressed on the neck of a helpless race. The friars owned the land, owned the ear of Spanish officials, owned the soul of the ignorant and superstitious native. Against this irresponsible omnipotence every Filipino revolt has been directly aimed, and in order to show it up, to make it plain and detestable to Europe, Rizal wrote fervently poems, pamphlets, and novels. "The Eagle Flight" is an adaptation of his first novel, entitled "Noli me tangere," and it is probable that many incidents of his own life, much of his own aspiration, are described and expressed in the principal figure of the tale, Crisóstomo Ibarra. The book is extraordinarily interesting, showing the poet's feeling and far vision in unusual combination with power of unprejudiced observation and force to do—to do always the most and best for a purpose on which the heart is set. Rizal did not concern himself deeply with the technicalities of novel-writing (though the original is probably more coherent than the adaptation), so the book is a series of episodes, scenes, situations loosely connected, yet all helping to express his absorbing passion and to impart it with intensity.

The strain, however, is not of unenlivened melancholy, for the sketches of social life in towns are, to the foreigner at all events, exceedingly funny. It is very amusing to know that society people, in Manila have ambitions and arts so much like those of society people at home. Rizal's attitude towards the more prosperous of his countrymen is of contempt more bitter, perhaps, than they deserve, seeing that they are human as well as Filipino, and that they, even as the poorer classes, come under the scourge of the friars. But while his feeling for the masses is intensely sympathetic, he never looks at them with the eye of uncritical partisanship. My people, he says, are ignorant, idle, not sternly virtuous; on the other hand, not predisposed to coarse, destructive vice. What strength of nature they have is crushed by an infamous oppression, and my conviction is that, once having obtained freedom, they will learn to use freedom well. This argument is not yet closed, so there is still time for Rizal's plea to be taken into consideration.

The author of "A Breaker of Laws" revives the romance of that sort of crime which Dickens exploited in "Oliver Twist." Mr.

Ridge's burglars are not quite so depraved and dirty as Bill Sykes and the Artful Dodger, but, on the other hand, they are never thrilling, and their best efforts to be comic fall flat. Alfred Bateson's struggle to assume respectability with matrimony is not picturesque, nor are his relapses very touching. The self-sacrifices of his friend, the excellent but uninteresting Mr. Finnis, must have been their own reward; otherwise, they point no moral. The tale is not entertaining, and can hardly have been written with the immoral intention of exciting sympathy with burglars, as the author does not appear to be an enemy of society.

#### *The Story of Nineteenth Century Science.*

By Henry Smith Williams, M.D. With illustrations. Harper & Bros. 1900. Svo., pp. 475.

A brief and extremely popular account of the general progress during the nineteenth century of the physical and natural sciences was wanted at this time, and Dr. Williams has drawn it up quite as successfully as could be expected. He does not cover the whole field of those sciences, but deals with all the most significant parts, and adds, besides, a chapter upon modern psychology. To call what is here dealt with "Nineteenth Century Science," ignoring mathematics, linguistics, archaeology, economics, is to do injustice to the nineteenth century, but it is an injustice that we are accustomed to. The word "Story" in the title may serve as a hint to the prospective purchaser of the volume that he may expect a style which strains a little, and rather uncomfortably, after effect and sensation. Still, while there is some truth in that, especially in the earlier part of the book, it would be a great mistake to suppose that this is one of those publications which assume that science consists in producing startling novelties and thrilling marvels. On the contrary, it is a serious work, written by a man who, if he does not everywhere show himself a master of the particular branch of science of which he is treating, which would be almost inconceivable, yet does show that he knows what science really is better than a good many men who go by the name of scientists. He seizes upon the great and fruitful ideas which have been developed in each of the branches of which he treats, and shows how it has been evolved, in a way to make his work worthy of being called, not a mere "Story," but a History of the Nineteenth Century in respect to ten, at least, of the eleven sciences which he considers. To do this in such a way as to be readable without fatigue by everybody who ever reads anything but a newspaper or a novel, is a veritable feat. That it is easy enough to be entertaining about science we know, but it is not easy to write lightly and yet picture science as it appears to scientific men.

We must not be understood as meaning that the book wraps up any profound insight into the nature and methods of science, as Whewell's immortal history did. It can teach nothing to scientific men, because it looks upon science precisely as they do; but it will be highly instructive for the great public for which it is intended. Bad proofreading, with which we are becoming sadly familiar of late, must be responsible for Lagrange being named as the author of the "Mécanique Céleste," for Agassiz's work on glaciers being dated twenty

years too late, and a number of such misleading statements, in spite of which a great deal of pains has evidently been taken to insure accuracy in details. The book is not a mere compilation. The writer has looked into the memoirs, and has otherwise sought information at first hand. The volume also contains upwards of a hundred illustrations, almost all of which are positively interesting. Three-quarters of them are portraits. The writer of this notice was acquainted with the originals of nearly half of them, and can testify that those are characteristically portrayed, while most of the others carry conviction.

Nobody can dream that it is humanly possible to write a work like this which is not open to much criticism. The writer must have a weak side, and Dr. Williams shows his, the more exact is the branch of science with which he deals. This is unfortunate, for that is just where mastery would be most desirable. For example, Dr. Williams plainly shows his aversion to the idea of action at a distance, to which he has no doubt been encouraged by Kelvin and his followers. Now there are just three reasons which render the opinion of those physicists a tenable one. The first is purely logical: it is that as long as we are forced to admit an all-pervading ether, we have no need of any action at a distance, nor, indeed, of any other matter at all, and all our notions of rigid mechanics can be replaced, or be regarded as replaceable, by an amplified hydrodynamics. The second reason appeals to the lessons of the history of science. Because Faraday had no mathematical training, and was consequently unable to think clearly about action at a distance, he was led to develop another way of thinking about the forces of electricity which not only is extremely attractive to a mathematical mind, but also gave rise to Maxwell's theory of electricity, and thence to all the conceptions of Hertz (with the Marconi telegraph to testify to their value), and to the vortical theory of matter, with the applications that J. J. Thompson is making of it. The third reason is more positive, although even this is not conclusive: it is that the properties of elastic solids cannot be accounted for by attractions and repulsions between pairs of particles. But Dr. Williams does not touch upon any of these things as causes of the opinion he seems to espouse. He does not tell us that action at a distance was universally accepted by all whose opinions were of any account through the first half of the century, nor how the contrary belief has gradually become respectable. He leaves the reader to imagine, as the popular reader will be sure to do, that the objection to action at a distance is no more than might have weight with a philosopher of Newton's century—its inconceivability. Now there can be no manner of doubt, in the mind of a psychologist, that this "inconceivability" of action at a distance is due to the circumstance that the great mass of every-day experience in regard to the communication of forces is of one solid body pushing another. Yet, whatever theory we may entertain about action at a distance, it is an indisputable fact that in such ordinary experience there is really no contact at all between the atoms of the different solids. For if two pieces of iron or glass are brought into actual contact, they will stick together so that they can only be torn apart. In short, the "inconceivability" of action at a distance

is of the same kind as the inconceivability of any occult phenomenon, such as the mixture of two liquids making a solid, two colorless liquids making a black mixture, red and green lights making yellow, etc. An inconceivability which does not prevent an hypothesis from being perfectly exact and consistent is no good reason for rejecting it. Although Dr. Williams is so averse to the admission of action at a distance, he seems almost equally averse to the only possible escape from it, that of the ether. He even suggests that empty space may fulfill its functions. He does not point out that if light, during the eight minutes after it leaves the sun before it impinges on the earth, is in empty space, the doctrine of the conservation of energy is false.

Passing from physical conceptions to his statement about the state of opinion among physicists, we also find inaccuracies which, though perhaps of no particular importance in so very popular a history, nevertheless show that exact science is not the author's element. Certainly, there is no more important page of the history of physics than that which relates to the development of ideas concerning heat, energy, and gases from 1824 to 1875. But we do not find that the account here given of this movement of thought is all that might be desired. The author asserts that Sadi-Carnot, in 1824, explicitly stated that a definite quantity of heat could be transformed into a definite quantity of work. But, on the contrary, though it is said that Carnot's posthumous papers show that he subsequently entertained this idea, yet in his celebrated book his doctrine is that heat is a fluid, that its quantity remains unchanged, and that it does work in falling from a higher to a lower temperature just as water does in passing from a higher to a lower level. Nothing is said in this "Story" about the second law of thermodynamics. The reader will get the idea that, Joule's results being admitted, or we may even say Rumford's, there was no further difficulty with the theory of the steam-engine; and no adequate recognition is given to the work of Clausius. In regard to the kinetical theory of gases, the names of Krönig, Boltzmann, Van der Waals do not appear. Regnault, Amagat, Willard Gibbs are never mentioned.

In chemistry, we find such assertions as that hydrogen being univalent while oxygen is bivalent, "makes it plain that we must expect to find no more than three compounds of those elements." It did not make the matter plain to those who held to the strict univalence of chlorine; and Dr. Williams says nothing about variable valencies, but rather implies their fixity. The history of opinion concerning Mendeléeff's law is inexcusably inaccurate after the admirable history of the matter by Venable. The importance of Newland's octaves is much exaggerated, since ideas upon the subject, about as nearly correct as his, were generally rife among advanced chemical thinkers of that day. Such comments might be continued to great length. It must suffice to say briefly that the chapter on psychology, although possessed of some merit, is less good than the others.

*The Story of the Chinese Crisis.* By Alexis Krausse. Cassell & Co.

In this handy volume of 200 pages we have a spirited narrative in brief of China

and her modern experiences, together with the stock picture of the Chinaman as painted by the average Occidental. The writer evidently has knowledge at first hand of much of what he has written, and probably no other book gives a more vivid and accurate account of events in China during this past year. He pictures in lively style the universal habit of "squeezing," which means theft and corruption. It pervades every class, from the viceroy to the boy who carries your letters to the post-office, destroying one or two so as to save from the money given to buy stamps. Like a true Briton, Mr. Krausse believes in opium for the Chinese, declaring (p. 13) that "in the case of the overwhelming majority no ill effects are produced." He is a stalwart for trade and British interests, and believes in thoroughly humbling the Chinese. He would abandon the vacillating policy of the past three years, and "revert to the manly method by which we asserted our dominion in the Far East."

The author shows clearly the part which the various predatory nations have played in the dismemberment of China, as already accomplished. Great Britain has nearly 6,000 subjects in China, shipping in the treaty ports amounting to "upwards of 25,000 tons," (sic, p. 147), in reality over eight millions or about sixty per cent., while her commerce in 1899 reached a total of \$200,000,000. Yet the amount of Chinese territory owned by Great Britain is under 550 square miles. Russia, on the contrary, has in China, including those in her colonies at Newchang and Port Arthur, but 1,600 subjects and no shipping worth speaking of, but has seized 888,830 square miles of territory which, with Manchuria, practically hers, will amount to over 1,200,000 square miles. France, whose commercial interests in China are the smallest of any first-class Power's, has robbed China of an area of 315,250 square miles. It is hard for the Chinaman to understand the wealth and resources of Great Britain. Notwithstanding that 60 per cent. of the total foreign trade is British, England's effective influence is as nothing compared with that of Russia. The author traces the failure of diplomacy to the fact that no European has yet learned the workings of the Chinese mind. He believes that with such a people no ordinary measures will serve.

The various wars which China has suffered "have failed either to inculcate respect for the superior power of other nations, or to moderate the intense self-complacency which is inherent in the Celestial character." Yet the impression one gets as he reads this book is that, from the standard of absolute morals, the Occidental man must seem to the Chinaman as abnormal, as proud, as subtle, and as malignant as the Westerner is sure the Chinaman is. Surely, if there is ever to be a union or reconciliation of the Orient and the Occident, it must be not only by moral betterment, but by mutual moral betterment. The Chinaman of Mr. Krausse, and of so many other writers whose God is "trade" or "interests"—British or otherwise—is largely the phantasm of myth or distorted vision. Nor shall we ever be able to see clearly until we get the beam out of our own eye. Actual experience shows that the Chinaman, when treated as a human being, responds to such treatment very much as humanity all over the world does, though it is also true that this response is the more prompt and thorough according as the light

P 60750