

husband, commanding her sons, and ruling the rest as she pleases. The remarks just made apply, as above said, to the mothers of sons only.

Again, take the case of the widow from infancy : shorn of much that women value in the world, dressed in coarse clothing, deprived of her ornaments, compelled to fast till health breaks down, made to subsist on the coarsest of food, kept out of what amusements come in the way of the rest of the household, forced into being the unpaid drudge of the family, held to be the legitimate butt of the ill nature of all, considered fit only to amuse the children, openly called and taught to think herself a creature of ill omen, — this being the cause of all the rest of her sorrows, — superstition has indeed nowhere else shown more clearly its power to pervert the reason of man. How much the women dread widowhood is exhibited to the full in the fact that to call a woman a widow is to offer her a dire insult, and from her earliest childhood a girl is taught to pray that she may die while yet the red spot, which is the sign of the married state, remains on her forehead.

It must not be thought, however, that an Indian woman's life is necessarily all unhappiness. Human nature in her case is as capable of adapting itself to circumstances as elsewhere ; and since the ultimate gauge of permanent individual happiness is suitability of temperament to immediate surroundings, many a woman in India must be so constituted as to be quite content with the life she is called upon to lead, and in fact to enjoy it. When a girl is naturally sedate, yielding, and good-natured, of blunt susceptibilities, limited aspirations, and strong religious emotions, she will give in to her mother-in-law, avoid quarrelling without effort, follow the course of life laid down for her without demur, thoroughly believe it to be the only desirable life to lead, find the innumerable restrictions imposed upon her not unwelcome, and become contented with her contracted sphere, and, if those about her happen to be kind, be quite as happy as any girl in the world. But the potentialities for misery involved in her surroundings are enormous, and, where such is the case, to argue that misery is not the frequent result would be to argue against human nature.

Such is the life of Indian women as described by Captain Temple ; and there seems to be little to deprive it of its gloom, except the frequent holidays and the feasts that attend them. He tells us, however, that the women themselves are the strongest supporters of the social system which dooms them to such a life ; and this he attributes in part to religious sentiment, and in part to the well-known fact, that women, all the world over,

are the strongest advocates of social rules and ceremonies.

As to the best methods of improving the women's lot, the author of the paper spoke somewhat hesitatingly. He thinks that something may be accomplished by the native monotheistic church known as the Brahmo Somaj ; and he alluded favorably to the efforts of certain missions of European origin, and to the society organized under the auspices of Lady Dufferin for furnishing medical aid to women. He took occasion to reprobate the practice of child-marriage, and expressed the hope that it may be disallowed by law. There is now pending in the Indian courts a case in which the question of the legality of such marriage has been raised ; and if the decision should be against its legality, an important reform would thus be wrought. It is evident, however, that the main cause of the evils that Captain Temple has pointed out, is the system of caste ; and so long as this system prevails, there can be no satisfactory improvement in the life of Indian women.

MINCHIN'S STATICS.

IN the third edition of his valuable treatise on statics, of which the second volume has recently appeared, Professor Minchin has enlarged the work by about two-thirds of its previous amount. The new matter is almost all contained in the second volume, and consists largely in an exposition of the theory of screws, a chapter on astatic equilibrium, and very large additions to the chapters on the theory of attraction, electrostatics, and the theory of strains and stresses. There are also other important additions, notably in the chapter on virtual work. The theory of attraction is far more extensively treated than in the second edition, the space devoted to it being 122 pages as against 37. Spherical harmonics are introduced in the present edition, and it may be mentioned that the author proposes and employs the term 'Laplacian' to denote a Laplace's coefficient.

In the preface to the second volume the author lays stress on the fact that he has, in the chapter on attractions, explicitly adopted the C. G. S. system, in order to constantly fix the mind of the student on the concrete realities for which his symbols stand. This is undoubtedly most desirable ; but we cannot help suspecting that the importance of this and similar points of discipline, as objects of a scientific treatise, are overestimated by Professor Minchin and other English writers. It is

A treatise on statics. By GEORGE M. MINCHIN. Vol. ii. Oxford, Clarendon pr., 1886. 8s.

certainly going to great extremes to say, that, "without this definiteness of idea, no knowledge of the slightest value can exist." However, no harm would probably be done by this excess of what is certainly in itself a merit, were it not that the constant endeavor to insure the student's good grip of his tools throws into the background all considerations of elegance, and often interferes with unity of treatment and a harmonious development of the subject. In these features, Professor Minchin's work leaves much to be desired; but its comprehensiveness, the fulness and clearness of its explanations, and its richness in examples, make it extremely valuable both as a text-book and as a work of reference. Its usefulness in the latter capacity has been increased by the addition of an alphabetical index.

ROYCE'S CALIFORNIA.

THIS work is the seventh in the series of 'American commonwealths,' now in course of publication under the editorship of Mr. Horace E. Scudder. The author, who is already known to the readers of *Science*, is a native of California; and his work, as he himself tells us, has been a labor of love. It deals but slightly with the early history of the country, when it was under Mexican rule, but takes up the subject at the time when our government was seeking to gain possession. This was in 1846; and the work closes with the final establishment of order in the state in 1856, thus covering a period of ten years.

The work is properly divisible into two parts, the first treating of the conquest of the country by the United States, and the second of the politics of the state itself after the war was over. The reviewer is obliged to say that the book has grave faults of style and treatment, particularly in the earlier part. The style is verbose, and the chapters that treat of the conquest are carried to such a length that few persons will have the patience to read them through.

Mr. Royce, like most other people, regards the Mexican war and its accessories as little creditable to the American nation; though, of course, he recognizes the good results that have actually flowed from it. He thinks, too, that we might have got California by peaceful means, or at least with the consent of its inhabitants, if we had pursued the right course; and that we failed in this, he thinks is due to the misconduct of some of our military and naval officers. He is specially severe on Captain Frémont, whom he regards as mainly responsible for the fighting that occurred in Cali-

fornia, and consequently for the animosities and race-hatreds that it engendered.

In the fourth and fifth chapters, the author treats of the 'struggle for order' between the law-abiding citizens on the one hand, and the criminal elements on the other. Congress having neglected to provide a permanent territorial government for California, the people met of their own motion in the autumn of 1849, and organized as a state, which was soon after admitted into the union. When this had been done, however, the struggle with the lawless elements of society was only just begun; and it took seven years longer to reduce the whole state to an orderly condition. The causes of the long continuance of social disorder were, in Mr. Royce's opinion, two, — the general sense of irresponsibility due to the irruption of a crowd of fortune-hunters; and the animosity of the American settlers toward the Mexican inhabitants on the one hand, and foreigners on the other; to which we would add the political incapacity of the Mexican inhabitants themselves.

In his last chapter the author treats briefly of the land question in California. When our government took possession of the country, there were many tracts of land the ownership of which was doubtful, and this would have caused much difficulty in any case. But our people saw fit to treat the ownership of all tracts as doubtful, and compelled the landholders to prove their titles in the courts as a prerequisite to having them recognized. The courts, however, sustained the vested rights of the proprietors; and Mr. Royce thinks that the whole history of California "has illustrated the enormous vitality of formally lawful ownership in land."

ACCORDING to official statistics, it appears, says the Journal of the Society of arts, that on the 31st of December, 1881, 382,131 persons were engaged in manufactories in Italy. Of these, 219,844 were spinners (69,447 being children); 77,779, weavers (13,628 children); and in printing 15,499 (618 children) were employed. In 1876 there were 229,538 weavers who worked at their own homes, chiefly in Sicily, Sardinia, Calabria, Apulia, and the Marche of Ancona.

—*Nature* states that during the present summer a university will be opened at Tomsk, in Siberia, the first of its kind in this part of the Russian empire. At first it will consist of two faculties, — an historical-philological one and a physical-mathematic. It already possesses a library with fifty thousand books, a very valuable paleontological collection, presented by Duke Nicolaus of Leuchtenberg.