which each may be required for the full understanding of the subject, and all are arranged in admirable order. Print and paper are worthy of the work and the photographic plates leave nothing to be desired.

Knowlson, JOSEPH S. *England's Need in Education—A Suggested Remedy.* Fifield: London; 1911; 8vo; 190 pp.; price 3*s.* 6*d.* net.

THE author, a teacher of long experience, argues for a reorganisation of our educational practice. The necessity for some change of method in primary instruction is shown (1) by the superior results claimed for other countries, notably America, and (2) by the frequent complaints of employers that our school-product lacks intelligence, initiative, and adaptive capacity. He finds the reasons of the disappointing results to be these: that our system pays too much attention to the intellectual side of education; that even here it merely instils knowledge which is outside the circle of the child's interests; and that it neglects almost entirely the training of the feelings and of the will.

He gives some interesting practical suggestions of the way in which the circle of intellectual interests may be filled and extended. But the two original difficulties remain. There is, first, the opposition between the pure, but limited, scientific interest, and application, when the child becomes a money-making machine for an employer or for himself. In the second place there is the opposition between facts and generalisations as the chief staple of educative knowledge. If, in preparing the child's "circle" for adaptation to his future career we substitute generalisations instead of the old cramming of facts, we have to remember that the new food is no more digestible than the old, and is far more liable to adulteration. Even at the commencement of adolescence it may be doubted whether the mind can *realise* social co-operation; and if the generalisation is based on sentimental unrealities, the inevitable disillusion will be cruel.

Comparing the Syllabus of Moral and Civic Instruction, inserted at the end of the book, with the real facts of the child's home-life and future circle of activity, is a melancholy business. It is simply the old inconsistency between Christian ethics and the facts of life. The same difficulty remains in the question of training the emotions and the will. "Training" the former can only produce a race of hypocrites and prigs; given the correctly adapted acts, the correct emotions will follow.

As for the will, to speak of "training" it is to use a contradiction in terms.

Like similar schemes of reconstruction, this of the author's fails because it ignores the prerequisite of eugenics.

Take the alleged superiority of the American child in *initiative*, by which the author is visibly impressed. This is not the result of American educational methods; it is the result of American breeding. And it is not too much to say that any superiority in American education is an effect, not a cause, of this racial quality. Perhaps the best thing in the book is contained in one sentence—"cannot we train every sense of the human machine?" If by "sense" is meant physical mechanism, such training would be fruitful at once, granted the soundness of the stock. Educationists should distinguish more clearly, it may be urged, between physical training and social education or rather adaptation. The link between the two is supplied by intelligence. Train the child's intelligence so that it may serve him as the *means* of adaptation, and as the *measure* of social values. But in such training any false sentimentalism is fatal. It should aim at sense-education rather than the cramming of facts or the inculcation of generalisations. "I understand it," says the child, "until you begin to explain it."

Mr. Knowlson's remedy seems to me to begin at the wrong end. Of course he deals with children as they are; it is outside his aim to provide better children. But the worse the stock, the more futile is any attempt at

an education which is more than a mechanical drill of the senses and of the intelligence. And there is a good deal to be said for this method in any case, provided that it is always correlated with actual facts and applied to reality.

A. E. CRAWLEY.

Slaughter, J. W. *The Adolescent.* With an introduction by J. J. **Findlay** Sonnenschein; 2*s.* 6*d.* net.

FROM Fourteen to Twenty-four: its Nature and Needs, would have been a more illuminating title for this little book of a hundred pages, in which the distinguished disciple of a distinguished master sums up certain modern conceptions. The central thought of the whole is that a sound pedagogy can only be based upon biology, that it must faithfully reflect the successive biological stages, and that of these stages adolescence is the most critical and, till now, the least understood.

Dr. Slaughter's biology is to me impregnable—perhaps because I am no biologist. Impregnable too his pedagogy—perhaps because it coincides with my own. But whether in agreement or disagreement, no enquiring educator can read these provocative utterances without assured benefit to all he is seeking to educate.

"The central fact of adolescence," we are told, "is emotional change," and "its chief business is the formation and projection of ideals." Thus, "the chief value of great men is to fertilise the imagination of adolescents," and Utopias, so often decried, are "the very block and tackle of human advancement." The object of all education being "human quality and human adjustment," the chief need of adolescent education is "a provisional system of values, a working arrangement with regard to the large issues of life." For the teacher "the most difficult lesson to learn—as, indeed, in all other departments of education—is when to refrain from interference." But there is one safe course—to follow the "controlling principle that considerations of health and growth are paramount over all others. It is the prime function of the body to project the soul on its lonely way, and this cannot be done by any accessory machinery which sacrifices the body's efficiency." As to curriculum, "it would consist essentially of *Kulturgeschichte*, about which other materials would be organised."

A good many readers will regret that this comprehensive German term is not explicitly defined, but it is at least made clear that "the classics" will not be included, seeing that "they involve a misapplication of time and energy during the most important years of growth—a sacrifice made to meet a conventional demand educationally irrelevant."

Among other incidental severities I note that it is "a criminal ignorance" that teaches reading in the kindergarten; that "the present unlicensed employment of formal physical exercises for all stages of growth constitutes one of the greatest dangers of the time"; that "adolescent training is usually focussed upon those stale commonplaces which an inept adulthood believes are the beginning and end of wisdom," and that "a more enlightened generation will regard the boards displaying the names of scholarship winners as a record of offences demanding condemnation."

Dr. Slaughter attaches great importance to adolescent religion, but although he broadly interprets religion as "the expression of the communitary consciousness," and reminds religious teachers that "the full growth of a human soul is more important than adherence to any theological system," he seems to include the "*Deus ex machina* of the old-time theologians," among the legitimate objects of worship. Can it be that he would also include the Zeus and Jupiter of the ancients?

"Here are conclusions," writes Professor Findlay, "gathered from research in genetic psychology and kindred fields. If the interpretations are misleading, if the data on which they are based are incorrect, let the