have to get along in life without comforts and reasonable pleasures that have hitherto been within our reach. A cutting down of the scale of living is one of the sources of real suffering.

Hence if we take, say, $2,000 as the average salary of our college professors, we may say that on the average our professors will be drawn from homes where the scale of living is adjusted to the same figure, or a little more. But the children in such homes have, in our day, few of the advantages of life—few books, little or no travel, perhaps one may say without offense, little social experience. That was not so a generation ago, when salaries were about the same, but the scale of living totally different. Nowadays the college professorship offers no material inducements except to those who have been brought up in a pretty severe economy, and who can get from it all the comforts to which they have been used, and perhaps something more, with often an added pleasure in a certain prestige, which is attractive. Many will say that the self-made man is the grandest type of manhood we can put before our young men, etc. But the self-made man, admirable and effective though he often is, is rarely a cultivated man, and therefore can not give us all of what we want in the college teacher. And then, the self-made men on our faculties have so rarely finished the job.

Now a general rise in salaries would, I think, make it possible for our undergraduates to have for their intellectual guides not men who merely know immeasurably more of Latin or of botany than do the students themselves, but men who bring with them fine traditions of cultivated living and of "high thinking," a wide experience of life and humanity. It should, therefore, be the aim of the college to pay such salaries to its professors as would enable them to give to their own children what the college would regard as a perfect preparation for professorial work. Only in this way can it draw its teachers from a class in which such preparation is possible.

The graduate student has totally different needs, and in the university there should be found room for both types of teachers, the man of cultivation and the man of knowledge. Of these two the latter is more necessary to the advanced student than the former. I believe it is equally true that for the younger student, the man of cultivation is more necessary than the man of knowledge.

Everything depends, however, on the point of view, and no one can recognize more clearly than the writer that his own is hopelessly old-fashioned; though in a time that we regret and admire it was almost universal.

S.

SCIENTIFIC BOOKS

Life and Letters of Herbert Spencer. By David Duncan, LL.D. 2 vols. 8vo, pp. xiii + 414; vii + 444. New York, D. Appleton and Company. 1908.

Obviously enough, it is impossible at this early date to offer a just estimate either of Spencer the man, or of his "synthetic philosophy." "The Autobiography," covering sixty-two years of its author's life, and the volumes now before us must always serve, nevertheless, as primary sources for that more objective appreciation to be undertaken, doubtless, after the lapse of years. In these circumstances, and in this journal, I shall confine myself to certain points suggested by the "Biography," and eschew excursions farther afield.

The contents of Dr. Duncan's work are as follows: (1) Twenty-eight chapters of strict biography, filling the whole of Volume I., and 245 pages of Volume II. The method employed is to rely largely upon Spencer's correspondence, and to connect the scattered parts by apposite comments which serve also to fill out lapsed details. I am much struck by Dr. Duncan's admirable restraint in subordinating his own personality, and permitting the events to tell their own tale. (2) Two chapters, entitled, respectively, Characteristics and Personal Reminiscences, and Spencer's Place in the History of Thought; in these the biographer speaks for himself, and, especially in the former, introduces appreciations furnished by intimate friends and familiar acquaintances. (3) Five Appendices, whil fall into two distinct groups. (*a*) Contributions from

Spencer's own pen. Of these the *first* deals with his Physical Traits and some Sequences (written in 1902); the *second* with his intellectual history, under the title, The Filiation of Ideas (written in 1889). In a prefatory note Spencer points out that they really belong to the "Autobiography," but that this book was stereotyped ten years before the first of them was written. The *third* is a three-page unpublished letter on The Nebular Hypothesis (written in 1900). (*b*) *First,* a List of Herbert Spencer's Writings. *Second,* a list of Academic and other Honors offered to Herbert Spencer. I ought to add that I have found Dr. Duncan's volumes much more interesting than the "Autobiography." In fact, they present a complex, in some ways contradictory, personality. Perusal of them can not fail to dispel many current misconceptions; they will also enable the reader to orient himself more readily towards this latest "runner" in the wonderful race of British empirical "torch-bearers." Their wealth of incident will, of course, elicit varying reactions from different minds, and I can only indicate one or two of my own.

Spencer was wont to pride himself upon the non-conformity of his ancestors. Exiles for conscience sake from their old homes on the continent of Europe, they appear to have remained "agin' the government" in the land of their adoption. However this may be, it is of more vital interest by far for us to note that Spencer's own nonconformity can not but have been influenced deeply by the life upon which he looked out. A Saul among the prophets of the dissidence of dissent in religion, in politics and in society, he felt himself commissioned as a kind of supreme critic. His lack of school and university experience left "all his angles acute," while his career, after 1878, *dans le mouvement* at London, seems to have been too belated to work radical alteration. Had the Royal Society elected him in 1853, when Huxley introduced him to Tyndall for the first time in its rooms, he would doubtless have welcomed the recognition gladly. But, as he thought afterwards, in 1874, the courtesy arrived over-tardily. I incline to believe that much of his contrariness must be sought deep down in the nature of the English environment during his active days. The movement, so marked since, whereby eminent representatives of science pass readily from their middle-class origins to terms of equality with the "upper ten thousand," had not eventuated. The standards of judgment, inherited from medievalism, that wrote a man down a scoundrel for his matured opinions, still prevailed widely. In a word, the great period of transition from renascence to modern thought was on, and Spencer had the fortune, or misfortune, to be a main instrument in a profound transformation, one by no means over yet, especially in English-speaking lands. Of this he exhibits slight awareness, and the continuous friction serves to confirm incipient idiosyncrasies. His influence upon the philosophical trend in Britain after J. S. Mill's death, say, has remained slight; his public in the United States was constituted sooner, and has always been larger. These straws show how the wind blew; and he felt the chill keenly, even if he never perceived the causes. Or, to put it otherwise, his career must be read in the light of the contemporary religious, social and philosophical situation in England. He tended naturally to dissent, and regnant moods of his contemporaries served to intensify this leaning. Remembrance of this will help to explain not a little. For, as he records himself, he was at odds with his countrymen.

A further indication of the unstable condition of the intellectual world may be traced in Spencer's morbid fear lest he should be accused of elaborating any ideas save his very own. I have noted no less than fourteen references in point (I., 128, 147, 185, 188, 197, 207, 253, 268, 315, 327, 342; II., 90, 168 f., 212). Be it Comte or Darwin, Rousseau or Tylor, he will acknowledge no obligation; nor does he relish that Maudsley, or Clifford, or Lockyer should, as he supposes in evident good faith, trade upon his ideas, and amass reputation while he goes supperless to bed. His unhumorous punctilio in these and other matters almost renders Gilbert's whimsies fit commentary;

For he himself has said it,
And it's greatly to his credit,
That he is an Englishman!
But in spite of all temptations
To belong to other nations,
He remains "*the*" Englishman.

The immense transvaluation that occurred during Spencer's life has, I feel sure, as much to do with these curious, unpleasing, and puzzling traits as any mere heritable quality. This appears further in the dogmatic judgments he offers so serenely upon other men. As might be expected, Goethe and Carlyle, Ruskin and Watts and Stevenson, to say nothing of Kant, fare badly; so do Owen and Kelvin, Laveleye and Tylor and Weismann; but even Comte, J. S. Mill and Bain fail to escape the "predestinate scratched face." Justly enough, Calderwood is convicted of "a piece of poor fumbling," and Princetonians will be charmed to know that McCosh's *soubriquet* in his native country (McBosh) is recalled with glee. George Eliot and Victor Carus come through the ordeal unscathed; while of Alexander Smith it is said, "I am strongly inclined to rank him as the greatest poet since Shakespeare"! Neither Tennyson nor Browning, let alone Arnold, merits similar commendation. Plainly, the conflict of the age has determined these curious phenomena quite as much as personal bias.

No less interesting and symptomatic is Spencer's relation to *Facharbeit*. The enemy has affirmed in many shapes, "scratch Spencer and you find ignorance." It were superfluous to comment upon this cynicism. But it so happens that certain facts, full of intimation, do make their appearance, and serve to cast light upon not a few matters. As concerns what we mean by the *English* term "science," Spencer took care to consult with authorities. Consequently, even Darwin is able to write, "I was fairly astonished at the prodigality of your original views." He sought counsel constantly with Huxley and Tyndall; when he dealt with individual ethics, he "solicited the criticisms of married lady friends on whose judgment he could rely"; when preparing for a new edition of the "Principles of Biology," in 1895, he "ordered copies to be interleaved and sent to young biologists, recommended as being familiar with the recent developments of the science"; on questions of physics and geology he referred to Clerk Maxwell, Kelvin, Judd and numerous other experts; when he desired information *re* statistics, he applied to Sir R. Giffen, and so on. But, then, he aimed to rank as a philosopher, not as a scientific leader. What of philosophy, and philosophers, we therefore ask? *Mirabile dictu*, he knew little of Plato, nothing of Aristotle; of Bacon, the "Essays" alone; of Hobbes, not much; of Locke, nothing; of Bentham and Paley, only their most general doctrines, noised abroad by the man in the street; of Kant, nothing; of Mill he read the "Logic," but recorded no more than an attack upon one of its doctrines; Hamilton and Mansel aside, he seems to have been blind or indifferent to the whole movement since Kant; for instance, his single communication to its leading English exponent is a letter on a burning question of party politics! He repudiated expressly all knowledge of Indian philosophy; and, although he was an authority on the philosophy of education, he avers that he never read "Emile." Further, he seems rather proud that he possessed slight philosophical equipment; and yet, he does not protest when friends baptize him "the greatest living philosopher," indeed, one can only infer that he took them *au pied de la lettre*. These extraordinary contradictions are explicable in one way, so far as I am capable of seeing. Spencer was a *Verstandsmensch* and did not know it. It is amusing to find him cling again and again to the outworn eighteenth century standpoint (*e. g.*, I., 232, 235 f., 287, 301, 304; II., 3, 79, 191, 201) and, at the same time, characterize modern idealism as "old-world nonsense." The old-world nonsense nestled between his own covers, despite his evolutionism. As Ferri pointed out, he did not draw the conclusions which evolution warrants, and thus in philosophy, as in other things, he stood rather aside from the main current of his time. Epistemology and logic failed to touch him, and he never attempted the deeps of constructive metaphysics. His constitutional aversion to criticism, and even

to discussion, emphasized all this. So, here too, transition is written large over much of his work. This, more than aught else, explains the defense outlined by the Dean of Westminster, when he refused to entertain the proposal for a Spencer monument in the Abbey. And, as Dr. Duncan does not see (II., 244 f.), Hegel would have concurred, would have trimmed, possibly, upon his famous foot-note about the philosophy of hair-dressing. Philosophically, Spencer was fated to be a mighty *Bahnbrecher;* such an one stood in need; and he accomplished the full tale of bricks. Accordingly, it is nowise astonishing that his appeal to philosophers *von Fach* has not been very fundamental. How could it be in the circumstances? Try the case from the scientific side. What would scientific men think of a colleague who comported himself in like manner, and then permitted acclaim as the sole high-priest? Notwithstanding, no one can deprive him of his rightful place as advance agent of evolutionary phenomenology; yet, for this very reason, our generation hesitates to enroll him in the apostolic succession of constructive thought. Further, the same facts indicate why, to this good hour, he has not received more than a modicum of the recognition that he earned so richly. They also account for some of his life-long asperities.

Pleasing glimpses are given of Spencer's relations with his friends, which dispel the wide-spread belief that he was a surly curmudgeon, "all intellect and no heart." Among these, one of the most interesting to Americans can not but be his unclouded friendship with Youmans, the founder of the *Popular Science Monthly.* But, beyond question, the most impressive factor in the personality was the indomitable will whereby, taking up arms against a sea of trouble, the man conquered, and all for the purest of ideal interests. To this battle the history of the race presents few parallels, and it bears a heartening message of encouragement to every worker for the spiritually indispensable, as Carlyle called it finely.

Finally, for the benefit of American readers, a word should be added concerning Dr. Duncan. He is an Edinburgh philosopher, who acted as Spencer's secretary for several years in the late sixties. In 1870, he proceeded to India as professor of philosophy in the Presidency College, Madras. After fourteen years' service, he became principal of this institution. From 1892 till 1899, when he retired, he occupied the important administrative office of Director of Public Instruction for the Madras Presidency. He is known as one of Spencer's oldest collaborators in the "Descriptive Sociology." He seems to me to have performed a task of infinite difficulty, due partly to the reasons outlined above, with admirable spirit and skill. The extreme care with which the book has been produced—I have noted but three trifling misprints—and the thorough, workman-like index, are among our least obligations to his *pietas.*

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Notes on the Development of a Child, Parts 1–4, Vol. I., 1893–1899. The Development of the Senses in the First Three Years of Childhood, Vol. II., July 25, 1908. University of California Publications in Education, Vols. 1 and 4. By MILLICENT WASHBURN SHINN. Berkeley, The University Press. Pp. (Vol. I.) 424. $2.25. Vol. II., pp. 258. $2.50.

Dr. Shinn's first contribution to our knowledge of "the ontogenic evolution of the faculties of the human mind," which Professor Le Conte, in an introductory note to Volume I., describes as the "most important of all possible subjects," was published fifteen years ago as Part I. of the "Notes." (Pp. 88.) This part, after a page of biographical notes and two pages giving measurements of growth in height and weight, consists of data relating to the development of sight in infancy, chiefly during the first two years, and classified under such headings as: sensibility to light, movements of the eyelids and eyeballs, fixation, direction of look, sensibility to colors, color preferences, discrimination of forms geometrical and other, understanding pictures and other representations.

Part II. of Volume I., pp. 89–178, appeared