has been continued in a variety of ways; he knows further that for Kant the categorical imperative and the practical postulates derived from it were anything but arbitrary and subjective, and not "things posited by the ego" in any Kantian, post-Kantian, or psychological sense (cf. pp. 61-62); he knows, lastly, that no doctrine of an absolute Will is to be found in Hegel (cf. p. 57), and that neither in Fichte nor in Schopenhauer is the absolute Will free to experiment with any assumptions it pleases (cf. p. 51). It will not to do attribute the empirical voluntarism of the experimental theory of knowledge which has been developed in America and England to the apriorist voluntarism of some German metaphysics, simply because Prof. Santayana dislikes them both, and in trying to hit both with the same stone he scores a double miss.

The earnest student of philosophy for examination purposes, then, will not be able quite to trust Prof. Santayana. He has made his monster, not to instruct others, but to divert himself. And a horrid suspicion arises that he has modelled it upon the characteristics of a former colleague, who still represents German science and a Fichtean metaphysic at Harvard—much as those of James's 'irenical Absolute' always showed beneath a thin veil the features of his friend, Josiah Royce. But even if it does not teach us much about German philosophy, we learn a good deal from this book about Prof. Santayana, especially about his attitude towards bull-fights. And we are excellently entertained throughout. Is not that far more than can usually be said of philosophic literature?

F. C. S. SCHILLER.

A Budget of Paradoxes. AUGUSTUS DE MORGAN. Second Edition. Volume i., pp. viii, 402. Volume ii., pp. 387. Edited by DAVID EUGENE SMITH. Open Court Company.

THIS work is a reprint of De Morgan's extremely witty and learned contributions to the *Athenæum*, with the author's additions. It contains notes by De Morgan and his wife, and many additional ones by the editor. It is published in two handsome red volumes with two portraits of De Morgan, an old gentleman of delightful appearance who recalls Mr. Pickwick.

The book is marred very greatly by the atrocious translations from foreign tongues which some one—not the editor, let us hope—has provided. They contain 'howlers' which would have delighted De Morgan if he had found them in the works of any of his paradoxers. But a scholarly and widely read author such as De Morgan would turn in his grave if he knew of some of the horrors which now appear in his own work. I will quote a few choice specimens. On p. 3, in a reference to the doctrine of the Trinity, the passage *Satius fuisset . . . antequam quod esset*

statuerent . . . quid esset . . . investigasse is translated: 'It would have been better to have investigated what it might be before they determined what it was'. This seems to be equally bad as Latin and as philosophy. On p. 24 the French *devoit-il confondre avec des Ecrivains superficiels, dont la Liberté du Corps ne permet pas de restreindre la fertilité cette foule de savans du premier ordre . . .* is translated by the meaningless sentence: 'Must we confuse him (!) with those superficial writers whose liberty of body (!) does not permit them to restrain their fruitfulness, that crowd of savants of the highest rank . . .' On p. 90 *et seq.* De Morgan quotes the corrections which the Congregation of the Index proposed to apply to the work of Copernicus. Here the translator is again at fault. *Sacræ Scripturæ . . . repugnantia . . . non per hypothesin tractare sed ut verissima adstruere non dubitat* does not mean 'As repugnant to Holy Scripture . . . he does not hesitate to treat (of his subject) by hypothesis but he even adds as most true.' In fact this translation is hardly intelligible English even.

On p. 93, where the same subject is continued, there occur some very odd translations. Copernicus wrote: *Cur ergo hesitamus adhuc mobilitatem illi . . . concedere, magisquam quod totus labatur mundus, cujus finis ignoratur, scirique nequit . . .*? The emendation of the Index runs: *Cur ergo non possum mobilitatem illi . . . concedere, magisque quod totus labatur mundus, cujus finis ignoratur, scirique nequit . . .* The former passage is translated by the sentence: 'Therefore why do we hesitate to concede to it motion . . ., the more so because the whole universe is moving, whose end is not and cannot be known . . .?' The latter is translated by the sentence: 'Hence I cannot concede motion to this form, the more so because the universe would fall, whose end is not and cannot be known . . .' It has not apparently struck the translator that there might be a difference between *magisquam* and *magisque*; nor is any reason produced why *labatur* in the first sentence should mean 'is moving' and in the second 'would fall'.

There is another exquisite piece of translation on pp. 53-54 where a circle, which says of itself:

Eram figura nobilis
Carensque sola origine
Carensque sola termino,

is made to have said:

'A noble figure then was I,
And lacking nothing but a start,
And lacking nothing but an end.'

This is (*a*) an impossible translation of the Latin; (*b*) logically absurd. How could a figure lack *nothing* but a start and *also* lack an end, or *vice versâ*?

These are the more noteworthy pieces of mistranslation in volume i. There are also misprints on p. 53, where *the* is

written for *they;* and on p. 253, where, from the differential equation $\beta(\phi - z)\,dt = dz$, is deduced the equation

$$\beta t = \frac{\kappa}{\phi - z}, \text{ instead of } \beta t = \log \frac{\kappa}{\phi - z}.$$

On p. 392 *quib* is a misprint for *squib*.

Among good things in the first volume I may mention Napier's 'killing dilemma' to the Church of Rome (p. 67); the statesman-like testimonials of Jean Bernouilli and Samuel Koenig to an importunate circle-squarer (p. 151); and De Morgan's story of seeing in the library of the British Museum a highly coloured work with the title *Blast The Antinomians*, which proved not to be an uncharitable forecast of the future state of that sect, but a history of it by a writer who combined the possession of this vigorous name with a contempt for the pedantries of punctuation. ('Blastus! thou shouldst be living at this day; Maxse hath need of thee!')

Readers of MIND will also be interested in Mr. Wirgman, 'the Kantesian jeweller,' who demonstrated his master's system to De Morgan by blowing cigar smoke over a bowl of goldfish. He was defended by Brougham against a Society for the Suppression of Vice, which charged him with selling snuff-boxes containing pictures which appealed to the bucks of the Regency for reasons that would hardly have been recognised as purely æsthetic by the author of the *Critique of Judgment*.

This story brings me to an amusing fact (omitted by De Morgan) about Thomas Taylor, the Platonist, who is mentioned in this Budget. Taylor translated the *Golden Ass* of Apuleius, in which he saw all kinds of profound metaphysical truths. Being a very respectable old gentleman he omitted all the bleaker passages from the body of the work; being a very conscientious one he translated them all and collected them at the end, thus earning the undying gratitude of those whose taste for obscenity is stronger than their Latin scholarship.

Occasionally we get very interesting glimpses of De Morgan's own views; these are always acute and valuable. Thus he gives a long review of an edition of Bacon's works by Spedding, Ellis, and Heath (p. 76 *et seq.*). Here he makes a very reasonable protest against the English idolatry of Bacon as the founder of induction, and states his own admirable views as to the real nature of inductive reasoning and the real merits of Bacon. It is in a footnote on p. 76 that we are told that Spedding was 'a fellow of Cambridge'. I am afraid that the Theory of Logical Types makes this expression a meaningless noise; but the error is excusable in an American editor. But I can hardly excuse the expression 'suicided' used in a note on p. 186 to describe the end of my Lord Castlereagh[1] of happy memory.

[1] May we be permitted to hope that his late Lordship's troubled spirit has now found rest in studying the *Defence of the Realm Act* and noting its administration?

Throughout the whole work we get a very pleasant picture of De Morgan as a man who combined great learning with a genuine love of truth in every field and a hatred of every kind of intolerance, political or religious. These characteristics, added to his strong sense of humour and his logical acuteness, remind us of the greatest English logician of our own day, also a member of De Morgan's own college. And this resemblance is not diminished by a certain rather lovable tendency to be a little intolerant in his hatred of intolerance.

The second volume opens with some very acute remarks on religion. De Morgan was obviously inclined to be an Unitarian Theist and is equally opposed to the narrow-mindedness of priests and of orthodox scientists. The former opposition is charmingly illustrated by his comparison of the Roman and Protestant Communions to two dishonest milkmen whose real difference is that one puts milk into water and the other puts water into milk, but who accuse each other of far worse kinds of adulteration. And the latter opposition is shown in De Morgan's attitude towards spiritualism; he was compelled to accept some of the phenomena, but declined to hold that the spiritualistic explanation was more than one possible hypothesis.

This volume is the happy hunting-ground of De Morgan's two arch-paradoxers, Mr. James Smith of Liverpool, who proved that $\pi = 3\frac{1}{8}$ by *assuming* this as an hypothesis and proving that other hypotheses were incompatible with it, and Dr. Thorn, who attempted to identify De Morgan with the Beast of the Revelation. The author is at his best in castigating these two very pertinacious paradoxers; it was obviously a labour of love, and they—though totally unconvinced—seem to have entered into the spirit of the contest.

The reader will also be pleased to make the acquaintance of Mrs. Cottle of Clapham, who appears to have considered herself a good deal higher than the angels; and to hear of the small child, carefully trained by religious parents, who, when told 'Papa couldn't dance on his head,' replied 'No, but Dod tood!' And the mathematician may be interested to learn that Mr. Tresham Dames Gregg's differential equation for the 18th Psalm is

$$\frac{du}{de} = ce\frac{dx}{de} + ex\frac{dc}{de}x + cx.$$

It is perhaps fitting that the volume which the author has filled with the most astonishing examples of human folly should be provided by the editor with some of the brightest gems of mistranslation. Two of them are good enough for *Punch*. On p. 166 the sentence *C'est donc pour arriver à ce parallelisme . . . que Copernic a cru devoir recourir à ce mouvement égal et opposé* becomes in English: 'It is therefore to arrive at this parallelism . . . that Copernicus *feared* (!) to be obliged to have recourse to this equal and opposite movement'. *Cru* as the past participle of *craindre* is fairly good; but on p. 365 there is something

better, for there *Christe . . . qui cuncta pace tueris* is translated 'O Christ who . . . slayst (!) all things in peace'. *Tueris*, I suppose, from the well-known *Latin* verb *tuer*, to kill! There is another 'howler' in the translation of the first line of the poem in which this sentence occurs; but I have doubtless said enough to make it clear that a delightful and scholarly book, well bound and well printed, has been almost ruined by ignorance which reflects equal discredit on the translator who exhibited it and the editor who passed it.

C. D. BROAD.