THE UNITARY METHOD IN ARITHMETIC.*

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WE have heard a good deal lately about this so-called *new* method. We read of it in Educational journals; learned Doctors refer to it in their Annual Addresses, and we see it occupy a prominent position in carefully prepared Examination Papers. All this, too, among our friends in the sister province of Ontario, so justly celebrated both by themselves and others for the excellence of their schools and schoolmasters. Being so well received there, ought not we to adopt it here without further question? I think not. Not at all influenced by the morbid dread of seeming to be submissive to *authority*, which haunts many of the would-be leaders of educational thought and practice, we would still like to inquire for ourselves into the credentials of this new-comer. It would not be the first time that a specious adventurer had, in Toronto as well as elsewhere, by dint of brass and the enthusiasm of his patrons, obtained a position far above what his true merits entitled him to. Wherever the Unitary Method is mentioned, it is generally in connection with the name of Hamblin Smith as its author or promulgator. Let us examine his work and see whether, in other directions, he proves himself such a careful, correct, intelligent director that we can, in regard to this new matter, heartily accept him as a safe guide; and, without further demur, follow his lead. If he does not prove himself such a trustworthy guide, then we must examine the subject itself on its merits, and decide accordingly.

I have here A TREATISE ON ARITHMETIC, by J. Hamblin Smith—fourth edition—*London*, 1877. A *Treatise*, observe; not a mere collection of rules and exercises for the convenience of schools, but a discussion of Arithmetic as a *science* as well as an art.

Nothing could be better than the first sentence of the preface—"In writing this book, the object I had in view was not so much to teach *rules* as to explain *principles*." Farther on he says; "I have carefully avoided the unsatisfactory and misleading process called the *Rule of Three*, which merely teaches how to arrive at certain results without a thorough knowledge of the method." In the preface to the second edition, he says: "I have added a few remarks on ratio and proportion." Observe the concession, the graceful condescension of a great mind to popular prejudice. On looking over the table of contents, which is well divided into the two parts, Pure Arithmetic and Commercial Arithmetic, I find his *remarks* on ratio and proportion thrust into the middle of the commercial part. This augurs ill either for his understanding or for his honesty in dealing with the despised subject.

Passing on to the work itself, he begins with Notation, without any hint of the system of Numeration which preceded it, and on which it is based. His Numeration is only written, not spoken, and he nowhere shews that, *e.g.*, 936 represents nine hundred and thirty-six *ones*. In Addition and Subtraction he does not use the technical names, *addend*, *minuend*, etc., though he uses corresponding words afterwards. To subtract 3 from 5 he says that *strictly* it is $5-1=4$, $4-1=3$, $3-1=2$ $\therefore$ $5-3=2$. He defines $\times$ to mean *times*, and then elsewhere uses it in the ordinary sense of *multiplied by*. Division is thus defined: "The process by which when a *product* is given, and we know *one* of the factors, the *other* factor is determined." To me this

*Delivered before the Provincial Association of Protestant Teachers, Province of Quebec, held at Quebec, October, 1879.