

to neutralise and enfeeble his powers—and in short, to abet him in appropriating other people's gains. (1)

Let us take another instance. A child is crammed with the multiplication table. He glibly repeats, six times five are thirty, six times seven are forty-two, &c. He perhaps does not know what *times* means. He often does know that six times seven is the same as seven times six. He knows six and seven, because he had experience of six nuts or seven marbles, but he does not know what forty-two means, because it probably transcends his experience. He has no idea in his mind corresponding to the word. It is a case of unlawful appropriation. If he had been required to make six heaps of seven nuts or peas, and then mingled the heaps, and counted the result out, he would have obtained this idea; and then he would have known forty-two, whereas it is now a mere sound, nothing but cram.

And so with other tables. Getting them up to repeat merely by rote, without an intelligent perception of their meaning as interpreted by facts, is of the nature of cramming—it is unlawful appropriation. A child masters the sing-song of twelve inches make one foot, three feet one yard, etc., having no ideas in his mind corresponding to the words; it is rammed or crammed down. But suppose he had put into his hands a yard measure, graduated with feet and inches, and counted the large divisions, and then afterwards the small ones, this would be feeding on fact-food, which would give him ideas, not on mere word-feed which he could not turn into ideas. He would be gaining knowledge for himself. And then, with the yard measure in his hand, he could find the length of the desks, forms, or the floor of the room, which would be practically applying his knowledge. And further still, having gained the idea of a foot, he might by his eyes, guess at the length of different sticks and rods, and then by actual

measurement verify the judgments he had formed. All, then, would be natural feeding.

In the same way, by handling whole and divided cubes, he could learn by himself, and without cramming, that a three-inch cube contains twenty-seven inch cubes. In all these cases the same principle holds good. The child gains knowledge by observing for himself; and illustrates in his practice the laws of psychological action without telling or cramming.

But further, and more generally still. Whenever the teacher, in defiance not only of the child's nature but of the nature of things, neglects the true order of mental development, involves his pupil's mind in the misty and obscure remote, which is beyond the range of his personal experience, instead of exercising him in the clearly-defined area of the near, which is within the range of his personal experience; whenever the teacher hurries on the child with long strides, instead of allowing him to proceed by his own sure method of step by step, advancing only as he can advance; whenever the teacher, instead of guiding the learner from the known to the unknown, from the particular to the general, from the concrete to the abstract, from the centre to the circumference, inverts this procedure (as when he gives definitions and rules in advance of the facts and principles on which they are founded), he sins against the nature of things, and against the laws of mental development, and is essentially a crammer.

Then there is the moral aspect of the question. Cramming is a system of shams and delusions, which pretends to be what it is not, and is what it pretends not to be. It pretends to be advancing the cause of knowledge and truth; it actually screens ignorance and error; it gives mere words the place which is due to ideas founded on realities, and which alone constitute sound knowledge; and therefore creates the habit of being contented with the semblance instead of the substance—a habit which slowly but surely perverts the moral nature.

It can never be too often repeated that cramming and education are in direct antagonism; the success of the one is the defeat of the other. Education aims at developing all the learner's active powers, and making the best of their spontaneous and

(1) I have often quoted Dr. Temple's remarks on this subject, but I quote them once more as apposite to my purpose. "All the best cultivation," he says, "of a child's mind is obtained by the child's own exertions, and the master's success may be measured by the degree in which he can bring his scholar to make such exertions, absolutely without aid." It is clear that the teacher, who, even with the best intentions, supercedes these exertions, violates a prime canon of teaching, and is so far a crammer.