

and cheerful adherence to duty while at school, that he used to speak of her as a pattern to other young pupils, as well as for the promise her conduct gave of future merit. She was not, however, permitted to remain long at school, her father having become more reduced, and the little assistance her services could render being required at home. I could not learn of any thing remarkable in her life," says Mr. Rose, "until after she had trodden the blossoms of some seventeen springs, save her affection to her friends, her industrious habits, and her application to mental self-culture.

"It was then that Mr. Bethune's youngest son, Norman, first began to manifest a desire that he should appear worthy of Colina's esteem. He was always at home, his father being anxious he should direct his views to the profession of teaching, and willing to give him every advantage,—but for this he had no inclination, and as he had rather a predilection for a farmer's life, he often rambled out in the fields adjoining the village, when he should have been reading or studying at home. By this means he frequently met Colina while tending her father's little flock,—he knew her in School, and never forgot the good opinion his father had formed of her then. In their rural walks whenever their conversation turned upon interesting books, the varied beauties of nature around them, or other subjects congenial to their young ideas, Norman found that Colina's mind was a model of his own, and he regarded her not like those who value the jewel for the external elegance of the casket—but for her intrinsic worth, nor could Colina long conceal that she loved Norman, not only for his amiable qualities but as well for having made her the only 'beautiful' of his heart.

"But the time was come when Colina's parents must leave the land of their nativity, and it was then the young lovers felt that their hearts were more closely entwined together than that they could be happy if separated. Fain would Norman follow his Colina to the most sequestered spot of the earth or the most detached island of the ocean,—but he soon learned that his parents would not be reconciled to the thought of his emigrating at so premature an age, and notwithstanding their regard for Colina, would, for the same reason, object to their union. He sought for advice from the early object of his youthful vows, and, at such a juncture, what could the tender-hearted Colina suggest. A delicate consciousness of propriety caused the blush which marred its performance, and she could only refer to the obligations parental affection imposed on them. At last it seemed to have occurred to Norman's mind how he could obtain his father's consent to emigrate ere much time should elapse, especially as the state of affairs in his native country offered few inducements or prospects in any other line of life, and for teaching he thought he could soon convince his father it was folly for him to follow a profession which he disliked. He had already foreseen the way in which he could obtain his parent's blessing, and on angel's wings follow his beloved Colina,—and with such hopes he consoled her mind. She knew the integrity of his purpose, and loved him not less for his filial piety.

*Fate often tears the bosom chords
Which nature finest strung.'*

"We next find Norman accompanying his fair Colina to the emigrant ship on the evening preceding the morning of her departure. Not a few of the honest peasantry of the surrounding country—induced to leave their long-loved homes and native land by reason of those vicissitudes by which so many once happy homesteads in these districts are left desolate—were already berthed on board the noble vessel that was to carry them across the wide Atlantic, and many of the cottages in the village of Lochalin, which used to present the appearance of industry and happiness, now looked cheerless and uninhabited.

*'Good heaven! what sorrows gloomed that parting day
That called them from their native walks away.'*

Norman and Colina were not long permitted to converse together on board, after the confusion which usually attends the embarkation of emigrants had somewhat subsided, when the pastor of the village of Lochalin was come to give a farewell address to the members of his flock now about to be dismissed from his charge."

"Dear papa," Adelaide interrupts, "I have read of the 'Church in the house' but there was the 'church in the ship.'"

"Exactly so," proceeded Mr. Rose, "and calmly did this interesting assembly listen to the words of instruction and comfort spoken on the occasion. As they joined in singing the lines—

*Thou, tears of sorrow giv'st to them,
Instead of bread to eat.'*

"Norman could read in Colina's countenance although deeply sullied with tears, something that expressed a hope that the same Providence which now appointed their separation for a time, would deign to grant ere long they should meet again to part no more till death. But it was not long when Norman had to return ashore at a late hour, and as if some guardian spirit had whispered to Colina that she should not see him again before the ship would leave, she wanted to know if he did not intend to see her again at an early hour in the morning. Her young friend answered in the affirmative. She pressed his hand, and with a sweet and solemn emphasis, and a broken sigh which expressed the language of the heart, she said, 'Norman, your Colina!' He replied with a deep tone of feeling which vibrated every chord of her bosom, 'Yours alone, ever.'"

(To be continued.)

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CANADIAN FAMILY HERALD.

TORONTO, SATURDAY, APRIL 24, 1852.

PROFESSOR CHERRIMAN'S SPEECH ON KIRKWOOD'S ANALOGY.

The subject proposed for a brief discussion was one of more than common interest, as it professed to be the discovery of a new planetary law, by an American gentleman, Mr. David Kirkwood of Pennsylvania. It was propounded by him in a letter to Professor Walker, who seized upon it with enthusiasm, and read a demonstration of it before the American Society in 1849, being followed by Dr. Gould in the same track. These gentlemen and Professor Peirce spoke of it "as being the only discovery since Kepler's time which at all approached the character of his three physical laws, as affording striking evidence in support of Laplace's nebular hypothesis, and as entitling Mr. Kirkwood to take rank beside Kepler as the discoverer of a great planetary harmony." If this praise were not exaggerated, it must then follow that the new world had at last produced in the teacher of Pennsylvania, one of those giants of science whose birthdays are epochs in the history of the world. The statement of the law or as it is called "Kirkwood's Analogy," was this: between every two adjacent planets there is a point where the attraction of the one is nearly counterbalanced by the attraction of the other, so that a particle placed there would move towards neither, but be at rest; thus such a point will occur between Venus and the Earth, and another such point between the Earth and Mars:

let the distance between these two points be called "the diameter of the sphere of attraction of the Earth," and let a similar diameter be calculated for each of the planets, also take the number of times which a planet turns round its own axis during our revolution round the Sun, then the Analogy asserts, that, "the squares of these latter numbers are proportioned to the cubes of the respective diameters of the spheres of attraction." The Analogy on the face of it has a certain resemblance to Kepler's third law, the same forms and quantities of the same species being involved as in that law, but the resemblance is only apparent; Kepler's law being universal, while the Analogy is incapable of application either to the outermost planet, or to the sun regarded as the innermost. This lack of universality was enough to warrant Philosophers in rejecting it as an expression of a law of nature, still it might be a physical fact so far as it went, and must therefore be examined in detail. Instances of this kind were not of uncommon occurrence, where a formula gave results in a limited number of cases more or less exactly agreeing with those of observation, and yet failing wholly when more cases were taken into account, the failure of Bode's law was a case remarkably in point. In applying the Analogy in detail, it was found inapplicable in the case of Mercury, the planet next the sun, and also to fail where the break of the asteroids occurred, as was indeed to be expected, but the consequences in the latter instance were unfortunate as it prevented the testing of the Analogy in the two planets next to the Asteroids, namely Mars and Jupiter. On applying it to Uranus, it regained for him a rotation of from 33 to 36 hours, while he received rotation is only 9 $\frac{1}{2}$ hours; it happened however, that this latter rotation was only a result of theory and not of observation, although with other planets the same theory gave results which accorded with observation, and there was no reason for distrusting it in this case, beside which, the rotation thus deduced from theory, was seen to be probable from certain distinctive features which appear to give us the means of dividing the planets into two marked classes; however, theory and the Analogy disagreeing in this case, and observation not having yet been able to decide the matter, the benefit of the doubt might be given to the Analogy, and Uranus be suffered to drop, thus making the seventh out of the ten planetary bodies in which the Analogy is either indeterminate or fails. Here are then left three planets out of the whole set, Venus, the Earth, and Saturn, and from these three we were to expect two numerical coincidences according to the Analogy, and thus this huge inverted pyramid of a planetary harmony was found to stand on so narrow an apex as two numerical agreements. But were even these agreements? Professor Walker and Dr. Gould say so, Professor Loomis hesitates and rather thinks not, as the result of his own investigations, the speaker had no hesitation in asserting that the agreements were not really close enough to afford even a shade of support to the Analogy, and that the results obtained by those who asserted the contrary were obtained by a process which could not be regarded as an exact investigation. The speaker concluded by remarking on the singular fatality which had attended any attempts at the numerical verification of Laplace's nebular hypothesis, instancing that of M. Comte who had wasted much industry and skill in proving what turned out to be an identity or truism; while to this present attempt of Mr. Kirkwood could not even be awarded the praise of numerical correctness.

WHAT WE OWE TO CHRISTIANITY.

The late eminent judge Sir Allan Park, once said at a public meeting in London, 'we live in the midst of blessings till we are utterly insensible of their greatness, and of the source from whence they flow. We speak of our civilization, our arts, our freedom, our laws, and forget entirely how large a share is due to Christianity. Blot-