Lewis Carroll: Author, Mathematician, and Christian

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Charles Lutwidge Dodgson (1832-1898), better known as Lewis Carroll, is best known as the creative and imaginative author of the Alice stories, but he was also a mathematician at Christ Church College, Oxford University and a devout Christian. His mathematics, especially mathematical logic, contributed much to the charming "nonsense" in Alice's Adventures in Wonderland and Through the Looking-Glass. However, his Christian thought is not evident in those books. In fact, they contain many parodies of morality poems for children. As a result of reading just these books, one might conclude that he was not even interested in morality. But to those who knew him personally, he seemed to be a rather pious, stodgy person. Also, he wrote essays and letters in defense of morality and Christianity as well as books and articles on mathematics. His writings on morality showed little of his literary imagination and his writings on mathematics give no indication of his Christianity. Only in Sylvie and Bruno and Sylvie and Bruno Concluded did Dodgson attempt to bring his literary creativity, mathematics, and Christianity all together in one artistic creation. This paper will attempt to answer the following questions. What motivated him to make this attempt and how successful was it?

The Alice stories were the first really successful children's stories which did not have obvious moral teachings. They were just for fun. However he wrote articles and letters against "indecent literature," joking about sacred things, and immorality in plays. Some projects that he planned but never completed were: selections from the Bible to be memorized, selections from the Bible with pictures for children, and selections from Shakespeare with inappropriate content for young girls deleted. Morton Cohen, in his biography, states "On June 20, 1895, Charles sent the printer the manuscript of 'Eternal Punishment', part of a book to be entitled Solvent Principles" (never completed). According to what he wrote Macmillan on May 14,1895, it would "attempt to treat some of the religious difficulties of the day from a logical point of view" (481). He also wrote articles against vivisection, on the problem of pain, and advice to an agnostic. None of his charming nonsense appears in these writings. It is almost as if Charles Dodgson wrote on Christianity and morality and a separate person, Lewis Carroll, wrote the Alice stories. In some of his writings on mathematics and puzzles, the mathematician and literary artist combine to produce delightful reading, but in none of these does he bring in his Christian thought.

However, those who knew him best, knew that in the man, Charles Dodgson, there was a unity between author, mathematician, and Christian. There was a close connection between his mathematics and his humor. According to his nephew and biographer, Stuart Dodgson Collingwood, as quoted in Morton Cohen's Lewis Carroll:

Interviews and Recollections, "His mathematical mind had a great deal to do with the form of his humour. It was the exactitude of a mind mathematically trained which dealt with such delicately absurd preciseness." (12). Thomas Strong, a student and dean of Christ Church College said, "As one saw more of him it became natural to think of him in connexion with the two sides of his mind, and to understand their real unity and to know behind them the kind and thoughtful Devout Christian man" (39 in Cohen's Interviews and Recollections). The question is, did the Sylvie and Bruno stories display that unity?

Although Sylvie and Bruno was published in 1889, and Sylvie and Bruno Concluded in 1892, Dodgson considered them as one story. So, in the rest of this paper, I will refer to both parts simply as Sylvie and Bruno. In a letter to a friend in 1887, Dodgson referred to the writing of Sylvie and Bruno as the work he believed that God meant for him to do (686 in The Letters). In the preface to that book, he wrote, "It is written, not for money, and not for fame, but in the hope of supplying, for the children whom I love, some thoughts that may prove, I would fain hope, not wholly out of harmony with the graver cadences of Life". Also, in a letter to the wife of George Macdonald, he wrote, "I earnestly long to complete the second (and concluding) volume of Sylvie and Bruno. Whether it is better or worse than the Alice books, I have no idea: but I take a far greater interest in it, as having tried to put more real *thought* into it" (886 in The Letters). For the first time, he expresses many of his Christian ideas in a work of fiction.

He may have been inspired to make this attempt to integrate his Christianity with literary work by the example of his friend George Macdonald, whose many novels and fairy tales are permeated with Christian thought. Incidentally, Dodgson had given the manuscript of Alice in Wonderland to the Macdonalds to be read to their children. It was their enthusiastic endorsement that persuaded Dodgson to publish the book. Dodgson's theology was quite similar to Macdonald's and he had read most of Macdonald's books and discussed many of them with him. It is quite possible that Macdonald's success with expressing his Christianity in his fiction and the Macdonald family's work in aiding the poor encouraged Dodgson to this attempt to do more for his faith.

There are similarities between Sylvie and Bruno and some of Macdonald's works. Macdonald was very much interested in dreams. One of his favorite quotations was from Novalis, "Our life ought to be a dream and perhaps someday it may become one". At the beginning of Sylvie and Bruno is a poem which begins:

> Is all our life, then, but a dream
> Seen faintly in the golden gleam
> Athwart Time's dark resistless stream? (275. All quotations from Sylvie and Bruno are taken from The Complete Works of Lewis Carroll.).

According to William Raeper, a biographer of MacDonald, Arthur Forester's (a character in Sylvie and Bruno) "sacrificial entry, into the plague-ridden village only to undergo an inevitable death and resurrection are familiar devices to anyone who has ever read any of Macdonald's novels" (177). John Docherty in his book, The Literary

Products of the Lewis Carroll-George Macdonald Friendship, makes many comparisons between the works of MacDonald and Dodgson. In particular, he compares the father's relationship to Sylvie and Bruno to the elder brother's relationship to his sisters and brothers in Macdonald's fairy tale, "The Castle" (348). Docherty also conjectures that Sylvie and Bruno may be based on Macdonald's children, Mary and Greville (95). If not the inspiration for Dodgson's attempt at integration, Macdonald was at least an influence. Sylvie and Bruno combines a fairy tale, which contains much of the humorous nonsense from the mathematical mind of Dodgson, nonsense which is similar to that in the Alice stories, with a serious Victorian novel. The literary device used by Dodgson is a supposition that real people have modes of consciousness which enable them to see and sometimes to become a part of fairy land and similar modes of consciousness for fairy people to see or become a part of the real world. This is often confusing for the reader, but it enables Dodgson to use nonsense in the fairy parts and Christianity in the "realistic" parts. We now need to examine the novel more carefully to try to evaluate how successful the integration was.

Mathematics is used in both the fairy-world and the real-world parts of the book and is used sometimes as a takeoff for his nonsense and sometimes to illustrate a serious point. Some examples of topics that are used are; ellipses, dimensions, the rule of three, and least common multiple.

One of his most interesting uses of mathematics is a Klein bottle in which the inside and the outside are the same. It is a three-dimensional object which can not be constructed in our three-dimensional world, but can be described. It is similar to a Mobius strip, a two-dimensional object with only one side, which can be constructed in our world. In the novel, Mein Herr shows Lady Muriel how to sew handkerchiefs into what he calls Fortunatus's Purse but which would actually have the shape of a Klein bottle. Of course, she does not complete it because it is impossible in the real world. Lady Muriel asks, "But why do you call it Fortunatus's Purse, Mein Herr?" The answer is, "Don't you see my child. . . ? Whatever is *inside* that Purse, is *outside* it; and whatever is *outside* it is *inside* it. So you have all the wealth of the world in that leetle Purse!" (579). One of the points that Dodgson is making in Sylvie and Bruno is that there is more to reality than we normally experience and so Fortunatus's Purse may be a symbol or metaphor for the whole novel. A major theme of the novel is the importance of love. Mein Herr's comment about the wealth of the world being in the purse, led Edmund Miller (in Guillano) to speculate that it may also be

> an emblem of the theme of the work that love is teachable and its power is boundless. We must learn to reach the depths of love contained in Fortunatus's Purse. And this love is all around us if we know how to look for it aright (135).

Mathematics is the subject where theorems are proved from axioms, using the rules of logic. Since it is impossible to prove every statement, the axioms must be accepted without proof. Dodgson's specialty in mathematics was mathematical logic, so

he uses this more than any other idea for both his sense and nonsense. First, an example of nonsense. Although Lady Muriel usually seems quite intelligent, Arthur gets her to agree to some strange axioms in the following conversation:

> "Talking of Herbert Spencer," he began, "do you really find no logical difficulty in regarding Nature as a process of involution, passing from definite coherent homogeneity to indefinite incoherent heterogeneity?"
>
> "No physical difficulty," she confidently replied, "but I haven't studied Logic much. Would you state the difficulty?"
>
> "Well," said Arthur, "do you accept it as self-evident? Is it as obvious, for instance, as that 'things that are greater than the same are greater than one another?'"
>
> "To my mind," she modestly replied, "it seems quite as obvious. I grasp both truths by intuition."
>
> "For a complete logical argument," Arthur began with admirable solemnity, "we need two prim Misses—"
>
> "Of course!" she interrupted. "I remember that word now. And they produce--?"
>
> "A Delusion," said Arthur.
>
> "Ye-es?" she said dubiously. "I don't remember that so well. But what is the whole argument called?"
>
> "A Sillygism."
>
> "Ah, yes! I remember now. But I don't need a Sillygism, you know, to prove that mathematical axiom you mentioned."
>
> "Nor to prove that 'all angles are equal', I suppose?"
>
> "Why, of course not! One takes such a simple truth as that for granted!" (425-6)

In the preface to Sylvie and Bruno Concluded, Dodgson claims that the two quasi-mathematical axioms in the preceding conversation were actually stated, in all seriousness, by undergraduate students (514).

Although mathematics and logic are used in nonsensical ways, logic is also used in serious and profound ways. At one place he discusses logically the problem of the effect of environment on our actions and personal responsibility. Also, in an excellent discussion on the problems of Christian charity or philanthropy, Arthur comments on a statement made by the narrator (a character within the novel). "I would not like to quit

the subject without exposing the *two* fallacies of that statement - which have gone so long uncontradicted that Society now accepts it as an axiom!" (547). He proceeds to do so in a clear and logical manner. This whole discussion is quite relevant to the present day.

The following conversation shows another relationship between mathematics and Christianity.

> "Yet, surely many human interests survive human Life?" I said.
>
> "Many do, no doubt. And some forms of Science; but only some, I think. Mathematics, for instance: that seems to possess an endless interest: one can't imagine any form of Life, or any race of intelligent beings, where Mathematical truth would lose its meaning. .. "
>
> After a minute or two he began again. "If I'm not wearying you, I would like to tell you an idea of the future Life which has haunted me for years, like a sort of waking nightmare - I can't reason myself out of it."
>
> "Pray do."
>
> "The one idea," the Earl resumed, "that has seemed to me to overshadow all the rest, is that of eternity - involving, as it seems to do, the necessary exhaustion of all subjects of human interest. Take Pure Mathematics, for instance - a Science independent of our present surroundings. I have studied it, myself, a little. Take the subject of circles and ellipses - what we call 'curves of the second degree'. In a future Life, it would only be a question of so many years (or a hundred years, if you like), for a man to work out all their properties. Then he might go on to curves of the third degree. Say that took ten times as long (you see we have unlimited time to deal with). I can hardly imagine his interest in the subject holding out even for those; and, though there is no limit to the degree of the curves he might study, yet surely the time, needed to exhaust all the novelty and interest of the subject, would be absolutely finite? And so with all other branches of Science. . . .I ask myself 'What then? With nothing more to learn, can one rest content on knowledge, for the eternity yet to be lived through?' It has been a very wearying thought to me."
>
> "I know that weary feeling," said the young Doctor. . . "Now let me tell you how I have put it to myself. I have imagined a little child, playing with toys on his nursery- floor, and yet able to reason, and to look on, thirty years ahead. Might he not say to himself 'By that time I shall have had enough of bricks and ninepins. How weary Life will be!' Yet, if we look forward through those thirty years, we find him a great statesman, full of interests and joys far more intense than his baby-life could give - joys wholly inconceivable to his baby-mind – joys such as no baby-language could in the faintest degree describe. Now may not our life, a million years hence, have the same relation, to our life now, that the man's life has to the child's? And, just as one might try, all in vain, to express to that child,

in the language of bricks and ninepins, the meaning of 'politics', so perhaps all those descriptions of Heaven, with its music, and its feasts, and its streets of gold, may be only attempts to describe, in our words, things for which we really have no words at all." (665-668).

Before looking at more examples of his use of logic, I would like to look at science in the novels. As with logic, he takes scientific ideas, and by pushing them to an extreme, produces wonderful humor. In addition, he sometimes shows remarkable foresight. Arthur does a thought experiment in which he imagines a house at a great distance from a planet and falling to the planet. Since everything in the house teapot, tea, and all are falling at the same rate, nothing exhibits any weight. This is almost identical to one of Einstein's thought experiments. Arthur even includes some interesting variations such as, if someone on the planet had a rope attached to the house and was pulling it down, then the objects in the room would fall up instead of down (340f).

Much of the humor is due to puns or to valid logic, but with a false premise. The following conversation is typical:

"It's like this," said the Other Professor, hastily drawing a long line on the black board, and marking the letters "A," "B", at the two ends, and "C" in the middle. "Let me explain it to you. If AB were to be divided into two parts at C – "

"It would be drownded," Bruno pronounced confidently.

The Other Professor gasped. "What would be drowned?"

"Why the bumble-bee of course!" said Bruno. "And the two bits would sink down into the sea!" (pp. 369-7q).

At one point, Bruno said to his sister, "He went more far than he'd never been before."

"You should never say 'more far,'" Sylvie corrected him: "you should say 'farther.'"

"Then Oo shouldn't say 'more broth', when we're at dinner," Bruno retorted: "Oo should say ''brother'!" (531).

The narrator tries to use some of this Bruno type logic on Bruno with the following result, Bruno says,

"[The goat] singed it right froo. I sawed it singing with its long beard."

> "It couldn't sing with its beard," I said, hoping to puzzle the little fellow: "a beard isn't a voice".
>
> "Well then, oo couldn't walk with Sylvie!" Bruno cried triumphantly. "Sylvie isn't a foot!" (493).

We know that Dodgson loved nonsense and was a devout Christian, but could these mix with each other, could they be integrated into one work of art? Some of Dodgson's concerns about not joking about sacred things seem to show that he thought the two should not go together. However, in some editions of his nonsense fiction, he inserted letters with Christian messages to the readers. He defended this in one of those letters. "Some perhaps may blame me for thus mixing together things grave and gay; . . . I do not believe that God means us thus to divide life into two halves." (233 in Gattegno). Dodgson's letters to his young friends often contain nonsense and sober advice. As Roger Lancelyn Green comments: "... does a child need to be given a new prayer and a new riddle, Dodgson will supply them both with perfect harmony, realizing, as George MacDonald realized, that it is only 'the heart that is not yet sure of its God that is afraid to laugh in His presence'" (167-8). MacDonald, C. S. Lewis, and G. K. Chesterton, just to name a few, used humor effectively in their writing about Christianity. Still, Lewis Carroll's type of nonsense is probably harder to integrate with Christianity than other types of humor. But any type of humor may help us see reality more clearly. "For nonsense, as Chesterton liked to tell us, is a way of looking at existence that is akin to religious humility and wonder." (14 in Gardiner). I believe that the logic in the nonsense part of this novel helps to set the stage to use logic in the serious part of the novel to see through some of the common, but false, views of reality.

For example, Mein Herr, who comes from a different country (perhaps a different world) starts with the supposed premise of the British political system that the party in power works to accomplish certain goals and the party out of power works to keep them from doing so and then applies it to other areas, such as farming and war. Thus some men are employed to plow a field and others are employed to keep them from doing it and in war some soldiers fight and others try to hinder them. The point being that if the "basic principle of British politics" is applied logically, it is absurd. Of course, Dodgson was having his usual fun, but was also critiquing the political system.

The following is an argument against teetotalism. The teetotalist says,

> "I was once a moderate drinker, and knew a man who drank to excess. I went to him, 'Give up this drink,' I said. 'It will ruin your health!' 'You drink,' he said: 'why shouldn't I?' 'Yes,' I said, 'but I know when to leave off.' He turned away from me. 'You drink in your way,' he said: 'let me drink in mine. Be off!' Then I saw that, to do any good with him, I must forswear drink. From that day to this I haven't touched a drop." (600)

The answer to this argument was, "I was once a moderate sleeper and knew a man

who slept to excess. . ." You can fill in the rest.

Some of the criticism of the book is that the various parts have little or no relationship to the others. There is some truth to that. Some of the discussions of Christianity, for example, some sections on church attendance or the liturgy, seem to have little bearing on the plot. However, some do. For example, right after a profound discussion about Christian responsibility, Arthur, a medical doctor, must decide whether or not to go to almost certain death to help in a plague infested village. Incidentally, I enjoy those discussions on Christianity even when they have little to do with the plot.

Often the "fairy" parts seem unrelated to the "real" parts. However, the fairy children, Sylvie and Bruno, act as guardian angels and affect events in the "real" world. John Docherty suggests that the father of Sylvie and Bruno leaves them for a time in order that they may grow into better children and that this is a metaphor for Christianity (337).

The theme of love is what does the most to tie all of the parts together. Early in the novel, Sylvie's father gives her the choice between two lockets. One has written on it "All will love Sylvie" and the other, "Sylvie will love all." Sylvie chooses the latter. Throughout the story, Sylvie does show love to all. But in the process, all begin to love Sylvie and in the end, the locket has both statements on it. This is the main point of the novel. In the "real" portion of the novel, Arthur is willing to give his life right after his marriage to Lady Muriel. He nearly dies, but is nursed back to health by Eric, an atheist and his former rival for Lady Muriel's love. In the process, Eric comes to faith in Christianity.

Another problem with the book is the question of the intended audience. When he started it, Dodgson said it was for children (660 in The Letters). But later he said that it was for all ages. Some parts seem more for children and some for adults. MacDonald once said that his fairy tales were for the childlike of all ages. Perhaps Sylvie and Bruno is for the childlike who are also adults.

Critics have said that Sylvie and Bruno is "in no sense a true art form" (228 in Lenon), that it is an " appalling epic" (23 in Pudney), and that it is "one of the most interesting failures in English literature" (115 in Kelly), and in it "The artist has not been snuffed out, but he has been overlaid by the moralist" (230 in Hudson). Edmund Miller (in Guilliano) gives a more appreciative evaluation. According to him, although Arthur's supposed death is arbitrary, it is

> not a flaw but a consequence of the moral point proved by it, that love can work miracles. By the standards of moral contrivance in the Victorian novel it works very well. It is a good less surprising than Oliver Twist's genealogy or the blinding of Mr. Rochester or the ability of Tess of the d'Uberville"s to sleep through a sexual assault. . . . Sylvie's Jewel works its magic to make Sylvie and Bruno a single work structurally and a Victorian novel (139-40).

There is an introductory appendix in the Dover edition of Sylvie and Bruno which contains a quotation from Stuart Dodgson Collingwood, a nephew of Charles Dodgson, which best sums up the book and its author's relationship to it.

> The publication of "Sylvie and Bruno" marks an epoch in its author's life, for it was the publication of all the ideals and sentiments which he held most dear. It was a book with a definite purpose. . . For this very reason it is not an artistic triumph as the two "Alice" books undoubtedly are. . . But from a higher standpoint, that of the Christian and the philanthropist, the book is the best thing he ever wrote. It is a noble effort to uphold the right, or what he thought to be the right, without fear of contempt or unpopularity. The influence his earlier books had given him he was determined to use in asserting neglected truths (xx-xxi).

In conclusion, it is likely that George MacDonald's writings and friendship with Dodgson influenced him to attempt a novel which would integrate his literary creativity and his Christianity. Sylvie and Bruno is certainly not a perfect novel. It has many faults as a literary work of art. However, as suggested earlier by Miller, some of the criticism of it would be applicable to many other Victorian novels. And it is possible that some criticism is by those who would object to Christianity entering into any novel. I find it an interesting story to read. It has delightful nonsense, an interesting plot and subplots and profound ideas about Christianity. It is not for everyone, but for those few who enjoy nonsense, logic, mathematics and challenging Christian thought, it is a worthwhile and enjoyable book.

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