

Married to a Mathematician: Lyn Newman's Life in Letters

In 1934 Lyn Irvine, aged 33 and daughter of a Scots presbyterian minister, married Max Newman, fellow of St. John's College, Cambridge. She was a writer and journalist, at that time editing her own literary journal, *The Monologue*. He was a rising star in the world of pure mathematics, breaking new ground in both research and teaching. To both of them the future offered the promise of brilliant careers. For Max this promise was fulfilled, for he went on to establish himself as a pioneering topologist, to lead one of the key wartime codebreaking groups at Bletchley Park, and to build up a world-class mathematics department in Manchester. Lyn, however, soon found that she had unwittingly taken on a new, unsought-after 'career': she had become a mathematician's wife.

For the next twenty years Lyn set her writing aside to make a home for Max and to bring up their two sons Edward and William. Only in the 1950s did she find a way to return slowly to writing, and even then her family commitments still often took first place, right up to her death in 1973. Throughout her life, however, Lyn wrote copiously to her friends and family. The letters she left behind cover a fifty-year span and now, together with Max's papers, have been donated to St. John's College library.¹ The two sets of papers help piece together not only the progression of Max's distinguished career, but also the impact of this career on those close to him, and especially on Lyn.

In several respects Lyn Newman's papers offer more to the researcher than Max's. As a letter writer Lyn wanted increasingly, as she got to know her correspondents, to share with them her feelings and her life's intimate details. Max, on the other hand, avoided personal matters in his letters just as he did in conversation, spicing them with jokes and anecdotes but writing much the same kind of letter to all his friends and family. Also there is simply more material on Lyn's side: she kept her correspondence, as did many of the people she wrote to. Max's letters, perhaps because they revealed less, were kept less.

Lyn's papers thus offer us a unique and vivid picture of a writer's life with a great mathematician and her constant struggle to balance the demands of family and career. They begin ten years before her marriage, documenting her life at Girton and her subsequent entry into journalism and Bloomsbury life. She left Cambridge in 1927 with a letter of introduction to Leonard Woolf, who got her a job reviewing fiction for the *New Statesman*, and later commissioned and published her first book, *Ten Letter Writers*. Woolf – “a man in a million” Lyn would later call him – also introduced her to his wife Virginia², and through the Woolfs she met and started corresponding with others in the Bloomsbury Group, including E. M. Forster, Clive Bell, David Garnett,

¹ See <http://www.joh.cam.ac.uk/Library/msbox.html>.

² Virginia Woolf records her impressions of Lyn in her diary entry for September 2nd, 1929, see *The Diaries of Virginia Woolf*.

John Hayward, Frances Partridge and Vita Sackville-West. Lyn's letters of this period are scattered amongst several collections of Bloomsbury Group papers, including the archives at King's College, Cambridge, where we find Lyn writing plaintively to Clive Bell in August 1931, "It looks as though we should never meet again – unless we both arrive in Heaven one day, you through the entrails of a Javan alligator and I through the prayers of my parents;"³ to which Bell responds, "But at latest we shall meet in October Lyn, in London; so don't talk to me of Heaven."

By 1937 Lyn, Max and their infant son Edward were in Princeton, where Max had been invited to spend six months. Lyn marvelled at his idyllic lifestyle, writing in November to her parents,

Max has no job here. He simply sits at home doing anything he likes. That is what the Institute of Advanced Studies exists for. They know Mathematicians can be trusted to like doing Mathematics better than anything else. He has taken a little rest from his book and is doing some pet problem at the moment.

The nature of the 'pet problem' is revealed in a later letter, just before their return to Cambridge:

On Friday night I had the first real news of the sensation made in Princeton by Max's proof of the Poincaré Hypothesis, a classical obstacle in Topology which has defied proof for more than 30 years. Of course M. may not have proved it yet but an audience made up almost entirely of professors listened to him for 5 hours (on 4 different days) and failed to find a flaw.

There was, alas, a fatal flaw in Max's proof, and Lyn thus learned that mathematics could bring not only bliss but its own special kind of misery. Her diary for July 27th, 1938, records "This was the day M's theorem went wrong," and a few days later she notes, "Day I discovered about M's theorem." Max hid the flawed manuscript away in his files and for the rest of his life never spoke of this painful setback.

Lyn was back in the United States in 1940, this time a refugee with Edward and William from the Nazi menace; for Max was the son of an immigrant Polish Jew, Hermann Neumann, and his own sons' lives were therefore at risk. Her letters home now mostly reported the trials of a hand-to-mouth existence and the pain of separation from family and friends. Her life was brightened, however, by a brief visit from Maynard and Lydia Keynes to Princeton in June 1941, and she wrote to Max,

I ran into [Maynard] and his aide-de-camp, Thompson, in Jack Honore's. I had just got E's hair cut and failed to get W's cut (William was clinging to the hammer of his new hammer peg, and Johnnie von N[eumann] who was getting a shave told Hermann [Weyl] he looked terribly dangerous and he didn't wonder none of the men would tackle him). Maynard rushed out of the shop to see E. and W. and talked with his most silvery persuasive voice to W. about the delights of having one's hair cut. His accent or something must have awakened far off memories for William stopped weeping and gazed at him with great interest... Maynard asked me himself if I felt it a great hardship that he and Thompson wouldn't let sterling out of England and he seemed quite impressed when

³ Charleston Papers, King's College Archives, L(1) CB 2.

I said that even 10 pounds a month would make all the difference to life.⁴ They thought I ought to start the Monologue again over here. Maynard had been greatly impressed by the President, had talked 2 and 1/2 hours with him about everything.

In 1943 Lyn and the boys returned to a changed England, now in the depths of the war. Max had started working at Bletchley Park, and was spearheading the effort to mechanize the decrypting of the German high command's 'Fish' cypher. This effort was to lead to the construction of the first electronic computer, Colossus, and the formation of a large codebreaking group known as the Newmanry⁵ – exploits that Max was never permitted to share with Lyn during her lifetime. The only papers Max kept from this period, relating to his recruitment by Bletchley Park, include letters from Patrick Blackett, F. L. Lucas and others encouraging him to accept this vital wartime role. Meanwhile Lyn, now in a small rented house twenty miles from Bletchley, could still find much of interest to report to her friend Hella Weyl in Princeton:

Apart from the awfulness of having the children in their seventh month without school and the isolation and all that, life goes very smoothly. Everything is extraordinarily well organized and people behave and speak as though the war had been going on for twenty years and would scarcely end under another twenty. Half the time I feel as though the clock had gone back to my childhood. Gigs and pony traps and women on horseback pass us almost as often as cars and it has once more become possible to get almost anything mended.

In 1944 the Newmans returned to Cross Farm, the family home five miles from Cambridge in the small village of Comberton. Lyn was ecstatic, writing to Hella, "It is even more delightful to live in than I imagined in my sharpest pangs of homesickness." But in the same letter she mentions worries about the family's domestic arrangements, which were to become a source of unending friction between her and Max: "I do hope Max is steeling himself to the idea of living here more or less permanently." Her hopes were soon to be dashed, for Patrick Blackett had new plans for Max: there was a vacancy at Manchester University for head of the department of mathematics. This was exactly the opportunity Max had been craving, a chance to escape from the hidebound attitudes he found in Cambridge and create a centre of excellence of his very own. Lyn was horrified by the prospect, writing to Hella in March 1945:

At first I felt utterly appalled to think of leaving Cross Farm & our cold but wide & bright skies for the perpetual gloom of Manchester, but I have come round to thinking of it with resignation & even anticipations of compensating points in the change. For Max the job is much more interesting than what he has here & the staff at Manchester will be very congenial (Patrick Blackett is there too) and for both of us in our post war hopes & plans there will be more scope & encouragement there than there could be in Cambridge... We hope very much not to be forced to sell Cross Farm.

⁴ At the end of 1941 the British government relaxed the regulations, and Max was able to send Lyn a monthly allowance of £16.

⁵ See Copeland, B. J. (to appear, 2002). *Colossus: The First Electronic Computer*. Oxford University Press.

Postwar life in Britain of course dashed most people's hopes, Lyn's included. A year later she writes to Hella from Manchester, describing her unending domestic chores: "Max of course is profoundly disgusted it is like this with me but incapable of altering his own way of life an iota." Max was indeed unable ever to learn to look after himself, a legacy perhaps of the cosseted existence he enjoyed at St. John's until he was nearly 40. In 1950 Lyn, when seriously ill with mumps, was able to report one minor breakthrough:

Max resigned himself after 15 years standing out to learning how to cook the potato. It was a revelation to him that every mashed potato begins its career as a plain boiled potato.

Here she is writing to Antoinette, Viscountess Esher, whose inquiry to Leonard Woolf about *Ten Letter Writers* had been forwarded to Lyn in 1944. Their correspondence began slowly, Lyn clearly somewhat overawed by Antoinette's evident affluence and social status; not until 1947 did she gain the courage to begin her letters "Dear Antoinette." They discovered a common passion for English literature, and Lyn responded to Antoinette's evident enjoyment of the correspondence by writing passages that themselves stand as tiny literary gems, such as this on the subject of her hens:

It's the unpredictable things in housekeeping (like the kitchen sink getting blocked with the mud off the potatoes) that spoil one's plans. I've been blissfully free of hens since August, when we went off for our Cambridge holiday, but I see I shall have to start them again. At Cross Farm it was so easy. In the morning I used to see them away down the meadow like brown & white sails on a very green sea, & only about the middle of the afternoon did they send a delegation to knock with their beaks on the back door & remind me that even country hens like their tea. But here every time I looked out of the windows at the back of the house there they were gazing reproachfully up at me from their muddy little run.

By 1948 Lyn was gaining confidence, sharing with Antoinette her hopes of Max's return to a chair at Cambridge in 1950:

You say, what a long time, but if I could believe I had only 2 more years here, I can't tell you how happy I should be. Max knew I hated leaving Cross Farm because I fought like mad to stay, but he thought there would be compensations here, interesting people popping in & out & lots of friends for the children. The Blacketts were determined he should come & Patrick got at that always sensitive place, pride in a husband's career – he said if Max chose to take a back seat in Cambridge still, another would very gladly step in. I think Max would have done just as well in most ways if he had stayed in Cambridge...

With one notable exception, the mathematicians who visited the Newmans in Manchester did little to compensate for Lyn's homesickness and domestic drudgery; mathematics held no interest for her and she was mystified how Max, with such a lively and versatile a mind, could find it appealing. The exception was Alan Turing. Alan had attended Max's lectures at Cambridge in 1934, and had been encouraged then by Max to explore mechanical approaches to theorem proving. This led to Alan's celebrated work on computing machines, which Max was instrumental in

getting published. In 1948 Alan moved to Manchester to join in the computer work that Max had helped get started, and Lyn found herself drawn by his “very simple, humble, gentle personality.” Alan was a frequent and welcome visitor to the Newman household, even though his overheard conversations with Max about the computer sometimes made Lyn uncomfortable:

When I heard Alan say of further possibilities “Wh – wh – what will happen at that stage is that we shan’t understand how it does it, we’ll have lost track” – I did find it a most disturbing prospect.⁶

For Lyn, Alan’s death by poisoning in 1954 was, she told Antoinette, “the most shattering thing that has ever happened to me.” Neither she nor Max could accept the coroner’s verdict of suicide. Several years afterwards, Lyn was able to express some of her feelings for Alan in a foreword she wrote to his mother Sara’s biography, *Alan M. Turing*. Sara could not permit herself or Lyn to mention Alan’s homosexuality, about which he had been quite open with Lyn: “Dear Alan,” she writes to Antoinette at that time, “I remember his saying to me so simply & sadly ‘I just can’t believe it’s as nice to go to bed with a girl as with a boy’ and all I could say was ‘I entirely agree with you – I also much prefer boys.’”

By this time Lyn was at last back permanently in Cambridge, her seven-year Manchester exile at an end. She and Max had at first planned this move as a short break, with Max moving into rooms in St. John’s to prepare a new course of lectures. But Lyn got him to agree that he would move into a flat when he returned to Manchester, and Lyn and the boys would remain at Cross Farm; he would join them there during vacations. At last Lyn was able to revive her writing. In 1957 she published her first postwar book, a charming account of her childhood entitled *So Much Love, So Little Money*.

Max and Lyn maintained this partial separation until he retired from Manchester in 1964. As this juncture approached, fresh disagreements arose about their future domestic arrangements, and there were times when things were close to breaking point. Writing to her great friend Nancy Blackburn in 1960 she describes her correspondence with Max as “two express trains roaring away into space at tangents and yet by some fourth dimensional trick perpetually colliding.” Eventually Lyn was able with financial help from Antoinette to create a one-bedroom cottage for herself out of a dove-house in Cross Farm’s adjoining meadow. Cross Farm itself was divided in two, one half was let, and Max moved into to the other half. In 1967 Lyn could write to another friend, Molly Harrower:

The present chapter in our ever-changing and never-changing relationship is more agreeable than some. He no longer wishes to sell Cross Farm. My having a little house of my own in the meadow and showing no signs of giving it up has brought him to the advisability of being close to his cook-housekeeper... He enjoys talking to me at meal times and I usually find his talk profitable and entertaining, and I think that he probably tells me a good deal of what goes through his mind. But I cannot tell him what goes through mine...

⁶ Lyn Newman to Antoinette Esher, 24 June 1949.

Meanwhile from her dove-house refuge Lyn produced two more books, *Field With Geese* and *Alison Cairns and Her Family*. Inspired perhaps by her memories of the Woolfs' Hogarth Press, she set up a publishing and mail-order business of her own, Monologue Books. Under this imprint she published *Alison Cairns*, and she had plans for several other books when she fell ill with cancer. She died in May 1973. Later that year Max married Margaret, widow of his lifelong friend Lionel Penrose. They lived at Cross Farm until Max's death in 1984.

William Newman