Russell and Philip Jourdain

a study of their relationship

One of the frustrations of Russellian scholarship is that there is often no trace among his papers of the letters he wrote before 1952 to his many correspondents. One of the most important missions of the Bertrand Russell Archives is to find as many of these letters as possible; for whenever some are found, new insights and details emerge. Without denying the central importance of the papers purchased from Russell in 1968, the most exciting development may be the growth of its section of recent acquisitions from other sources.

A collection of letters of this type which is of unique importance is the surviving correspondence between Russell and the mathematician and historian of mathematics Philip Jourdain (1879-1919). Jourdain suffered throughout his life from Friedrich's ataxia, a crippling palsey which made writing extremely difficult for him.[1] Nevertheless he successfully pursued a career in research and scholarship. Indeed, all his brothers and sisters were remarkable in one way or another. For example, his eldest sister Eleanor was Vice-Principal of St. Hugh's College, Oxford (and Russell knew her quite well in the years when he lived in the city), and in 1911 she and her Principal Annie Moberley caused a sensation when they published pseudonymously a book claiming that in 1901 they had seen Marie Antoinette and members of her court during a visit to Versailles.[2]

Philip had strong views, especially in favour of foundational studies in mathematics and against the church, and later in his life he shared with Russell strong pacifist inclinations. He first made contact with Russell when, as a student at Cambridge, he attended Russell's lectures on Mathematical Logic given there in the winter of 1901-02. In a journal[3] which Russell kept he recalled a visit to Jourdain in November 1902:

> He is very ill, partially paralysed, and at first sight almost half-witted. But as soon as he begins to talk of mathematics his face shines, his eyes sparkle, he speaks with fire and ability, one forgets that he is ill, or remembers it only in passionate admiration of the triumph of mind...I saw his mother for a moment: she pressed my hand, I loved her, and she seemed deeply grateful to me for encouraging her son: it was a deep moment of intimacy, though not a single word was said by either of us, and I had never met her before.

Jourdain stimulated a correspondence with Russell which continued throughout Russell's period of logical studies up to 1910, and thereafter until Jourdain's death in 1919. Now the Archives possess only a very few of Jourdain's letters to Russell and even fewer of Russell's replies; but in 1968 I discovered *sixty* letters from Russell and drafts of Jourdain's among Jourdain's papers in the Institut Mittag-Leffler in Stockholm, Sweden. The Institut is the former home of the wealthy mathematician G. Mittag-Leffler, who collected manuscripts concerning contemporary mathematicians whom he revered.[4] One of them was G. Cantor, the creator of set theory and transfinite arithmetic, with whom Jourdain had had an interesting correspondence. Mittag-Leffler asked Jourdain's literary executors for these letters, and in fact received from them two thick note-books which Jourdain had used in the period 1901-1910 to draft his letters to correspondents and paste in their replies. They contained not only the Cantor letters in which Mittag-Leffler was interested,[5] but also dozens of letters to and from many other scientists — including this important correspondence with Russell (of which a microfilm is held by the Archives).

The unique character of the letters springs from the nature of Jourdain's interests. Like Russell, he was deeply interested in the foundations of mathematics; but in addition his strong historical inclinations gave him both a deep knowledge of previous developments and an acute feeling of their relevance to the contemporary situation. Thus his letters to Russell both described his own approach to their common problems and its difference from Russell's methods, and also asked penetrating questions of Russell's understanding of his predecessors' work and of the progress of his own thought.

There seems little doubt that Russell conducted no other correspondence of this quantity or technical detail during the period of his logical studies. Even the correspondence with Whitehead may not have been so historically enlightening; the fragments of it surviving in the Archives suggest that to some extent it was more concerned with the technical details of execution of ideas sorted out in conversation during their frequent meetings. But such ideas had to be *explained* in letters to Jourdain, for he was not personally involved in the project and saw Russell only infrequently. Hence they disclose information of all kinds on the preparation of *Principia Mathematica* through all its stages from 1902 until 1910. Especially welcome are lengthy discussions of the mathematical parts of the work, and insights into the changes in Russell's thought during his fallow period of 1903-1907, after the abandonment of the type theory of *The Principles of Mathematics* and before the commitment to the revised version of *Principia Mathematica*. The only substantial area not covered is the foundations of geometry, in which Jourdain's interest was slight and where anyway Russell's had become muted.

This is of course not the place to discuss these technicalities. I shall reserve them for my forthcoming book on Russell's logic, which will contain several chapters on the principal mathematicians of the late nineteenth century by whose work Russell was influenced, as prefatory to an extended analysis of Russell's logic using his published writings, the manuscripts in the Archives, and the Russell-Jourdain correspondence.[6] But it is possible to sketch here their later relationship, during the years from 1911 to 1919. For the cessation of Russell's logical work did not terminate their correspondence, but converted it from a dialogue between logicians to discussions between an editor of *The Monist*, *Open Court* and *The International Journal of Ethics* and one of his regular contributors, and also between two men with common pacifist sympathies.

Jourdain wrote a lengthy and important series of articles on the history of mathematical logic which Russell read and commented on in manuscript.[7] He also compiled a humorous article on "The Philosophy of Mr. B*rtr*nd R*ss*ll" from witticisms that Russell used to tell him during their visits;[8] he published it in *The Monist*,[9] and with Russell's approval had it reprinted as a book in 1918.[10] He was an expert at composing comic and curious verse,[11] and must have amused Russell with a pacifist and anti-clerical poem called "The War and Christianity" which he sent to him sometime during the First World War.[12] The last verse is especially good:

> The war has issues far beyond our ken:
> Men fall like grass before the August scythes;
> It raises hell on earth; but then
> It also raises the poor parson's tithes.
> The dead lie thick beneath a foreign sod,
> But Mr. Bottomley believes in God.

Clearly, there must have been regular contacts between the two men.[13] Unfortunately, in contrast with the textual abundance for the earlier period, little documentary evidence is available for these later years. In fact it all comes from the Archives, for there seems little doubt that Jourdain's literary executors either threw away or lost almost all of the remainder of the papers put in their care and thus created another example of the frustrations that Russellian scholars know well. There must have been a considerable amount of correspondence over the many papers that Russell wrote for the journals which Jourdain helped to edit, but the letters survive in a reasonably connected form only from the autumn of 1917.

The principal topic was Russell's lectures on the philosophy of logical atomism, which Jourdain solicited and had published in *The Monist* in 1918 and 1919.[14] But unfortunately complications and misunderstandings then arose to destroy their relationship. While the lectures were appearing in *The Monist*, its chief editor, P. Carus, died, and Jourdain succeeded him in that post. One of his first actions was to inform George Allen and Unwin in March 1919 that some passages of the forthcoming section of the lectures were very similar to parts of Russell's *Introduction to Mathematical Philosophy*, which they had recently published. Russell (justly) denied the charge to his publishers,[15] and Jourdain effectively apologised to Russell on 4 April. Then when Russell asked for payment for the lectures Jourdain reminded him in a letter of 24 May that he had advanced £100 to Russell from his own funds early in 1914 as an advance for Russell's *Our Knowledge of the External World*, which the Open Court Company, publishers of *The Monist*, brought out later that year. Jourdain said this action was done

> out of a sense of duty or friendship although I could not afford it: my total earnings were then £200 a year and my total private income £12,

and there is some evidence that Jourdain never recovered this money from the Open Court Company and that Russell never received payment for his lectures.[16]

But these misunderstandings were compounded by their mathematical disagreements. An important feature of the foundational studies in the early years of this century was the controversy over a new assumption which was first explicitly introduced in 1904 and became known as the "axiom of choice". As the years passed most mathematicians and logicians, of whom Russell was one, came to accept (or at least live with) the axiom *as* an axiom. But throughout his life Jourdain belonged to the dwindling minority who believed that it was provable from the traditional principles, and early in 1919 he found yet another (alleged) proof of it. He also seems to have got the impression that Russell would not discuss his new proof until payment for the lectures on logical atomism was made. In his letter to Russell of 24 May he accused him that

> It is practically asking me to bother Mrs. Carus specially for you in order that I may get some approval from you of what I have written.

But in his publications of the period he was openly abusive of both Russell and Whitehead. For example, he told the public that a mathematical logician called "W." was "bored with well-ordered series" (a mathematical idea with which the axiom of choice was intimately connected), and that another logician called "R." saw difficulties in the proof and

hence must see "mathematical logic as a very different thing from logic".[17] Elsewhere[18] he wondered if Russell's interest in psychology was becoming

> so strong that he will devote the rest of his life to a history of the Church or a treatise on animal behavior.

And in a review of Russell's *Introduction to Mathematical Philosophy* he not only repeated his charges of Russell ignoring his proof of the axiom of choice but also charged him with plagiarism in *Principia Mathematica* of his definition of continuity of a function.[19] He also accused Russell of such sloppiness in the work as a whole that

> Mr. Russell has sometimes enthusiastically praised Humpty-Dumpty's way of treating words, but it seems that in his later works he has fallen far behind Humpty-Dumpty.[20]

It seems possible that Jourdain's balance was upset by the increasing seriousness of his palsey. By the summer of 1919 he was seriously ill and unable to deal with Russell's continuing requests for payment of his money for the lectures. At the time Russell was sharing a house with the mathematician J.E. Littlewood at Lulworth in Hampshire, near Jourdain's home at Fleet; but he did not respond to Jourdain's call in September for someone to come over and hear his proof of the axiom. Littlewood went, and soon afterwards Russell offered by telegram to go also; but it was no use. After reading their wonderful correspondence on logic of but a few years earlier, one can only feel the deepest sadness for the last letter to pass between them, sent on 26 September by Jourdain's wife five days before his death:

> Your telegram came just too late to arrange for Philip to see you. He is now quite unable to talk or see anyone, but just lies in a semi-conscious state. Why didn't you make an effort to come a little sooner. You have made him so unhappy by your inability to see his well-ordering [i.e., his new proof]. You are the only person he wanted to see and talk with months ago.
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> Yours truly,
> Laura Jourdain.

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[1]His sister Melicent's reminiscences of childhood, in which he appears prominently under his third Christian name of "Bertrand", were published as J. Arden, *A Childhood* (Cambridge, 1913).

[2]The claim included also a visit by Eleanor alone in 1902. The book was published as E. Morison and F. Lamont, *An Adventure* (London, 1911). For a study of this affair, see L. Iremonger, *The Ghosts of Versailles* (London, 1957).

[3]Russell gave this journal to Ottoline Morrell and it is now with her papers at the Humanities Research Center, University of Texas, Austin. The quotation is from the transcript made at Austin by the then Miss Kadriin Timusk and presented to the Archives.

[4]On the collections held by this Institut (in a manner maximally contrastable with that of the Russell Archives), see my "Materials for the History of Mathematics in the Institut Mittag-Leffler", *Isis, 62* (1971), 363-374.

[5]These are now edited in my "The Correspondence between Georg Cantor and Philip Jourdain", *Jahresbericht der deutschen Mathematiker-Vereinigung, 73*(1971), pt.1, 111-130.

[6]Tentatively entitled *Bertrand Russell's Logic and its Background.* A sampler from the correspondence is given in my "Bertrand Russell on his Paradox and the Multiplicative Axiom. An Unpublished Letter to Philip Jourdain", *Journal of Philosophical Logic, 1*(1972), 103-110.

[7]P.E.B. Jourdain, "The Development of the Theories of Mathematical Logic and the Principles of Mathematics", *Quarterly Journal of Pure and Applied Mathematics, 41*(1910), 324-352; *43*(1912), 219-314; and *44*(1913), 113-128. Jourdain acknowledged Russell's assistance in the introductions to the first and second parts. Some of the later letters in the collection in the Institut Mittag-Leffler refer to these articles.

[8]According to Russell's reminiscences in L.E. Denonn, "Recollections of Three Hours with Bertrand Russell", *Correct English, 44*(1943), 14-19.

[9]*The Monist, 21*(1911), 483-508; and *26*(1916), 24-63.

[10]The publisher was George Allen & Unwin; in the file of their correspondence with Russell in the Archives there is an approving letter from Russell dated 10 June 1918.

[11]See especially his little known and anonymous *Topsy-Turvy Fairy Tales by Somebody-or-Other with Three Illustrations by Somebody-Else* (Cambridge, [1906]). Russell received a copy (letter from Jourdain, 27 June 1906; draft in the Institut Mittag-Leffler).

[12]The manuscript of this poem is in the Archives. "Mr. Bottomley" was H. Bottomley, Member of Parliament and founder of *John Bull,* who strongly urged the war cause.

[13]For example, surviving diaries for Russell note ten appointments to see Jourdain between November 1911 and February 1914.

[14]Bertrand Russell, "The Philosophy of Logical Atomism", *The Monist, 28*(1918), 495-527; *29*(1919), 32-63, 190-222, 345-380. Reprinted in R.C. Marsh, ed., *Logic and Knowledge* (London, 1956), 177-281.

[15]Russell to S. Unwin, 22 and 30 March 1919. (Photocopies in the Archives.)

[16]See the letter of 28 November 1919 in the Archives from H.P. Kite, the legal executor of Jourdain's estate.

[17]P.E.B. Jourdain, "A Proof That Any Aggregate Can Be Well Ordered", *Mind,* n.s., *28*(1919), 382-384.

[18]P.E.B. Jourdain, "Causality, Induction and Probability (1.)", *Mind,* n.s., *28*(1919), 162-179 (p. 168); pp. 167-170 are all critical of Whitehead and Russell.

[19]P.E.B. Jourdain, "Logic and Mathematics", *Science Progress, 14* (1920), 669-674 (pp. 672-674).

[20]*Ibid.*, p. 672; the allusion to Humpty-Dumpty refers to the humorous essay.[9] The article was published posthumously, and Russell denied some of the charges in a letter in *ibid., 15*(1920), 101.