UK Froebel Trust Project (2022-2023)

The "Researched" Child from the 1900s to the 1960s

Larry Prochner, Alessandra Arce Hai, Kristen Nawrotzki, Helen May, and the late Yordanka Valkanova

Occasional Paper #2

"Let's Find Out"

Reimagining the Young Child as a Research Worker 1920s-1960sn

Helen May

(July 2022)

Figure 1. Bell St. Infant School, Leicestershire, 1967. Source: Nuffield Foundation

Contents

Figure 2. Froebel Demonstration School Ibstock Place, c. 1950s. Source: Froebel Archive for Childhood Studies (FACS), Roehampton University

Figure 3. Geoffrey Pyke and his son David, c. 1922. Source: Geoffrey Pyke Archive.

Introduction

Entrepreneur Geoffrey Pyke (1893-1948) founded and funded the Malting House School, Cambridge, England, as a site for "scientific experiment and research" in the field of early education, adopting the latest psychoanalytic understandings of child development.[1] The Malting House experiment, which operated from 1924 to 1929, is one of five case studies in the 2020 coauthored book *Reimagining Teaching in Early 20th Century Experimental Schools.*[2] At Malting House the role of the teacher was to provide a rich learning environment, interfere as little as possible, but be available, in Pyke's words, as a "co-investigator" who suggests to children, "let's find out," thereby fostering the children's natural curiosity to explore and discover. Psychoanalyst John Rickman, a visitor to Malting House, bluntly summed up its pedagogical premise whereby the teachers

> did not perceive the child as a lump of wax to be moulded but a *research worker* in need of material and equipment. The teachers were both the children's "lab-boys," aiding them when asked, and their observers whose prime duty was to make their records unobtrusively without interference with the real work of the place—the pupils' own discoveries and experiences.[3]

[1] Philip Graham, *Susan Isaacs: A Life Freeing the Minds of Children* (London: Karnac, 2009).

[2] Alessandra Arce Hai, Helen May, Kristen Nawrotzki, Larry Prochner, and Yordanka Valkanova, *Re-imagining Teaching in Early 20th Century Experimental Schools* (New York: Palgrave Macmillan, 2020).

[3] John Rickman, "Susan Sutherland Isaacs," *International Journal of Psycho-Analysis* 31 (1950): 2, emphasis added.

The task of the teacher-observer was to "find out" and understand how children learn and develop in a free and playful environment. This child "research worker" was, therefore, also the research object whose life and learning at Malting House was minutely documented by Susan Isaacs (1885-1948), Pyke's appointed head of the school.

Figure 4. Susan Isaacs, c. 1930s. Source: FACS

Isaacs' research publications, popular writings, and teaching became hugely influential in the burgeoning field of child research across the mid-twentieth-century years in Britain and beyond, particularly in New Zealand and Australia. Included in the paper, therefore, are occasional references to the Antipodes as a reminder of the wider reach and enactment of Isaacs' ideas. There were students from both Australia and New Zealand enrolled in Isaacs' courses at the Institute of Education (IE), University College London; she addressed over 5000 teachers at four New Education Fellowship Conferences held in New Zealand in 1937, before the Conference speakers travelled across Australia. Thousands more heard her radio talks. The Malting House case study in *Reimagining Teaching* cites the experience of Geraldine McDonald, who first encountered the work of Isaacs in 1943 at Dunedin Training College in New Zealand. It is an exemplar of Isaacs' influence:

> I remember my excitement when I read her analysis of children's thinking in a milieu which was largely unconstrained. . . . For me the appeal was not just about the theoretical interpretation or an argument for free methods teaching. It was my introduction to the

> idea of research, that one could study human behaviour and analyse it—a voyage of discovery into the minds of children.[4]

McDonald is credited with laying the foundations of early childhood research in New Zealand with methodological approaches, like Isaacs' Malting House research, that included teachers in the task.[5]

In this paper Malting House sets the stage for exploring the interplay of the child as a curious investigator and research worker while also an object of study by teachers. The trajectory of this interplay with Pyke's mantra "let's find out" begins at Malting House in the 1920s and extends into the 1960s. Revisited are key players from the experiment: Susan Isaacs (1885-1948), Nathan Isaacs (1895-1966), and Evelyn Lawrence (1893-1987), but less so Pyke, who lost his fortune and the school in the economic crash of 1929. Collectively and individually, in different places and times, the players promoted the Malting House experimental premise as a pedagogy for early education, and a qualitative research method yielding insights into children's intellectual development, more nuanced and richer, they argued, than standardised testing or tasks. This was something appreciated by McDonald:

> What Susan Isaacs did for me was to inoculate me against any idea that required "hard data" that had to be analysed statistically in order to be valid. . . . I accepted that it is possible to do good research with careful observation and interpretation and that positivist methods do not account for the narrative experience.[6]

The combination of the young child researcher and co-investigator with the teacher observer was disseminated through the writings of both Susan and Nathan Isaacs, who utilised the apparatus of key academic sites as a conduit to teachers and policy makers: at the IE from the 1930s where Susan Isaacs was the head of the Department of Child Development (1933-1943) and, from the late 1940s through the 1960s, the Froebel Institute of Education (FEI) and its National Froebel Foundation (NFF). Lawrence was the director of the NFF (1943-1955) and afterwards an honorary director and a governor (1955-1972). Nathan was also a governor, elected by NFF subscribers (1959-1966). Included too as players were Dorothy Gardener, a student of Susan Isaacs at the IE in the 1930s and her successor at the Department of Child Development (1943-1968), and Molly Brearley, principal of the FEI (1955-1970) and a

[4] Geraldine McDonald, "Unpublished Memoir of a Research Journey," Geraldine McDonald papers, Alexander Turnbull Library (ATL), Wellington.

[5] Sue Middleton and Helen May, *For Women and Children: A Tribute to Geraldine McDonald* (Wellington: NZCER Press, 2019).

[6] Geraldine McDonald, "Susan, Sylvia and the New Zealand Council for Educational Research," Unpublished presentation 18 September 2003, Geraldine McDonald papers ATL.

Foundation governor who, with other staff, promoted the theories of Jean Piaget (1896-1980) to teachers. And there was Piaget himself, whose "long conversation" with both Susan and Nathan Isaacs began after a visit to Malting House in 1927.[7] It was later, amidst the postwar, Cold War, space-race milieu of the 1950s and 60s that the pedagogical mantra "let's find out" was given credence by Piaget's theorising of the stages of children's thinking and cognitive development, by then translated into English and in the public domain. This combination was a compelling rationale for political interest and policy intervention endorsing active inquiry and discovery in mainstream primary school classrooms. Piaget's likening of the child as a "little scientist" was sufficiently persuasive to permit and indeed require more playful approaches to learning and teaching. However, without a clear blueprint for what this meant in practice, there were extreme interpretations.

In New Zealand, playcentre supervisor Tony Holmes described his preschool programme in the early 1970s as "social anarchic":

> The idea is that the material and the environment is provided, and the kids just go for it. . . . *The role of the adult was to provide for the child's free exploration as a Piagetian "little scientist."* You create the environment for children to learn but it was very much hands off. The only time that there was real intervention was when there were disputes. . . . As long as the session flowed, and children enjoyed exploring the environment, they weren't to be touched unless they came to you.[8]

New Zealand, like Britain, had embraced progressive "playway" practices across both preschool and primary school settings similarly influenced by Isaacs and Piaget. Holmes's recollection is cited in Sue Middleton and Helen May's oral history *Teachers Talk Teaching 1915-1995,* a book examining the engagement of teachers with progressive education ideas in education settings through the decades. Across the 1940s through 1960s, teachers recalled many variations of the introduction of creativity, play, and discovery in classrooms. Despite the flourishing of playful activity in both Britain and New Zealand, such ideas were also contested, not least by teachers who perceived their role as much more than "lab boys." As a young teacher in the 1960s, Joan Gooseman was "worried" that "developmental" play in the New Zealand infant classroom had become a requirement and not an option. Gooseman did not see her role as either an observer-researcher or a co-investigator.

---

[7] Lydia A. Smith, "Jean Piaget and Susan and Nathan Isaacs: A Long Conversation," *New Era* 61, no. 4 (July/August 1980): 151-57.

[8] Tony Holmes cited in Sue Middleton and Helen May, *Teachers Talk Teaching 1915-1995: Early Childhood, Schools, and Teachers' Colleges* (Palmerston North: Dunmore Press, 1997), 267, emphasis added.

> Developmental was in the first hour of the day after news. It was a playtime where children were interacting freely supposedly learning through play. This had good vibes, but I always had reservations. It was a peak time when children were at their best. I would rather have been doing reading and maths. I was a serious teacher. I don't remember standing in the corner reading the newspaper, but there wasn't a lot for the teacher to do. I was just itching to get on, but instead went around sorting out squabbles in the Wendy house. It wasn't too many years and we shifted developmental to the afternoon and I was pleased later when it stopped.[9]

By the 1980s the heavy hands of policy makers across many countries were intent on gaining tighter control of the curriculum in schools and preschools and reining in the perceived permissiveness towards children and their teachers that progressive education ideas had encouraged.[10]

This paper traces the journey of "let's find out" as a pedagogy across the mid-twentieth-century years, mainly in Britain, examining first its roots across the eighteenth and nineteenth centuries, second, the early twentieth-century experiment, and third, its postwar gravitation into mainstream curriculum practice.

Legacy of discovery

"An Appreciation" in the *Manchester Guardian* (22 February 1948) published the day after Geoffrey Pyke's death claimed that "Britain had lost one of its greatest and certainly one of the most unrecognised geniuses of the time." Pyke's grandiose schemes as an inventor, speculator, trader, engineer, and education pioneer were recounted. Many of his schemes crashed and faltered; nevertheless, the "genius" of Pyke's "imagination" grounded in his understanding of science was applauded. The Malting House experiment as a laboratory school was forged with a view of education as a science. The scientific milieu at Cambridge University inhabited by Pyke was influential in framing a pedagogy of discovery suited to the scientific world of the twentieth century, but the notion of "let's find out" as a pedagogy was not new. As a twentieth-century "genius," Pyke was following in the footsteps of eighteenth-century enlightened scholars in imagining a new economic, social, and political order supported by new kinds of schooling.

The fictional child Émile created by Jean-Jacques Rousseau in 1762 inspired a popular following, although those who attempted to replicate its practice were disappointed. Rousseau's

[9] Interview with Joan Gooseman, 2009, cited in Helen May, *"I Am Five and I Go to School": Early Years Schooling in New Zealand 1900-2010* (Dunedin: University of Otago Press, 2011), 195.

[10] John Darling, "Child-Centred, Gender-Centred: A Criticism of Progressive Curriculum Theory from Rousseau to Plowden," *Oxford Review of Education* 12, no. 1 (1986): 31-40.

key philosophical tenet for the young Émile was freedom, with an education based on natural interest, discovery, and, for the most part, "non-teaching"—a pedagogical approach that later underpinned the Malting House experiment. Rousseau was to write that "[freedom] is my fundamental maxim. Apply it to the rules of childhood and the rules of education spring from it."[11]

One man who grappled with these ideals was Richard Edgeworth, whose interests in education stemmed from a failed attempt to rear his son according to Rousseau's teaching, but also from a passion for science and his quest as an inventor. The Anglo-Irish father and daughter Richard and Maria Edgeworth are remembered for their popular book *Practical Education*, first published in 1798.[12] Richard was a Pyke-like figure in relation to Maria in the more practical role of Isaacs. The Edgeworths' educational experiment in the eighteenth century captured the spirit of enlightened thinking, with the child being encouraged to learn through, play, discovery, and invention in a similar way to the Malting House experiment. Adults were admonished to follow the child's pace and interests:

> When children are busily trying experiments upon objects within their reach, we should not . . . break the course of their ideas, and totally prevent them from acquiring knowledge by their own experience.[13]

Like other enlightenment figures, Richard regarded education as "the engine of progress."[14] The Edgeworth children's education was conducted as an experiment much like Malting House, where "every circumstance which occurred worth reporting was noted and recorded."[15] These interests were fostered by Richard's membership in the Birmingham-based Lunar Group of intellectuals, interested in new industries and science, who met to discuss and exchange ideas.[16] Women and children were an integral part of the Lunar Group, "helping to develop its culture of education, invention, literary and philosophical critique."[17] Thus, in the Edgeworths' large family, children would have card, pasteboard, scissors, wood, wire, gum and wax, balls and pulleys and were encouraged to invent, construct, discuss, and find out for themselves.[18]

---

[11] Jean Jacques Rousseau, *Émile*, trans. Barbara Foxley (London: Dent Everyman Library, 1872/1911), 281.

[12] Maria Edgeworth and Richard Lovell Edgeworth, *Practical Education* (London: Johnston, 1798).

[13] Edgeworth and Edgeworth, 910.

[14] Edgeworth and Edgeworth, ii.

[15] Edgeworth and Edgeworth, 734.

[16] Jenny Uglow, *The Lunar Men: The Friends Who Made the Future* (London: Fisher and Faber Ltd., 2002).

[17] Mary Hilton, *Women and the Shaping of the Nation's Young: Education and Public Doctrine in Britain 1750-1850* (Aldershot: Ashgate, 2007), 119.

[18] Edgeworth and Edgeworth, *Practical Education*, 5-6.

Learning was based on the scientific experiment rather than formal teaching, where fostering curiosity and the interests of the child was the primary method.[19] These ideas are captured in Joseph Wright's paintings inspired by the Lunar Group. There are parallels with the children photographed at Malting House 150 years later.

Figure 5. "Boy and Girl Blowing Bubbles by Candlelight" by Joseph Wright of Derby, c. 1776. Source: Paul Mellon Centre, London

[19] Tony Lyons, "Play and Toys in the Educational Work of Richard Lovell Edgeworth 1744-1817," *Irish Educational Studies* 20 (Spring 2001): 310-20.

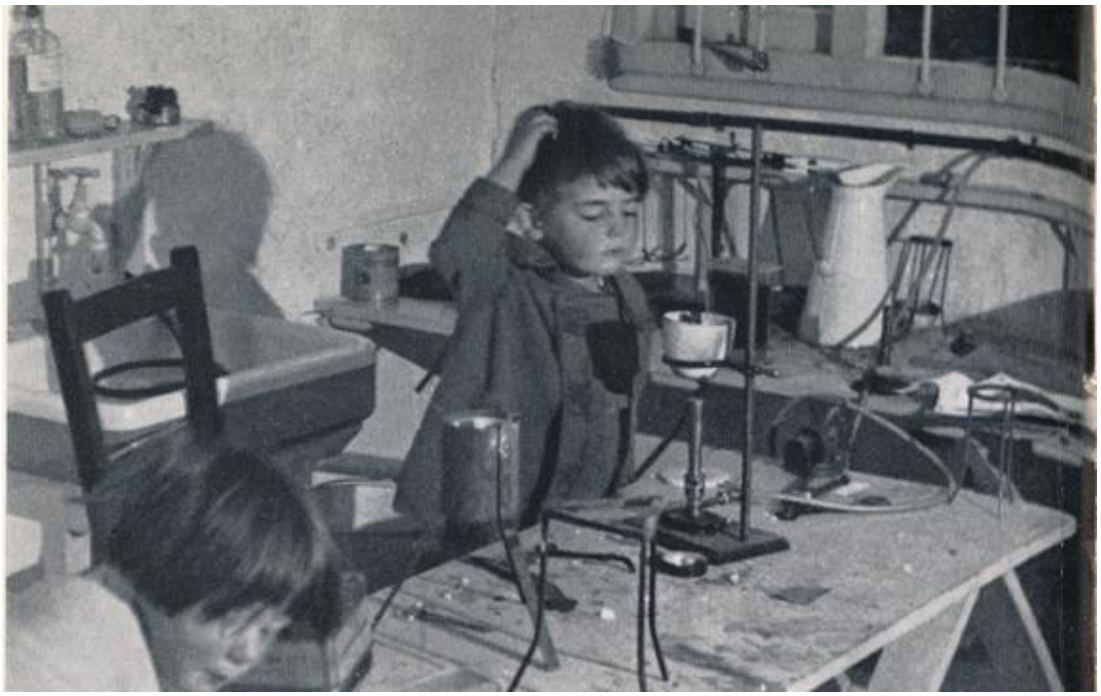


Figure 6. Physics laboratory at Malting House School, 1927. Source: Still from *Lost Malting House* film.

Practical Education was a family venture and not a school such as Malting House. The Edgeworth family lived on a rural estate with freedom for children to roam and collect. Despite the distance across centuries, there are similarities between the Malting House setting with its natural gardens and a science laboratory and the large Edgeworth estate that also included a laboratory for experiments in chemistry, botany minerology, and mechanics. And preempting Froebel, each child in the Edgeworth family had a garden plot, as did the children at Malting House.

Friedrich Froebel's invention of the kindergarten in 1837 with its playful apparatus of blocks and craft occupations, music, games, and outdoor activities was the most significant contribution to the idea of early education during the nineteenth century; his legacy of principles and practice, if not the exact apparatus, was accommodated across pedagogical innovations in later centuries. [20] Exemplars of this fusion of Froebelian ideas: discarding some, accommodating and revisioning others is apparent too across the trajectory of the Malting House legacy outlined in this paper. Mike Watts, one-time principal of the Froebel College at Roehampton University (previously the FEI), has reappraised the contribution of "Froebel the scientist," claiming that he

[20] Tina Bruce, Peter Elfer, Sacha Powell and Louie Werth, eds., *The Routledge International Handbook of Froebel and Early Education* (London: Routledge, 2019).

> was indeed a scientist, both in instinct and in training, and his life coincided with an enormously important and dynamic period of scientific growth [whose] immersion in the sciences of the day was fundamental to the "naturalistic" shape of his educational practice, and to the "gartens" in which his kinder would eventually be nurtured and grow.[21]

"Let's find out" was a Froebelian mantra for kindergarten, but in a more prescribed progression than either the Edgeworths' *Practical Education* allowed or the Malting House experiment encouraged. Playful activity, gardening, and games in the outdoors were accompanied by Froebel's mainly indoor tabletop sequences of blocks (gifts) and technical crafts (occupations). Froebel's scientific interests are evident, for example, in the selection, design, progression, and playful possibilities of the first gift of five soft coloured balls.

By the late nineteenth century, Froebelian activities had become both pervasive and outdated. The kindergarten movement had spread across the globe and selective activities adopted in the early years of schooling, but the tasks were standardised and prescriptive. New education ideas were challenging the regimentation of public education. In New Zealand a new primary school syllabus was introduced in 1904. The priorities of the reforming director general, George Hogben, were clear:

> The important thing . . . is not the amount of things that are taught, but the spirit, character, and method of teaching in relation to its purpose of developing the child's powers. . . . We must believe with Froebel and others of the most enlightened of the world's educators, that the child will learn best, not so much by reading about things in books as by doing: that is exercising his natural activities by making things, by observing and testing things for himself; and then afterwards by reasoning about them and expressing thoughts about them.[22]

Like other progressive educators, Hogben was supportive of Froebel's principles, if not the minutiae of tasks. His reading of newcomer John Dewey is also evident.[23]

Susan Isaacs was introduced to both Froebel and Dewey in her teacher training, with further studies in psychology at Cambridge University, and she had undergone psychoanalysis. Isaacs brought this mix of disciplinary approaches into Malting House, although she later challenged Bertrand Russell's description of Malting House as an "application of psycho-analytic theory of education," arguing, "I was a trained teacher of young children and a student of Dewey's educational theories long before I knew anything about Freud."[24] She claimed too

---

[21] Mike Watts, "Friedrich Froebel: Interpolation, Extrapolation," *Early Child Development and Care* 191, nos. 7-8 (2021): 1186-95. https://doi.org/10.1080/03004430.2021.1881077.

[22] Appendices to the Journal of the House of Representatives (New Zealand Government, 1904) E-1C, 2.

[23] John Dewey, *School and Society* (Chicago: University of Chicago Press, 1899).

[24] Susan Isaacs, *Social Development in Young Children* (London: Routledge, 1933), 18.

that "it may be the first time, at least in this country, that [Dewey] has been taken really seriously, and put into practice in the education of quite young children."[25] Dewey's version of "let's find out" was also playful but tilted towards experience and activity in the social environment.

The first case study in *Reimagining Teaching* is the Dewey laboratory school established at the University of Chicago in 1896 and informed by a theory of "inquiry-based learning." Democratic citizenship was the aim, with the school providing opportunities for "directed living" in a "miniature community."[26] Teachers were to consider children's interest "in inquiry, or *finding out things*, in making things, or construction; and in artistic expression."[27] In 1897 Dewey organised a conference at which kindergarten reformers debated the need for change. Dewey set the scene for moving forward with "the spirt of Froebel" and Froebel's view of the mind of child as "an instrument of knowing" but urged the audience to leave behind Froebel's "over-formulated" games and "predetermined" sequences of play.[28]

The subprimary section of the school (4–6-year-olds) still owed much to the Froebelian kindergarten, but the Dewey kindergarten introduced activities based on family life in the community and encouraging cooperative living through playful activities. A key shift from the Froebelian programme was free movement. The director, Georgia Scates, wrote:

> There must be freedom and as few rules as the surrounding will permit, thus throwing each child upon his responsibility and allowing him opportunity for expressing individual traits of character. . . . A person continually bound by rules cannot be expected to show what he is, nor what he should do under certain conditions.[29]

Dewey credits kindergartener Anna Bryan with devising the problem-solving equipment and materials, much like Maria Edgeworth's suggestions in earlier times:

> Upon the whole, constructive or "built up" work seems better fitted than anything else. . . . It brings the child in contact with a great variety of material: wood, tin, leather, yarn, etc; it supplies a motive for using these materials in real ways instead of going through exercises having no meaning.[30]

In both practical and philosophical terms, the carefully planned Malting House environment was modelled on Dewey's kindergarten experiment, including, for example, a seesaw designed

---

[25] Susan Isaacs, *Intellectual Growth in Young Children* (London: George Routledge and Sons, 1930), 21.

[26] Dewey, *School and Society*, 15.

[27] Dewey, *School and Society*, 61, emphasis added.

[28] John Dewey, "Some Points in Froebel's Psychology," address at The Kindergarten Conference, 10 April 1897, *University Record* 2 (May 1897): 49-53.

[29] Georgia P. Scates, "The Sub Primary (Kindergarten) Department," *Elementary School Record* 1 (June 1900): 129.

[30] John Dewey, "Froebel's Educational Principles," *Elementary School Record* (June 1900): 149.

by Pyke with hooks on its underside from which weights could be hung, and double-handed saws, all designed for open-ended educational purposes. At Malting House there were further efforts to model life, with, for example, a tool shed and carpentry workshop with real implements:

> The space was understood by Pyke and Isaacs to open the child to the facts of the external world, as opposed to conventional classrooms which created barriers between children and their natural living interests, discouraging rather than encouraging children to "find out" about the world around them.[31]

Both Dewey and Isaacs believed that to be effective in building thinking skills, schools must encourage the natural curiosity of young children, acknowledging both immediate and long-term social benefits.

Pyke's scientific interests pushed the possibilities of "let's find out" further but were overlaid by the belief, shared with Isaacs, of an experiment operating on psychoanalytic principles of fostering a well-adjusted child. This was important to Pyke due to his unhappy childhood and wartime experiences. He was determined to create a childhood for his son free from the trauma he had experienced. Both Pyke and Isaacs believed in the idea of the "child scientist" but with a different emphasis. Isaacs was primarily interested in studying and understanding the child's inner world whereas, in the view of Laura Cameron, Pyke was intent on moulding adults capable of embracing the changes that science would create in the world.[32] Cameron's examination of Pyke's "attempt to manufacture infant scientists eager to 'find out'" redresses the primary focus on Isaacs' contribution to the Malting House experiment. "Less is known concerning Pyke's application of psychoanalytic knowledge, his powerful scientific networks and his grand vision for a new form of education," Cameron wrote.[33] However, Pyke withdrew and left few records compared to Isaacs' ongoing presence in education circles and publications.

An experiment to "let's find out"

[31] Laura Cameron, "Science, Nature, and Hatred: 'Finding Out' at the Malting House Garden School, 1924-29," *Environment and Planning D: Society and Space* 24 (2006): 864.

[32] Cameron, 851-72.

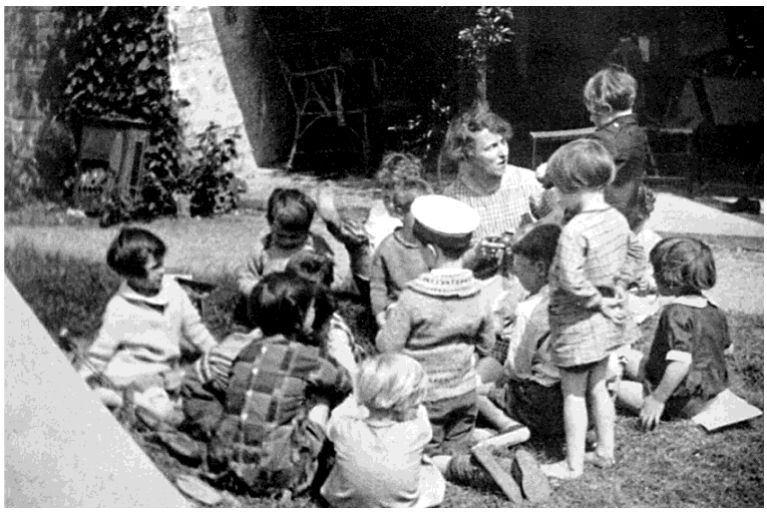
[33] Cameron, 851.

Let's find out about children

Susan Isaacs observing and documenting children's play

Let's find out by children

Children in the carpentry workshop



Let's find out with children

Susan Isaacs in conversation with children

Figure 7. "Let's find out" at Malting House School. Still from Lost Malting House film, 1927.

Susan Isaacs gave a full description of Malting House School in *Intellectual Growth and Young Children* (1930), as do key texts about Isaacs.[34] This paper cites some other first-hand accounts, each noting the surprising sight of young children using Bunsen burners in the physics laboratory. Few images exist of the Malting House School, and a film commissioned by Pyke in 1927 was lost except for some surviving stills. The three images above illustrate the interplays of discovery, with the teacher as an observer, children discovering by themselves, and the teacher engaging with children. The film's viewing for an invited audience of 400-500 was reported in *The Spectator*:

> I watched children . . . having the time of their lives, wading up to their knees trying to fill a sandpit with water, mending a tap with a spanner, oiling the works of a clock, joyously feeding a bonfire, dissecting crabs, climbing on scaffolding, weighing each other on a see-saw. . . . It is a system of education by discovery, aiming at the preservation of the most precious gift of discovery. . . . No child is ever told anything he can find out for himself. . . . The school is equipped with the most extensive apparatus which will stimulate the natural curiosity possessed of every child.[35]

Evelyn Lawrence joined the Malting House team in 1926. Previously a teacher, Lawrence had trained as a psychologist and was experienced in intelligence testing. Her first task, at the behest of Isaacs, was to write a description of what she saw. After Isaacs' death and twenty years after the school folded, Lawrence published her account in the *National Froebel Foundation Bulletin.* There is a detailed description of the layout and activities and commentary on allowing the children maximum freedom of expression and action. Pertinent to this paper are Lawrence's insights around "finding out" by children and teachers.

> *For the teacher as a researcher-observer:*
>
> An indispensable preliminary improvement to educational theory was a detailed and consistent study of a group of children living under conditions of maximum freedom. The study is being made, and at the same time innovations in educational practice are being made and tried out. . . . The children are under trained observation. . . . Practically all that they do, and much of what they say, is recorded. The children are discussed individually, and the meaning of their actions, as well as how to deal with them, considered.[36]

---

[34] Susan Isaacs, *Intellectual Growth in Young Children*, 1930; Willem van der Eyken and Barry Turner, *Adventures in Education* (London: Allen Lane, Penguin Press, 1969); Lydia A. Smith, *To Help and to Understand: The Life and Work of Susan Isaacs 1885-1948* (London: Associated University Press, 1985); Mary J. Drummond, "Susan Isaacs: Pioneering Work in Understanding Children's Lives," in *Practical Visionaries: Women, Education, and Social Progress*, ed. Pam Hirsch and Mary Hilton (London: Pearson Education, 2000), 221-34; Graham, *Susan Isaacs*.

[35] "Notice of Film of the Malting House School, Cambridge," Correspondence, NI/B/7, IEUCL Archive.

[36] Ibid., 2-5.

Lawrence emphasised, however, that there was "a definite group of children to be educated. Something has to be done with them. They cannot be put back to sleep until educational theory has devised the perfect method of bringing up children."[37]

> *For the teacher as a co-investigator:*
>
> The aim for the teachers is as far as possible to refrain from teaching but to let the children find out all they can for themselves. They are urged to answer questions, with the teachers to help them discover where the answers can be found. Above all care is taken that their ideas and values shall be their own.[38]
>
> *For the child:*
>
> The kind of people that the promoters of this school want to produce will have a scientific attitude to life. They must have intellectual curiosity and vigour and be averse to taking their opinions ready-made. . . . Capacity for social adjustment in society is included in the scientific attitude.[39]

Lawrence reported that the task for teachers in the school was not "easy," admitting too that the freedom allowed the children "entails a certain amount of unpleasantness for grown-ups."[40] Other observers argued that the freedoms allowed was not always easy for children, and Isaacs did take advice that more intervention and support by staff was required.

A description from Piaget written after his visit in 1927 captures the experimental work Malting House:

> For anybody who visited this school, as we have had the pleasure of doing ourselves, its most striking characteristic was that it was a true laboratory place at the disposal of children. As well as educational games such as those of Madam Montessori or the infant school of Geneva, the children had, not only a menagerie (rabbits, guinea pigs, chickens, lizards, etc.) but a wide variety of instruments and real studio workshops.

Piaget was fascinated with the use of Bunsen burners "operated by the little children as well as bigger ones, and the use of fire had no more secrets for these apprentice chemists."[41] Piaget's vision of the developing child as a "little scientist" was still undeveloped but obviously under consideration.

A description escaping the attention of British writers came from Lois Allen, a teacher at Malting House during 1927 who, on arrival back in Australia, described the experience in

---

[37] Ibid., 1.

[38] Ibid., 4.

[39] Ibid., 2.

[40] Evelyn Lawrence, "The Malting House School," *National Froebel Foundation Bulletin* 56 (February 1949): 5.

[41] Jean Piaget, "Intellectual Development among Young Children: A Critical Study," trans. Alan. A. Smith, *Mind* 40, no. 158 (April 1931): 137-60.

hometown newspapers. Allen had been away from Australia for nine years teaching, travelling, and studying psychology at the University College, London, and probably got the position through Evelyn Lawrence. On the morning of her arrival by ship in Adelaide, Allen was interviewed for *The News* (7 February 1928). She described Malting House as

> a small experimental school for research and the children were between three and eight years of age. The object was to study the problems of children with a view to making better use of the natural curiosity with which those this age are endowed. They were allowed to investigate the realities of nature and had a little laboratory where they experimented with crucibles, Bunsen burners, and so on, so that knowledge of scientific phenomena might be instilled in the early years. Among the children was a grandson of Sir Ernest Rutherford, the noted physicist. It was most interesting to notice the extreme difference between the children, and to observe the trend of each mind towards artistic or scientific subjects. Association with Mrs Susan Isaacs (head mistress) was an education in itself. She has a marvellous mind and her handling of the different individualities of the children was wonderful.

In a further interview in *The Register, Adelaide* (21 February 1928) readers were reminded of Pyke's original advertisement in 1924, which had circulated in Australia, for an "educated young woman with honours degree for scientific work and research . . . with a small group of young children."[42] Allen recounted:

> Mr Pyke believes that natural curiosity of children between three and eight is practically wasted in the ordinary scheme of education. At that age children do not want to learn their letters or look at books, their curiosity is about what things are made of, and how they work, and why—in a word, is scientific. The 20 children at the Malting House School, most of whom are the offspring of men on the Cambridge professorial staff, are allowed utmost freedom to follow their natural curiosity about water, mud, matches and other interesting phenomena, with a highly qualified staff to lead their enquiries into the right channels. Children are allowed to use laboratory apparatus that ordinarily they would not see until they were 13 or 14. . . . There is no distinction between work and play. What the children may wish to do inside is called "work" when they experiment on the sandheap it is called "play" but the two are really one and the same thing. . . . It appears to work excellently with the young things of Cambridge, most of whom have far more need of a natural education than young Australians, since they are largely left in their early years under the care of nurses whose one idea is that they must keep their pinafore clean.

Allen was at Malting House during the appointment of a "scientist of senior standing." Rutherford, a Nobel Laureate, had agreed to help in the selection. This was a scheme initiated by Pyke and Nathan Isaacs, who had been co-opted onto the staff in 1926. During the search, Nathan canvassed around education institutions with arguments in support:

[42] For example, *The Nation, The Statesman,* 24 March 1924.

> It may easily seem an extraordinary demand [and] you might ask "why first-class?" and "why do you want a scientist to do nurses or infant teachers' work?" . . . Let us see what happens to science in early education, and for that matter to early education, if we can get a first-class scientist to apply to it methods of thorough exploration. To encourage us in trying this, let us consider how inadequate are the results of our current methods of education at their best.[43]

The appointment of Richard Slavson in 1927, an engineer who had taught science and mathematics at Teachers College, Columbia University, in the United States, was not opportune timing. Both Nathan and Susan left soon after his arrival due to a breakdown in their relationship with Pyke and amid an impending financial crisis. Pyke's financial woes caused issues for Slavson, who later departed taking with him observations documenting conversations with children in the workshop and laboratory.[44] Slavson described the "unhampered investigation of the environment with ample material and adequate adult guidance provided at the Malting House School . . . [as] 'superior' to any he knew elsewhere."[45]

Theorising the child researcher

The Malting House experiment is characterised by its entwining of research, theorising, pedagogy, and practice. The aftermath publications by Susan Isaacs were ground-breaking in the burgeoning field of child research, using the everyday life of the school as a freer environment than the laboratory and with observation as the method rather than the test. Pertinent to the view of the child as a researcher is Nathan Isaacs' early writing on the theme of education and science, which forged a lifetime of scholarly and advocacy work, combined too with his occupation as a metal trader and a psychoanalytic practice. Nathan published a first consideration of these ideas in the popular *Nature* magazine (23 July 1927) after a short time at Malting House. Susan included his paper "Education and Science" in *Intellectual Growth in Young Children* (1930) along with "Children's 'Why' Questions" from Nathan's research at Malting House.[46] Less known is Susan's short paper "The Child as Scientist" published in *The Spectator* (8 August 1931).[47] These early arguments for a new pedagogy of practice were, over time and across a range of settings, adopted, refined, expanded, and contained.

For the readers of *Nature* magazine, Nathan's article had front-page billing, although his authorship was not acknowledged until its later inclusion in Susan's book. Malting House

[43] Nathan Isaacs, "About Early Education," typed letter to editor, NI/B/73, IEUCL Archive.
[44] Graham, *Susan Isaacs*.
[45] Richard Slavson, "Integrated Science for Young Children," *New Era* 13, no. 1 (1932): 17.
[46] Nathan Isaacs, "Children's 'Why' Questions," in Isaacs, *Intellectual Growth in Young Children,* 291-349; and "Education and Science," 350-54.
[47] Susan Isaacs, "The Child as Scientist," *The Spectator* no. 5380 (8 August 1931): 178-79.

school was the exemplar when Nathan wrote, "The beginnings of education have not hitherto seemed very relevant to the interests of scientific men."[48] At heart was Nathan's concern that the belated introduction in schooling of the sciences as a special field "prevents the true value of science for liberal education from being seen."[49] Explaining the potential of Pyke's mantra "let's find out," although not cited, Nathan wrote:

> Most normal children of, let us say, 4-5 years of age show a lively, inquiring curiosity in the world around them, and want to know how things work, what they are, how they are made. Their curiosity seeks knowledge and takes pleasure in finding it. We should be endeavouring so to guide, reinforce, and develop this curiosity of the normal child in the world around him that it could pass continuously by its own activity into the same interest, informed and organised, in the world—not different but greater—of science.[50]

In preference to liberalising "old methods," Nathan proposed this "radical possibility" for education, informed by "enlightened education theory" and the influence of "psychological knowledge." Readers were briefly informed of the Malting House experiment with its "suggestive" results:

> During three years, the response of children of 4-7 years of age under free conditions to opportunity and stimulus for the direct discovery of many kinds of natural knowledge—mechanical, physical, biological—has been observed and studied.[51]

This early work seeded Nathan's long quest for the integration of the sciences in the child's everyday world. Over the following decades Nathan expanded his thinking into versions of a book titled *Education and Science* that was never completed.[52]

Nathan's more substantive paper analysed the circumstances of children's "why questions" he had observed at Malting House. He categorised the level of explanations provided by adults, arguing that the cumulative process was an essential cognitive tool for making sense of the world by the child. Adults working with children had a crucial role

> to equip and guide the natural epistemic concern of children from the start, so as to turn it to its most fruitful and valuable use. . . . [The child] depends for a long time upon adults for satisfaction, and they can either give every help possible to turn it into an active, enjoyed and freely advancing interest for the child, or they can rebuff, confuse, mislead and stifle it in endless ways.[53]

---

[48] Nathan Isaacs (attrib.) "Education and Science," *Nature* 120, no. 3012 (23 July 1927): 105.

[49] Ibid., 105.

[50] Ibid., 106.

[51] Ibid., 107.

[52] "Education and Science" NI/B/7, IEUCL Archive.

[53] Nathan Isaacs, "Children's 'Why' Questions," in Susan Isaacs, *Intellectual Growth*, 338.

This seminal work by Nathan spearheaded his long campaign to transform the primary school curriculum, as well as the practice of teachers.

Susan's article "The Child as a Scientist" in *The Spectator* (8 August 1931) read like a presentation to an interested audience. She was introduced as the "Chairman of the Education Section of the British Psychological Society and the author of *Intellectual Growth in Young Children*." Susan echoed Nathan's arguments challenging the late introduction of science to children, stating, "To many it may seem monstrous to try to bring science and the little child together. . . . Leave at least the young child alone with his charming beliefs in fairies and Santa Claus!"[54] Susan argued that harnessing the child's "natural interests in the here and now" and adults responding with respect was the conduit to the "world of scientific thought." She distinguished between the teaching of science, which was something for later, and the "adventure of discovering the world" that the young child sought from adults. Susan Isaacs is remembered by many for her ability to illustrate ideas with lively examples, such as this example of the teacher as a researcher recording the child researcher:

> If [the child] has the chance, he will try to "find out" by practical handling and experiment. Take, as one instance, the following record of a group of young children in a favourable environment: "Some modelling wax having been dropped on a hot-water pipe, the children discovered that it melted. . . . When they found that all the wax would melt, whatever colour it was, they went on to try other materials—plasticene, wood, chalk and so on, talking about it together and telling Mrs I. 'Plasticine melts. Wood won't melt' and so on."[55]

The spontaneous vignette was intended to reveal to readers (and her audience) that the young child "bears within himself the seed of the patient discoverer no less than the creative artist and practical doer." Susan urged educators to "not bar the door to the world of scientific thought when [the child] himself essays to open it."[56] Extracted from her recently published *Intellectual Growth in Young Children*, the vignette yields a glimpse of Susan's contribution to the field of child research—with a mix of the teacher observer, co-investigator, and an environment encouraging child discovery. This was the foundation forerunner of a qualitative action-research paradigm of child research.

Understanding children

[54] Susan Isaacs, "The Child as Scientist," 179.

[55] Ibid., 178.

[56] Ibid., 179.

Susan Isaacs left Malting House in 1927 with three years of observation research data. This was a traumatic time personally and she underwent psychoanalysis, which also allowed her to establish a child analysis practice. She began to write. Between 1929 and 1933 Isaacs published four books using her research data: *The Nursery Years* (1929), *Intellectual Growth in Young Children* (1930), *The Children We Teach* (1932) and *Social Development in Young Children* (1933). Academic recognition and fame followed, also financial reward as her books were reprinted many times. Broadly, the books addressed Isaacs' concern for "the great, the desperate need of children themselves to be *understood*"—that is, understanding their development and behaviour as opposed to measuring their development.[57] Measurement cannot be a "substitute for hard thinking" claimed Isaacs, concerned at the "over-simplification" and "standardisation" of experimental studies dominating the field of developmental psychology during the interwar years.[58] She cited, among others, Arnold Gesell's rating scales of normal development, John Watson's behaviourist experiments, Alfred Binet's mental age scales, and Cyril Burt's intelligence tests, labelling such approaches as "quite sterile."[59] While not rejecting the idea that the knowledge gained had value, because Lawrence had tested children at Malting House, Isaacs instead claimed, "I am much more interested in the children and the way they look at life."[60] To understand this a different methodology was needed. Isaacs' books are rich in revealing the interests, behaviour, and thinking of young children, but they also illustrate a research process to "find out."

The Nursery Years was a small book written for parents, teachers, and nurses. It was still being reprinted in 1968 and was a standard text for teacher trainees into the 1950s. In 1929, however, Isaacs was explaining to readers how scientific knowledge had greatly improved the rearing of babies:

> In the care of the child's mind, this is beginning to be true; but it is not yet by any means as true as it might be . . . without that knowledge . . . we move in the dark and may do much harm, with the best intentions in the world.[61]

To shine light on this darkness a new approach was needed: "by patient listening to the talk of little children, and watching what they do, with the one purpose of *understanding* them."[62] This

[57] Susan Isaacs, *Social Development in Young Children* (London: Routledge, 1933), 13.
[58] Susan Isaacs, *Intellectual Growth,* 6.
[59] Ibid.
[60] Susan Isaacs, *The Children We Teach* (London: University of London Press, 1932), 111.
[61] Susan Isaacs, *The Nursery Years* (London: Routledge, 1929), 2.
[62] Ibid., 15.

was Isaacs' powerful missive for the rearing and education of children that slowly infiltrated homes, schools, and institutions.

The *Intellectual Growth of Young Children* followed, intended for an academic audience for whom Isaacs included research data and outlined her methods. She emphasised the value of qualitative records of children's behaviour, noting the lack of detailed records of a group of young children "over long periods of times and under relatively free conditions."[63] Isaacs adopted the ethnographic traditions of anthropology; however, observations at Malting House were undertaken by staff who were also educators, unlike the "neutral" anthropological observer on the sidelines from those times. The staff had notebooks in their pockets and "at moments snatched from doing things actively with the children" noted as fully as possible "the actual moment," including conversation.[64] Such practices can still be seen in early childhood centres almost a century later. Isaacs mined this data for the book and its sequel *Social Development in Young Children* (1933), which also included tracts of raw data. At the end of the twentieth century Mary Jane Drummond reflected:

> The range of children's powers documented in these two volumes is still extraordinary, even after generations of educators, psychologists and other researchers have added to our sum of knowledge about young children. In Susan Isaacs' account, the children's living interests are evergreen, comprehensive and cosmopolitan, their appetite for understanding virtually insatiable. No avenues are closed off from their enquiries.[65]

The key for Isaacs was a research environment that allowed maximum freedom for children to explore and interact with others, thereby "watching the child's intelligence actually at work in his everyday practical and social relations." [66] Isaacs' interest in these random group observations contrasted with Piaget's intentional experiments and questioning of individual children. Their shared interests in children's intellectual development and their different approaches and conclusions are examined in later sections. Isaacs wrote:

> Watching the spontaneous cognitive behaviour of a group of children under conditions designed to further free inquiry and free discussion may, therefore, reveal facts which would scarcely yield to the direct assault of test or experiment.[67]

[63] Susan Isaacs, *Intellectual Growth,* ix.

[64] In 1927 observers with shorthand skills were hired by Pyke, which assisted in the recording of conversations.

[65] Drummond, "Susan Isaacs," 225.

[66] Susan Isaacs, "*Intellectual Growth,*" 5.

[67] Ibid., 6.

The sequel to *The Nursery Years* was *The Children We Teach,* written for teachers. It was not about schools or teaching but about "understanding the children who are in the schools."[68] Isaacs criticised psychologists who wrote about "the child" as if there were a fixed type of child, which, she wrote, had "led to all sorts of rigid laws being laid down."[69] Instead, Isaacs urged teachers to consider the children's interests and the ways they looked at life: "It is clear that the sayings and doings of children show how false is any view of mental development which sees it as an affair of fixed stages."[70] For Isaacs, as for Dewey, children's activity was the key to their development. She wrote: "Children have a natural impulse *to be doing,* with hands, feet and tongue" hence, she claimed, "the greatest duty of the educator is thus to create conditions that will allow the freest possible movement."[71]

Social Development in Young Children was published in 1932, setting out a rationale for understanding children's social development. The data it drew on revealed the inner world of the child, their feelings of jealousy, anger, hatred, and interest in sexuality. Isaacs again refuted judgements that Malting House was a psychoanalytic school; nevertheless the data was informative in the contested field of psychoanalysis, to which Isaacs also belonged as a member of the British Psycho-Analytic Society. For Isaacs, the aim of the experiment was to understand how to rear and educate children with acceptable social behaviour without physical punishment or verbal reproof. Isaacs devoted a chapter to an examination of the relationship between education and psychoanalysis, acknowledging confusion and overly optimistic views that the "new discoveries . . . would completely revolutionise educational purposes and practices."[72] Isaacs warned of the danger of "quasi-educators" in schools causing "undesirable complex-hunting.[73] " Instead, she positioned her books as translating the "deeper understanding of the emotional life of children which psycho-analysis has yielded" into "*usable* educational theory" for teachers in training and parents.[74] This was a complex dance in which teachers were expected to "find out" about the minds and emotions of children, but as Mary Jane Drummond wrote, "it is striking how Susan Isaacs never attempts to do teachers' thinking for them. She does not offer a pedagogic programme. . . ."[75] This was for teacher to "find out" for themselves.

[68] Susan Isaacs, *The Children We Teach,* 11.
[69] Ibid., 71.
[70] Ibid., 167.
[71] Ibid., 73-74.
[72] Ibid., 403.
[73] Ibid., 412-13.
[74] Ibid., 414-15.
[75] Drummond, "Susan Isaacs," 229.

A conversation with Piaget

The visit of a young Jean Piaget to Malting House in 1927 took place after the translation into English in 1926 of his early theories concerning the development of children's logical thinking.[76] Piaget was interested in observing the way young children were reasoning in their play at Malting House. Susan Isaacs and Piaget admired each other's work, although Isaacs did not agree with Piaget's research methods or some of his conclusions. Nevertheless, what Lydia Smith describes as a "long conversation" began between Piaget and Susan that included Nathan, a critic and supporter of Piaget's work, and in later decades, Evelyn Lawrence.[77] Susan did not accept the certainty of Piaget's stages of development derived from test situations, arguing that natural observations revealed "more elasticity" and "more variety" in the data.[78] Piaget did adapt his methods to include more open-ended conversations, but differences remained in their respective understandings of the processes of a child's intellectual development. Susan also visited Piaget in Switzerland to see the experimental Maison des Petits, similar in size to Malting House but a public school attached to Institute Jean-Jacques Rousseau at the University of Geneva. Its programme was a mix of Froebelian, Montessorian, and Deweyan approaches with "active" methods that Piaget was able to observe while he listened to and conversed with children. His early books contain much of this verbatim data.

The conversation between Piaget and the Isaacs continued, mainly through reviews of each other's books and rejoinders, including an exchange about Susan Isaacs' *Intellectual Growth in Young Children* and Nathan's chapter on "Children's 'Why' Questions"[79]. Piaget responded, admiring "Mrs. Isaacs' fine book" as well as Mr. Isaacs' essay of "primary importance"; he noted, too,

> the remarkable talent with which Mrs Isaacs and her collaborators have understood how to collect facts of great novelty and interpret them according to both systematic and personal conceptions.[80]

[76] Jean Piaget, *The Child's Conception of the World* (London: K. Paul, Trench and Truber, 1926).

[77] Lydia A. Smith, "Jean Piaget and Susan and Nathan Isaacs."

[78] Susan Isaacs, "Review of 'The Child's Conception of Causality' by Jean Piaget" *Mind* 38 (January 1931): 89-93.

[79] Nathan Isaacs, "Children's 'Why' Questions," in Susan Isaacs, *Intellectual Growth*, 291-349.

[80] Piaget, "Intellectual Development among Young Children," 5.

Susan was similarly effusive about Piaget, writing, "there is probably no single contributor . . . whose work is of greater interest than that of Jean Piaget."[81] She admired the school setting Piaget used for his observations, in contrast to laboratory settings, although Maison des Petits did not allow the freedoms of Malting House. Nevertheless, Susan still cast Piaget's "clinical method" as too restrictive. Smith likens the different perspectives argued throughout their conversation to an extension of the "old controversy between heredity and environment," with the Isaacs placing more emphasis on children's interactions and experiences that build gradually, and not necessarily in an orderly progression, rather than a theory of stages.[82] Notwithstanding such differences, both Susan and Nathan Isaacs and Piaget all saw the potential of a new kind of learning environment for young children that the co-investigating teacher enabled.

Not until the postwar years was this environment more fully possible. This was after the death of Susan and the translation of Piaget's later works into English and was encouraged by Nathan and Lawrence's links with Froebelians at the FEI and through the National Froebel Foundation, an accommodation described in a later section. Barbara Beatty examines parallel interest in the United States and compares "the appearance and disappearance of Piaget in the nursery school movement in the 1920s and 1930s" to "a window [that] briefly opened then closed."[83] And then, like Britain, "by the 1970s, Piaget was a God . . . the cycle began to repeat itself" but again to close, because "the alignment of factors in psychology and education conducive to the establishment of a new trend . . . had shifted."[84] This pattern of realignment and accommodation characterises the journey of Pyke's missive "Let's find out" across the time trajectory of this paper.

Stewardship of Dorothy Gardner

Susan Isaacs was appointed as the foundation head of the Department of Child Development at the University of London Institute of Education (IE) in 1933. The institution soon became a conduit for promoting new understandings about children, development, and play in mainstream nursery schools and classrooms, settings that were different to Malting House in terms of staffing, expertise, resourcing, and infrastructure. The position at the IE was not generous; it remained half time, and promises of promotion and a laboratory nursery did not

[81] Susan Isaacs, "Review of 'The Child's Conceptions of the World' by Jean Piaget," *Mind* 38, no. 152 (1929): 506.

[82] Smith, "Jean Piaget and Susan and Nathan Isaacs," 155.

[83] Barbara Beatty, "Transitory Connections: The Reception and Rejection of Jean Piaget's Psychology in the Nursery School Movement in the 1920s and 1930s," *History of Education Quarterly* 40, no. 4, (2009): 442.

[84] Beatty, "Transitory Connections," 464.

materialise, nor did the Institute offer initial teacher training with practicing schools. Nevertheless, with Isaacs, already acclaimed as an outstanding teacher, in charge, the IE established a reputation, bridging the growing field of child development knowledge and the everyday experience of schooling for children and teachers. Students from across the education sector in Britain—and soon, by reputation, other countries—enrolled in Isaacs' advanced course in child development as well as her seminar and postgraduate programmes. Archival records are meagre, and the best record is by Dorothy Gardner in *Susan Isaacs: The First Biography* (1969). Gardner was a part-time foundation student during 1933-34, previously a nursery teacher with a Froebel diploma and a lecturer in education at the Bishop Otter College in Chichester. She wrote:

> My most vivid recollections are of the many ways in which she led us to do our own thinking; of superb teaching, but also of wise silences until we had worked out a problem to a point where her help became essential and we could assimilate it.[85]

These were the methods Isaacs used to grow teacher-researchers in her own footsteps. Essentially, Isaacs shifted from undertaking research herself and became a sought-after communicator as teacher, supervisor and mentor of her students, speaker in public forums, policy advisor and advocate for early years education, book editor, and author of many popular and scholarly articles and booklets. In the other "half" of her time, Isaacs had a practice as a child analyst and ongoing involvement in the Psycho-Analytic Society.

The Institute became a buzzing hub of people and new ideas inspired by Isaacs' understandings of children, the impetus of new research, and an optimistic belief that the ideals of new education could be transferred from the experiment into the mainstream to benefit all children. The apparatus of the IE as a research university gave powerful backing to networks across other university and teacher training settings, government agencies, schools and nurseries and the fledgling psychological and guidance services for children. Many initiatives for early education across the mid-twentieth-century acknowledge the influence of Susan Isaacs in person and/or her research and publications. A useful exemplar is the research trajectory of Gardner, a student of Isaacs as well as her long-time friend and colleague, who succeeded Isaacs at the IE in 1943, a position she held until her retirement in 1968. Isaacs' continuing influence across the mid-century and beyond was both pervasive and persuasive via students who fanned out across education institutions and the globe, promoted her books, and, like Gardner, initiated their own research and writings.

[85] Dorothy E. M. Gardner, *Susan Isaacs: The First Biography* (London: Methuen, 1969), 94.

Gardner did not need persuading by Isaacs that an environment of play and discovery was a key conduit for teachers to better understand children. In 1931 Gardner had established a Children's Play Centre attached to the Bishop Otter College, for children from ages three to thirteen living in nearby Tin Huts emergency housing with little space for play. The programme then expanded to include referrals from local teachers for "less happy children" or those with "unstable" home backgrounds.[86] The Centre operated after school, was staffed by student volunteers who observed the children in a freer environment than school, recorded parents' views, and documented their own experience. A wide range of play equipment was provided, although more limited than what was available for children at Malting House, but the approach of documenting children's play and problems over time provided rich insight into behaviour that was often challenging. Gardner later claimed, "We have learnt that we cannot educate a very unhappy child [and] realise that emotional satisfactions lie at the root of all intellectual interests."[87] Isaacs became interested in the ongoing project, writing, "I realized at once how important a contribution it was, alike to the education of children and the training of teachers"; she invited Gardner to write a book for a series on contributions to modern education. In the foreword to *The Children's Play Centre* (1937) Isaacs wrote:

> [Miss Gardner's] records show how [the Play Centre] enlarges [children's] lives; how they expand their creative interests and happy confidence in the grown-ups, how their sense of responsibility and their beliefs in themselves are fostered. This book will be welcomed by . . . all who are engaged in preventative social work . . . [and] the growing number of teachers who value the child's creative activities in school and are willing to make use of his play interest for serious education purposes … and will be stimulating and helpful to teachers who are in charge of large groups of children and who find it difficult to discover a technique of giving freedom without anarchy.[88]

Isaacs recognised that Gardner was exploring the possibilities of innovation in mainstream schooling, acknowledging too the challenges and problems of realising the ideal of "let's find out" by children, with children, and about children. *The Children's Play Centre* was frank about the difficulties faced by student volunteers, by the staff in charge, and by children, many of whom did not know how to play by themselves or with others.

Prior to Gardner's appointment to the IE in 1943, she lectured at the City of Leeds Training College, worked as an inspector of infant and nursery schools in Bolton, and published

[86] Dorothy E. M. Gardner, *The Children's Play Centre: Its Psychological Value and its Place in the Training of Teachers* (London: Methuen and Co. Ltd., 1937).

[87] Dorothy E. M. Gardner, *The Education of Young Children* (London: Methuen and Co. Ltd., 1956), 10-11.

[88] Ibid., xi.

the first of a series of books spanning two decades. A reference for Gardner, written by Isaacs, positioned Gardner as her preferred successor for new times ahead:

> Miss Gardner has a more intimate and varied knowledge of different types of schools than I ever had myself; and at the present times, this knowledge would be invaluable in shaping the contribution of the Department to the many urgent problems of the education of young children. . . .
>
> Amongst all the people who came to me during the last years . . . Miss Gardner has been the most outstanding in her ability, her sense, her knowledge and her wisdom. The conviction has been growing in my mind for several years that she was the person to whom I should be happy to hand over the stewardship. . .[89]

Unlike Isaacs, whose broad research was about understanding children, Gardner realised the need to convince teachers, teacher educators, and policy makers that "understanding" and playful discovery could produce good education and social outcomes for children in ordinary classroom settings. Proof was needed to encourage widespread change. *Testing Results in the Infant School* (1942) recounted a research project undertaken in six "good" infant schools across different settings, each staffed by "efficient and interested" teachers. Three were identified as schools that viewed a child's spontaneous play as of great importance, while the other schools acted as "control schools" where children were taught mainly by means of activity directed by and/or knowledge presented by the teacher. There was minimal opportunity for play and/or the teachers saw little educational purpose in play. The project highlighted the contrasting views of the child's nature and needs and the role of teachers. Gardner's methodology, which built on Isaacs', included observations over time but added a range of tests around the three Rs and social adjustment. *Testing Results in the Infant School* was published again in Isaacs' edited series, who again wrote the foreword:

> I awaited her final results with eager interest. And I will not deny that they surprised me—most agreeably!
>
> My own and other people's experience had left no doubt that any objective tests under proper conditions, comparing achievements of children who were allowed to talk and play together with those who were mostly made to sit and listen, would show solid and lasting gains by the former group *in many subjects*. . . . But no one could say *how much more*.[90]

[89] "Reference from Susan Isaacs" in Child Development Applications 1943, IE/1/ADM/4, IEUCL Archive.

[90] Dorothy E. M. Gardner, *Testing Results in the Infant School* (London: Methuen and Co. Ltd., 1942), v, emphasis added.

Gardner's book was published in the early years of a war that was hugely disruptive to schooling and families, although longer term the war heightened better understanding of children's mental health. In the meantime, Isaacs hoped that the promising results

> will convince doubting Thomas. They will encourage and support all those understanding teachers who have long struggled against half-hearted authorities, or have battled with adverse building and meagre equipment, to meet the true needs of children in the Infant School.[91]

In the postwar years Gardner followed up the study published as *Long-term Results of Infant School Methods* (1950). The results were similarly indicative of the value of play but the test results were less conclusive, partly due to the postwar staffing instability. This time Gardner tracked children from the infant school through to ages nine and ten years in the junior school, again using control schools for comparison. Gardner's research methods attracted criticism, which she acknowledged. Her wider mission, however, was to transform the experience of early education for young children and train a new generation of teachers with child development knowledge and confidence to implement playful methods. For these purposes she wrote several texts for teachers, including *Education Under Eight* (1949) and *The Education of Young Children* (1956).

In 1949, amid the baby boom population growth and the expansion of teacher training, Gardner established the Child Development Society at the IE, remaining its chair until her retirement in 1967. The Society was a continuum of earlier initiatives by Isaacs, attracting membership across the wider teacher education and research community. For the next 55 years, until the Society disbanded in different times, it and its newsletters were a conduit for the dissemination of current research, issues, and educational thinking about young children. It hosted the annual Susan Isaacs Lecture and in 1985 celebrated the centenary of Isaacs' birth with a retelling of the Malting House story.[92] Gardner died in 1972. The Society held a memorial, with tributes in person and from afar applauding the work of Gardner as a researcher, teacher, mentor, and influencer. An interesting comment from Margaret Roberts, who succeeded Gardner as head of the Department of Child Development (1968-79), gives a glimpse of her leadership:

> The climate of her department had the quality of a happy infant school, where one chose to do what one wanted to do and was not, in fact, forced to choose at all, yet soon everyone found themselves working at their chosen task, with extreme zest and very

[91] Ibid., vi.

[92] "In Celebration of Susan Isaacs," Child Development Society, *Newsletter* 34 (1985) CDS6/3, IEUCL Archive.

> hard. . . . She herself was a tireless worker and a keen politician. She knew which of her students she wanted where and soon she had them placed in strategic quarters. . . . Many of her dearest friends were H.M.I.s [Her Majesty's Inspectors].[93]

This pattern of personal influence is a clue to the successful infiltration of play and discovery methods across the mainstream of early years schooling. Tributes came from New Zealand, where Gardner had visited several times at the behest of past IE students, that provide glimpses of the IE and its people from afar as a site of influence. From Emeritus Professor Henry Field, University of Canterbury:

> Dorothy Gardner was a worthy successor of Susan Isaacs at the Institute of Education. Both were magnificent; each contributed in terms of her distinctive personal idiom and their wholesome influence has permeated the education of pre-school children in many parts of the world. Miss Gardner maintained a nice combination of scholarship at the highest level . . . and a supportiveness which did not cramp the independence and integrity of the children and students with whom she worked.[94]

From Philip Lawrence, professor of education at the University of Canterbury:

> Miss Gardner . . . was able to combine a shrewd psychological insight with a thorough knowledge of the realities of the classroom. Dorothy Gardner was to me a constant reminder that in the field of child development the greatest returns came from starting with a knowledge of the child as he is rather than with abstractions about children: she was not averse to theory but was able to keep it in healthy perspective and remind us to do the same.[95]

Isaacs' legacy of "finding out" and understanding children as an approach to both research and pedagogy had not dimmed across decades or distance. Lawrence can be credited with introducing New Zealander students and teachers to Piaget's theories in the 1950s. He later recounted how, in 1950, Professor Field urged him to enrol in a doctorate at the IE, as was custom, but instead Lawrence became the second only graduate awarded a University of New Zealand PhD in education.[96]

Froebelians on the frontline

During the early twentieth century there was an accommodation by Froebelians with new education ideas and a rejection of the formality and progressions of older kindergarten activities

[93] Child Development Society, *Newsletter* 21 (1972), CDS/6/3, IEUCL Archive.

[94] Ibid.

[95] Ibid.

[96] Sue Middleton, "Educating Researchers: New Zealand Education Phds 1948-1998," *State-of-the- Art Monograph* 7 (July 2001): 9.

and apparatus. Periods of free play and a wider range of activities were introduced, described by Kevin Brehony as a "revisionist Froebelian pedagogy." Brehony suggests that in Britain, it was the initiative of key women who, by adapting out-dated kindergarten practices and embracing new education ideas, were crucial to the survival of Froebelian principles in new times. Interestingly, Brehony names "the work in the 1920s of Susan Isaacs at the Malting House [who] was almost in a direct line of descent from revisionist Froebelians."[97] The emergence of a nursery school movement in Britain, most famously spearheaded by Margaret McMillan[98], further encouraged the fusion of Froebelian principles of play and purposeful activity with freedom, discovery, and understanding. Following on from Brehony, Jane Read writes:

> In Britain, two significant early years pioneers, Margaret McMillan and Susan Isaacs, took Froebel's ideas forward, each reflecting how Froebelian pedagogy adapted to take account of new scientific knowledge of young children's development. However, they were not alone. . .[99]

This paper also presents a telescoped trajectory of a much broader swathe of change and endeavour.

During the 1930s and 40s both Isaacs and Gardner were advocates of the burgeoning nursery school movement, promoting the social and educational benefits for all children, not just the poor who had been the focus of Margaret McMillan's work.[100] In 1946 a summer course for teachers was held at the Froebel Education Institute (FEI) in Roehampton, jointly organised by the National Froebel Foundation and the Nursery School Association. The 200 attendees represented the education spectrum, from nursery teachers to principals, inspectors, and college lecturers, including Gardner, who brought international students from the IE. Evelyn Lawrence, also in attendance, wrote:

> The two societies have identical ideals in relation to the education of young children and are anxious to work together wherever it was possible. This summer school was a very happy beginning to close co-operation.[101]

---

[97] Kevin Brehony, "English Revisionist Froebelians," in *Practical Visionaries: Women, Education and Social Progress 1790-1930,* ed. Mary Hilton and Pam Hirsch *(*London: Longman, 2000), 196.

[98] Margaret McMillan, *The Nursery School* (London: J. M. Dent and Sons Ltd., 1919).

[99] Jane Read "Tracing Froebel's Legacy," in *The Routledge International Handbook of Froebel and Early Childhood Practice,* edited by Bruce et al., 16.

[100] Susan Isaacs, *The Educational Value of the Nursery School* (London: The British Association for Early Childhood Education, 1937); Dorothy E. M. Gardner, *Education Under Eight* (London: The British Council, 1949).

[101] Evelyn Lawrence, "Joint Summer School, 1946," *National Froebel Foundation Bulletin* 41, 1.

This collaboration continued with a view to building influence across the domains of both preschool and primary schooling. Opening the conference was Isaacs, applauded by the attendees for "having done more than any other in this country to establish our principles and guide our practice." In her presentation "Educational Memories" Isaacs gave an account of what had changed but also, in her view, the "lack of change in the education of young children."[102] There was still much work ahead, the audience was told.

In the 1950s and 60s, alongside the expansion of nursery provision and primary curriculum reform, particularly in infant classrooms, there was ongoing revisioning by Froebelians, including an accommodation with Piagetian theory. Piaget's earlier conversations with both Susan and Nathan Isaacs were rekindled for new times under the institutional umbrellas of the NFF and the FEI, with Nathan Isaacs and Evelyn Lawrence, who had married in 1950, firmly in the Froebelian camp, so to speak. They were both at times governors of the NFF, with Lawrence its director and editor of its *National Froebel Foundation Bulletin.* In 1952, Lawrence edited *Friedrich Froebel and English Education* in celebration of the centenary of Froebel's death, positioning his relevance for the schooling of young children in current times, a space in which English Froebelians wanted a continuing presence.

Nathan contributed a chapter on Froebel's educational philosophy, against a backdrop of postwar conflict and emerging Cold War politics, to debate the issue of freedom. He argued that "the great Froebelian revolution" still provided "the true groundswell for an effective theory of freedom" for which children must be educated "from the start."[103] Nathan urged, "It must be [the child's] own experience . . . [the child's] own final choice that counts," a missive repositioned in new times under the philosophical umbrella of "Froebelian freedom" rather than the psychoanalytic freedoms that resonated at Malting House. The older "Froebelian child-centred principles of experience and activity, integration and growth" were now firmly aligned to new understandings of children and "construed socially as much as individually, since they apply to every child."[104] Nathan also endorsed Piaget, acknowledging that the "interpretations of his results [had] aroused discussion and doubt . . . [nevertheless] his vast and comprehensive canvas of *average* development cannot in the future be left out."[105] Embedding this realigned

[102] Ibid., 1-2.

[103] Nathan Isaacs, "Froebel's Educational Philosophy," in *Friedrich Froebel and English Education*, ed. Evelyn Lawrence (London: University of London Press, 1952), 226.

[104] Ibid., 228.

[105] Ibid., 204.

blueprint into policy and practice for schools became the focus of Nathan's work in the years before his death in 1966.

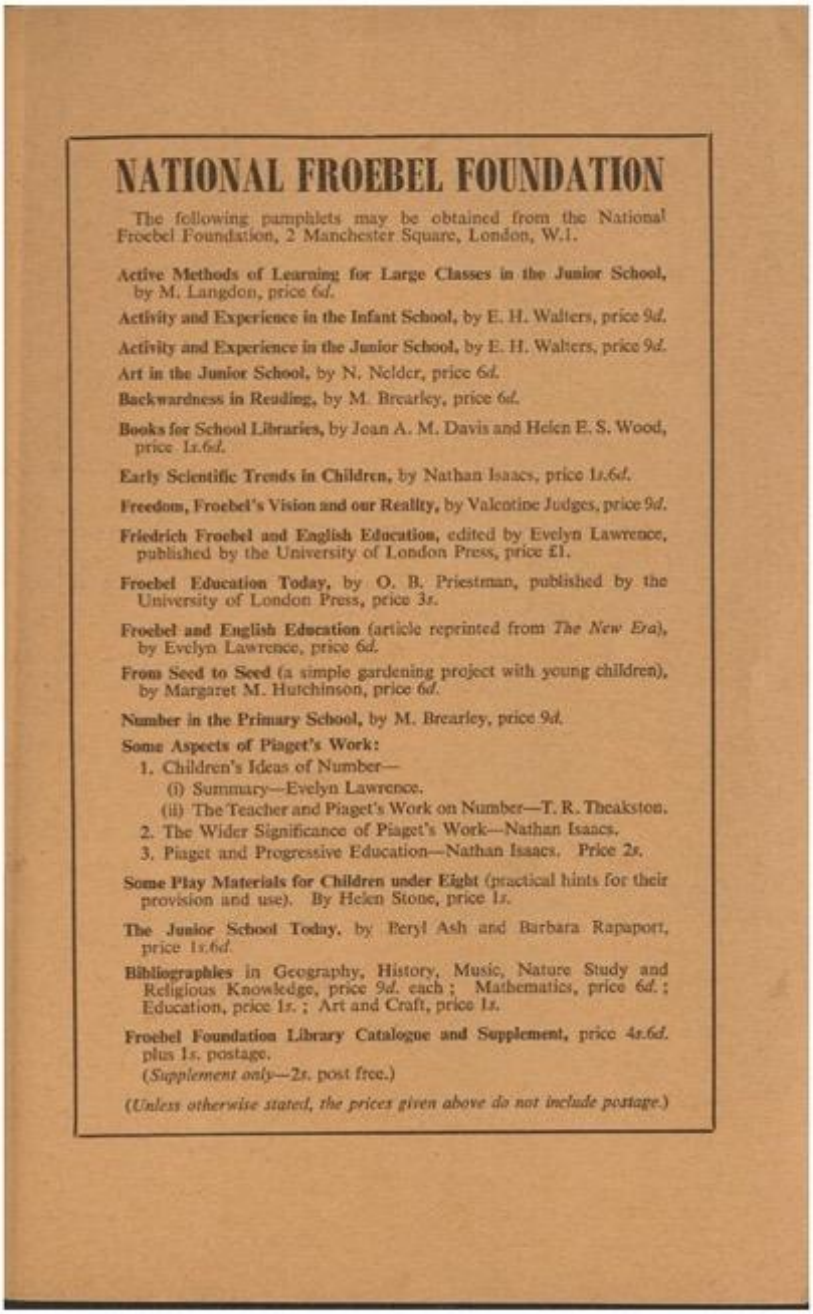
In a history of the English Froebel Society/Foundation, Joachim Liebschner, one-time lecturer at the FEI, made an acute assessment of the alignment of Froebelian principles and Piagetian theory. He suggested that the cause lay partly in the shifting politics of postwar teacher qualifications, to wit, the demise of the Froebel Teacher's Certificate with new regulations taking over roles once shouldered by the Foundation. Liebschner argued:

> [The Foundation's] usefulness seemed to be drawing to a close. This may well have been the case had it not been for the appearance of Piaget's work dealing with the importance of the child's own actions as a means for the establishment of intelligence. Because Piagetian research was providing scientific evidence of the correctness of much of Froebel's intuitive thinking as regards how children learn best, the Foundation explored, supported and disseminated Piagetian ideas earlier than probably any other single body in the United Kingdom. . . .
>
> The concentration on Piaget's work put the Foundation once more at the forefront of educational thought. Membership, which had gone down during the early fifties, once more topped the thousand mark by 1959. Almost two thousand copies of the June *Bulletin* were printed and sold in the same year. . . . Financially too there was a real turnaround. Deficits . . . were changed into profits . . . there was hope.[106]

The Froebelian-Piagetian alignment in Britain was enacted through NFF-sponsored conferences. These included a lecture by Piaget himself in October 1960, translated on site by Isaacs who, with Evelyn Lawrence, hosted Piaget for dinner at their home.[107] There was also the platform of the *Bulletin*, which published pamphlets, articles, and booklets promoting Piagetian ideas as relevant for teachers and akin to Froebelian principles and practice.

[106] Joachim Liebschner, *Foundations of Progressive Education. The History of the National Froebel Society* (Cambridge: Lutterworth Press, 1991), 145.

[107] Isaacs to Piaget, 8 September 1960, "Correspondence with Piaget 1959-62," NI/C/14, IEUCL Archive.



NATIONAL FROEBEL FOUNDATION

The following pamphlets may be obtained from the National Froebel Foundation, 2 Manchester Square, London, W.1.

Active Methods of Learning for Large Classes in the Junior School, by M. Langdon, price 6*d*.

Activity and Experience in the Infant School, by E. H. Walters, price 9*d*.

Activity and Experience in the Junior School, by E. H. Walters, price 9*d*.

Art in the Junior School, by N. Nelder, price 6*d*.

Backwardness in Reading, by M. Brearley, price 6*d*.

Books for School Libraries, by Joan A. M. Davis and Helen E. S. Wood, price 1*s*.6*d*.

Early Scientific Trends in Children, by Nathan Isaacs, price 1*s*.6*d*.

Freedom, Froebel's Vision and our Reality, by Valentine Judges, price 9*d*.

Friedrich Froebel and English Education, edited by Evelyn Lawrence, published by the University of London Press, price £1.

Froebel Education Today, by O. B. Priestman, published by the University of London Press, price 3*s*.

Froebel and English Education (article reprinted from *The New Era*), by Evelyn Lawrence, price 6*d*.

From Seed to Seed (a simple gardening project with young children), by Margaret M. Hutchinson, price 6*d*.

Number in the Primary School, by M. Brearley, price 9*d*.

Some Aspects of Piaget's Work:

1. Children's Ideas of Number—
   (i) Summary—Evelyn Lawrence.
   (ii) The Teacher and Piaget's Work on Number—T. R. Theakston.
2. The Wider Significance of Piaget's Work—Nathan Isaacs.
3. Piaget and Progressive Education—Nathan Isaacs. Price 2*s*.

Some Play Materials for Children under Eight (practical hints for their provision and use). By Helen Stone, price 1*s*.

The Junior School Today, by Beryl Ash and Barbara Rapaport, price 1*s*.6*d*.

Bibliographies in Geography, History, Music, Nature Study and Religious Knowledge, price 9*d*. each; Mathematics, price 6*d*.; Education, price 1*s*.; Art and Craft, price 1*s*.

Froebel Foundation Library Catalogue and Supplement, price 4*s*.6*d*. plus 1*s*. postage.
(*Supplement only*—2*s*. post free.)

(*Unless otherwise stated, the prices given above do not include postage.*)

Figure 8. Advertisement for the Froebel Foundation publications, 1958

The Foundation was similarly proactive in publishing a range of material for teachers promoting progressive practice.

The other conduit for the Froebelian realignment and influence was the FEI itself. Liebschner claimed:

> Lecturers at the Froebel Educational Institute were particularly keen to structure their courses around Piaget's developmental ideas and it was not surprising that for a long

> time the *Froebel Educational Institute became known as the 'Piaget Institute' among students and educators in London.*[108]

Liebschner was referring particularly to Molly Brearley, principal of the FEI (1955-1970), and her predecessor, Gwen Allen (1956-1969). Both women wrote books for teachers about Piaget, play, discovery, science, and finding out, although Susan Isaacs, had she still been alive, might have been surprised at Nathan's adaptation of her views about learning and development, with Piaget's stages of cognitive development now being positioned at the forefront of Froebelian practice for a new generation of teachers. Froebelian educator Tina Bruce recalled being interviewed by Brearley for a student place at the FEI in 1966 and being given a "Piaget task" to solve and then discuss in a group, which she found "absolutely fascinating" because there was no correct answer.[109] There was also Chris Athey, a teacher at the Froebel Demonstration School at Ibstock Place and from 1962 a lecturer at FEI. Athey drew inspiration from Isaacs but was remembered too for "integrating Piagetian principles into Froebelian pedagogy."[110]

"Piaget was a god"

Barbara Beatty's depiction of the return and rise of Piaget in postwar United States aptly applies to the United Kingdom.[111] Heightened interest cannot be solely attributed to the opportunism of London Froebelians and the advocacy of Nathan Isaacs, although it played a role, assisted by his regular correspondence with "my dear Piaget" who wrote back to "mon cher Isaacs."[112] Other factors also led to the interest of educators and policy makers. In the United States, Beatty cites the backdrop of "Sputnik and the Cold War" and the availability of federal money for education projects.[113] Similar concerns in the United Kingdom sparked initiatives around the teaching of science in primary schools, with calls for broader curriculum reform. Another factor was the belated availability of Piaget's writings and research across the English-speaking world. There had been no translations between 1933 and 1949. Amidst this milieu the NFF publications found a receptive readership. "An American appreciation" of Nathan Isaacs written by Lilian Weber cited the "9000 copies yearly" of his pamphlets on Piaget, also circulating in the United

---

[108] Liebschner, *Foundations of Progressive Education*,145, emphasis added.

[109] Kate Hoskins and Sue Smedley, "Tina Bruce (b. 1947): Advocating and Practicing Froebelian Principles," in *British Froebelian Women from the Mid-Nineteenth Century to the Twenty-First Century*, eds. Amy Palmer and Jane Read (London: Routledge, 2021), 167.

[110] David Gledhill, "Chris Athey (1924-2011): Integrating Piagetian Principles into Froebelian Pedagogy," in *British Froebelian Women*, eds, Palmer and Read, 147-62.

[111] Beatty, "Transitory Connections."

[112] "Correspondence with Piaget 1959-62," NI/C/14, IEUCL Archive.

[113] Beatty, "Transitory Connections," 463.

States.[114] Piaget's ideas, now fully formulated as a staged theory of cognitive development and logical reasoning, showed that young children gradually acquired these understandings through "trying out" "exploration," "cumulative activity," "action," and "interaction."[115]

Piaget appealed to the readers of the popular *Scientific American* (1957) in an article titled "The Child and Modern Physics." Piaget's infant was depicted as a playful fledgling scientist who systematically encountered problems and developed hypotheses that were solved by activity and discovery.[116] Jody Hall's study of 1960s science education reform in English primary schools concludes that "the pragmatic pedagogy of Susan Isaacs, which encouraged children to follow up interests (ideas) in a 'trial and error' way, provided a seedbed for the reception of Piaget" by a wider group of educationalists.[117] There were still tensions:

> Some educationalists envisioned a new order for schooling in the form of Piaget-derived hierarchies . . . [and] developmental stages. Others placed the highest premium on scientific processes and a more generous view of children's intellectual capabilities as suggested in the research of psychologist Susan Isaacs and advanced in the 1960s by her collaborator Nathan Isaacs.[118]

However, in the milieu of postwar reform, these differences were muted in writings promoting the importance of Piaget's findings, such as the NFF booklet *Scientific Interests in the Primary School* (1958) co-written by Allen, whose introductory words positioned the new context:

> Today . . . the dynamic impact and needs of the scientific age are compelling us to reconsider *what* we teach and *how* we teach it. . . . The field of science includes the whole range of natural forces . . . things that can be perceived through our senses and by means of the apparatus that man has invented to supplement their limitations: telescopes, microscopes, spectroscopes, stethoscopes, thermometers, radar, chemical tests, and the like . . .
>
> Science, however, must not be narrowly thought of as a "subject", however much it may be labelled and given a place on the timetable . . . [119]

Allen reframed her own subject of nature study, which she described as "mainly descriptive," to become nature science, where "exploration and enquiry become more detailed, experimental,

---

[114] Lilian Weber, "Nathan Isaacs—An American Appreciation," *The New Era* 49, no. 3 (1968): 69-73.

[115] Jean Piaget, "The Young Child's Thought" and Nathan Isaacs, "Children's 'Scientific' Interests" in *First Years in School*, ed. Molly Brearley (London: University of London Institute of Education by Evans Brothers Ltd., 1963), 36-48, 49-92.

[116] Jean Piaget, "The Child and Modern Physics," *Scientific American* 196, no. 3 (March 1957):146-51.

[117] Jody S. Hall, "Psychology and Schooling: The Impact of Susan Isaacs and Jean Piaget on 1960s Science Education," *History of Education* 29, no. 2 (2000): 170.

[118] Hall, 153.

[119] Gwen Allen, V. W. Brown, Honor Southam, and Evelyn M. Tuke, *Scientific Interests in the Primary School* (London: NFF, 1958), 2.

analytic and systematic"; she concluded that "the nature experiences of children are thus the forerunners of the investigations of the scientist. . . . As teachers, we need to offer children a rich and stimulating experience of the natural world so that it may nourish and develop these potentialities also."[120]

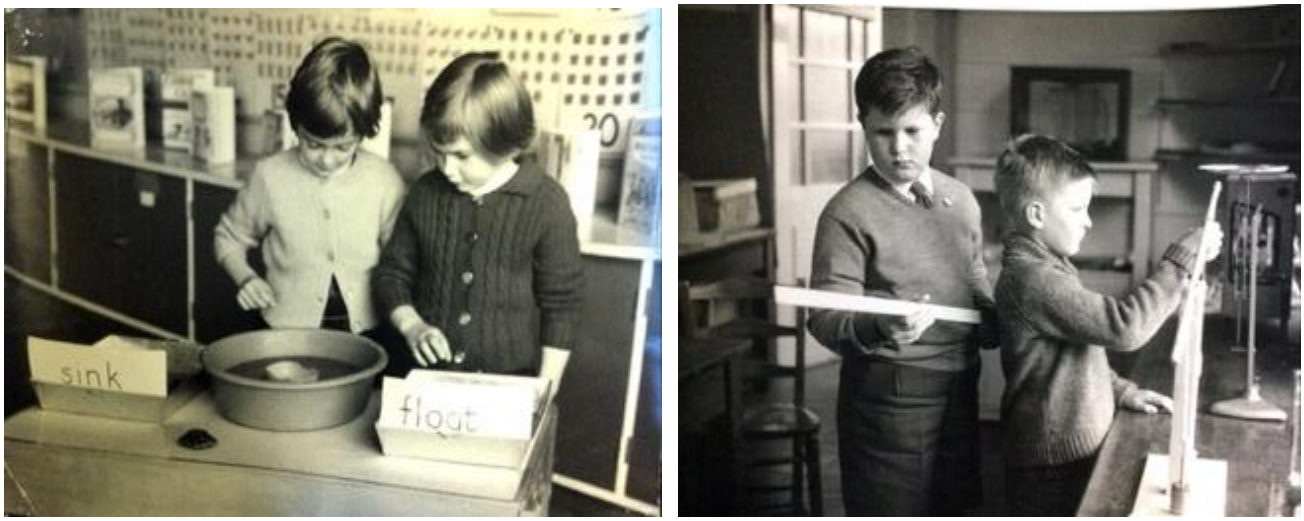


Figure 9. Science in the primary school at Froebel Demonstration School Ibstock Place, c. 1950s. Source: FACS

Indicative too of changing times is the booklet *Science in the Primary School* (1959) produced by a consortium of interested education groups proposing that the subject of nature study be widened to include the physical sciences in a new subject of "science."[121] This included a chapter by Allen on "scientific exploration in young children." Allen was a long-standing practicing teacher and lecturer, remembered because she "valued pupil excitement and engagement as a marker for good teaching rather than skills for delivering information. . . . Science was concerned with exploration, answering questions and enquiry and experimentation." [122] Over the next decade a raft of publications followed, including *Approaches to Science in Primary Schools* (1960) edited by Lawrence and Isaacs, keen to embed Susan Isaacs' Malting House research within this rethinking of the primary curriculum. In Nathan's chapter "What Active Enquiry Means for the Child" he argued:

> We must look afresh at the five year olds who enter our Primary Schools, and what these schools can do for them . . . think of each child as a person and aim at getting him really

[120] Ibid., 2-3.

[121] Cited in Hall, "Psychology and Schooling," 154.

[122] Louie Werth and Tina Bruce, "Gwen Allen," in *The Routledge International Handbook of Froebel and Early Education*, ed. Tina Bruce et al. (London: Routledge, 2019), 213.

> interested and carrying him with us, we have to give new attention to what everything we are trying to do for him means to him.[123]

This rethinking of teaching and learning had high-level political interest. During the 1960s, the Nuffield Foundation established its international reputation with projects exploring new ways of teaching science and maths.[124] The Junior Science Project (1965-67) referenced Nathan as a primary mentor and cited and adopted many tenets of Piagetian thought.[125] In an endorsement of "active enquiry," the front piece to the teachers' guide for the Nuffield Mathematics Project *I Do and I Understand* (1967) famously stated, "I hear and I forget, I see and I remember, I do and I understand."[126]

Figure 10. Left: Nuffield Maths Project, 1965-67; Right: Nuffield Junior School Science Project, 1967. Source: Nuffield Foundation

In 1963 the British government undertook a review of primary education and established the Plowden Committee. Its report, published in 1967, supported progressive approaches to learning and teaching. The Committee rejected the teaching of timetabled subjects, instead "allowing young children to choose within a carefully prepared environment in which choices and interest are supported by teachers."[127] Directly citing the contribution of Susan Isaacs, the committee heralded play as the conduit to learning in the early years: "We know now that

[123] Nathan Isaacs, "What Active Enquiry Means for the Child," in *Approaches to Science in Primary Schools*, ed. Evelyn Lawrence and Nathan Isaacs (London: The Educational Supply Association, Ltd., 1966), reprinted in Smith, *To Help and to Understand*, 313.

[124] Nuffield Foundation, "A Short History of Curriculum Development at the Nuffield Foundation," updated November 18, 2017, https://www.nuffieldfoundation.org/news/a-short-history-of-curriculum-development-at-the-nuffield-foundation.

[125] Hall, "Psychology and Schooling."

[126] Nuffield Mathematics Project, *I Do and I Understand* (London: Wiley, 1967), front piece.

[127] Central Advisory Council for Education, *Children and Their Primary Schools* (London: Her Majesty's Stationery Office, 1967), 195.

play—in the sense of 'messing about' either with material objects or with other children, and of creating fantasies—is vital to children's learning and therefore vital in school."[128] Lawrence and Nathan Isaacs wrote complementary submissions on behalf of the NFF that, as Lawrence explained, "rest[ed] on the same theoretical case, namely that education must be based fundamentally on children's own natural interests."[129] There were, however, tensions in this view, with other educators advocating for more direction of children's work.[130] Isaacs died before the Plowden report was released. His submission advanced his long-held view that the whole of primary education needed to change.[131]

Figure 11. "Let's find out" in the classroom. Left: Sherrier Junior School, Leicestershire, 1973; Right: Stafford Leys Junior School, Leicestershire, 1972. Source: Nuffield Foundation

In January 1963, the NFF's own science subcommittee met for the first time. Its members included Allen from the FEI, Alice Murton, newly appointed organising director of the Foundation (1963-1972), Lawrence, the Foundation's honorary director and governor, and Isaacs. The subcommittee was established to oversee an NFF-sponsored project on "finding-out activities" in primary schools[132] developed in cooperation with the British Association for the Advancement of Science and the Nuffield Foundation. The project team worked with a group of teachers interested in discovery approaches who documented the range of scientific interests their children developed over a year. Isaacs described "the whole scheme . . . as a pilot

[128] Ibid., 523.

[129] E. H. Lawrence, "Memorandum for the Plowden Committee, 28 October 1964," in Plowden Committee Evidence 5 Papers, PL/10/6 1/3, IEUCL Archive.

[130] Hall, "Psychology and Schooling."

[131] Nathan Isaacs, "Memorandum to the Plowden Committee," *Froebel Journal* (June 1965).

[132] National Froebel Foundation, "Co-operative Study Scheme on "Finding Out" Activities," (1963): 2, NI/C/17, IEUCL Archive; NFF minutes 4 January 1963, FACS.

experiment and a co-operative long-term educational enquiry"[133], much like an action research model of current times. The intention was, first, to demonstrate that "finding out" approaches were possible in everyday classrooms and, second, provide teachers who hitherto had been "out on their own" with ideas and resources for classroom activities. A draft of "Finding-out Activities in the Primary School" was presented by Isaacs to the NFF in May 1966 shortly before he died[134] and subsequently published by the NFF as *Children Learning through Scientific Interests* (1966). At the heart of the project were Froebelian interests, flanked by Piaget, in shaping primary school pedagogy. Emphasising their views on introducing science into primary school teaching Allen and co-researchers again made it clear that

> in the Foundation's view [science] must not become another "subject" to be formally taught. The right approach at the Primary School level is to start from the children's own interest in the world around them; to provide materials and experiences that will arouse questions; and then help them to discover how to find their own answers.
>
> This approach follows from the Froebelian conception of education generally and produces results in both infant and Junior schools, indeed groups of children who were given this kind of opportunity have carried out enquiries that led to knowledge and understanding of a genuine scientific order. Above all they have thus secured various experience, and a true first grasp, of the methods by which scientific knowledge can be won.[135]

Evident in this methodological mix is Piaget's "little scientist," Pyke's missive "let's find out," and "Froebelian conceptions of education." Allen emphasised too that "let's find out" should guide the learning of teachers: "They must experiment, improvise and to a large extent discover, as they go along, the best means for furthering their aims. They must learn from their failures as much from their successes."[136] The project was also noteworthy as an approach where children and teachers were both the subject and object of research. This interplay of "finding out" and discovery by children and teachers at the heart of the Malting House experiment was a complex and tentative dance in the 1920s, but by the 1960s was under serious consideration by policy makers. These were heady times for Isaacs, Lawrence, and other Froebelians.

The weighty tomb of the Plowden report, read by few but cited by many, communicated the possibilities and permission for more permissive and experimental approaches to primary

[133] NFF minutes, 2 June 1966, FACS.

[134] Ibid.

[135] Gwen Allen, Evelyn Lawrence, and Alice Murton, *Children Learning through Scientific Interests* (London: National Froebel Foundation, 1966), 7.

[136] Ibid.

schooling.[137] Tina Bruce remembered its release in her first year at the FEI with their lecturer Chris Athey, announcing its publication to the class by proclaiming, "This is your Bible!"[138] The challenge was to communicate how to implement such approaches in practical ways for the teaching profession, although this had long been underway; it was a role undertaken by the NFF in its publications, as well as training institutions such as the IE and the FEI. In 1961 the IE organised a series of lectures on "the first years of school." The speakers included key players in this paper: Nathan Isaacs, Gardner, Piaget and Brearley who, in the concluding lecture, considered "the practical implications for teachers" noting that

> wandering through all our lectures has been the fatherly figure of Piaget . . . to some he is a prophet, to some a crank. He is most truthfully and usefully to my mind as an inspired research worker whose findings . . . can help us to uncover some of the structures of our children's thinking and feeling, and which can give us a sounder approach to teaching them.[139]

Brearley's role as principal at FEI greatly assisted with transforming Piaget's theories and Nathan Isaacs' writings into useful tracts for teachers. Brearley had gained the National Froebel Union Training Diploma in 1937 and had extensive experience in teaching and training teachers before her appointment to the FEI in 1955. In a biographical appraisal of her role at the FEI, Peter Cunningham claims that "it fell to Brearley, in the postwar decades, to implement stronger links between practical work based on Froebelian principles and new psychological theory and research"—being the adoption and adaptation of Piagetian theory as useful for classroom teachers.[140] Hall describes how Brearley and her colleague Elizabeth Hitchfield, a psychologist appointed to the FEI, were initially "stunned" by Piaget's contentions about children's thinking and that as "a researcher and psychologist [Piaget] saw important aspects of children which seasoned teachers like themselves had managed to ignore."[141] In redress, Brearley and colleagues produced resources and support for teachers, including Brearley and Hitchfield's books *A Teachers Guide to Reading Piaget* (1966) and *Fundamentals in the First School* (1966) and Brearley's illustrated book *The Teaching of Young Children* (1970). The books were bestsellers, including in the United States. Brearley wove the ideas of Piaget and both Susan and Nathan Isaacs into a uniquely fresh Froebelian perspective for early years schooling in new

[137] Plowden Report, *Children in their Primary Schools: A Report of the Central Advisory Council for Education* (London: HMSO, 1976).

[138] Gledhill, "Chris Athey (1924-2011): Integrating Piagetian Principles into Froebelian Pedagogy," 150.

[139] Molly Brearley, *First Years in School*, 228.

[140] Peter Cunningham, "Molly Brearley (1905-1994): Educating Teachers and Popularising Developmental Approaches in the Post-War Era," in *British Froebelian Women*, eds. Palmer and Read, 113.

[141] Hall, "Psychology and Schooling," 164.

times. Brearley had a presence beyond the FEI as a frequent speaker, radio commentator, and TV presenter and was appointed a member of the Plowden Committee. Cunningham wrote:

> Through her membership of the Plowden Committee, Brearley can be seen disseminating Froebelian thinking to politicians, policy makers as well as to parents. . . . Brearley occupied an influential position, presenting evidence based on her own varied experience . . . [and] drawing on networks of practitioners and researchers.[142]

Brearley claimed that her time on the Plowden Committee made her "more Froebelian than ever" [143], albeit with a pedagogical approach considerably revised since the awarding of her Froebel diploma in 1937.

On their release in 1967 the Plowden recommendations stirred controversy amongst both teachers and policy makers. While many educators welcomed the Committee's endorsement of progressive approaches seeded earlier in the century, trialled by some but now poised to become policy, there was also stern philosophical and political critique, culminating in two "Black Papers" of critical articles.[144] There was also resistance by teachers not confident enough or willing to adopt such playful methods. An eight-part TV series showcasing innovative primary schools was fronted by Brearley in a final debate on the question "Does it Work?" Brearley argued in support of Plowden's progressive stance against Geoffrey Bantock, professor of education at Leicester University and a renowned critic of progressive education.[145]

There was interest in this British experiment into "informal education" by the well-known U.S. child psychologist David Elkind, who published an article on Piaget and British primary education for American readers in 1974.[146] Elkind et al. classed the college-trained primary school teachers in Britain as "more child-centred and less subject-matter orientated than the graduate teachers" trained in universities in the United States. Elkind was interested in arguments that informal education practices were a "concrete embodiment of the work and theory of Jean Piaget."[147] Elkind's outsider observer's description of a British classroom is useful:

---

[142] Cunningham, 121. Brearley's personal papers from the Plowden Committee are in the Froebel Archive for Childhood Studies at Roehampton University.

[143] Molly Brearley, "What Froebel has Meant to Me," *The Link*, Froebel Bicentenary Edition, (1982): 14.

[144] Darling, "Child-Centred, Gender-Centred."

[145] Peter Cunningham, "Molly Brearley (1905-1994)."

[146] David Elkind, Donna Hetzel, and John Coe, "Piaget and British Primary Education," *Educational Psychologist* 11, no. 1 (1974): 1-10.

[147] Elkind et al., 2.

> The fundamental insights into the child's need to learn by reconstituting experience . . . are the root stock out of which all English child-centered practices grow. . . .
>
> To encourage children to observe, explore and to represent their world the traditional classroom has given way to a very different, informal environment. Gone are throws of desks all focussed on the teacher at the head of the room, instead the room arrangement is based on the needs and activities of the young learners. . . .
>
> The materials are arranged in ways which are stimulating to the child, and which help him see what options he has. In many cases such arrangements do not coincide with the traditional "subject" grouping of materials into "maths" "science" "reading" areas. Rather the room is arranged so that there are places for reading. Surfaces for writing, drawing, painting, space for coming together to talk and discuss with or without the teachers. . . .
>
> In the informal classroom the child encounters the need for academic skills (reading, writing, arithmetic) as a means of expressing or re-presenting his experience.[148]

Elkind's mention of the integration of traditional school subjects is interesting. Bruce became a lecturer at the FEI (1983-1989) and recalls "a little bit of tension between subject specialists and education staff at FEI"[149]. Bruce continues: "Molly Brearley, who was very Piagetian, was clear that 'education' was the whole within a Froebelian framework while 'subjects' constituted the parts and must be subsumed within the whole."[150] Allen, for example, was appointed as a principal lecturer in "natural history" in 1956, but amidst the buffeting winds the subject became "science" and later, possibly as a compromise, renamed "nature science."[151]

Elkind examined the link between Piagetian theory and informal education practices, citing, for example, that,

> Piaget respects the child's point of view and regards his ideas as different rather than wrong. He believes in the child's ability to make judgements and reason. . . . And finally, Piaget, like teachers in informal classrooms, believes that the aim of education is to grow children who will think for themselves.[152]

Elkind concluded that while Piagetian theory grew out of experimental studies with children, and informal education practice in Britain grew out of work with children in the classroom, they both "arrive[d] at comparable ideas about child nature and about the learning process."[153] While Elkind was citing neither the ideas of Froebel nor Susan Isaacs, he was, however, attuned

[148] Elkind et al., 3.

[149] Email from Tina Bruce, 9 June 2022.

[150] Ibid.

[151] Email from Kornelia Copek, archivist, FACS, 13 June 2022.

[152] Elkind et al., "Piaget and British Primary Education," 10.

[153] Ibid.

to the uniquely woven British approach to the incorporation of Piagetian theory in classroom practice promoted by Nathan Isaacs and Brearley across the 1950s and 60s.

This flourishing of sanctioned child-centred practice in Britain, and beyond, was short lived. While it became an opportunity for some teachers to experiment, others resisted, found it too hard, or took it too far. By the late 1970s and 1980s, political critique of progressive approaches led to the heavy hand of the government in schooling. In England, the 1988 Education Reform Act introduced a national curriculum for schools with detailed prescriptions and assessment of separate subjects. This became an international trend, encouraged too by agencies with global interests in education policy and practice such as the Organisation for Economic Co-operation and Development (OECD). Teachers were increasingly told what to teach and how to teach with standardised assessments to measure outcomes and guide practice. Playful learning by discovery, pioneered at Malting House and promoted over later decades by an expanding network of followers, almost disappeared from British primary classrooms, mainly retreating to its roots in early education settings. The Froebelian response to this changed environment is beyond the scope of this paper; however, it will be up to a new generation of Froebelians such as Bruce who, like Brearley in earlier years, similarly combined scholarship, advocacy, writing, and political engagement, to carve out a Froebelian space, at least for younger aged children.[154]

An overview

The people, places, texts, and times selectively cited in this paper illustrate the journey of an idea framed by Geoffrey Pyke in 1923—"let's find out"—adopted as an experimental pedagogical approach for young children. The idea included a "reimagined" teacher as a "co-investigator" who would "find out" with children and, following Susan Isaacs, teachers were tasked as researcher-observers to "find out" and "understand" children. This was a complex interplay of ideas, with roots stretching back to eighteenth-century enlightened educators to be resurrected and revised in new education ventures across the nineteenth and twentieth centuries. This paper has outlined how the idea, which began as a short-lived but well-documented experiment, was then theorised, persuasively disseminated, adapted, and enacted by others in a range of settings. This became a journey towards transforming and/or at least reforming mainstream early years schooling in Britain. The ideas also had a long geographic reach, a story only indicated but not detailed in this paper. There were of course other manifestations of

[154] Kate Hoskins and Sue Smedley, "Tina Bruce (b. 1947)."

discovery learning in Britain and offshore, and the case study in this paper is but one powerful and persuasive exemplar.

The story has been telescoped, first across three key sites and time frames: the Malting House school in the1920s, the IE in the 1930s-40s, and the FEI and the NFF in the 1950s-60s. From an experiment in a well-funded private school for a small and selective group of children and their mainly academic parents it moved to a postgraduate university setting with networks and into the heart of the education infrastructure and then to an independent training college with its own pedagogical traditions and a network of schools, nurseries, students, and teachers. Second, the story is selectively framed around key people whose relationships across time have the appearance of a dance routine with the dancers gaining new partners, meeting old friends in new times and new places, and, as their ages progressed, handing the lead to new followers. While the ideas of Susan Isaacs were strengthened enroute, the long-term survivors were Nathan Isaacs and Evelyn Lawrence, who become the postwar couple in the lead. However, key people such as Dorothy Gardner and later Molly Brearley were crucial players who set out to prove that radical ideas about teaching and learning could be adapted and made meaningful for classroom teachers.

Third, in this dance of ideas through time there are new alignments. Most evident is the cautious alliance with Piaget that decades later became an almost seamless partnership, cemented by the interest of science educators and political support for reforming the primary school curriculum. For a short time, “let’s find out” as a radical pedagogy backed by Piagetian theory had the attention of both educators and policy makers. This became the kind of opportunistic moment that enables a paradigm shift in both the language and practice of teaching, but it was never going to be easy. There were many challenges to implementing such practice, including straight resistance. The other partner in this dance was the Froebelian alignment and its frontline position in forging this new synergy, which encouraged a reframing of its own brand of education in new times. Finally, this paper has cited some key texts from the selected players that outlined the pedagogy, set out the research, argued the case to policy makers, and provided resources and manuals for teachers. The texts were powerful and useful at the time and remain a legacy, but they are only one strand of the players’ advocacy as scholars, researchers, mentors, education leaders, policy advisors, editors, correspondents, and teachers. These everyday interactions across fronts were equally powerful in growing the seeds of change.

Archival sources

Alexander Turnbull Library (ATL), Wellington.

- Geraldine McDonald papers

Institute of Education, University College London (IEUCL) Archive, London.

- Nathan Isaacs papers (NI)
- Susan Isaacs papers (SI)
- Dorothy Gardner papers (DG)
- Plowden Committee papers (PL)
- Child Development Society records (CDS)
- Institute of Education records (IE)

Froebel Archive for Childhood Studies (FACS), University of Roehampton, London.

- *The Link*
- *Froebel Journal*
- *National Froebel Foundation Bulletin*
- Froebel Educational Institute papers (FEI)
- National Froebel Foundation papers (NFF)

References

Allen, Gwen, V. W. Brown, Honor Southam, and Evelyn M. Tuke. *Scientific Interests in the Primary School.* London: National Froebel Foundation, 1958.

Allen, Gwen, Evelyn Lawrence, and Alice Murton. *Children Learning through Scientific Interests.* London: National Froebel Foundation, 1966.

Appendices to the Journal of the House of Representatives. New Zealand Government, 1904.

Beatty, Barbara. "Transitory Connections: The Reception and Rejection of Jean Piaget's Psychology in the Nursery School Movement in the 1920s and 1930s." *History of Education Quarterly* 40, no. 4, (2009): 442-64.

Brearley, Molly, ed. *First Years in School*. London: University of London Institute of Education by Evans Brothers Ltd., 1963.

Brearley, Molly. "What Froebel Has Meant To Me." *The Link,* Froebel Bicentenary Edition, (1982): 13-14.

Brehony, Kevin. "English Revisionist Froebelians." In *Practical Visionaries: Women, Education, and Social Progress 1790-1930,* edited by Mary Hilton and Jane Hirsch, 183-200. London: Longman, 2000.

Bruce, Tina, Peter Elfer, Sacha Powell, and Louie Werth, eds. *The Routledge International Handbook of Froebel and Early Education.* London: Routledge, 2019.

Cameron, Laura. "Science, Nature, and Hatred: 'Finding Out' at the Malting House School, 1924-29." *Environment and Planning D: Society and Space* 24, no. 6 (2006): 851-72.

Central Advisory Council for Education. *Children and Their Primary Schools* (Plowden Report). London: Her Majesty's Stationery Office, 1967.

Cunningham, Peter. "Molly Brearley (1905-1994): Educating Teachers and Popularising Developmental Approaches in the Post-War Era." In *British Froebelian Women from the Mid-Nineteenth to the Twenty-First Century: A Community of Progressive Educators*, edited by Amy Palmer and Jane Read, 111-28, London: Routledge, 2021.

Darling, John. *Child-Centred, Gender-Centred: A Criticism of Progressive Curriculum Theory from Rousseau to Plowden.* Oxford Review of Education 12, no. 1 (1986): 31-40.

Dewey, John. "Some Points in Froebel's Psychology." Address at The Kindergarten Conference, 10 April 1897, *University Record* 2 (May 1897): 49-53.

Dewey, John. *The School and Society*. Chicago: The University of Chicago Press, 1899.
Dewey, John. "Froebel's Educational Principles." *Elementary School Record* (June 1900): 143-151.
Drummond, Mary J. "Susan Isaacs: Pioneering Work in Understanding Children's Lives." In *Practical Visionaries: Women, Education, and Social Progress*, edited by Mary Hilton and Pam Hirsch, 221-234. London: Pearson Education, 2000.
Edgeworth, Maria, and Richard Lovell Edgeworth. *Practical Education*. London: Johnston, 1798.
Elkind, David, Donna Hetzel, and John Coe. "Piaget and British Primary Education." *Educational Psychologist* 11, no. 1 (1974): 1-10.
Gardner, Dorothy E. M. *The Children's Play Centre: Its Psychological Value and its Place in the Training of Teachers.* London: Methuen and Co. Ltd., 1937.
Gardner, Dorothy E. M. *Testing Results in the Infant School.* London: Methuen and Co. Ltd., 1942.
Gardner, Dorothy E. M. *Education Under Eight.* London: The British Council, 1949.
Gardner, Dorothy E. M. *The Education of Young Children.* London: Methuen and Co. Ltd., 1956.
Gardner, Dorothy E. M. *Susan Isaacs: The First Biography*. London: Methuen, 1969.
Gledhill, David. "Chris Athey (1924-2011): Integrating Piagetian Principles into Froebelian Pedagogy." In *British Froebelian Women from the Mid-Nineteenth to the Twenty-First Century: A Community of Progressive Educators*, edited by Amy Palmer and Jane Read, 147-62. London: Routledge, 2021.
Graham, Philip. *Susan Isaacs: A Life Freeing the Minds of Children*. London: Karnac, 2009.
Hai, Alessandra Arce, Helen May, Kristen Nawrotzki, Larry Prochner, and Yordanka Valkanova. *Re-imagining Teaching in Early 20th Century Experimental Schools*. New York: Palgrave Macmillan, 2020.
Hilton, Mary. *Women and the Shaping of the Nation's Young: Education and Public Doctrine in Britain 1750-1850*. Aldershot: Ashgate, 2007.
Hall, Jody S. "Psychology and Schooling: The Impact of Susan Isaacs and Jean Piaget on 1960s Science Education Reform." *History of Education* 29, no. 2 (2000): 153-70.
Hoskins, Kate, and Sue Smedley. "Tina Bruce (b. 1947): Advocating and Practicing Froebelian Principles." In *British Froebelian Women from the Mid-Nineteenth to the Twenty-First Century: A Community of Progressive Educators*, edited by Amy Palmer and Jane Read, 165-80. London: Routledge, 2021.
Isaacs, Nathan (attrib.). "Education and Science." *Nature* 120, no. 3012 (23 July 1927): 105-7.
Isaacs, Nathan. "Children's 'Why' Questions." In *Intellectual Growth in Young Children*, authored by Susan Isaacs, 291-349. London: Routledge, 1930.
Isaacs, Nathan. "Education and Science." In *Intellectual Growth in Young Children*, authored by Susan Isaacs, 350-54. London: Routledge, 1930.
Isaacs, Nathan. "Froebel's Educational Philosophy." In *Friedrich Froebel and English Education,* edited by Evelyn Lawrence, 179-233. London: University of London Press, 1952.
Isaacs, Nathan. "Children's 'Scientific' Interests." In *First Years in School,* edited by Molly Brearley, 49-92. London: University of London Institute of Education by Evans Brothers Ltd., 1963.
Isaacs, Nathan. "Memorandum to the Plowden Committee." *Froebel Journal* (June 1965): 8-33.
Isaacs, Nathan. "What Active Enquiry Means for the Child." In *Approaches to Science in Primary Schools*, edited by Evelyn Lawrence and Nathan Isaacs. London: The

Educational Supply Association, 1966, reprinted in Lydia A. Smith, *To Help and to Understand: The Life and Work of Susan Isaacs 1885-1948*, 313-21. London: Associated University Press, 1985.
Isaacs, Susan. "Critical Review: Jean Piaget, *The Child's Conceptions of the Mind*." *Mind* 38 no. 152 (1929): 506-13.
Isaacs, Susan. *The Nursery Years: The Mind of the Child from Birth to Six Years*. London: Routledge, 1929.
Isaacs, Susan. *Intellectual Growth in Young Children*. London: Routledge, 1930.
Isaacs, Isaacs. "Review of 'The Child's Conceptions of the World' by Jean Piaget." *Mind* 38, no. 52 (1929): 506-13.
Isaacs, Susan. "Review of 'The Child's Conception of Causality' by Jean Piaget." *Mind* 40, no. 157 (January 1931) 89-93.
Isaacs, Susan. "The Child as Scientist." *The Spectator*, no. 5380 (8 August 1931): 178-9.
Isaacs, Susan. *The Children We Teach*. London: University of London Press, 1932.
Isaacs, Susan. *Social Development in Young Children*. London: Routledge, 1933.
Isaacs, Susan. *The Educational Value of the Nursery School.* London: The British Association for Early Childhood Education, 1937.
Lawrence, Evelyn. "Joint Summer School, 1946." *National Froebel Foundation Bulletin* 41, (September 1946): 1-2.
Lawrence, Evelyn. "The Malting House School." *National Froebel Foundation Bulletin* 56, (February 1949): 3-5.
Liebschner, Joachim. *Foundations of Progressive Education: The History of the National Froebel Society.* Cambridge: Lutterworth Press, 1991.
Lyons, Tony. "Play and Toys in the Educational Work of Richard Lovell Edgeworth 1744-1817." *Irish Educational Studies* 20 (Spring 2001): 310-20.
May, Helen. *"I Am Five and I Go to School": Early Years Schooling in New Zealand 1900-2010.* Dunedin: University of Otago Press, 2011.
McMillan, Margaret. *The Nursery School.* London: J. M. Dent and Sons Ltd., 1919.
Middleton, Sue, and Helen May. *Teachers Talk Teaching 1915-1995: Early Childhood, Schools, and Teachers' Colleges*. Palmerston North: Dunmore Press, 1997.
Middleton, Sue, and Helen May. *For Women and Children: A Tribute to Geraldine McDonald.* Wellington: NZCER Press, 2019.
Nuffield Foundation. "A Short History of Curriculum Development at the Nuffield Foundation." Updated November 18, 2017. https://www.nuffieldfoundation.org/news/a-short-history-of-curriculum-development-at-the-nuffield-foundation.
Nuffield Foundation, *I Do and I Understand*. Nuffield Mathematics Project. London: Wiley, 1967.
Piaget, Jean. "Intellectual Development among Young Children: A Critical Study." Translated by Alan. A. Smith. *Mind* 40, no. 158 (April 1931): 137-60.
Piaget, Jean. *The Child's Conception of the World.* London: K. Paul, Trench and Truber, 1926.
Piaget, Jean. "The Child and Modern Physics." *Scientific American* 196, no. 3 (March 1957): 146-51.
Piaget, Jean. "The Young Child's Thought." In *First Years in School,* edited by Molly Brearley, 36-48. London: University of London Institute of Education by Evans Brothers Ltd., 1963.
Read, Jane. "Tracing Froebel's Legacy." In *The Routledge International Handbook of Froebel and Early Childhood Practice,* edited by Tina Bruce, Peter Elfer, and Sacha Powell with Louie Werth, 14-18. Abingdon: Routledge, 2019.
Rickman, John. "Susan Sutherland Isaacs." *International Journal of Psycho-Analysis* 31 (1950): 1-6.

Rousseau, Jean Jacques. *Emile*. Translated by Barbara Foxley. London: Dent Everyman Library, 1872/1911.
Scates, Georgia, P. "The Sub Primary (Kindergarten) Department." *Elementary School Record* 1 (June 1900): 129-42.
Slavson, Richard. "Integrated Science for Young Children." *New Era* 1 (1932): 17-21.
Smith, Lydia A. "Jean Piaget and Susan and Nathan Isaacs: A Long Conversation." *New Era* 61, no. 4 (July/August 1980): 151-57.
Smith, Lydia, A. *To Help and to Understand: The Life and Work of Susan Isaacs 1885-1948.* London: Associated University Press, 1985.
Uglow, Jenny. *The Lunar Men: The Friends Who Made the Future.* London: Fisher and Faber Ltd., 2002.
Watts, Mike. "Friedrich Froebel: Interpolation, Extrapolation." *Early Child Development and Care* 191, nos. 7-8 (2021): 1186-95. https://doi.org/10.1080/03004430.2021.1881077.
Weber, Lilian. "Nathan Isaacs—An American Appreciation." *The New Era* 49, no. 3 (1968): 69-73.
van der Eyken, Willem, and Barry Turner. *Adventures in Education.* London: Allen Lane, Penguin Press, 1969.

Acknowledgements

COVID prevented planned travel from New Zealand to archives and libraries in the UK. Meanwhile, it was possible to locate copies of some old texts in off-site storage at the University of Otago and Victoria University Wellington. I already owned many of Susan Isaacs' publications. Kornelia Copek, archivist of the Froebel Archive Collections at Roehampton University, sourced considerable material concerning staff at the FEI, NFF minutes and publications and relevant excerpts from old texts not available in New Zealand. When a visit became possible in 2023, Kornelia sourced useful postwar images from the Froebel Demonstration School Ibstock Place. Kristen Nawrotzki spent time on my behalf at the IE archives at the UCL sourcing new material from Nathan Isaacs papers and Dorothy Gardner papers. I was fortunate to already have a considerable amount of IE archival material on hand from both Nathan and Susan Isaacs. This assistance was most appreciated. The development of this paper was shared with co-researcher colleagues from the project "Froebelian Endeavours, New Education and the 'Researched' Child from the 1900s to the 1960s" funded by the Froebel Trust 2020-2023 Larry Prochner, Kristen Nawrotzki, Alessandra Arce Hai, and the late Yordanka Valkanova; a draft was formally presented for useful feedback at our writing workshop at Cumberland Lodge, Great Windsor Park, in March 2023. The paper is intended as a draft of what will be a more concise chapter of a proposed book.

Author

Helen May is an emeritus professor at the University of Otago and an adjunct professor at Victoria University Wellington. She is the author of a number of books on early years history including *Discovery of Early Childhood* (1997, 2013) and *Politics in the Playground* (2001, 2009, 2019). Helen has previously cowritten and published with colleagues from the Researched Child project, including (with B. Kaur and L. Prochner) *Empire Education and Indigenous Childhood: Missionary Infant Schools in Three British Colonies* (2014), (with K. Nawrotzki and L. Prochner) (Eds.) *Kindergarten Narratives on Froebelian Education:*

Transnational Investigations (2016), and (with A. A. Hai, K. Nawrotzki, L. Prochner, and Y. Valkanova) *Re-imagining Teaching in Early 20th Century Experimental Schools* (2020).