

reviews

Born's intimate reminiscences

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My Life: Recollections of a Nobel Laureate. By Max Born. Pp.308. (Taylor and Francis: London; Scribners: New York, 1978.) £8.50; \$17.50.

THE basic facts about Max Born's career can readily be found; there is an entry under his name in every respectable encyclopaedia. One aspect or another of his pioneering work is well known to any competent physicist; many received their first introduction to atomic and molecular phenomena from his *Atomic Physics*. Born himself wrote several retrospective essays, some of which are collected in the volume *My Life and My Views*; and an excellent study of his life and works appeared in 1971 in the Biographical Memoirs of the Fellows of The Royal Society. Yet there has been relatively little information about the forces which shaped his character and outlook, the motives which turned him from an average school-boy into a physicist of the greatest distinction, or his relations with the contemporary academic community and society at large. These and many similar questions are answered in this volume.

Max Born had just turned 50 and was at the height of his career when Hitler rose to power, and a few months later he was deprived of his position. He writes: "All I had built up in Göttingen, during twelve years' hard work, was shattered. It seemed to me like the end of the world". And in a way it was. He left Germany, and during his 20 years of exile he found no true spiritual home. After three years of limited security in a Cambridge lectureship he was appointed to the Tait Chair of Natural Philosophy at the University of Edinburgh in 1936. He stayed there until his retirement at the age of 70. The major part of the recollections, under the title "Good Old Days", was written here during the War. It takes the story up to 1925, including the birth of Quantum Mechanics. The second part, entitled "Tempestuous Years", is a more sketchy account of the rest of his active life, written in retirement in Germany when he was about 79. The Preface by his son tells us that these memoirs were written primarily for his family. Indeed the reader feels as if he were admitted to this intimate circle to witness Born re-living his eventful life. The narrative is loosely spun of several strands and presented in a discursive style.

Firstly, the story of his family. On his mother's side, rich and influential industrialists enjoying a life of luxury,

highly educated amateurs and patrons of the arts (mainly music and literature), friends of and hosts to eminent artists of the time. "My father's ancestry", he writes, "was humbler in regard to all things of property and consequence in the world, but I believe that the essence of my nature is due to the Born clan". As the narrative unfolds there emerges a view of the social



Max Born in the 1920s

and political scene in Prussia about the turn of the century, and in Germany as a whole during the following decades.

Against this back-drop one can see the working of the factors which shaped his remarkable character. A fixed reference frame was defined for him by the traditions of his Jewish ancestors, emancipated generations earlier. "They believed they differed from their neighbours only in respect of religion, for which they had hardly any use, and they were Germans by culture and custom". This deep-seated sense of identity, an "inextinguishable homesickness for the German language and landscape", played an important part in deciding him to return to Germany after his retirement.

Born's concept of right and wrong began to be formed at a tender age and crystallised early, under his father's guidance. He recalls touching examples of his father's methods of teaching "practical ethics". The moral code thus assimilated did not conflict in any way with the enjoyment of beauty in nature and in art, and with taking a fair share of all the pleasures of a full life.

Intertwined with the family saga there appears a vivid picture of the contemporary educational system, and of academic life with its social and

professional facets, depicted first from the point of view of a student, and then as seen by a scientist of rapidly growing stature. Fascinating portrait sketches bring to life many unique individuals, his teachers, fellow students, eminent colleagues of several generations, and highly gifted pupils. Some are portrayed with affection and respect, some observed with critical eyes and some drawn in the style of mocking cartoons.

As the narrative progresses he overcomes his apparent reluctance to 'talk shop'. Bit by bit there emerges a complete, though non-technical, survey of his own work and his own assessment of its significance. Reading these passages one can catch a glimpse of the way his creative intellect worked and of the emotional response to recognition given or denied to him at various stages of his career. Some of his attainments he thought were overrated, others were not appreciated adequately. Above all, the lack of recognition for his contribution to the foundation of the principles of Quantum Mechanics left a very deep and long-lasting scar, healed only by the Nobel prize 28 years later, during his retirement.

Max Born and his contributions to our knowledge of the physical world became enduring features of the history of science. This volume of his reminiscences reveals a whole world unknown to the present generation, and through it one can piece together the complex personality of the narrator. His reflections on a philosophical seminar he attended as a student in Göttingen could stand as his testament: "I can quite well grasp Kant's idea that there are principles or categories of thinking which are the conditions of actual knowledge and which you can discover by investigating the structure of this knowledge. That is what we theoretical physicists are really doing — with the sole difference that we do not claim that our latest analysis is a final and irremovable law, but just another step to a remote truth. To look for ultimate evidence by introspection, contemplation and verbal analysis, is irreconcilable with science, and seems to me in practical life the source of all ideological struggle. For anyone who believes he has obtained such an internal evidence easily becomes a fanatic, a mystical believer unapproachable by reason and argument". □

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