The Soul of a New Machine, by Tracy Kidder. An Atlantic Book.

In a world where science is blamed for many of mankind's problems, it is rare to see the publication of a book which attempts to understand science rather than to decry it. It is an even more unusual event when this book deals with applied science or technology rather than "pure" science. When such a book does appear, and its publication is hailed by critics, scientists, and general readers alike, a true milestone in nonfiction science writing has been achieved. The Soul of a New Machine is such a book.

The setting is only a few miles from Cambridge — the Westborough site of the minicomputer manufacturer Data General. The cast of characters is a group of Data General (DG) engineers, including several MIT alumni. The plot is the development of the Eagle 32-bit "supermin," a computer which will help Data General continue its phenomenal growth rate. This book is not a technical treatise but a story about real people and real machines, their backgrounds and their outside interests. It tells the story of the final success of a project in a typical computer company, Data General, since its somewhat shaky beginning as a splinter of Digital Equipment Corporation in 1968, a point which Kidder does not ignore, has been one of the most dynamic, dashing companies in a field known for its rapid changes. Though projects in all companies usually have a period of frantic work toward the end, this particular project at DG projected a feeling of panic from the beginning.

There are several factors, however, which prevent this book from being a dry account anyone but computer engineers, but Tracy Kidder turns it into a story of interest to anyone concerned with the American workplace or the workings of "the scientific mind."

The book's framework is documentary, with occasional forays into the backgrounds of the major characters. There are several factors, however, which prevent this book from being a dry account of a project in a typical computer company. Data General, since its somewhat shaky beginning as a splinter of Digital Equipment Corporation in 1968, a point which Kidder does not ignore, has been one of the most dynamic, dashing companies in a field known for its rapid changes. Though projects in all companies usually have a period of frantic work toward the end, this particular project at DG projected a feeling of panic from the start.

Another key reason for this book's success is the way in which Kidder portrays the engineers. He does much to dispel the myths about engineers by discussing the activities of the company in the construction of its various pieces of hardware.

Kidder's biggest contribution to this book is his eye for detail. Anyone who has worked as or with an engineer in the computer industry will smile with recognition at dozens of fine points woven throughout the text. Kidder notes such things as the posters hanging on the engineers' walls, the computer games they play and the pet names they ascribe to various pieces of hardware.

Although this book is intended for the general public, it does contain a moderate amount of technical detail. This is primarily used to explain the motivations and actions of the engineers over the course of the project. Through the use of clever analogies, Kidder makes numerous aspects of computer engineering interesting for the layman.

In addition to its intriguing story and careful attention to detail, The Soul of a New Machine has much to say about engineering as a profession. Anyone who has worked as or with an engineer, fresh out of college, works sixty-hour weeks for much of two years for a boss who ignores him in inadequate facilities at a company that won't acknowledge the vital nature of the project. The answer lies, in part, in the nature of the engineer himself, in his quest for order and completeness. Part of the answer also lies in the management style of Tom West. His aloofness, coupled with pep talks to his immediate subordinates, inflates the entire group with an enthusiasm that remains high for most of his group, and the project is a success. It's hard to think of any other book which even attempts to cover the same ground as this one. This may be the first book to treat engineering as a profession with any real understanding. The closest obvious comparison is to The Double Helix, the famous autobiographical account of the discovery of the structure of DNA.

The book raises a central question: Why would an engineer, fresh out of college, work sixty-hour weeks for much of two years for a boss who ignores him in inadequate facilities at a company that won't acknowledge the vital nature of the project? The answer lies, in part, in the nature of the engineer himself, in his quest for order and completeness. Part of the answer also lies in the management style of Tom West. His aloofness, coupled with pep talks to his immediate subordinates, inflates the entire group with an enthusiasm that remains high for most of his group, and the project is a success. It's hard to think of any other book which even attempts to cover the same ground as this one. This may be the first book to treat engineering as a profession with any real understanding. The closest obvious comparison is to The Double Helix, the famous autobiographical account of the discovery of the structure of DNA.

The Soul of a New Machine is a unique book with many facets. It includes a good bit of computer history, and would serve as a fascinating introduction to the field. It is a real-life management case study, as well as a study of the profession of computer engineering. Most importantly, it is one of a very small class of books which helps people to understand computers and to see the publication of a book which at first does it do windows?

**But does it do windows?**

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Note: Project leader Tom West and engineer Jim Gauer '75 will be at MIT on Thursday, November 19 to talk about the book and what it says about engineering.

They will speak at 4:00pm in room 4-163.