Tipe Koleksi: eBook - Sains & Teknologi

A Philosophy of Technology: FromTechnical Artefacts to Sociotechnical Systems

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Deskripsi Lengkap: http://lib.uhamka.ac.id/detail.jsp?id=66568&lokasi=lokal

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Abstrak

In A Philosophy of Technology: from technical artefacts to sociotechnical systems, technology is analysed from a series of different perspectives.The analysis starts by focussing on the most tangible products of technology, called technical artefacts,and then builds step-wise towards considering those artefacts within their context of use, and ultimately as embedded in encompassing sociotechnical systems that also include humans as operators and social rules like legislation. Philosophical characterisations are given of technical artefacts, their context of use and of sociotechnical systems. Analyses are presented of how technical artefacts are designed in engineering and what types of technological knowledge is involved in engineering.And the issue is considered howengineers and others can or cannot influence the development of technology.These characterisations are complemented by ethical analyses of the moral status of technical artefacts and the possibilities and impossibilities for engineers to influence this status when designing artefacts and the sociotechnical systems in which artefacts are embedded. The running example in the book is aviation, where aeroplanes are examples of technical artefacts and the world aviation system is an example of a sociotechnical system. Issues related to the design of quiet aeroplane engines and the causes of aviation accidents are analysed for illustrating the moral status of designing, and the role of engineers therein.