This chapter presents the analogy between the camera and computer technology. The ideas behind the development of photographic technology and subsequent arguments for and against it are discussed, along with an analysis of the questions of skill. The camera was seen as an automation of art, and likewise artificial-intelligence-based technologies are seen to automate a vast number of professions. In response to this reaction, the photographers strove to introduce the personalities of their subjects into the images. They argued that artistic work is not just about copying nature. The author illustrates how the photographer Robinson demonstrated that a picture brought a change demanding more reality from photography. The emphasis changed from aesthetics and technical ability to the questions “why?” and “what for?” Photographic practices of developing and printing are analysed and the author gives an example of how he carries out his practice of photography, thereby illustrating the great experience that is needed to know about even which pieces of equipment would be suitable for a certain case. The author concludes that an automatic program for photography will be so complex that the very complexity of instructions and alternatives will make it impossible to use. This is succinctly argued and it is shown that technology is undiscriminating when it is used over a long period of time and at a high level of automation. This will serve only to reduce the human function to that of button-pusher.

Photography as a Historical Example

"Just press the button and you will get a perfect picture." These are the terms used by several camera manufactures to present the new fully automatic microprocessor-controlled camera technology. But it is not simply the photographic industry which is giving out this message. The same philosophy permeates the marketing of design programs for architects’ offices, numerically controlled machines for the engineering industry and programs which generate the background data on which social insurance office staff base their decisions.
The object of the exercise is to represent a complex reality within a formalized set of rules, and from that set of rules reproduce human expertise from the design stage to the finished product. As to whether this is an expression of hubris or unadulterated pornography is a stone I would like to leave unturned for the moment. Instead, I return to my heading and my own profession, namely photography. I will describe the introduction and development of an automaton which was presented to the French Deputy Chamber as long ago as 1839. In a number of ways, this event influenced the idea that there is a difference between human and mechanical knowledge and the perception of the real significance of craft skill in art.

Before taking a detailed look at the history of photography I would like to return briefly to a typical camera advertisement for Canon. It shows a picture of the well-known Spanish Riding School in Vienna taken by the photographer Hans Hammarskiöld in the 1950s. A white horse photographed in the act of jumping gives the impression that it is flying. The caption says that if this picture were taken today the photographer would have used a fully automatic camera. "This camera possesses much of the skill and know-how intuitive to Hammarskiöld and the other experts. Now you can take photographs like the professionals, you can catch motion in flight".

The message is that the manual action of setting the camera, the actual knowledge required to expose the film and the ability to make judgements are programmable. What remains is pure creativity, divorced from corporeal sensory experiences and practical procedures. At the same time the intention is to sell a computer-aided tool to the expert and a mechanical expert to the inexperienced amateur. Or, in other words, a pliant and obedient manual slave to the expert and an artificial, thinking, photographic brain to the amateur.

The Flying Horse Program

What should an expert program look like? Let us construct a hypothetical program in the form of a sheet of rules designed as a list of instructions for an imaginary photographer. These instructions will automatically code exposure time and aperture selection.

If the subject is a horse, and if the horse is flying, then short exposure times will always be chosen. If the ambient light is insufficient to allow optimum shutter speed (shortest possible exposure time), then change to a longer exposure time but not in excess of 1/125 second. If the horse is flying slowly, lengthen the exposure time but not longer than 1/60 second. If the light is further reduced, stop-light a red warning lamp or activate an integrated flash. We call this "the flying horse program".

In principle all these instructions can be traced back to propositional knowledge which may be expressed in explicit terms, and the instructions may also be traced to known principles and serve as instructions for the user who wants to teach himself photography. We have a hypothetical teaching program.

However, it is important to question whether it reflects the craft skill of the