

# 1 | First Chapter

Thus, I came to the conclusion that the designer of a new system must not only be the implementer and first large-scale user; the designer should also write the first user manual.

The separation of any of these four components would have hurt  $\text{\TeX}$  significantly. If I had not participated fully in all these activities, literally hundreds of improvements would never have been made, because I would never have thought of them or perceived why they were important.

But a system cannot be successful if it is too strongly influenced by a single person. Once the initial design is complete and fairly robust, the real test begins as people with many different viewpoints undertake their own experiments.

## 1.1 FIRST SECTION

Donald Knuth has spent the past several years working on a system allowing him to control many aspects of the design of his forthcoming books, from the typesetting and layout down to the very shapes of the letters! Seldom has an author had anything remotely like this power to control the final appearance of his or her work. Knuth's  $\text{\TeX}$  typesetting system has become well-known and available in many countries around the world. By contrast, his  $\text{\METAFONT}$  system for designing families of typefaces has not become as well known or available.

In his article "The Concept of a Meta-Font", Knuth sets forth for the first time the underlying philosophy of  $\text{\METAFONT}$ , as well as some of its products. Not only is the concept exiting and clearly well executed, but in my opinion the article is charmingly written as well. However, despite my overall enthusiasm for Knuth's idea and article, there are some points in it that I feel might be taken wrongly by many readers, and since they are points that touch close to my deepest interests in artificial intelligence and esthetic theory, I felt compelled to make some comments to clarify certain important issues raised by "The Concept of a Meta-Font".

### FIRST SUBSECTION

This nation, turning 100 years old, had no *Odyssey*, no St. George slaying the dragon, no Prometheus. The emerging American genius for making a lot of money was a poor substitute for King Arthur and his knights (although the Horatio Alger myth of rags to riches was good for a lot of mileage). Without a mythology and set of ancient heroes to call its own, America had to manufacture its heroes. So the mythmaking machinery of nineteenth-century American media created a suitable heroic archetype in the cowboys of the Wild West. The image was of the undaunted cattle drivers living a life of reckless individualism, braving the elements, staving off

brutal Indian attacks. Or of heroic lawmen dueling with six-guns in the streets at high noon. This artificial Wild West became America's Iliad.