**SAS**

**Computer Programming and the Power of Written Language**

SAS was the first program that allowed individuals to input collected data and write a program and then have the program read and analyze the data for them. Once it became easier to collect and analyze large amounts of information, people found they could record data they hadn’t considered recording previously. This, combined with an increasingly technological world, where nearly everything a person does can be recorded, analyzed, and put into a database, resulted in extensive data tracking.

SAS, for instance, has created several kinds of analytical software, including models such as SAS Customer Intelligence 360™ that are marketed for the purpose of consumer data tracking, creating a database that can be used to guide customer interactions and make personalized decisions. Today, computer storage is cheap, and computers work very quickly. Our daily activities are full of technology and software that can record and report everything we do. Companies collect data on individuals and create a data profile of the person, a “double” full of information the company believes it knows about the person that can be used to target advertisements, offers discounts, predict customer behavior, and discriminate based on past encounters.

Those with the ability to write in and understand computer languages are few in number. This means that those who are able to write in computer languages have power through the authority of skill. Those who do not understand computer programming and use computer technology and social media are constantly affected by algorithms, data tracking, and company interpretation, but do not understand how and often do not understand the extent to which it is happening. Many websites have a privacy policy that forces the user to agree to data tracking before the individual can access the site. Many people, however, do not read the policy and those who do often do not understand the terminology used in the policy.

Data tracking is also used in the case of politics. The government uses data profiles to calculate citizen risk. The government keeps track of people whose data profiles place them in categories of “terrorist” or “foreigner,” paying close attention to the web activity of those individuals. Data profiles can also be used to target advertisements and sway citizens to a particular candidate or political party based on psychological profiling.

The first writing systems were invented to solve the issue of too much information — before writing, information only existed if a person could remember it. As societies became more complex, more information was needed in order to rule them. People in power needed to remember trade deals, the history of kings that ruled large populations, etc. Writing was invented to solve this issue. After hundreds of years of writing, people had recorded a lot of information. So much, in some cases, that they could no longer analyze it by hand. Again, this issue found a solution in writing, only of a different kind; computer programming. Now, programs like SAS and other data tracking and analyzing programs allow people of power to create data profiles on individuals, largely without their consent and/or knowledge. Today, the issue we are approaching is one of autonomy and privacy. It is impossible to predict the future, but as of yet, problems regarding information and its retention have been solved with the invention of new writing systems. What humanity will do with the issue of data tracking as a result of computer technology remains to be seen.

**What is SAS**

SAS (the name of the company and the computer software) was founded in 1966 to solve a particular issue: there was too much data being collected for people to analyze by hand. The founders combined written script and computer technology and created the SAS language and SAS programs. Basically, the language is written mostly using abbreviated words as well as symbols. There are two different kinds of steps: DATA steps, which begin with the word data and enact on a dataset by making numeric conversions, bringing the sets forward from a file, combining datasets, etc, and PROC sets, which begin with the word proc and run procedures on SAS datasets.

**Writing in SAS**

To use SAS, you write statements in the SAS language to write a series of instructions called a SAS program. The language is written mostly using abbreviated words as well as symbols. There are two different kinds of steps: DATA steps, which begin with the word data and enact on a dataset by making numeric conversions, bringing the sets forward from a file, combining datasets, etc, and PROC sets, which begin with the word proc and run procedures on SAS datasets.

There are many other words and abbreviations used to write a SAS statement. For example, a basic set of PROC statements for a dataset named “example” would look like:

```
Proc univariate data = example;
Var example;
```

The statements for a dataset named “practice” that would allow the user to examine the general distribution of the variable “example” would look like:

```
Proc univariate data = practice;
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The demand for SAS statistical analysis programs designed for specific business needs grew. At the same time, SAS began developing online curriculum resources for the classroom.