

ABOUT PROPHETS AND CRYSTAL BALLS

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Some people say that the ancient prophets were ordinary people who uttered simple logical consequences based on deeper observation of facts of one's present and past. Everything we see around us is a result of some action; it has a history and a reason of being. On the other hand, following the same scientific reasoning, if something apparently "does not have an explanation", it is because the historical facts that have caused it have not been investigated deeply enough.

Today, twenty years after the Internet changed society and business, the world is highly computerized. In practice, this means that thousands of computers constantly generate huge volumes of data, e.g. the item that passed through the supermarket box, the license plate captured by a traffic camera, the visited social network profile, or the record of a phone call. After being used in its original purpose, the information becomes outdated.

Historical data then takes on an even greater value. When aggregated in large quantities or arranged in graphics, it may show performance, growth, fall, and mainly, trends that are materializing in the business world of the eternal search for the prediction of the future.

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Modern "Prophets" work more or less like this:

1. Identify various repositories of historical data to be spread over a company (or even beyond) and integrate in order to allow them to be accessed together. Two examples of data would be (a) all products sold in a store and (b) register of customers with more generic data like SSN, address and monthly income. Often the data is stored in data warehouses or data marts and other times discarded after analysis;
2. Find and model relationships between these data sets. For example, the SSN customer who purchased such products and the profile of SSN in the General Register of customers;
3. Create graphical views that help them to infer and, eventually, "predict the future" and make better decisions in order to control it. Note that this factor, still fairly human dependent, is the most valuable in this process.

In this example, one might try to predict the standard purchase of the residents of a certain neighborhood or of certain income range or with a certain number of dependents, based on the history of a population. This analysis would be useful to determine the products and quantity of goods to supply to a specific store and or to improve the returns from targeted marketing campaigns.

Another important forecast is how much one will need to open the floodgates of a hydroelectric power plant in order to generate enough power to meet the demand after the last broadcast of a popular show, the - time at which entire cities shall bathe or start ironing. This sounds obvious but it is a historic event that, when left untreated, can cause blackout in an entire State. This example is real and shows the intrinsic relationship between disparate facts which do not suggest anything intuitive when viewed in isolation.

Predict or control the future has been institutionalized as a formal science in the disciplines of:

Business Intelligence: which aims to observe quantitative indicators in order to understand the past and the present

Business Analytics: which seeks to assist us to ask the right questions via correlation between data. The systems and methods of these disciplines enhance the practitioners' multi-disciplinary knowledge (e.g. between design of dams and plots of novels?) and intuition to predict the future.

The last word in prophecies is systems that receive data and facts as they occur can make real time decisions of fit and performance improvement, e.g. give or withdraw financial credit, command operations on the stock exchange or distribute load in a telephone network.

The ability to predict or control the future will always be a difficult and therefore highly valued task. Systems and business analysis techniques are modern crystal balls that turn that art into something tangible and scientific.

For further information:

http://en.wikipedia.org/wiki/Data_mining

http://theregister.co.uk/2006/08/15/beer_diapers/