



If, as is often said, “forecasts are always wrong” then forecasting the future of forecasting is a bit pointless. Tell you what: let’s begin by back-casting. What can we see that is definitely happening?

Forecasting the Future of Forecasting

Demand Sensing + Super Crunching = Future of Forecasting

I see two trends – both of which are driven by the very definite, huge increases in data availability and faster, better processing:

1. Short term forecast automation (demand sensing)
2. So called “super crunching” support for medium to long term forecasts

Short term automation

By “short term” I mean 6 to 8 weeks out, during which our sales are an outworking of plans and promotions that were put in place months or years ago. During this period sales volumes are essentially “in the lap of the gods” as Homer put it.

The most notable and obvious trend here is the rise of Terra Technology and “demand sensing”.



Demand Sensing

Bayesian Inference

Human Judgement

Terra simply take medium term forecasts, historical shipments, customer orders and POS data and feed them through statistical algorithms, which spit out updated projections every morning. This, near real-time processing provides for a rapid response to demand changes – with short term forecasts being adjusted appropriately.

Taking humans, with their propensities to chase noise and promotional rainbows, out of the loop, improves forecast performance by 40% (Terra’s 2011 Forecasting Performance Benchmarking)

It is early days for this technique, but the signs are promising. There are likely to be some false dawns, and quite a lot of hard work, before the technology matures. But if

it pans out as expected then we can expect to see all manufacturers close coupled to retailer systems in the future – and short term operational replenishment processes that largely run themselves.

Medium to long term forecasts

The term “Super Crunching” was coined by Ian Ayres in his book Super Crunchers: How Anything Can Be Predicted: I recommend this book, even though in my opinion (and probably his) the subtitle is somewhat overstating the

case. We can’t predict anything! But we can predict an awful lot of things far better than we ever could before.

Specifically using what used to be called “artificial Intelligence” but is now referred to as Machine Learning – very sophisticated inferences can be made from huge data sets.

These techniques are already being used in areas as diverse as medicine and currency exchange trading.

The time is ripe for their adoption by consumer goods industries for promotional forecasting.

One of the best, and now most familiar, of the uses of these techniques is Google Translator. It may come as a surprise that Google does not use and grammatical rules or language specific translation tables to run Translator – it is a purely statistical process.

What Google has is millions of equivalent texts in any two languages. Enter a phrase and it uses statistics to work out what the phrase probably means by performing correlation analysis. It is startlingly good because it has millions of data points – far more than any human could possibly use to try to emulate this process manually.

In consumer goods we have huge data sets being developed of sales information alongside sales drivers. The drivers include promotional details (shelf placement as well as offers) and so called exogenous factors such as weather, holidays, competitor activity. The same process Google uses is well capable of processing this data to isolate the impacts of promotional plans on sales patterns. This is what Sequoia is working on.

Conclusions

So, in many respects the Future of Forecasting is not a forecast at all – its already with us. What about the Future of Forecasters – what happens to the humans?

Well, the machines are great ... where there is great data. I see humans focussed on the difficult judgements, where historical data is sparse and a degree of intuition is needed. In short I see less drudgery, more difficulty and a lot more interest for humans – as the machines take over.

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