The Trading Intelligence Quarterly

Issue 5

Contents

Big eCommerce data

Everything you ever wanted to know about turning data into profit but were afraid to ask.

eCommera

Customer data and decisions: How the social data revolution transforms everything

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Highlights

- The explosion of social data has revolutionised retailing
- **For businesses**, it is influencing everything from how they create and sell products to how they acquire and lose customers
- **For consumers**, behaviour has radically changed:
  - Individuals are empowered as the co-creators of information
  - Purchasing decisions are being made differently
- To participate in the revolution businesses should develop a customer-centric mindset as well as encouraging and embracing the use of social data in their business design and strategic decisions.

Today's customers freely share information on the Internet about themselves and their friends that even the KGB could not have extracted under torture. This explosion in social data is the most important driver of innovation in the past ten years: people post their CVs on Linkedin; they answer questions on Quora; they share their photos on Flickr; and they comment on their friends updates on Facebook. Similarly, unofficial information about a company, its products, its services and its competitors is readily available on sites like Yelp, Jigsaw, Glassdoor and Vault.

The availability of this information, and our desire to contribute, permeates almost every aspect of our waking lives – from Googling someone before agreeing to a date to reviewing a film or updating your Facebook status.

This marks a transformation to the age of the individual. It is no longer just official bodies and corporations that have the power to 'create'. Gone is the passive audience who once sat in receipt of a monologue of communications. Individuals are now empowered as 'creators' on a mass level; they are in charge of the conversation and it is multi-directional.

What is social data?

Quite simply, social data is the information that people freely create and share online. There are two types of social data:

1. **A social share:** attributes about a person, such as their geolocation or information that they post, such as a status update or a review of a product.

2. **The social graph:** networks of interactions between individuals. Now, any Facebook app can ask to access the list of friends of a user. Beyond this friend network, social data includes tagging friends in photos, recommending people on LinkedIn or following influencers on Twitter.

- For individuals there are new opportunities to express opinions , to get attention, to belong to 'clubs' and to collaborate with other people
- For businesses, the revolution means adopting a customer-centric mentality, giving genuine attention to those who want it and offering a social playground in which people can mingle, converse and co-create.

This article offers some practical suggestions for brands and retailers grappling with the implications of the social data revolution.

Why do people share?

In this world of fragmented selves, where your online reputation may matter more than your offline 'real' self, the individual needs to construct an authentic social identity. We share our experiences and emotions to obtain that most scarce of commodities – attention. We share to collaborate, to coordinate, to get more done in less time, or to get things done that we could not accomplish alone.

Why is this a revolution?

It is a global consumer revolution because: it is happening in the minds of a billion people worldwide; it democratises the means of production; and it makes previously hoarded information freely available. For businesses, social data is a revolution because it fundamentally alters the relationship between buyers and sellers.

Managing social data – not social media

Like mass media, social media is designed to broadcast content in one direction. On YouTube or a blog anyone can become a publisher, but conversations are one-way, not a dialog. So as a communication tool, a video uploaded to YouTube is no different to an advertisement shown during the World Cup.

Social data, on the other hand, is raw information created and shared by individuals expecting to benefit from its socialisation, aggregation and analysis. For example, geolocation shared by a woman via Google Latitude is social data, not media, because she is hoping to find out if a friend of hers is nearby, or if a local store is having a sale.

As a result, a company's social data strategy will be completely different from a social media strategy. For years, companies have tried to push tired marketing messages through new channels, viewing them just as additional entries in their marketing mix. Social media strategies that try to find better, cheaper, faster ways of drumming a message into people's minds are doomed to fail given the plethora of alternate sources of information consumers consider when making decisions.

The foundation of a social data strategy

a) A customer centric mindset

The social data revolution, for companies, is about a adopting a new customer centric mindset. Customer centricity is crucial because delighting the customer leads to more loyalty, increased sales and positive recommendations to other consumers. Customer centricity is about addressing each customer as an individual, not as a target. Fake customer centricity comes in many forms, such as an automated voice saying "Your call is important to us". This delights no one.

In the early days at Amazon, we aggregated sales data and used sophisticated algorithms to generate recommendations for our customers: customers who bought X also bought Y. At the time that was indeed revolutionary, but it was only the beginning. We constantly worked to make recommendations more relevant, to increase the genuine customer-centricity of the entire shopping experience, and to ensure that the promises we made were kept.

b) Design to encourage the sharing of social data

A sound social data strategy starts by making it easy for customers to create and share information with the company, other customers and the world. Furthermore, incentives for customers to contribute need to be designed well, such as giving them bragging rights and empowering them to collaborate. Most importantly, the value to the customer must be clear, such as personalisation and better purchasing decisions.

c) Use social data to make decisions

Knowledge about customers' relationships can help a company to focus its limited marketing resources effectively – what worked for a potential customer's friends is very likely to work with them as well. For example, Allstate Corp., an insurance company, uses Rapleaf data on a customer and their network to determine how carefully to investigate a new claim.

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For companies in tune with the transformation, social data is influencing everything from how they create and sell products to how they acquire and lose customers.

So, don't waste any more time crafting a social media strategy. Your customers, and your competitors, have already seen the movie and bought the t-shirt. Embrace the Social Data Revolution - it will happen with you or it will happen to you.

Rules for revolutionaries

Generally, most organisations haven't kept up with individuals when it comes to embracing social data's transformation of openness and individuality. These rules, adapted from Stanford University's Social Data Intelligence Test, provide guidelines for how tomorrow's successful businesses can participate in the new, relationship-centred world.

Rule #1: Treat your customers as individuals

Empower your customers to make better-informed decisions as individuals, and to share their data with friends and peers.

Marketing executives often salivate at access to a great deal of data because they see it is an opportunity to segment their customers more. "We want to reach single mothers between the ages of 21 and 35 years old living in northern Ohio," is a typical refrain.

But this bigger segmentation response to having more data is far too limited. Segmentation – not long ago the holy grail of marketing – is becoming an anachronism. Most people don't want to be anonymous. Customers want to be treated as individuals and they are heading for platforms and companies that understand this.

At Amazon, for example, customers have never been treated as demographic compilations, but as people who have made previous purchasing decisions, shared opinions, viewed particular items, established patterns of decision making, connected with friends either on Amazon or via third-party platforms, and a hundred other variables. Similarly, advertising on Google is not based on segmentation, but on the current search, and advertising on Facebook is based on your social graph. Highly specific segmentation has been surpassed by the ultimate marketing dream: one-to-one relationships on a vast scale.

Rule #2: Become part of your customers' digital lives.
Actively help your customers to create a public persona.

Customers have long defined themselves through the products they purchase – the Canon (or Nikon) guy, the Prius driver. Maybe customers will not tattoo your logo on their biceps (or somewhere else!) but if your company already is a part of your customer's life, social data can help you become an element of their self-expression. This is not about pushing product or tweeting your latest marketing message.

Nike+ does not sell shoes per se, but by allowing customers to share and compare their running regimes, it lets them build a public posting of their prowess. Many check it every day, the average is three times a week. That is becoming a part of your customers' digital life.

Rule #3: Liberate your organisation's data.
Provide your customers with the information they need to make decisions.

Most companies jealously guard their internal data, inadvertently creating a healthy market for industrial espionage. Open up your company to the world – it allows you to draw on the collective wisdom of all the smart people who do not work for you. Open source software grew rapidly precisely because it was not dependent on any one company's brain trust. In addition, your customers will gain confidence in your offerings if they can see through your workplace procedures, your supply chain and your footprint in the community.

The old game was about exploiting information asymmetry, like the used car salesman who knows the car's entire history while the customer is ignorant. The new game is played with all the cards face up. Lufthansa lets customers see how many seats remain unsold on a particular flight, a great example of socialising data. If you really need to be on that crowded plane, you will pay the relatively high price and probably pay it sooner rather than later. If you have greater flexibility, you may be able to save money by waiting.

Rule #4 Don't worry, be messy.
Let your customers provide the information they want, in the way that they want.

So many companies force their corporate structure and database structure on customers who are trying to communicate with them by making them fill out forms, often resulting in consumers turning away. Companies that insist on forms for interaction don't understand that consumers are willing to share much more interesting and useful information. Instead, they struggle to categorise themselves according to drop-down menus and feel both frustrated and annoyed. The company won't sell that product and the consumer has a bad experience. For example, if I want to buy anti-virus software for my company, I may be asked if I'm a small, medium or large business. My reaction is, "I don't know. I just want to buy virus protection."

Instead, companies should take whatever they can get. Let consumers tell you whatever they want and however they want to say it. Make it trivially easy for people to write comments. Then grab the data, surface it out and others will comment on it. Even if you don't understand the data, maybe others will and explain it. Craigslist is a good example of this; when someone posts something other users will put it in the right group, or flag it as inappropriate.

Rule #5: Let employees be messy too.
Empower your employees as innovators.

Don't stifle the freedom and creativity of your employees. Instead, empower them and give innovation the chance to bubble up. Several recent studies have shown that the most innovative companies use far more employee-generated ideas than the average. Some companies allot a certain amount of time for employees to explore relevant ideas outside their usual responsibilities. Google's Gmail, for example, was the result of this practice.

One of the benefits of social data is that it allows employees to test ideas cheaply and quickly. Like a venture capital model, most of the small investments won't pan out, but the occasional eureka moments will pay for the rest.

Instead of trying to mine old data, let employees use social data to run well-constructed experiments to answer relevant questions. Such questions can run the gamut of business operations. Will customers like this new toothpaste package design? What are customers who tried free samples saying to each other about the new flavour? If one of two people who are both members of several circles on GooglePlus, how likely is one to respond to an advertisement for a product the other has already purchased?

Rule #6: Focus on metrics that matter to your customers, not your accountants.
Centre the conversation around the things that your customers care about.

Most customers care more about receiving their package on time than about your earnings announcement. They care about speaking to a live human being when they call customer service. They care about being able to return goods or cancel a service without jumping through hoops.

In the old game, savvy mail order retailers strove to minimize returns by making them difficult. Zappos, a master of the new game, make returns trivially easy, which encourages customers to make more purchases. Why not publish your call-centre wait times on the web with a predictive model suggesting a better time to call? And when a customer calls, why not give them access to the recording of their conversation? Invite the world to see the amazing quality of your customer service, or, should you somehow fall short of perfection, improve on the interactions you are having.

Amazon's mastery of data

Amazon's unique approach to data can be most fully understood by starting with a brief biography of Jeff Bezos.

Bezos studied at Princeton University and graduated with a degree in electrical engineering and computer science (having entered to study physics). Between 1986 and 1994, Bezos worked in a number of financial services businesses including Fitel, Bankers Trust, and D. E. Shaw. In 1994, he founded Amazon.com.

Further, albeit subtle, clues on the inner workings of Amazon are found in Bezos' annual letter to shareholders – there are 14 so far[1].

Our insights on Amazon's approach to data encapsulate many of the themes of this edition:
- A holistic view of profit
- New algorithms
- Input driven trading.

A holistic view of profit

Bezos's insight was that in a world of unlimited shelf space, and stock decoupled from point of sale, Amazon could rethink the economic model and re-engineer the retail cash cycle.

"When forced to choose between optimizing the appearance of our GAAP accounting and maximizing the present value of future cash flows, we'll take the cash flows." 1997 letter

"Our ultimate financial measure, and the one we most want to drive over the long-term, is free cash flow per share." 2004 letter

New algorithms

Amazon has recognised that the traditional dogma of retail simply makes no sense in the online world, and has developed new mathematical algorithms to interpret data.

"Many of the important decisions we make at Amazon.com can be made with data. There is a right answer or a wrong answer, a better answer or a worse answer, and math tells us which is which. These are our favorite kinds of decisions."
2005 letter

"… most of our inventory purchase decisions can be numerically modeled and analyzed. We want products in stock and immediately available to customers, and we want minimal total inventory in order to keep associated holding costs, and thus prices, low. To achieve both, there is a right amount of inventory. We use historical purchase data to forecast customer demand for a product and expected variability in that demand.

We use data on the historical performance of vendors to estimate replenishment times. We can determine where to stock the product within our fulfillment network based on inbound and outbound transportation costs, storage costs, and anticipated customer locations. With this approach, we keep over one million unique items under our own roof, immediately available for customers, while still turning inventory more than fourteen times per year." 2005 letter

"Our pricing strategy does not attempt to maximize margin percentages, but instead seeks to drive maximum value for customers and thereby create a much larger bottom line – in the long term. For example, we're targeting gross margins on our jewelry sales to be substantially lower than industry norms because we believe over time – customers figure these things out – this approach will produce more value for shareholders." 2003 letter

1 All the Bezos letters can be found here: bit.ly/oflLru

Input driven trading

Control theory was developed in tandem with the industrial revolution. As inventions became more complex, the core idea of control theory was to measure 'inputs into' and 'outputs from' a system and understand the relationship between them. Amazon seems to think of itself as a trading machine with inputs and outputs, and input driven trading is at the heart of Amazon's approach.

"Senior leaders that are new to Amazon are often surprised by how little time we spend discussing actual financial results or debating projected financial outputs. To be clear, we take these financial outputs seriously, but we believe that focusing our energy on the controllable inputs to our business is the most effective way to maximize financial outputs over time." 2009 letter

"For 2010, we have 452 detailed goals with owners, deliverables, and targeted completion dates. These are not the only goals our teams set for themselves, but they are the ones we feel are most important to monitor." 2009 letter

"Cycle time, the amount of time taken by our fulfillment centers to process an order, improved 17% compared with last year. And our most sensitive measure of customer satisfaction, contacts per order, saw a 13% improvement." 2002 letter

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A lesson for all online retailers hoping to emulate Amazon's success – Amazon has put data at the heart of its business.

But data will only get you so far… the culture of continuous invention is consistent throughout Amazon's history. Bezos himself seems to be always learning, summed up in a delightful anecdote from his 2008 letter:

"At a fulfillment center recently, one of our Kaizen experts asked me, 'I'm in favor of a clean fulfillment center, but why are you cleaning? Why don't you eliminate the source of dirt?' I felt like the Karate Kid."