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The Promise and Perils of Common Information

By Thomas H. Davenport

As I write today the Nobel Prizes are being given out. I congratulate the winners, but I guess it also means that I will not be receiving one this year. In the fall I get up early every day, anticipating a call from the King of Sweden or whomever it is who notifies the winners. But this year, as in other years, it only gave me more time to eat my Cocoa Puffs.

I keep thinking I will win for my seminal, profound findings on common information—what the world knows, of course, as Davenport’s Law of Common Information. If by some strange chance you haven’t heard of Davenport’s Law, it goes like this:

The more an organization knows or cares about a particular business entity, the less likely it is to agree on a common term and meaning for it.

This deliciously paradoxical observation first began to come to me at American Airlines more than a decade ago. They told me during a research visit that they had 11 different usages of the term “airport.” As a frequent traveler on their planes, I was initially a bit concerned about this, but when they explained it the proliferation of meanings made sense. They said that the cargo people at American viewed anyplace you can pick up or drop off cargo as an airport; the maintenance people viewed anyplace you can fix an airplane as an airport; the people who worked with the International Air Transport Authority relied on their list of international airports, and so on.

The next week I was doing some consulting at Union Pacific Railroad. They sheepishly admitted at some point during my Omaha stay that they had great debates about what constitutes a “train.” For some it’s an abstract scheduling entity; for others it’s the locomotive; for yet others it’s the locomotive and whatever railcars it is pulling at the time.

By an amazing twist of fate, shortly thereafter I paid a call on the U.S. Department of Justice. They were going through an information modeling exercise, and ran into a roadblock in creating a common definition of “trial.”

So just like Newton being hit on the head with an apple and discovering gravity, the key elements of Davenport’s Law hit me like a brick. This was why organizations were having so many problems creating consensus around key information elements. I also established several powerful corollaries, such as:

If you're not arguing about what constitutes a "customer," your organization is probably not very passionate about customers.

So you can see why I am miffed about being left out from the ceremony in Stockholm or Copenhagen or wherever it takes place (I was always a little confused about this). Davenport's Law makes it much easier to understand why companies all over the world have difficulty establishing common definitions of key terms around their organizations.

Perhaps in some ways it is just as well that I haven't gotten that call from King Carl XVI Gustav, because Davenport's Law could have some negative consequences too (just like Marie Curie's work on the atom, I suppose!). It might provide some organizations an excuse to allow meanings to proliferate. Even though there is a good reason for why they proliferate, organizations have to control—even stop—the proliferation of meanings and agree on one meaning for each term. Otherwise they will continue to find that when the CEO asks multiple different people just how many employees a company has, he or she will get multiple different answers. In short, the proliferation of meanings, however justifiable, leads to information chaos.

But Davenport's Law offers one more useful corollary about how to stop the proliferation of meanings. Here it is:

A manager's passion for a particular definition of a term will not be quenched by a data model specifying an alternative definition.

Over the past couple of decades we have believed that the way to control the proliferation of information meanings is through data architectures created by the IT organization. But whether you called those architectural efforts "data modeling," "information architecture," "information engineering," or the latest term "master data management," they have not been particularly effective.

One final corollary:

Consensus on the meaning of a term throughout an organization is achieved not by data architecture, but by data arguing.

That is,

You want the arguments to go like this: "OK, I give in. My function has always found it useful to define dead people (or prospects, or distributors, or whatever) as customers, but I see that this causes problems, and we will henceforth refer to them as "dead people," not "customers." Data modeling doesn't often lead to this type of dialog because it's simply not comprehensible to most nontechnical mortals. If people don't understand your data architecture, it won't stop the proliferation of meanings.

I am becoming reconciled to the idea that there will never be a Nobel Prize in Information Management, and if there were I undoubtedly wouldn't win. But if there is ever a debate within

the Nobel committee about just what is meant by the term “prize” (“Is it only the money, or do we include the medal too in the meaning?”), I will feel a certain level of vindication.

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