SUNDAY, MAY 14, 2006

Mapping Knowledge: Poetry in Aid of Science and Business

Before moving on to the main body of this missive, my good friend, Dean Landsman, kindly pointed out that the GEL posts have not been up to what he calls my usual standard of writing. He said so out of concern, and so please allow me to apologize here for any awkward sentence construction -- these are all first drafts with quick spell checks. I regret any lack of grace. I'm posting as quickly as I can get the words down.

And now back to our regularly scheduled program.

The History of Maps: Both a Means and Result of Discovery

Katy Börner, another inspirational speaker at GEL, explained her passion for finding patterns within and among large data sets and mapping the results.

Sound dry? In fact, the highly interpretive nature of the work -- how to create connections among siloed ideas to create an intuitive and yet accurate picture of existing knowledge -- demonstrates the importance of art in scientific innovation.

Börner began by discussing the history of science maps in relation to their geographical equivalents. Each map represents a vision of information and priorities based -- sometimes quite shamelessly -- on a particular mapmaker's perspective.

Mapping Science

Within the field of science, Börner includes the fields of math, physics, biology, chemistry, social sciences, and so on. Each domain of discovery (in this case, science) is distinct from the others often in language/jargon, resources, personnel, education, economic market, academic discipline, and often geography.

The questions Börner asks: how can we make use of what we know collectively so that we don't have to repeatedly reinvent the wheel? What would a map of knowledge look like that illustrated density (both overlap of ideas and outliers), detail (which can be got from search engines), and a big picture? What sort of metaphors would be appropriate?

Once You Build It?

Börner's work has application for every knowledge domain. Since the late eighteenth-century, Western thought has been increasingly relegated to distinct disciplines whose value, to a large extent, is predicated on its difference from other fields. Education follows a with increasingly specialized disciplines of interpretation to prepare practioners for their increasingly narrowing fields.

As Börner mentioned, as technology develops, it's increasingly difficult to keep up with the discovery and dissemination of knowledge. Furthermore, the ability of one field to publish more quickly than others creates a political imbalance among those in the business of research and discovery.

Learning: By Way of Example

With so much noise, and so few interpreters among fields, knowledge and learning processes are repeatedly redefined by practioners of psychology, biology, higher education, by secondary education, primary education, corporate training, new age systems, self-help industries, and so on.

In fact, the overlaps are often more salient than the differences, although the salaries for each field don't reflect it. Often, for example, corporate trainers spend a great deal of energy reminding adults that communication skills differ among individuals according to background, expectations, gender, culture, etc. How much more do they earn than Kindergarten teachers who spend much of their time on the same theme?

As I mentioned early on, this blog was born from my own frustration over the way in which education is handled. Three years of research demonstrates that across fields, most professionals agree on the components of effective thinking. However, practioners

most professionals agree on the components of effective thinking. However, practitioners and researchers of learning, creativity, and education rarely acknowledge each other's accomplishments in a way that encourages further exploration of similarities. The economics and politics of celebrity discourage anything else.

What if overlaps among fields became a priority, and we mapped everything that is currently known about the way the mind processes information? What if everyone across age groups and fields worked from that map?

What if all fields were mapped across topics and discoveries?

More on GEL in the next post.

More on Börner's Work

Learn more about Börner's work at her website and get in touch if you have ideas about appropriate metaphors with which to map scientific knowledge. She also asked me to add that she and her colleagues sell maps and a video. All money goes towards the design and manufacture of (puzzle) maps of science to be donated to schools around the globe.

Posted by Annette Kramer, PhD at 12:58 PM

No comments:

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Source: Learning Lab
http://learninglaboratory.blogspot.com/2006/05/mapping-knowledge-poetry-in-aid-of.html