



# HONEYBEE CAPITAL

**HONEYBEE PUBLICATION #5 – DATA ISSUE**  
**(ABBREVIATED WEB VERSION)**  
**NOVEMBER 2009**

**MAIN TOPICS FOR THIS PUBLICATION:**

- **Data, data everywhere – so why do we still thirst for knowledge?**
- **Uses of cool new data – opportunities? dangers?**
- **Advice from the pooh-bah of data, Edward Tufte**
- **It slices, it dices - what CAN'T data do?**
- **Highlights of amazing media & new ventures, many from the PopTech Conference**

**QUOTES OF THE MONTH:**

*Where is the Life we have lost in living?  
Where is the wisdom we have lost in knowledge?  
Where is the knowledge we have lost in information?  
- T.S. Eliot, The Rock*

*“The country demands bold, persistent experimentation. It is common sense to take a method and try it: If it fails, admit it frankly and try another. But above all, try something. The millions who are in want will not stand by silently forever while the things to satisfy their needs are within easy reach. Yours is not the task of making your way in the world, but the task of remaking the world which you will find before you.”  
- FDR, 1932*

*“There’s no such thing as a neutral map, or neutral data.”  
- Lara Kurgan – Columbia Arch. Design Lab*

*“I’d rather be hated for what I am than loved for what I’m not.”  
- John Forte, musician*

*“When we reject the single story, we regain a kind of paradise.”  
- Chimamanda Adichie, novelist (The Thing Around Your Neck)*

## **WHY SHOULD WE ALL CARE ABOUT DATA?**

1. TOO OFTEN, DATA IS CONFUSED WITH INFORMATION, OR EVEN WISDOM.
2. KNOWING YOUR DATA, HOW TO ANALYZE IT, AND HOW TO PRESENT IT, WILL LEAD YOU TO BETTER CONCLUSIONS.
3. GOOD DATA AND ANALYSIS CAN HELP TO OFFSET COMMON BEHAVIORAL BIASES THAT INFLUENCE OUR DECISION-MAKING.
4. NEW DATA SOURCES AND TOOLS ALLOW FOR AMAZING NEW ANALYSIS AND NEW BUSINESS OPPORTNITIES.

## **STILL NOT CONVINCED? CHECK OUT THESE EXAMPLES:**

### **1. SOMETIMES THE BEST DATA IS JUST BELOW THE SURFACE.**

Consider KATY PAYNE, elephant linguist: She started out doing whale research, then switched to elephants. It turns out that when you record elephants and speed up the tapes, you can hear all kinds of sounds that are below human hearing range.

### **2. “THERE IS NO NEUTRAL DATA, AND THERE ARE NO NEUTRAL MAPS”.**

This quote is from LARA KURGAN of COLUMBIA'S SPATIAL INFORMATION DESIGN LAB– they are doing all kinds of cool work with spatial data.

<http://www.spatialinformationdesignlab.org/projects.php?id=16>

As far as neutral maps are concerned, here are two intriguing visions:

First, PARAG KHANNA has done some interesting geopolitical analysis, which is detailed in his book, *The Second World*. Parag also did a talk at the TED conference about shifting maps – though it is always tricky to draw broad geopolitical conclusions in an 18-minute talk, the notion of economic and infrastructure boundaries contrasted with traditional national boundaries is worth considering. Here is Parag's TED talk:

[http://www.ted.com/talks/parag\\_khanna\\_maps\\_the\\_future\\_of\\_countries.html](http://www.ted.com/talks/parag_khanna_maps_the_future_of_countries.html). And here is his book: [http://www.amazon.com/Second-World-Redefining-Competition-Twenty-first/dp/0812979842/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1254149715&sr=8-1](http://www.amazon.com/Second-World-Redefining-Competition-Twenty-first/dp/0812979842/ref=sr_1_1?ie=UTF8&s=books&qid=1254149715&sr=8-1)

Second, I want to highlight a book that stretches the traditional world map in every way: *The Atlas of the Real World* is a simple concept, but a powerful one. It simply maps data of all sorts onto the 'land mass map' we see all the time, and by the resulting puffed-up and shrunken proportions you can see some surprising data at one glance.

Here is the book: [http://www.amazon.com/Atlas-Real-World-Daniel-Dorling/dp/0500514259/ref=sr\\_1\\_1?ie=UTF8&s=book](http://www.amazon.com/Atlas-Real-World-Daniel-Dorling/dp/0500514259/ref=sr_1_1?ie=UTF8&s=book)

### 3. THERE IS MORE DATA ALL THE TIME, AND IF USED PROPERLY, IT CAN LEAD TO GREAT INSIGHTS. “WHO NEEDS A CENSUS ANYMORE?”

ASSAT BIDERMAN of the SENSEABLE CITIES LAB AT MIT (yes it is spelled with an ‘e’, get it?) presented on the lab’s “emotional maps” work at the recent PopTech conference. Here is the lab’s site, it is well worth popping around to see their difference projects: <http://senseable.mit.edu/>.

### 4. ALL OF THIS NEW DATA IMPLIES NEW APPROACHES TO SCIENCE AND OTHER DISCIPLINES – IS THERE A NEW AND MORE IMPORTANT ROLE FOR THE AMATEUR?

For example, Microsoft Research is doing all kinds of cool stuff, and most of it is open and free (!). Likewise, Apple’s iTunesU is democratizing academic content in an unprecedented way – it may never substitute for actually attending Stanford, but the increased access to knowledge of all sorts is quite literally world-changing.

TONY HEY, head of external research at Microsoft, says that computational science was the third paradigm, and data-intensive science is the fourth. He notes that there might be a different role for citizen-scientists in this realm – for example, on WorldWide Telescope (a Microsoft project, at <http://www.wvtelescope.org>), ‘regular people’ comb through space images to characterize what’s out there. Microsoft research’s other programs can be seen at <http://research.microsoft.com/en-us/> - contrary to popular opinion of this giant corporate entity, there is a lot of cutting-edge stuff here with a social benefit, and it’s almost all open access. Check out the famous Feynman physics lectures, with footnotes and related links – it is like MTV pop-up videos for nerds (yes, I love it).

And here is a more consumer-related approach: the Good Guide, which contains all sorts of data on everything from food to toys (<http://www.goodguide.com/>). You can see at a glance which baby foods are most nutritious, or which toys have sketchy supply chain issues. The data is still incomplete, but this is a great, user-friendly way to sift through the increasingly-available but increasingly-complex product information that exists.

### QUESTIONS

- What kind of lag is there between **data availability and our mindsets** changing?
- **New communications models** – these connect with and complement all the new data discussed above – what is possible now that communication can be free, and open, and more direct?
- Related to the above, **are there new skills required?**
- Is there a **mismatch between data and other resources?** Lots of amazing entrepreneurs are looking at these issues – stay tuned!

**OKAY, OKAY, SO DATA AND ITS PRESENTATION ARE REALLY IMPORTANT. Wouldn't it be handy to have an expert on hand to give us lots of more detailed advice?**

Well, it is your lucky day! I recently attended a data presentation course with the legendary (in data circles) Edward Tufte. His books are magical, dense in the best possible way – some highlights from his commentary are below, but I highly recommend his books for more complete illustration of these important concepts. They can be found here: [http://www.amazon.com/Edward-R.-Tufte/e/B000APET3Y/ref=sr\\_tc\\_2\\_0](http://www.amazon.com/Edward-R.-Tufte/e/B000APET3Y/ref=sr_tc_2_0), and his own website has lots and lots of additional information: <http://www.edwardtufte.com/tufte/>. If you ever have the chance, especially if you are engaged in any sort of research-oriented function (and/or if you feel like your head will pop off if you see one more slide with 4 short bullet points and a corporate logo on it), I highly recommend his one-day courses (the schedule is on his site).

### **NOTES FROM TUFTE DATA PRESENTATION COURSE**

- “Data presentation is a MORAL ACT”.
- There is no such thing as info overload, only lousy design.
- We have a tendency to PRESPECIFY data or format – the question is “HOW CAN THIS ISSUE BE EXPLAINED
- As a data consumer, you want an OPEN MIND BUT NOT AN EMPTY HEAD.
- A good, intense design can be HIGHLY INTERACTIVE
- Don't start with 'know your audience' - KNOW YOUR CONTENT, RESPECT YOUR AUDIENCE – they don't need to be read aloud to like preschoolers.
- Danger of ‘SAMPLING TO PLEASE” and other risks if you allow others to assemble all of your data for you.
- TO CLARIFY, **ADD** DETAIL – OR FIX DESIGN. Don't throw out useful information in the name of clarity.

*I was having a lot of flashbacks to my research days during Tufte's presentation, partly because some of his essential points touched on some of my biggest concerns about the growth of research operations from squirrely ad-hoc groups to highly professionalized machines (sometimes at the expense of the actual research). For example, the introduction of 'standard' report formats in the investment community brought some great benefits, and made them easier to consume quickly – but we have lost that random 'in the stacks' inspiration which occurred when it turned out the data we thought we wanted was not nearly as interesting as the column to the left, or the page to the right.*

## **SO, IF DATA AND TECHNOLOGY ARE SO IMPORTANT, WHAT CAN'T THEY DO???**

***Well, in short, they are not human – so, whatever is uniquely human becomes more and more prized. Here are a few examples, from the business-like to the personal.***

### **HUMAN COMPUTATION – Luis Van Ahn**

- Luis invented those irritating 'captcha' security windows for when you send a web link to someone – they prevent automated programs that cause web traffic jams and other bad things.
- But, given all that time and effort, Luis wondered, can this be put to better use? 200 MILLION clues are typed every day, 500k hours of effort! And the whole point is that you're doing something that can't be automated.
- So, NOW you are helping to digitize books!

### **HUMAN CONVERSATION/SOCIAL CONSTRUCTION: Michael Wesch, KS State**

- Michael is an anthropologist who works on social media
- Big picture summary: Orwell feared a control state, Huxley feared a trivial culture. Generally, in the US, Huxley has been closer to the mark.
- Social media – what's unique? It's NOT controlled by few, and NOT one-way, oddly personal, yet indirect: "I'm talking to you, but I don't know who you are."
- Questions for the future: CONNECTION VS. ISOLATION – can technology substitute for direct human contact? Can it be even more effective sometimes? When does it fall short?

### **HUMAN MOTIVATION: Dan Ariely, author of *Predictably Irrational***

- Dan's work confirms that we make big mistakes about motivation – MONEY ISN'T IT. At some point motivators become stressors - the speed of learning cannot always accelerate to match the increased incentives.
- For mechanical tasks, more money yields better results. But for cognitive tasks, more money yields WORSE results. Add an audience, and you get MUCH worse results.
- Revenge centers of the brain are very close to pleasure centers – people are willing to lose more of their own \$ if it makes another person suffer.
- There are challenges in mixing social and financial good – people will work for free, but not for \$3 – mixing these 2 motivations is especially murky.
- When change is quick we are okay at adapting, sudden shifts cause us to re-think our actions. But for longer duration, more secular changes – we are really bad at adapting.
- Implications: think about your own organization, does it have the appropriate mix of motivations? Everyone likes the idea of a cookie cutter, 'pure' financial compensation system, but there is little evidence that this alone is a good motivator

(or a fair one). How do we think of these motivators when it comes to investing? One of the issues with sustainable investing, for example, is that investors don't know where to put it, in the 'feel good' or 'make money' category. There is not yet a 'both' category, and this is likely due to some deep human cognitive preferences, not just lack of product development.

- This is Dan's book: [http://www.amazon.com/Predictably-Irrational-Revised-Expanded-ebook/dp/B002C949KE/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1259590354&sr=8-1](http://www.amazon.com/Predictably-Irrational-Revised-Expanded-ebook/dp/B002C949KE/ref=sr_1_1?ie=UTF8&s=books&qid=1259590354&sr=8-1)

### **HUMAN MOTIVATION: Ashley Merryman, co-author of *Nurture Shock***

- "You worked hard" is a more important/effective motivator than "you are smart" – PRAISE IS POWERFUL, BUT A SPECIFIC SORT OF PRAISE. When 'smart' kids were faced with a daunting task they couldn't quickly master, they gave up. When 'hardworking' kids faced the same, they kept at it until successful.
- SLEEP is even more powerful than praise: physical rest hits your hippocampus first (reason and memory are impaired) – your amygdala is the last to go (fight or flight).
- Here is Ashley and Po Bronson's book: [http://www.amazon.com/NurtureShock-New-Thinking-About-Children/dp/0446504122/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1259590921&sr=1-1](http://www.amazon.com/NurtureShock-New-Thinking-About-Children/dp/0446504122/ref=sr_1_1?ie=UTF8&s=books&qid=1259590921&sr=1-1)

### **BOOKS, MUSIC, AND OTHER MEDIA SUGGESTIONS**

- **THE SELECTED WORKS OF T.S. SPIVET, BY REIF LARSEN** – this is one of my favorite books of the year, a novel featuring a young boy who maps everything, from facial expressions to physical terrain to details of plants and animals. The layout of the book is mesmerizing, with T.S.'s maps and notes illuminating the margins and providing a sort of inner story to accompany the main text. And, Spivet's maps mirror the wisdom of Edward Tufte almost exactly! [http://www.amazon.com/Selected-Works-T-S-Spivet/dp/1594202176/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1258988490&sr=8-1](http://www.amazon.com/Selected-Works-T-S-Spivet/dp/1594202176/ref=sr_1_1?ie=UTF8&s=books&qid=1258988490&sr=8-1)
- Here is a moving example of artistic 'data', from a young Ukrainian on 'Ukraine's Got Talent' (no kidding) – in a few short minutes she conveys all of the joys and sorrows of history. <http://www.youtube.com/watch?v=vOhf3OvRXKg>.
- **JOHN FORTE** – I heard John Forte at the PopTech conference and he was amazing, even better in an acoustic set than in a fully-produced performance. Check out his work at: <http://www.johnforte.com/#>.

- **ANTHONY DOERR** – this essay of Doerr’s was featured at PopTech (second link below)– it is a sort of modern version of TS Eliot’s The Rock, illustrating the dangers of data overload in a world through of natural wonders. Doerr also reviews science books for the Boston Globe, including a honeybee story earlier this month that can be accessed through his personal website (<http://www.anthonydoerr.com/>). PopTech link: [http://poptech.org/popcasts/anthony\\_doerr\\_am\\_i\\_still\\_here?utm\\_source=PopTech+2009+Attendees&utm\\_campaign=c405455e63-PopCasts\\_Doerr\\_Guest11\\_23\\_2009&utm\\_medium=email](http://poptech.org/popcasts/anthony_doerr_am_i_still_here?utm_source=PopTech+2009+Attendees&utm_campaign=c405455e63-PopCasts_Doerr_Guest11_23_2009&utm_medium=email)
- **ZEE AVI** – Zee is a great example of the power of data availability –she was discovered on You Tube, via videos she posted of her singing along with her guitar at home in Malaysia. Be sure to listen to her Honeybee song! <http://www.zeeavi.com/>
- **GIDEON OBARZANEK** – Chunky Move, Gideon’s dance company in Australia, does some crazy stuff – he uses projections to illuminate dancers instead of just recording them, a whole new way of using the ‘data’ of light: <http://www.chunkymove.com/>
- **CHRIS JORDAN** – Chris is a lawyer turned photographer, who recently returned from a trip to Midway Island to witness the environmental state there – his theory was, if pollution is bad there (thousands of miles from landmass and major human settlements), then “it’s like the doctor saying, I’m sorry, it’s everywhere”. His disturbing photos are at <http://www.chrisjordan.com>.
- **NICHOLAS FELTON** – his ‘personal annual report’ is a little bit scary, but mesmerizing (do you know how many bicycle miles you travelled this year? He does!). More importantly, talk about innovative data presentation! Part art, part design, part nouveau tech... you might recognize the style from graphics he has done for some popular magazines as well. [www.feltron.com](http://www.feltron.com)

## **INNOVATIVE NEW VENTURES (featured at the PopTech conference):**

- **HAYAT SINDI** – **Diagnostics for All**
- **KACIE KINZER** – <http://www.tweenbots.com/>
- **DEREK LOMAS** – **Playpower.org** –
- **WILLIE SMITS** – **Tapergy** – <http://www.tapergy.com/>
- **EBEN BAYER** – **Ecovative Designs - fungi-based, compostable Styrofoam replacement.** <http://www.ecovatedesign.com/>