HONEYBEE CAPITAL

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BONUS MINI-ISSUE: HIGHLIGHTS FROM TED2015

As many Honeybee readers know, I've found the TED ecosystem to be a wonderful resource for all sorts of interesting ideas over time, from the highly technical to the deeply human (and sometimes both at once). A number of themes from this year's gathering will surely bubble up to inform more complete Honeybee explorations over time, but in the meantime here is the short list of my highlights from TED 2015. The talks are not all up for viewing on the TED website yet, but should be added quickly, and you can put yourself on their email list if you want to be notified of new postings as they occur.

I've highlighted some favorite quotes, a few mega-themes, and my personal picks for top talks of the session. Highlights from last year's conference can be found on our website. And in case you missed it, here is the TED post about Honeybee that appeared on their blog earlier this year!

TOP QUOTES:

Listening is an act of love.
- *Dave Isay, Storycorps (TED Prize winner)*

We really operate on the Potato-Head model. Our eyes and ears are just peripheral devices.
- *David Eagleman*

So, perception does not equal reality. So what? Science continues – there's no problem here.
- *Donald Hoffman, cognitive scientist*

The AI train does not stop at 'Human'. It is likely to whoosh right on by.
- *Nick Bostrom, philosopher*

Public shaming as a bloodsport needs to stop. Trafficking in shame brings profit to predators.
- *Monica Lewinsky*

It might not be impossible. It might not even be very hard. It's just that I don't know how to do it.
- *Alan Eustace, on lessons from exploring the stratosphere*

First we have to warm it (Mars) up a little.
- *Journalist Stephen Petranek, on plans to colonize Mars. No joke.*

We have ripped the humanity out of our companies… it is threatening the very underpinnings of our society.

- *Paul Tudor Jones (Yes, that one. Listen up!)*

Why are we still using plastics when we have chitin?

- *Neri Oxman*

You can always tell ambitious women from the shape of our heads. They're flat on top from being patted patronizingly.

- *Dame Stephanie Shirley, software pioneer & philanthropist*

Could your medicine be a cell, not a pill? Could your medicine be an organ that's created outside the body? Could your medicine be an environment?

- *Siddhartha Mukherjee*

If your intention is acclaim, you are taking, not giving.

- *Singer-Songwriter Teitur*

Beauty is a basic service.

- *Theaster Gates, artist and community transformer*

Random fact of the week: Jim Simons charged 5-and-40 in the early days of quant hedge funds at Renaissance!

THREE KEY THEMES:

1) SENSING – PERCEPTION & REALITY

Last year, one of the key themes that struck me from the TED gathering was "creation, re-creation, or stealing" - what constitutes originality? What outputs are real and what is borrowed, or adapted, or usurped? (you can read our observations here or listen to a recent TED radio hour on a similar note here). This year's continuation of the thread related more specifically to inputs, to sensing and sense-making – what information are we taking in? How do we interpret it? What is real or true?

One natural inclination is to just want more – more data, more awareness, more insight. **David Eagleman** asked, "can we expand our umvelt?" Eagleman is working with the "Mr. Potato Head Premise", the idea that our sensory systems are just peripheral devices that provide data to our computer brains. If that's the case, there are probably many other ways for us to take in data – we need not be limited to human definitions of sight or sound, for example. (He also wins the prize for dramatic reveal, as mid-talk he introduced a vest that translates data into vibrations that can, over time, be directly processed by the brain, without conscious translation. "And I'm wearing it *right now!* Flashing lights and all. It was really pretty cool. And a little creepy.)

Eagleman's talk and the questions it raised were terrific, and then both were extended by an even more interesting question, raised in the person of **Daniel Kish**. Daniel is sometimes referred to as "the real Batman", for having developed FlashSonar – a method of clicking that enables blind people to sense the environment around them. Along with **Jason**

Padgett, who sees the world in fractal images after a head injury, the synthetic "peripherals" discussed by Eagleman seemed to pale in comparison to the biological ones we already have. What if we used our full range of sight, hearing, touch, even intuition? We might not need external devices to assess our microbiome health – it is often already evident, if we just know where and how to look.

In business & investing contexts, understanding the benefits of more complete sensing might herald a newfound premium on observation, perhaps even above and beyond the value placed on computation (or maybe as a prerequisite, or symbiotic complement). Instead of just capturing more and more data on securities, trading faster and faster, what if we could access much more valuable information about anomalies in activity, or better yet, information about the actual companies and organizations that underlie those securities? There's plenty of this coming along, of course, from Glassdoor to open customer reviews to aggregate internet data – but we are clearly in our infancy when it comes to really sensing this information, as opposed to just collecting it.

Most importantly, if we sense differently, we have the chance to alter feedback loops in a positive way. What if changes in sensing caused you to ask a different question? Hear a different response? I have just one mega-note on the page for Kish's talk and it says, "Activate Your Senses." What might I want to see to become a really great investor? Probably something beyond heat maps and pie charts.

Additional links for the above:

David Eagleman – http://eagleman.com
http://eaglemanlab.net
Jason Padgett – http://struckbygenius.com
Daniel Kish – http://worldaccessfortheblind.org

2) TOOLS – INNER & OUTER, HUMAN & TECHNOLOGICAL

One you have the inputs from sensing, the next questions to consider relate to interpretation and tools. What really works best, a fancy new gadget or more qualitative wisdom derived from contemplation? At times these choices appear to be in opposition, but the answer, of course, is not either/or. It's "both".

Alan Eustace set new records for diving from the stratosphere wearing only a spacesuit, exceeding 821 mph in his descent (yes, this is on the side from his day job at Google). Eustace gave a tremendous talk outlining the technical challenges overcome by his team, but in passing he mentioned a few additional, critical, and deeply human components. Midway through the narrative of the video from his flight he commented, "Here, I'm really just concentrating on breathing."

Nathalie Cabrol discussed the possibilities of assessing life on Mars by studying Earth's most Martian-like environments, casually mentioning that this requires sleeping on 40-degree rock faces and exploring high lakes of the Andes (where *average* elevation is 13k feet). Aside from her giant brain, there is clearly giant heart, soul, and courage at work here – without these, all of the fancy equipment from NASA can only get you so far.

Siddhartha Mukherjee has taken a similar approach to analyzing cancer – unlike many techno-centric accounts of disease, his Pulitzer-winning book *The Emperor of All Maladies* is described as a biography, intertwining scientific narrative with more human, personal

elements. Reorienting to understand disease in this combined way leads to a whole different set of questions - like, what if medicine could be a cell? Or an environment? It's this kind of reorientation and combination – human and technological, inward and outward – that leads to real breakthroughs.

What struck me most about all of these presenters was the combination – and the intersection - of the technical and the human. The best tools are bridges that amplify human experience; they don't substitute for it, or shortcut around it. Perhaps there is no better example of this than the TED Prize winner for this year, StoryCorps leader **Dave Isay**. The tools that StoryCorps uses have gotten so much better, so much easier to use – I can easily imagine sitting down with my mom and a cell phone to record her story, though I never would have dragged her into one of those little recording booths. The tools on their own are merely clever, and the stories on their own are isolated. Put them together and the technology amplifies and facilitates what is most human.

In business & investing contexts, this idea of tools that bridge might highlight new hybrid organizations or investment approaches, those not easily boxed-in with labels like "quant" or "active management." Could it be that we might see the return of the go-anywhere fund, augmented (but not controlled) by terrific new technical tools? B-corps and social enterprise might also be examples of these "and" approaches, reuniting purpose and operations that have been falsely separated in recent years.
Some worry that by definition any endeavor that is not laser-focused on one single linear element is risky, spread too thin. But ask any farmer - hybrids are often more resilient. No matter how much you loved a hammer, you would never make it your one and only tool. Yet we do this with financial products, models, and algorithms all the time.

Additional links for the above:

Alan Eustace: http://paragonnsdc.com
Nathalie Cabrol: http://cabrol.seti.org
Dave Isay: http://storycorps.org
Siddhartha Mukherjee: http://sklad.cumc.columbia.edu

3) FROM LINES TO WEBS, FROM MACHINES TO ORGANISMS

What if you could vary properties of a single material – strength, elasticity, transparency – instead of using multiple feedstocks? What if silk could be spun on-site, to order, without killing the silkworms? What if we could think and see in multiple dimensions, instead of in old-school line charts? What if our buildings swooped and curved like nature, instead of imposing right angles on the world? The morphing from lines to webs in our designs and thinking is my favorite TED theme of all time.

Neri Oxman calls her work "material ecology", spanning design, biology, computation, materials, and digital fabrication. She sums it up by noting that in column A we have machines, Ford, assembly lines and in column B we have organisms, Darwin, organic growth. Her work is focused on moving from column A to column B. Oxman's ideas and projects are mesmerizing, both scientifically and aesthetically.

Manuel Lima reviewed his beautiful work from The Book of Trees, then noted that we are rapidly moving from tree-based mapping to network-based mapping. A new visual lexicon is arising for this sort of visualization, and it has already moved quickly from scientific spheres into business and cultural settings.

Elora Hardy echoed this theme with her elegant building designs from Bali, where the primary material is bamboo, which lends itself to curves and swoops. Straight lines are for losers! **Theaster Gates** demonstrated what ecosystem development looks like at a community level. And **Dame Ellen MacArthur** wove the same sort of web in her discussion of the circular economy (see notes below).

In business & investing contexts, this shift might mark the return of the generalist. Or at least of the well-connected, context-aware specialist. Our information streams are already evolving from line graphs to spiderweb charts, and as investors soon we will be able to visualize complex concepts like multidimensional returns, showing the health of entire enterprises instead of just looking at charts of stock prices.

In a related way, slowly, our business metaphors are moving from war-based (launch, restructure, supply chain) to nature-based (introduce, evolve, ecosystem). This may seem like a subtle point, but it is a Very Big Deal. It shifts us from defensive mode to caretaker mode, from destructive to generative, from combat to creation.

Additional links for the above:

Neri Oxman: http://neri.media.mit.edu
http://materialecology.com
http://matter.media.mit.edu
Manuel Lima: http://mslima.com
http://visualcomplexity.com
Elora Hardy: http://ibuku.com
Ellen MacArthur: http://ellenmacarthur.com

TOP TALKS:

In addition to the amazing speakers highlighted above, I found these to be standouts. Where videos are already available I've linked to them; otherwise the links are to the speakers' own sites. Additional videos are being posted daily, so it is worthwhile checking in for updates at http://ted.com

MONICA LEWINSKY – THE PRICE OF SHAME

I expected to be interested in this talk. I did not expect to be deeply moved and fervently in agreement with the central premise: "public shaming as a bloodsport has to stop". This talk made me resolve to click differently.
http://go.ted.com/okY

ABE DAVIS – EAVESDROPPING SNACKS

In my informal and completely unscientific survey, this is the talk that most stunned listeners. One of Davis' projects is called the Visual Microphone, which captures the tiny vibrations of objects on video and recreates the sound that caused those vibrations. A plant might move 1/100th of a pixel on video, but just from capturing this minute movement, the nearby sound can be recreated. Here is the spooky part – they can even do this by filming on a cell phone, outside soundproof glass. Forget the NSA, are your potato chips spying on you? Safety warning: do not watch this talk if you already have paranoid tendencies.
http://people.csail.mit.edu/abedavis/

DAME STEPHANIE SHIRLEY

Dame Shirley, wow. Kindertransport refugee as a child, pioneer in software development and flexible work environments, mother of an autstic child, philanthropist. Her talk was tremendous – funny, deeply human, and illustrative of some of the most important challenges and successes of our times. All of the workplace equity lectures in the world can't have as much impact as the still-so-familiar story of why so many call her "Steve". I cannot do justice to this incredible life in just a little blurb – please listen to this one on the TED site, and you can check out the Q&A on her website to get a little more of a glimpse into this extraordinary life.
http://steveshirley.com/qanda

JOSEPH DiSIMONE – WHAT IF 3D PRINTING WERE 100x FASTER?

What's holding back 3D printing?

1) It takes forever. "There are mushrooms that grow faster." This is true.
2) There are deficiencies due to the layered manufacturing process.
3) Material choices are far too limited.

They (Carbon 3D) use different polymer chemistry so that parts can be "grown" in a continuous process instead of layered production. This allows something much closer to real-time manufacturing. I'm encouraged that this company is also focused on toxicity of materials, which was largely skipped over in the earliest days of 3D printing.
http://go.ted.com/okB

ROMAN MARS, digital storyteller (host of the 99% Invisible podcast)

If you think that you don't really care about design, and you have not noticed the details of a flying flag in ages, I dare you to watch this talk. The odds are high that you are an impassioned (though unaware) flag fanatic! "If you have to write the name of the thing you're representing, your symbolism has failed."
http://romanmars.com

ANAND GIRIDHARADAS, author, The True American

"If you live near the Whole Foods, if you're paid by the year, not the hour… you may not know what's going on. The moral challenge to my generation is to reunite America." Giridharadas wants our best minds working on real challenges instead of new apps.
http://go.ted.com/M62
This Fortune article is also a helpful summary:
http://fortune.com/2015/03/20/anand-giridharadas-ted-inequality/

RORIGO Y GABRIELA

There are no words for this performance. You have to listen.
I mean, you *have* to listen!
http://rodgab.com

SECRET BONUS SECTION: *a few of my all-time favorite TED talks.*

Ed Yong - Science Writer, Creepy Bug Expert

Brene Brown, The Power of Vulnerability

Mark Bezos - Volunteer Firefighter

Louie Schwartzberg - Pollination

Jill Bolte Taylor - Stroke of Insight

Eli Pariser - Filter Bubbles

Hans Rosling - Washing Machine

JJ Abrams - Mystery Box

The mind, once stretched by a new idea,

never regains its original dimensions.

- Oliver Wendell Holmes