

Honest Signals that Drive Innovation & Collaboration



HIGHLIGHTS

1. Peter's Honest Signals are grouped into the three dimensions of structure, time and content. Within each of those dimensions are 'Six Honest Signals' of innovation that allow for the measurement of team effectiveness:
 - Structure = central leaders and balanced contribution
 - Time = rotating leadership and rapid response
 - Content = honest sentiment and innovative language
 - All six of the Honest Signals are very measurable in social networks. The more honest the communication, the better.
2. In a nutshell, Peter summed up his COINs (Collaborative Innovative Networks) theory. It begins with a creator who has a crazy idea. He/she then recruits a small but motivated network or team, i.e. COIN, to help turn that labor of love into a prototype. This group recruits their friends and family who, in turn, recruit their friends and families. This helps to iron out the kinks in the prototype to the point where it can be turned into a polished product. That convinces more friends and family, which turns the network from a few hundred to thousands of people. That is the force of collaborative innovation.
 - A prime example of this idea in action is Tim Berners-Lee, the Founder of the World Wide Web. Initially, no one thought that his idea had any scientific merit. However, a key characteristic of creative innovators is to never give up and to believe wholeheartedly in their idea.
3. Peter explained that the Six Honest Signals basically allow for the ability to "cool hunt" for creative people and to help them to be more creative. Cool hunting is basically defined as the "means of finding cool ideas by finding cool people" by studying social networks (Wikipedia, Twitter, blogs, Facebook, etc.) and people.

SPEAKERS

Peter Gloor (MIT), Rachel Happe & Hillary Boucher (TheCR)

COMPETENCIES

Metrics and Measurement, Strategy

MATURITY PHASES

CMM1, CMM2, CMM3, CMM4

OVERVIEW

Peter's work at the Center is studying which characteristics make for higher performing groups. It is difficult to raise an individual IQ, but group IQs can be orchestrated if the appropriate characteristics are put in place. This is of importance to communities who strive to create value. With this in mind, the highlights of the discussion are noted below:

- Collective Intelligence: With respect to group IQs, Peter added that individual IQ and Group IQ have no correlation. Having the smartest person in a group will not make that group the smartest group. Furthermore, the more female members in a group, the more it will increase the IQ of the group, as well as the group's social intelligence.
 - Waggle Dance: Peter has been studying social networks and creativity for the past 12 years. His inspiration has been bees. Human patterns are very similar to the waggle dance of the bees, which from the outside looks like chaos. However, once understood, it predicts extremely well what will happen next. This aspect of predicting the future is what fascinated Peter. Predicting the most creative teams is another way of phrasing his work.
- Predicting the Future: Peter explained that there are two ways to predict future behavior. One is with the use of a sociometric badge, which examines how people interact with each other. The second method now is with social media, particularly Twitter because Twitter is open. Facebook is also fascinating, but the privacy controls are more stringent in the wake Facebook's privacy scandals. Peter stated that looking within your own social network is a great way to predict what will happen next.

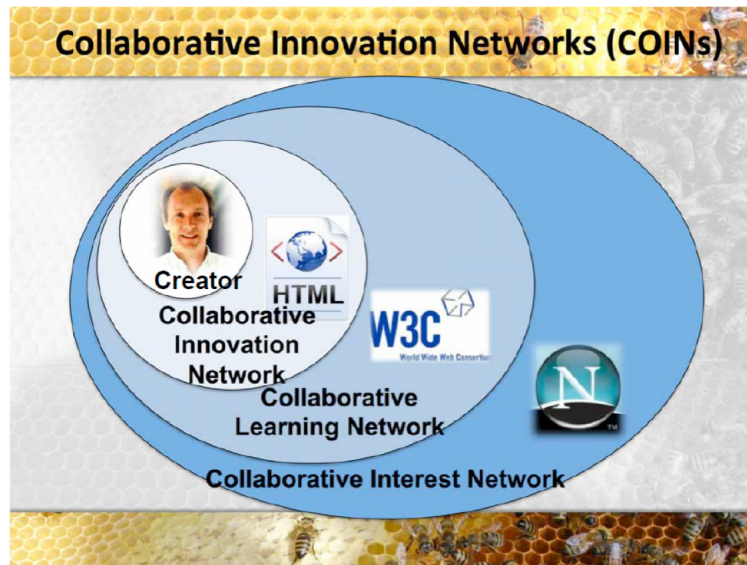
Waggle dance is a term used in [beekeeping](#) and [ethology](#) for a particular figure-eight dance of the [honey bee](#). By performing this dance, successful foragers can share, with other members of the [colony](#), information about the direction and distance to patches of flowers yielding nectar and pollen, to water sources, or to new nest-site locations. Definition taken from Wikipedia http://en.wikipedia.org/wiki/Waggle_dance

A sociometric badge (commonly known as a "sociometer") is a wearable electronic device capable of automatically measuring the amount of face-to-face interaction, conversational time, physical proximity to other people, and physical activity levels using social signals derived from vocal features, body motion, and relative location. We have built several hundred sociometric badges and used them in real organizations to automatically measure individual and collective patterns of behavior, predict human behavior from unconscious social signals, identify social affinity among individuals working in the same team, and enhance social interactions by providing feedback to the users of our system. Definition taken from MIT Media Lab website:

<http://hd.media.mit.edu/badges/index.html>

OVERVIEW

Collaborative Innovation Networks (COINs): Peter introduced members to the basic construct of how he and his team view social networks. Peter calls it: “COINs”, which he likens to an onion because of the layers.



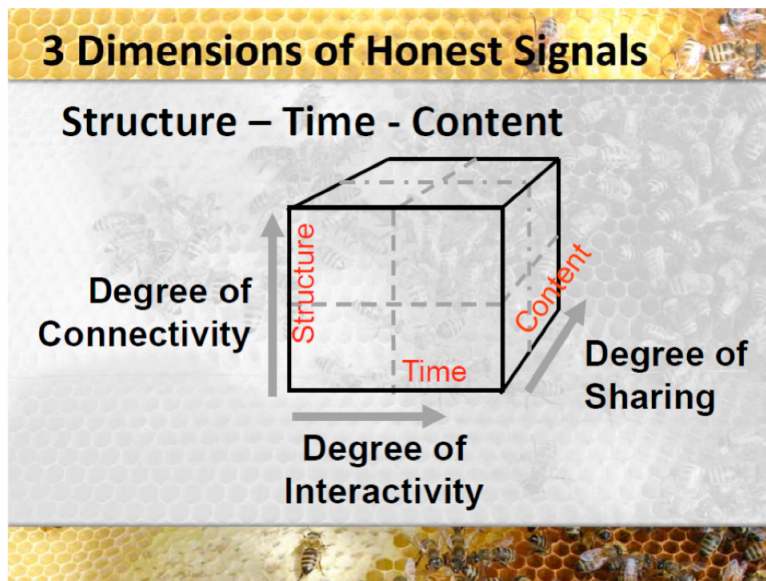
- Creator: The creative person is in the center. Creativity is not the genius in isolation, but in a group a very socially intelligent person is extremely important.
 - The picture above is of the Founder of the World Wide Web, Tim Berners-Lee. Peter met Tim for the first time in 1991 where Peter was presenting an academic paper that was accepted at this particular conference. Tim asked Peter if he could demo his World Wide Web prototype because his academic paper was not accepted. The program committee thought that Tim’s idea did not have any scientific merit and would never succeed. However, Tim did not let that stop him, which is a key characteristic of these creative innovators. If they have an idea, they will do everything it takes to make it succeed.

OVERVIEW

- Collaborative Innovation Network: Tim was able to recruit a group of like-minded people at the conference. That is the core construct of COINS. Anywhere from three to 15 people take an innovator's crazy idea and turn it into the first prototype.
 - Tim was invited by Peter's boss, the Head of the Internet Networking Architecture Group, David Clark, to come to Peter's group as a visiting scientist. Tim convinced David's boss – the Director of the Lab of Computer Science – to create W3C, the World Wide Web Consortium. That is the next layer in the onion, the Collaborative Learning Network.
- Collaborative Learning Network: This is the layer of people who take up the prototype, polish it, use it, turn the prototype into a real product and tell others how great it is until it is picked up by the fourth layer – the users.
- Collaborative Interest Network: This layer is the users of the product. In the case of the Web, that was greatly helped by one particular user, Marc Andreessen, Founder of Netscape. For Peter, this four-level system is how all collaborative innovation works. You have the creator with his crazy idea recruiting a small but motivated team – COIN – who then turn the labor of love into a prototype. They are recruiting their friends and family, i.e. the collaborative learning network. Those, in turn, work out the kinks to help it become more polished. That convinces their friends, which turns this layer from hundreds into thousands of users. This is the force of collaborative innovation.

OVERVIEW

- The Three Dimensions of Honest Signals: Peter believes that what sets teams apart from the norm is based on communication behavior. The bee's waggle dance is an example of that type of communication behavior. Honest signals are part of that communication behavior. Peter shared his personal story to illustrate his point:
 - About 12 years ago, Peter began studying the email archives at the World Wide Web Consortium, Linux and his own mailbox. This was when he was a partner at Deloitte Consulting before returning to MIT. At that time he was creating noise management products on the side because it was far more entertaining than day-to-day consulting.
 - Peter had his own innovation community that looked at communication behavior in comparison to quote/unquote "ordinary communication behavior." He noticed three things, which he termed the "3 Dimensions of Honest Signals":



OVERVIEW

Network Structure (Degree of Connectivity):

This represents how a team connects itself to the right people. By using an approach called “social network analysis” one can measure this quite easily. Peter’s group has built an entire system that takes email networks or other types of networks and measures connectivity. It measures how central somebody is and his/her importance.

The metrics used in this instance are called “degree” and “betweenness”. “Degree” refers to the number of friends an individual has and “betweenness” refers to the extent that somebody is ‘between’ other important people. A friend like Barack Obama would represent a strong level of betweenness.

Time (Degree of Interactivity):

The example Peter used to relay this point is that anyone can send an email to, for instance, Bill Gates. However, if Bill Gates responds to that email quickly, then that person must also be important. So, the speed of response is a very good predictor. Interactivity is good for those communities.

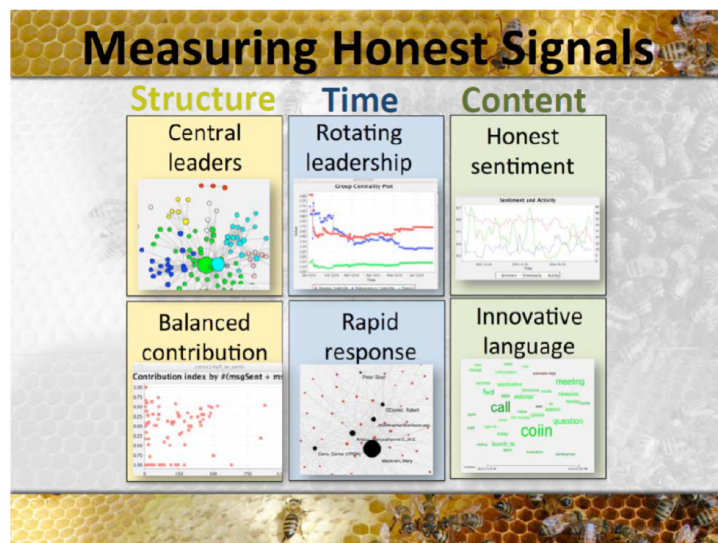
Content (Degree of Sharing):

The third dimension is content, which takes this concept even further. That is why Peter calls it: “degree of sharing”. Sharing is very important. It can be measured by looking at shared language. An innovation community will start to use their own language. The more the vocabulary of that group deviates from standard vocabulary – new ways of using old words or making up new words – represents a criterion of innovation. The most influential people are the ones that use those new words, which are then quickly adopted by others.

OVERVIEW

Measuring Honest Signals: This leads to Peter’s ‘Six Honest Signals of Innovation’ that allow for the measurement of team effectiveness:

- Central Leaders: This is very measurable with metrics like “degree of betweenness” mentioned above. Not everyone is equal. For example, Wikipedia has central leaders. The Web has central leaders. They lead in other ways.
- Rotating Leadership: This is not the same as central leadership because it refers to a small team in which the leaders take turns. Whoever is best qualified does the task.
- Rachel wondered if the data easily shows how the handoff of leadership happens or how that dynamic would look vs. data that showed multiple leaders. Peter replied that you can see it extremely well. Rotating leadership equates to a stormy sea and steady leadership equates to quiet seas.
- Honest Sentiment: Honesty is very important. In the study of the sales teams of a large organization, the company’s NPS – Net Promoter Score – was analyzed. When customer satisfaction was rated using the NPS of salespeople’s emails, it showed that the more positive the salesperson was, the customer was actually less happy. There was a negative correlation because the more that salespeople used over-enthusiastic words – great, cool, wonderful – the less happy their customers were in the rating. Honest sentiment is the factor. Intuition would say that positive is good, but that is not the case in this study.



OVERVIEW

Balanced Contribution:

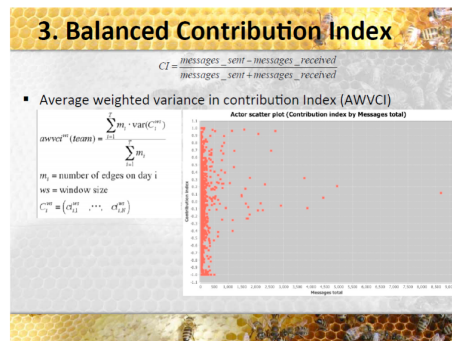
For this, Peter's group introduced the "contribution index", which measures how much of a sender or receiver that somebody is, as well as his/her overall activity. The dots in the slide represent people. This box is balanced contribution. The farther to the right someone is the more active they are. In the world of email, that means emails sent plus emails received. The farther up, the more of a sender someone is and the farther down, the more of a receiver. If you are at the very bottom, you never respond; you are rude. If you are at the very top, you send, but nobody ever responds to you; you are an outcast. The dot at the upper right is the creator. That is the person who kicks off the community. They are the most active person. They send more than they receive. That was Tim in the first year or Mark Zuckerberg when he started Facebook. This is any founder at the beginning of a start up.

What is wanted – besides the Queen Bees or the most active people – are for each team to have overall verbal and communication behavior. That means that everyone pulls their own weight. Peter's slides show a mathematical formulation that proves that there is solid math behind this metric. One metric is an "average weighted variance and contribution index". The smaller this variance, the smaller the variation between team members and contribution. That means that all the team members contribute the same, which is better for the team.

Rapid Response: This basically measures how quickly you respond to others. The faster someone responds, the more he/she likes the other person and vice versa. They are the most important.

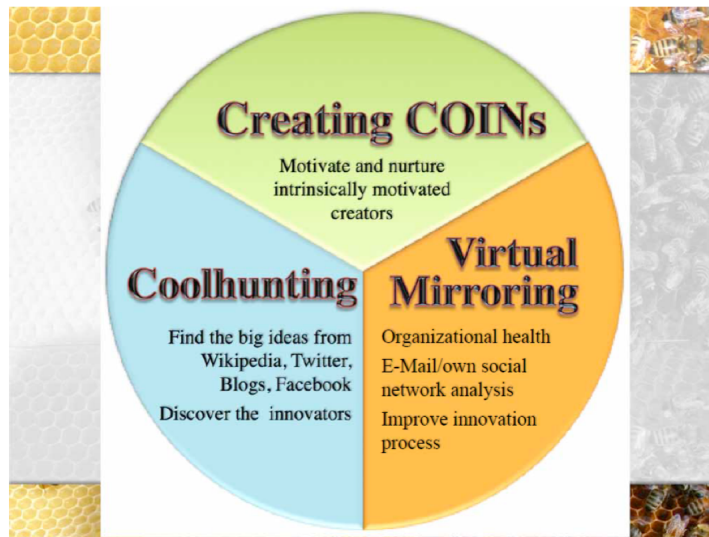
Another facet of rapid response is the quantity of responses, i.e. like a ping pong ball. In the world of tossing around creative ideas, the more balanced the ping pong is the better. Peter calls these the "number of nudges". So, the speed of response and available number of nudges always goes back and forth. That is good for innovation.

Innovative Language: The last honest signal is innovative language which is, again, very measurable. Basically, in mathematical terms there is the standard vocabulary of the English language. What is measured is how much the language deviates. This is the innovation metric. As well, the people who coin these innovative words are also measured. They are the most influential idea creators.



BEST PRACTICES

Understand How the Pieces are Put Together: Peter showed a slide that demonstrates the approach that they use in its entirety when helping organizations to be more creative:



Creating COINs: As described in detail above, this step motivates and nurtures intrinsically motivated creators.

Cool Hunting: Peter explained that the Six Honest Signals basically allow for the ability to “cool hunt” for creative people and to help them to be more creative. Cool hunting is basically defined as the “means of finding cool ideas by finding cool people” by studying social networks (Wikipedia, Twitter, blogs, Facebook, etc.) and people.

Peter explained that the tool they use is Condor, which looks at all the different types of networks and then calculates the six metrics described above.

Virtual Mirroring: This looks at the organizational health of a company, email and individual network analysis (i.e. how quickly are others responding to someone and/or how often someone brings new ideas into his/her network) and improvements to the innovation process.

LESSONS LEARNED

- In Peter's COINs framework, Rachel felt that the outside ring – the Collaborative Interest Network – refines itself into the Collaborative Innovation Network vs. the inside-out approach that Peter presented. Peter replied that the outside ring is important, too, because the timing has to be right. In the case of the Web, the early works based on microfiche that were presented to MIT were too early. Then there were other people like Ted Nelson who were early proponents of the idea, but they were not collaborative enough and the technology was not right. So, it all has to fit together to work. The key to all of this for Peter is culture – the culture of accepting and the culture of humble leadership. That is how the World Wide Web and other things like Facebook and Google got off the ground. Peter believes that the less money that the creator has, the more they have to share to get their creation off the ground. Start ups are a perfect example of this theory.
 - Rachel added that what she is noticing is that many of the venture capitalist firms finally understand that they have to build communities to help the innovative process across their portfolio of companies.
- All six of the Honest Signals are very measurable in social networks. With Facebook, Twitter, Wikipedia, email networks, etc., you can measure how central a leader somebody is, how they take turns (leader rotation) or sentiment.
 - Peter discovered that when studying content, honesty is very important. For example, communication of patients with chronic diseases on Twitter or with innovation teams working in that field, the more honest the communication, the better. In mathematical terms, if the standard deviation in positivity is bigger, then that is good. Honesty is good.
- Rachel brought up the point of group diversity and whether or not it was good for innovation. Peter was glad that Rachel mentioned this because too much diversity is not good. There are some studies at The Sloan School of Business that look at the optimal composition of teams. They looked at racial diversity on the team and their performance. They found that it was not the most mixed teams that did the best, but rather it was the homogeneous teams whose members had mixed friends. In Peter's experience, if the teams are too diverse, it does not work, especially if the cultures are very different. So, in the outer ring the more diverse the better, but then you need some filter that provides the common base and the common language. That is rotating leadership.

LESSONS LEARNED

- Rachel asked Peter what comes first, the cool idea or the cool person. Peter replied that you will not get a cool idea off the ground if the person is not cool. It is like a people search engine. The coolness criteria are defined for sub communities. The criteria of coolness are the Six Honest Signals. The individual can rate their own 'coolness' through virtual mirroring.
- In Peter's research, they have also studied entrepreneurial success by looking at location and business success of biotech start ups. The conclusion is that location matters for the amount of communication. However, location does not matter for business success. What matters for business success is social network position. There is no correlation between social network position and the amount of communication. It is the quality that matters and not the quantity. That is a key insight.
 - Rachel was fascinated by this finding because in the community management field, there is still a push for quantity – not quality – of conversation. TheCR works to push for the quality side and behavior change. This finding shows that there is quantifiable data that can be used to back TheCR's push for conversation quality.
- Wikipedia Through the Ages: Peter explained that they examined this because of the importance and effect of culture. As such, they have studied the English, the German, the Japanese and the Chinese Wikipedia so far and the constructed network of people who are linked to each other and have been leading at the same time in the same 50 or 100 years.
 - According to the English culture Wikipedia, the most important person in the world at the time of this study was George W. Bush.
 - For the Chinese culture Wikipedia it was Mao Zedong.
 - For the Japanese culture Wikipedia, it was the Ikuhiko Hata, a Japanese Empress.
 - For the German culture Wikipedia, it was Adolf Hitler.
 - Peter shared what he believed to be an interesting side effect of this study, which is that historians played a huge role in the compilation of the data. So, in effect, if you want to become famous become an historian. If you look at politicians like Churchill or Julius Caesar, they wrote their own history and they became famous.
- This study also showed the openness of a culture. Of the top 50 people in the English speaking Wikipedia, people from the English culture are just 10 out of the 50. In the Chinese culture, 48 out of the 50 people are Chinese. Among the Japanese culture, 31 of the 50 people are Japanese. In the German culture, also 31 of the 50 are German people. This is not surprising because the English Wikipedia serves a much wider audience.

RESOURCES

- As mentioned in the chat: http://en.wikipedia.org/wiki/Diffusion_of_innovations
- As mentioned in the chat: <https://www.youtube.com/watch?v=bFDGPgXtK-U>
- As mentioned in the chat: <http://nodexl.codeplex.com/>
- As mentioned in the chat:
<http://www.businessinnovationfactory.com/summit/video/valdis-krebs-getting-technology-and-sociology-match-0#.VLamolWJOuY>
- As mentioned in the chat:
<http://www.socialmediatoday.com/content/understanding-digital-body-language>
- As mentioned in the chat:
<http://video.mit.edu/watch/peter-gloor-cool-hunting-and-cool-farming-by-galaxy-advisors-28351/>
- As mentioned in the chat: <http://www.ickn.org/download.html>
- As mentioned in the chat:
<http://www.amazon.com/Swarm-Creativity-Competitive-Collaborative-Innovation/dp/0195304128>
- As mentioned in the chat:
http://www.amazon.com/Coolfarming-Turn-Your-Great-Thing-ebook/dp/B00NPAD5B8/ref=sr_1_1?s=books&ie=UTF8&qid=1421258364&sr=1-1&keywords=coolfarming