Big Data has become a market disruptor in more ways than one. As data increasingly becomes a product rather than strategy, it’s also changing the rules. Social and gender equity in Big Data are at the top of the discussion.

For our second interview of out #DataHeroes series, Inmar Givoni, VP Big Data for Kobo talks to us about social equity and tech. Inmar Givoni is VP of Big Data at Kobo Inc. where she leads her team in applying machine learning and big data techniques to drive e-commerce in e-readers business. Inmar is one of the leading experts and academics on Big Data, she is also a woman, computer scientist, and so much more. #WomenInTech #ILookLikeADataScientist

Check out Inmar at the Disruption Panel at our Big Data Show on June 14th, 1:30 PM – 2:30 PM

What do you think makes Big Data a market disruptor in 2016?

I see several trends that are picking up traction and will transform many aspects of how companies do business. These include customer acquisition & retention, sales, marketing, product development and so on.

Traditionally, companies have had analytics teams that use data for business reporting, and business decision support. Big Data is not just more of that data and better analytics.

It’s an opportunity to make use of the information as a product in and on itself.

The idea of data as product is something companies are spending more and more time thinking about. Examples include Netflix, that uses data to drive their recommendation engine, Fitbit that uses data to report back to the user about their activities & allow them to set and track goals, and the many companies that provide a useful, often free service to the user, but their business model relies on aggregating user behaviour data and selling it to other businesses interested in real-time, accurate insights around marketing and sales. These are all just examples and there’s a lot more going on. As a side note regarding Fitbit and similar platforms, we’ll be seeing more gamification and more companies allowing users to track and measure and log electronically their own data and statistics, and more and more people following the quantitative self movement and wanting to track all aspect of their measurable behaviour.

An additional service that data can help with is extreme personalization of all our online and mobile experiences. Tracking user behaviour gives companies insight about how customers spend their time, money, attention, how they make decision, what they like and dislike. We no longer need to rely on expensive and time consuming market surveys and focus groups. In fact, there’s
more and more evidence that suggests there’s often gaps in people’s perception and reporting of what they do, as opposed to what they actually do - and the latter can be now often measured directly. We are moving towards a world where enough is known about each and every user to provide them with an experience that’s completely tailored to their tastes and preferences. This will likely lead to a transformation of how we design websites and apps - rather than trying to tailor to what is best for the average user, design will need to be flexible enough to allow dynamic platforms that are specific to all the wealth of information a company knows about the customer and can retrieve in real-time to provide the best tailored service.

Finally, we’ve all been hearing so much about AI and the deep learning revolution. 2015 was a huge year for AI and this trend will likely continue. At the heart of all these systems is the ability to train on large amounts of data, and crunch through it in reasonable amounts of time. Big Data and machine learning go together hand in hand and we’ll see more automation both in terms of services companies provide, and of internal processes that utilize these algorithms. Agile companies and start-ups are building and using all these strategies data as product, personalization, & machine learning already, but we see increase in how the more conservative entities follow suit, including massive corporations, health-care, education, banking, insurance, etc, as well as governments and non-for-profits. Everyone is now aware of the need to pay attention to data and data-driven approaches.

Part of that process will involve a fair amount of traditionally creative or soft-skill based roles being supplemented by analytical technological roles.

As the role of women keeps growing in tech, how will their role continue to add to the market disruption of tech?

There’s a very important discussion happening on social media, other online platforms, and more traditional arenas around women & diversity; in general and as it pertains to tech. I’ll focus on gender equality, but it applies to other related issues. There’s a growing acceptance around the idea that diversity is important. That’s very good news. On the other hand there’s also many stories in the media describing the current state of affairs, and these are often quite gloomy. From differences and biases around hiring, compensation and mentoring, through career glass ceiling, all the way to alarming rates of sexual harassment in the tech industry and aggressive threats and acts towards women, for example around “Gamergate”.

Despite some of the difficult stories that have surfaced, it’s a discussion I’m encouraged to see because it means the conversation is finally moving to the mainstream. Nowadays, major companies are taking on general diversity and gender equality as challenges to tackle, and are taking steps to introduce changes in culture, process and attitude. There’s a lot more transparency around statistics and data having to do with inequality in the workforce and in tech in general. I’m hopeful these are all indicators of a culture shift where pursuing and achieving gender balance and safe, inclusive work environments is a reality and not a question that needs justification and convincing. As this trend continues, I am sure we will see many different types of improvements - for people’s lives, job satisfaction and productivity. Another area that will benefit greatly is that products and services are going to become better. Diversity brings into the picture multiple points of view and ways of thinking. Innovation and creativity usually benefit from diversity, and as a result companies who have

data as product, personalization, & machine learning
made it a point to hire and promote women and minorities often report increase in profits.

**Why is social equity important as Big Data continues to grow?**

As we have access to more and more data both in terms of quantity and variety, we always need to keep in mind that the questions we might ask and the answers we hope to find in the data can be heavily biased by what is familiar to us. It is important to recognize that no matter how good your data or approach is, if you are restricting your world view based on your biases you will arrive at less than optimal conclusions about how to move your business and what to invest in. There are many well known examples of products that were designed in a non-diverse environment and that were delivered to market after being optimized only for a segment of the population (in the case of software or engineering solutions, these are often white young men). This is for products were supposed to be used by a wide segment of the population. Voice recognition systems and car seat belts some examples.

[In the era of data, we need to make sure that we are looking at everyone that's relevant and their particular patterns.]