AI in the Food Chain: How Companies are Using Disruptive Technologies to Win in the Meat Aisle

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1. **How will blockchain and AI relate in retail and food?**
   a. Firstly, it is important to understand that blockchain and AI are very different technologies that have distinct applications for food retail.
   b. A blockchain is a decentralized database that allows for multiple copies of ledger to ensure traceability of transactions in the chain. The technology is already being used to track products in the supply chain to ensure food safety and is growing in its use to facilitate business to business transactions in trade promotions, marketing, and other commercial spend.
   c. AI is being used increasingly to improve merchandise, promotions and inventory planning processes as well as enhancing the experience for customers by both more accurately predicting what he/she will buy but also making it easier to do so.
   d. Where AI and blockchain is starting to be used together is to increase the amount and timeliness of data that AI solutions can use to increase the accuracy of a forecast or ensure a more seamless replenishment of inventory. But, we are in the early days of both technologies so expect there to be more developments in this area.

2. **What is biggest downside to AI for society?**
   a. Like with every disruptive technology (like the printing press, the steam engine, the Internet, etc.) there will be both positives and negatives and the impact will be disproportionally felt by certain sectors of our population.
   b. For AI in particular, there will certainly be an impact to our workforce as more and more traditional careers will be changed as AI becomes more capable. This will naturally lead to a shift in the way work is done as more automation will lead to greater efficiency but also less need for manual labor.
   c. Another potential downside is the advance of AI, especially in social media and the internet, is starting to generate real concerns about our privacy and the security of our private information. The use of AI to detect patterns in the way we behave have already given way to how commerce is conducted today but can have implications to society that will change how people interact.

3. **Can you speak to the concern about drawing the moral line with AI? How does the AI industry anticipate managing individual privacy and protecting against crossing over the moral and ethical line?**
    a. AI technologies do not inherently have a moral code per se, but rather, learn from the data and conclusions we teach them to draw. Therefore, it is important that developers of AI solutions use as exhaustive a data set as possible and use the right reinforced learning techniques to ensure that these solutions learn to behave more like we want them to. For instance, as automated driving becomes a reality, it is important that society help define what are the right choices the AI should make.
    b. The same goes with individual privacy. The social contract between developers and users must define the lines that can't be crossed and may need to be done on an individual basis as the trade off between privacy and convenience will continue to be more difficult to manage wholesale.

4. **Any predictions on how AI will manifest in the meat aisle? Any visions you want to share?**
    a. In the near term, expect that the ability to anticipate consumer trends and align product assortment to match will continue to be enhanced by AI. As we've seen in baked goods and beverages, the ability to customize your offerings (e.g. vending machines, direct to door and/or drone delivery, etc.) will be differentiators as customers learn to expect more choice at better prices. We'll also start seeing AI moving up the supply chain as the increasing use of external data like climate and global trading data will directly impact how suppliers adjust their positions to better mitigate risks.
    b. Longer term, it's harder to predict as there are so many ways AI has already disrupted the current retail environment, but expect that business models, especially in retail, will be dramatically impacted as customer preferences adapt to the application of these emerging technologies.

5. **Will there be devices that consumers will use to scan meat and it will give them information on how to cook, tenderness, animal welfare? Can AI replace store help in teaching consumers the information they lack?**
    a. These applications are already happening in other food categories as companies are increasingly turning to augmented reality (the ability to see a 3D rendering in a virtual space) to help differentiate their products. I expect that the experience of customers today will shift dramatically in the next 3-5 years as shelf space becomes more limited as grocers start shifting to smaller footprints or more c-store based concepts. This also means that the amount of staff stores can dedicate to educating the consumer will also require that more information be available at the customers fingertips, thus allowing for the opportunity to both inform and inspire and also mitigate the impact of erroneous information that can also often be found online.