The Internet of Behaviors (IoB)

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What is the Internet of Behaviors (IoB)?

In October 2020, Gartner released its annual Top Strategic Technology Trends for 2021. The first of these listed trends relates to the Internet of Behaviors (IoB).

In their press release, Gartner pointed to a number of recent examples illustrating some recent cases involving IoB. Namely, some changes noticed by employees at an industrial site upon their return after it was closed during the COVID-19 pandemic: sensors or RFID tags being used to determine whether employees were washing their hands regularly; computer vision determining if employees were complying with mask protocol; and, speakers being used to warn people of protocol violations.[1]

Gartner explains the IoB as the collection and analysis of this sort of behavioral data in order to influence behaviors:

> With an increase in technologies that gather the "digital dust" of daily life — data that spans the digital and physical worlds — that information can be used to influence behaviors through feedback loops.
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> For example, for commercial vehicles, telematics can monitor driving behaviors, from sudden braking to aggressive turns. Companies can then use that data to improve driver performance, routing and safety.
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> The IoB can gather, combine and process data from many sources including: Commercial customer data; citizen data processed by public-sector and government agencies; social media; public domain deployments of facial recognition; and location tracking. The increasing sophistication of the technology that processes this data has enabled this trend to grow.
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> IoB does have ethical and societal implications depending on the goals and outcomes of individual uses. The same wearables that health insurance companies use to track physical activities to reduce premiums could also be used to monitor grocery purchases; too many unhealthy items could increase premiums. Privacy laws, which vary from region to region, will greatly impact the adoption and scale of the IoB.[2]

Another way to think of IoB is as an extension of the Internet of Things (IoT). Software and services company BMC looks at IoT as the base of the pyramid in terms of gathering data and turning it into information; with the IoB, then, serving as an attempt to turn that information into knowledge.[3] This IoB "knowledge" might be considered as a combination of three fields:

- Technology
- Data analytics
- Behavioral science

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[1] Panetta, Kasey. "Gartner Top strategic Technology Trends for 2021". Gartner Website. October 19, 2020. Available at: https://www.gartner.com/smarterwithgartner/gartner-top-strategic-technology-trends-for-2021/. Accessed on November 1, 2020.

[2] Ibid.

[3] Kidd. Chrissy. What is the Internet of Behavior? IoB Explained. BMC Blogs – BMC Website. December 16, 2019. Available at: https://www.bmc.com/blogs/iob-internet-of-behavior/. Accessed on November 1, 2020.

BMC aptly summarizes the relationship: "As companies learn more about us (the IoT), they can affect our behaviors (the IoB)".[4] For now, the primary use of IoB has been to observe and attempt to influence a consumer's purchase decisions.

Going Forward

COVID-19 seems to have hastened the adoption of new IoB use cases: as with the example of industrial site safety compliance provided by Gartner. And, there is some suggestion that IoB could be used in a host of other use cases that raise questions of fairness and privacy.

On the matter of fairness, it's worthwhile taking another look at BMC's IoT-IoB pyramid. Moving upward from IoT to IoB, the elements that define that progression move from data to information to knowledge to wisdom. BMC concludes that while the IoT "surely converts data to information…it's too early to know whether the IoB can translate knowledge of us into real wisdom".[5]

It would seem at face value that the use of IoB can be helpful for companies and their marketing efforts. The use of IoB seems helpful for companies to gain a better understanding of job site safety compliance. The information gained can help to shape knowledge and inform decisions.

To be sure, there are privacy concerns. Though, in many cases, individuals have willingly opted in favor of the benefits and conveniences from having their devices synced and data shared. Without any assurances of IoB wisdom, perhaps we should all be thinking more about the scope of IoB. More specifically, fairness.

[4] Ibid.
[5] Ibid.