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Learning Through Noticing: Theory and Experimental Evidence in Farming^{*}

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March 9, 2014

Existing learning models suggest that the availability and informativeness of data determine the pace of learning. However, in learning to use a technology, there are often a staggering number of potentially important input dimensions. People with limited attention must choose numer of patentially important input stinensions. People with finited attention must choose which dismension to attend to and subsequently learn about from available data. We use this model of "learning through noticing" to shed light on stylized facts about technology adoption and use. We show how agents with a great deal of experience may persistently be off the production frontier, simply because they failed to notice important features of the data that they possess. The model also allows for predictions on when these learning failures are likely to occur. We test some of these predictions in a field experiment with seaweed farmers. The as occur, we use some of more presentation in a new experience was accessed at the effect of armores do not attend to pool size, a particular input dimension. Experimental trials suggest that farmers are particularly far from optimizing this dimension. Experimental data does not induce learning. Instead, behavioral changes occur only after the farmers are presented with summaries that highlight previously unattended-to relationships in the data.

"We thank Daniel Benjamin, Marthew Gentalcox, Marina Halac, Andy Newman, Ted O'Donoghue, Tim Ogdon, titlew Rabin, and Andri Shkrifer for helpful comments, as well as sentiner participants at the Behavioranal Day iso-ney Conference, Barkeley, BREAD, BU, Chicago Booth, Cornell, Darke, HarvardMIT, the NBER Organizational nomics Meeting, and SITE.

Learning Through Noticing: Theory and Experimental Evidence in Farming

Existing learning models suggest that the availability and informativeness of data determine the pace of learning. However, in learning to use a technology, there are often a staggering number of potentially important input dimensions. People with limited attention must choose which dimensions to attend to and subsequently learn about from available data. We use this model of "learning through noticing" to shed light on stylized facts about technology adoption and use. We show how agents with a great deal of experience may persistently be off the production frontier, simply because they failed to notice important features of the



data that they possess. The model also allows for predictions on when these learning failures are likely to occur. We test some of these predictions in a field experiment with seaweed farmers. The survey data reveal that these farmers do not attend to pod size, a particular input dimension. Experimental trials suggest that farmers are particularly far from optimizing this dimension. Furthermore, consistent with the model, we find that simply having access to the experimental data does not induce learning. Instead, behavioral changes occur only after the farmers are presented with summaries that highlight previously unattended-to relationships in the data.

March 09, 2014