

# Thinking in Bets

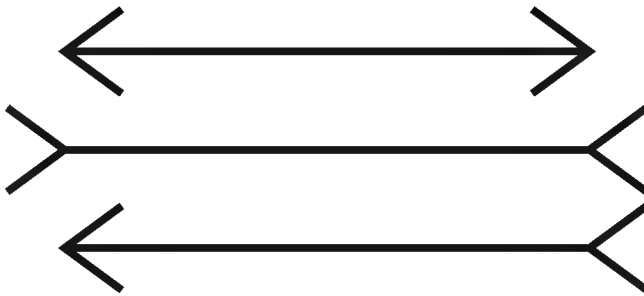
MAKING SMARTER DECISIONS  
WHEN YOU DON'T HAVE ALL THE FACTS

**ANNIE DUKE**

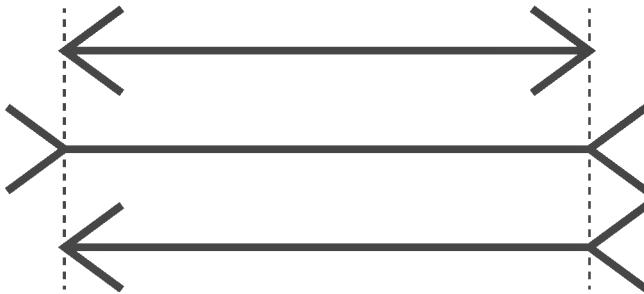
Supplemental Graphics

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## MÜLLER-LYER ILLUSION



Which of these three lines is longest? Our brain sends us the signal that the second line is the longest, but you can see from adding the measurement lines that they are the same length.



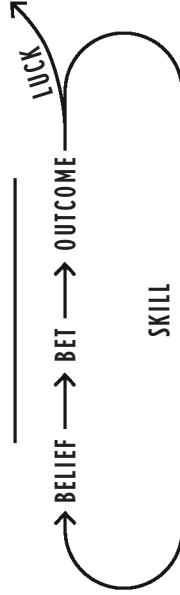
## BETTING ON A FUTURE

BELIEF → BET → (SET OF OUTCOMES)

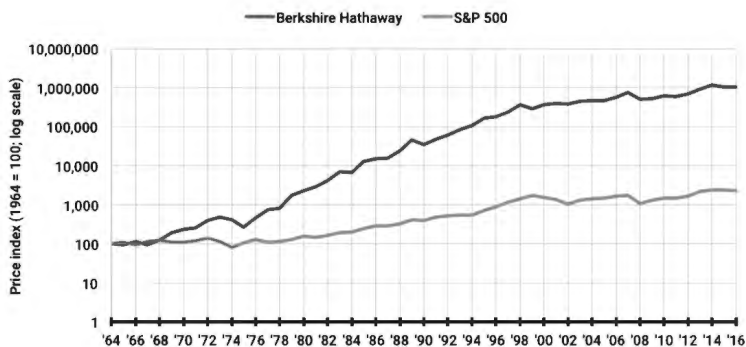
## LEARNING LOOP 1



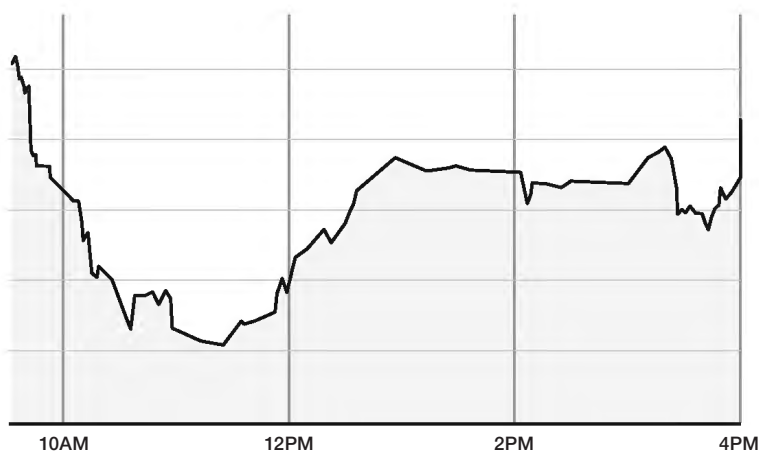
## LEARNING LOOP 2



Look at this chart of Berkshire's performance since 1964:



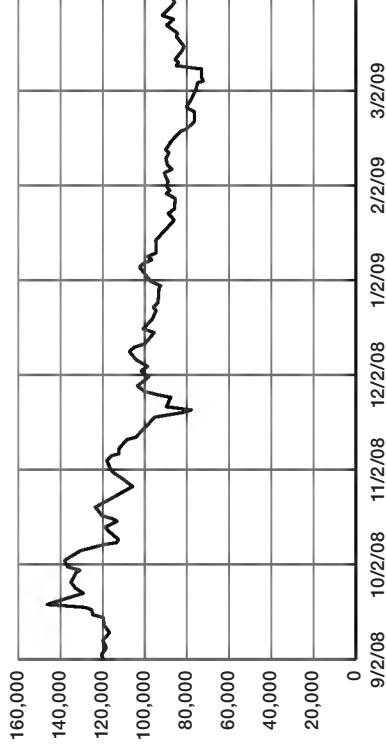
Now zoom in on a random day in late January 2017. The upticks and downticks look large and potentially frightening. You can imagine sitting at the low point around 11:30, feeling like your losses are spiraling.



If you zoomed in on the performance of Berkshire Hathaway stock during the banking crisis, September 2008 to March 2009, you would feel terrible most days:

### **BERKSHIRE HATHAWAY (SEPT. 2008 – MARCH 2009)**

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Yet we know from the first chart, the big picture, that all those minute-to-minute and even day-to-day changes had little effect on the investment's general upward trajectory.

## **BETTING ON A FUTURE**

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**BELIEF → BET → (SET OF OUTCOMES)**

