

## CS70: Jean Walrand: Lecture 38.

Random Thoughts

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## Confusing Statistics: Simpson's Paradox

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Female students happen to apply more to the college that admits fewer students.

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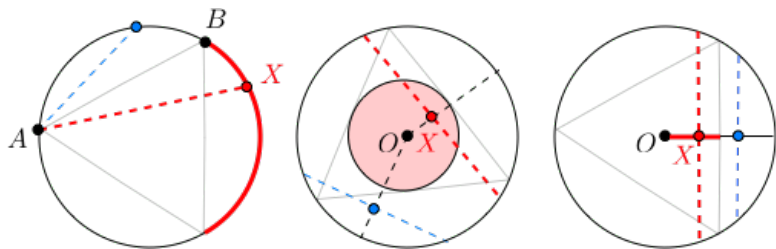
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- ▶ Beware of statistics reported in the media!

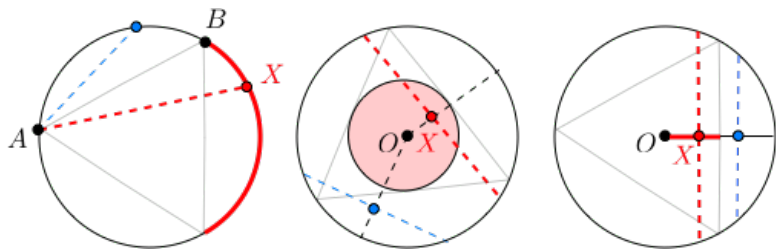


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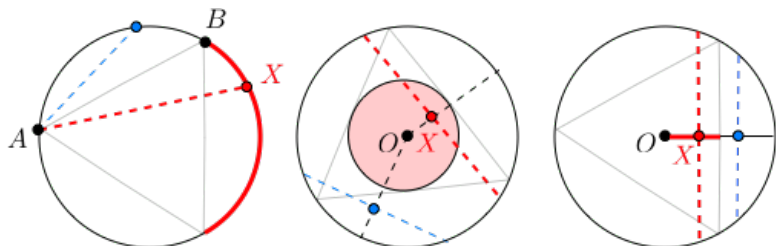


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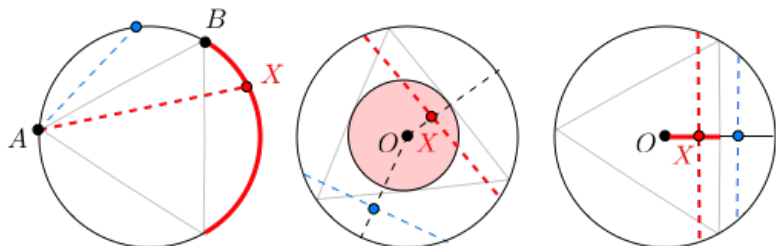
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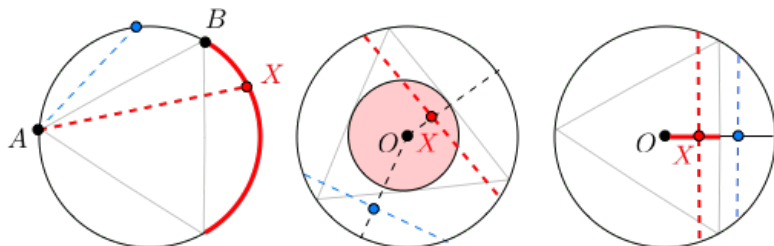
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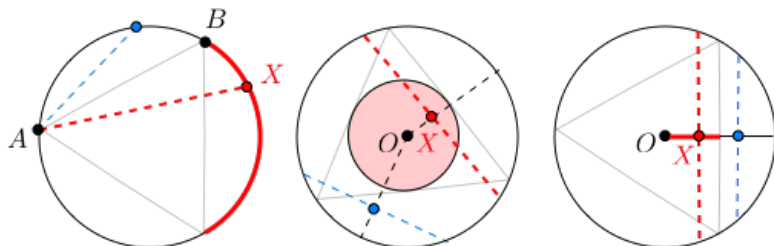
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- ▶  $1/2$  if you choose a point  $X$  uniformly at random **on a given radius** and draw the chord perpendicular to the radius that goes through  $X$  (right).

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- ▶ **Biased memory**. E.g., remembering facts that confirm your beliefs and forgetting others.



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Surprisingly, people tend to be reinforced in their original belief, even when the evidence accumulates against it.

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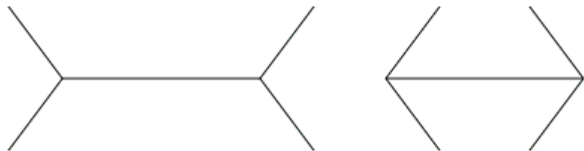
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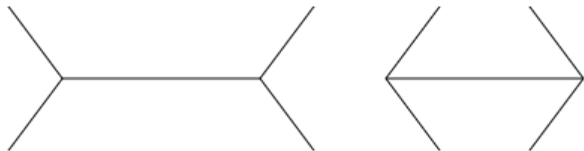


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- ▶ Prescriptive: How to play a game, how to design, ....

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# Final Thoughts

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- ▶ Lecture Slides; Notes; Discussion Problems;



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More precisely: Some thoughts about the final ....

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- ▶ Lecture Slides; Notes; Discussion Problems; HW

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- ▶ Next week: reviews during normal lecture hours:

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# Parting Thoughts



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Proofs, Graphs,

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See you on Wednesday.