

# RELIGION AS AN EVOLUTIONARY BY-PRODUCT

PHIL 101  
Self, World, & God  
Lectures Twenty-three  
& Twenty-four

## LANGUAGE ACQUISITION

- Chomsky
- Evidence
  - Poverty of stimulus
  - Language window
  - Pidgins and creoles
  - Deep-structure
- Language organ
- Large brains evolved
- Language is a by-product of large brains
- Too little time for language to be adaptive

## SPANDRELS



- Steven Jay Gould
- "Spandrels of San Marcos"
- Strong views about evolution
  - Gradualism
  - Minor role for natural selection
- Agreement with Chomsky

## COMPARISON

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|---|--|
| <ul style="list-style-type: none"><li>• Chomsky</li><li>• Evidence<ul style="list-style-type: none"><li>– Poverty of stimulus</li><li>– Language window</li><li>– Pidgins and creoles</li><li>– Deep-structure</li></ul></li><li>• Language organ</li><li>• Large brains evolved</li><li>• Language is a by-product of large brains</li><li>• Too little time for language to be adaptive</li></ul> | <ul style="list-style-type: none"><li>• Atran, Bloom, Boyer</li><li>• Evidence<ul style="list-style-type: none"><li>– All societies have religion</li><li>– 50,000 year history</li><li>– Deep-structure</li></ul></li><li>• "Religion organ"</li><li>• Sophisticated cognitive neurostructure evolved</li><li>• Religion is a by-product of these brains</li><li>• Problems for adaptive accounts</li></ul> |
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## SCOTT ATRAN



- Anecdotes
- Magic box
- Empirical mistakes and survival
- [Heider and Simmel](#)
- Agent detection
- Causal reasoning
- Theory of mind

## PAUL BLOOM



- Work with Pinker
- *Descartes Baby*
- Opiates and fraternities
- Bodies and souls
- Natural born dualists
- Evolved to be creationists
- Religion & science