## Phantom Memories

The L1i Cache (and the uOp cache, and ...)

- "Code" is "read" from "memory" and executed "in-order"
  - "Read" except for when it's in the uOp cache
  - "Memory" except for when it's in L1i
  - "In-order" if you're a TV remote

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Coherent? I would never be accused of that.

- Caches are "coherent" and "reflect the state of memory"
  - except when you double-map memory (???)
  - or directly modify the underlying storage without ever telling the CPU (???)
  - there be dragons, but not the sexy kind
- and then it never finds out (?!)