Future of ACT-R?

- **Theory**
  - memory context, memory stuffing?
  - instruction following?
  - episodic memory, ... ?

- **Software**
  - versions of ACT-R?
  - higher-level tools?

- **Scale & Integration**
  - large knowledge bases?
  - reusable models?

- **Neuroscience**
  - neural models? MEG?

- **Beyond Rational (Emotion)**
  - in or out? :)
  - arousal & valence?

- **External Interaction**
  - an experiment robot?
  - models with serious environments? (X-Plane, SF)

- **Teaching ACT-R**
  - to students? researchers?

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Dario Salvucci, Drexel University. ACT-R PGSS 2011.
In the Long Run, Only the Paranoid Survive

- **2000s** were the decade of convergence in Cog Arch
  - No architecture has proven good at everything (AI, CogSci)
- Stable state suggests *maturity* and reaching asymptote
  - *Premature* convergence? Could this be a local minimum?
- **Fit measures and test suites for incremental progress**
  - Running all existing models in new architecture *doesn’t work*
  - We have never done that for past major changes (3.0, 5.0)
  - Existing models and parameters optimized for old system
  - Modifying all models has *high costs and little benefits*
  - Past success is growing *drag* on architecture changes
  - Best that can be achieved is conceptual “should still work”
  - Incentives present *breadth/depth tradeoff* against integration
Evolve from isolated task-specific models?

- Several people brought up the issue of reusing models, or creating libraries.
- Ties in to long-term learning and interaction: have a model that runs of longer periods of time carrying out different tasks.
- Can this be the new goal to converge to (in the sense of Dario’s graphs)?