Extra Topic – Collaborative HCI Issues
Human-computer Interaction Consortium

• Founded in 1980’s
• Goals (quoted from their Web site)
  – Construct a scientific foundation for Human-Computer Interaction
  – Promote research, education, and training
  – Promote technology transfer and information exchange
  – Participate in collaborative research
  – Develop practical applications for Cognitive Engineering
Members

- Carnegie Mellon University
- Drexel University
- Georgia Institute of Technology
- Pennsylvania State University
- Stanford University
- University of California, Irvine
- University of Colorado
- University of Michigan
- Virginia Polytechnic Institute and State University
- Fraunhofer Institute for Integrated Publication and Information
- FX Palo Alto Laboratory
- Google
- IBM T.J. Watson Research Center
- Microsoft
- Mitsubishi Electric Research Laboratories
- NASA - Ames Research Center
- National Institute of Advanced Industrial Science and Technology
- National Institute of Standards and Technology
- Nokia
- Palo Alto Research Center (PARC)
- Sun Microsystems, Inc
Grudin – The Exponential Curve

• Change is sudden
• Interfaces must accommodate both formal and informal processes.

<table>
<thead>
<tr>
<th>Conceptual Visualization</th>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Formal process-based coordination</td>
<td>Scalable; Control; Insulation from other activities; Group-centric</td>
<td>Resynchronization problems; Insulation becomes isolation</td>
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<tr>
<td>Informal, awareness-based coordination</td>
<td>Flexible; Promotes synergy; Raises awareness; User-centric</td>
<td>Not scalable; Requires extensive human intermediation</td>
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<tr>
<td>Continuous coordination</td>
<td>Expected to be the strengths of both formal and informal coordination</td>
<td>To be discovered by future research</td>
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Redmiles

- And, finding the right people
Chi / Pirolli

• Quoting Bert from a forthcoming book on Structural Holes
  – Bridging gaps between expertise
“Beyond being aware”
- There are many kinds of activities to be aware of and at different levels of generality.

<table>
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<th>Human development</th>
<th>Reconcile different levels of performance and approaches to problems by synthesizing zones of proximal development</th>
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<td>Social capital</td>
<td>Nurture &amp; exploit mutual interdependencies; access broader resource networks</td>
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<tr>
<td>Community of practice</td>
<td>(Tacitly) leverage and regulate shared praxis through enactment and improvisation</td>
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<tr>
<td>Common ground</td>
<td>Protocol for continual testing and signaling of shared knowledge and beliefs</td>
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Table quoted from Carroll talk at HCIC 2006, Frasier, Co.