

Human Computer Interaction

Latest and Greatest, Kivy Installation, and Upcoming Topics

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December 15, 2017

1 L&G: The big hole in HCI research

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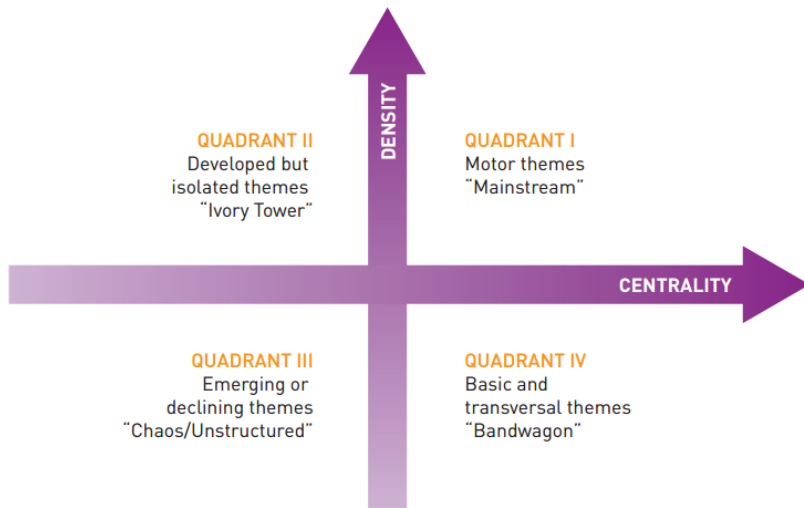
- The paper for this first Latest and Greatest sessions was:
Kostakos, Vassilis. "The big hole in HCI research." Interactions 22.2 (2015): 48-51.
- This paper offers general observations on a previous CHI paper by the author:

*Liu Y, Goncalves J, Ferreira D, Xiao B, Hosio S, Kostakos V.
"CHI 1994-2013: Mapping two decades of intellectual progress
through co-word analysis." In: Proceedings of the 32nd annual
ACM conference on Human factors in computing systems, 2014.*

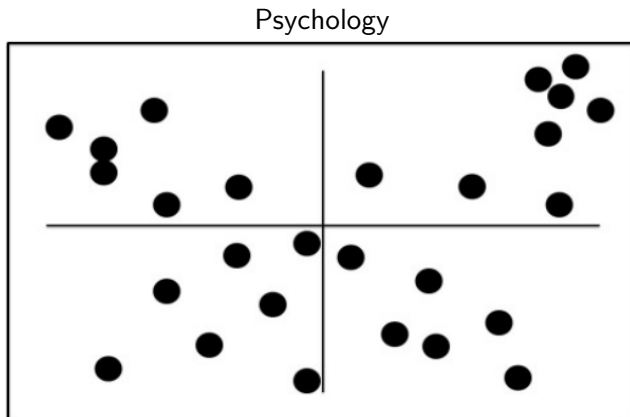
- This short paper is based on a **bibliometric analysis** known as of keyword co-occurrence in **twenty years** of CHI publications.
- The goal was to compare how this co-occurrence distribution in the CHI community compares with that of other disciplines.
- The most important finding in our paper was that CHI has systematically lacked **mainstream** or **motor themes**.
- **Themes** are identified by **keyword clustering**.
- Then, themes are quantified by two principal metrics:
 - **density** (the internal cohesion of the theme)
 - **centrality** (how "central" a theme is to the whole field)

- These two metric dimensions roughly divide the space into **four quadrants**:
 - A theme begins its life with **low centrality and density** in the **Chaos** quadrant.
 - As the theme becomes more central to the community, it moves to the **Bandwagon** quadrant.
 - The theme eventually matures its internal cohesion and moves to the **Mainstream** quadrant, **where the motor themes of a community lie**.
 - Finally, a theme loses its centrality and moves to the **Ivory Tower** quadrant, subsequently dying away by returning to the **Chaos** quadrant.

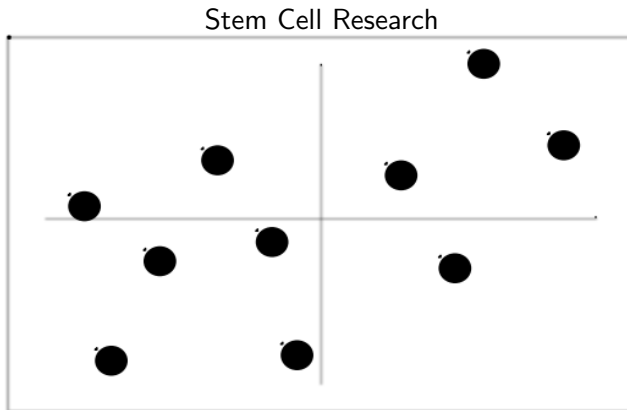
The big hole in HCI research



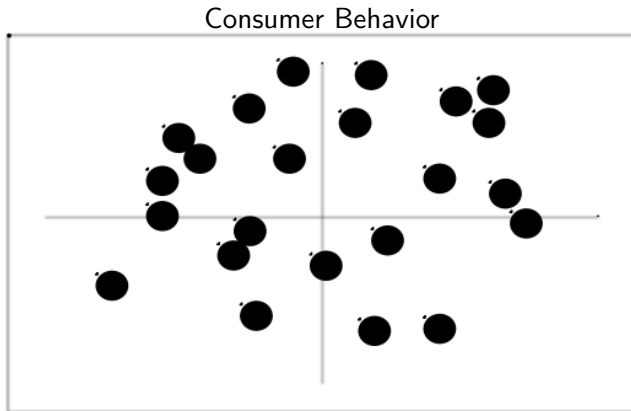
- The results of the **original** paper illustrate the difference between CHI and other communities:



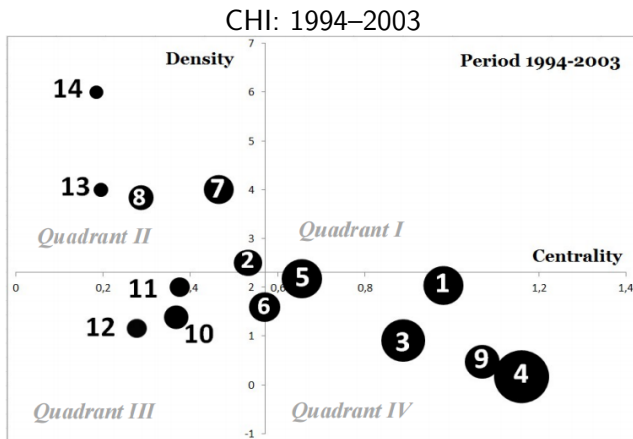
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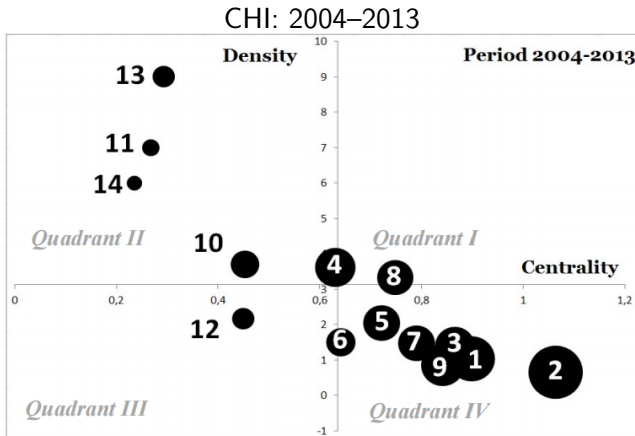
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- So what?
- The authors claim that “Motor themes are the heart and soul of a discipline, its main topics or schools of thought.”
- This is probably true, and their results show that HCI is **decidedly lacking in motor themes**.
- That most research themes at CHI remain at the **Bandwagon** or **Chaos** quadrants.
- That the CHI community “simply rolls from topic to topic, year after year, without developing any of them substantially.”

- The final conclusion (intended to stimulate discussion, presumably) is that too much concentration is given to **implications to design**.
- This has the following negative effects:
 - Implications for design put **practitioner** needs above those of researchers.
 - Implications for design give preference to **contextual** knowledge.
 - Implications for design are usually just a well-crafted **argument**.
 - Implications for design **demotivate incremental research**.
 - Implications for design **demotivate repeating studies**.

- The main insights of the paper:
 - Research in HCI has consistently lacked motor themes, mainstream topics, and schools of thought.
 - Implications for design have likely contributed to the scattered nature of our research.
 - Our discipline can establish motor themes by placing value in tools, data, and theory.
- Thoughts?