Stephen Simms
Introduction to Informatics
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Clark, A. [2003]. Natural-Born Cyborgs: Minds, technologies and the Future of Human Intelligence. Oxford University Press. Chapters 2 and 6

Chapter 2 – Technologies to Bond With

Transparent Technology – "so well fitted to, and integrated with, our own lives, biological capacities, and projects as to become almost invisible in use".

Opaque Technology – "one that keeps tripping the user up, requires skills and capacities that do not come naturally to the biological organism, and thus remains the focus of attention even during routine problem-solving activity."

Donald Norman describes Transparent Technology as "human centered" versus Opaque Technology being "technology centered".

"Information Appliances
- Geared to support a specific activity and does so via storage, reception, processing, and transmission of information
- Form an intercommunicating web. They talk to each other.
- Transparent technologies designed to be easy to use and to fade into the background. They are poised to be taken for granted"

Invisible Computing – invisible in use like a wristwatch
Tangible Computing – blurs the line between virtual and physical –Marble Answering Machine
Wearable Computing – portable, constantly running, hands-free (Google Glass could qualify)
Augmented Reality – via goggles or heads up display, shows digital content overlaying the view

"The passage to transparency often involves a delicate and temporally extended process of co-evolution"

Dynamic Appliance – an appliance that learns about the user

Chapter 6 – Global Swarming

Swarm Intelligence – "relatively dumb individual agents create beautiful, complex, and life-enhancing structures by following a few simple rules and by automatically pooling their knowledge courtesy of chemical traces and structural alterations laid down by their own activity"

Collaborative Filtering – "Each episode of use or access by a consumer lays down a trace, and after a sufficient amount of consumer activity, exploitable patterns emerge."

"Categorization by cumulative trail laying is unplanned, emergent, and as flexible as consumer choice itself."

Search
- Simple Text
- Google examines hyperlink structure
- Jon Kleinberg – text based search obtains "root set", expanded to include linked pages, compute hubs and authorities based on patterns in "hyperlink space"

Soft Assembly – "elements are not tied together firmly by fixed, preexisting links. Instead, they are brought together on the spot in response to a specific query, made by a specific user in a specific context."

Active Recommendation Systems – can provide a soft assembly without using "fixed semantics"
- Talkmine (combines collaborative filtering and keyword strategies)

Global Information Sharing
- Linux

"Our smart worlds will automatically become smarter and more closely tailored to our individual needs in direct response to our own activities."

Questions:

Clark in 2003 had a window into our present. How did he do? What is next for us natural born cyborgs?

These chapters talk about "free lunches" and don't really address the potential dangers of the free lunch. What are some obvious and not so obvious dangers of the technologies he lays out?