Are There Optimal Ways to Do Exploratory Searching?

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**ABSTRACT:**
The talk addresses two main topics:

1) a fuller array of types of search behavior than is usually addressed is considered in relation to interface design, and

2) the density of relevant material in the search territory and its impact on search success and optimal interface design are discussed.
Exploratory Searching

People engage in exploratory searching both intentionally and incidentally to other activities. Sometimes we know we want to explore out of interest or necessity; other times exploratory search is simply a manifestation of an impulse developed over millions of years of hunter-gatherer experience.

Since, during those years, exploring sometimes paid off in added food or other resources, humans tend to engage in it even when not seeking anything in particular.

Operationally, exploratory search is carried out mostly through the physical and cognitive activity of browsing. More sophisticated searchers may sometimes also engage in brief directed search events, as a part of their exploration, in the context of the overall browsing behavior.
Modes of Information Seeking

- Directed
  - Active: Searching (a)
  - Passive: Monitoring (b)
- Undirected
  - Active: Browsing (c)
  - Passive: Being aware (d)
• **Searching**: Active searching directed to particular sources to answer specific questions.

**Monitoring**: A passive alertness, primed by interest, that enables an individual to notice information of relevance to the interest when it comes along in life.

**Browsing**: Active exploring/searching for nothing in particular, or for only loosely characterized objectives.

**Being aware**: Passive, undirected absorption of experiences and learning as they come along in life.
It can be said that directed searching and monitoring are ways we find information that we know we want to know, and browsing and being aware are ways we find information that we do not know we need to know.
Socially generated information distributes naturally in Bradford rings. Number of information units is equal in each ring, while areas of rings are in the relation of $1 : n : n^2 \ldots$ where $n \approx 5$.

References:


C4 cluster map, cluster no. 0001: biomedical and physical science
Small & Garfield, 1985, p. 154
Searching domain characteristics

Bradford core: Picking low-hanging grapes in the fall harvest

Middle ring: Culling wheat from the chaff

Outer ring: Finding a needle in a haystack
Searching domain characteristics

**Bradford core**: Picking low-hanging grapes in the fall harvest
  **Techniques**: area scanning, journal run

**Middle ring**: Culling wheat from the chaff
  **Techniques**: Subject searching, author searching

**Outer ring**: Finding a needle in a haystack
  **Techniques**: footnote chasing, citation index searching
References


