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## Social Signals: Any Impacts in Search?

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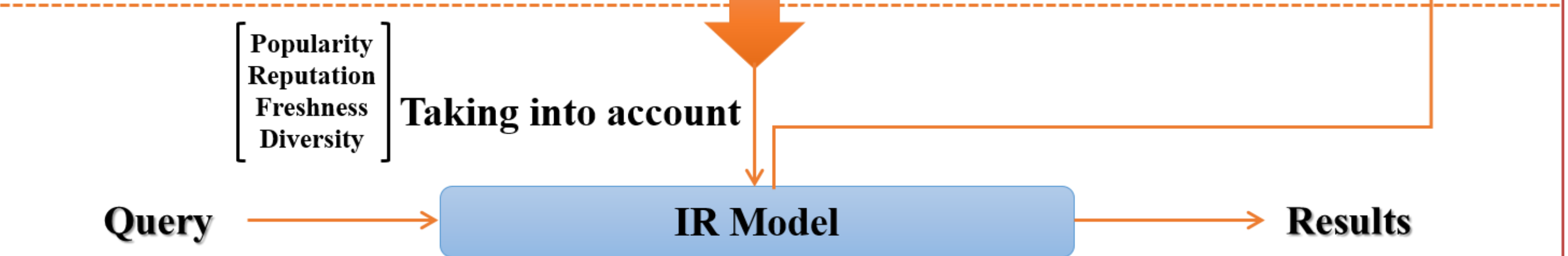
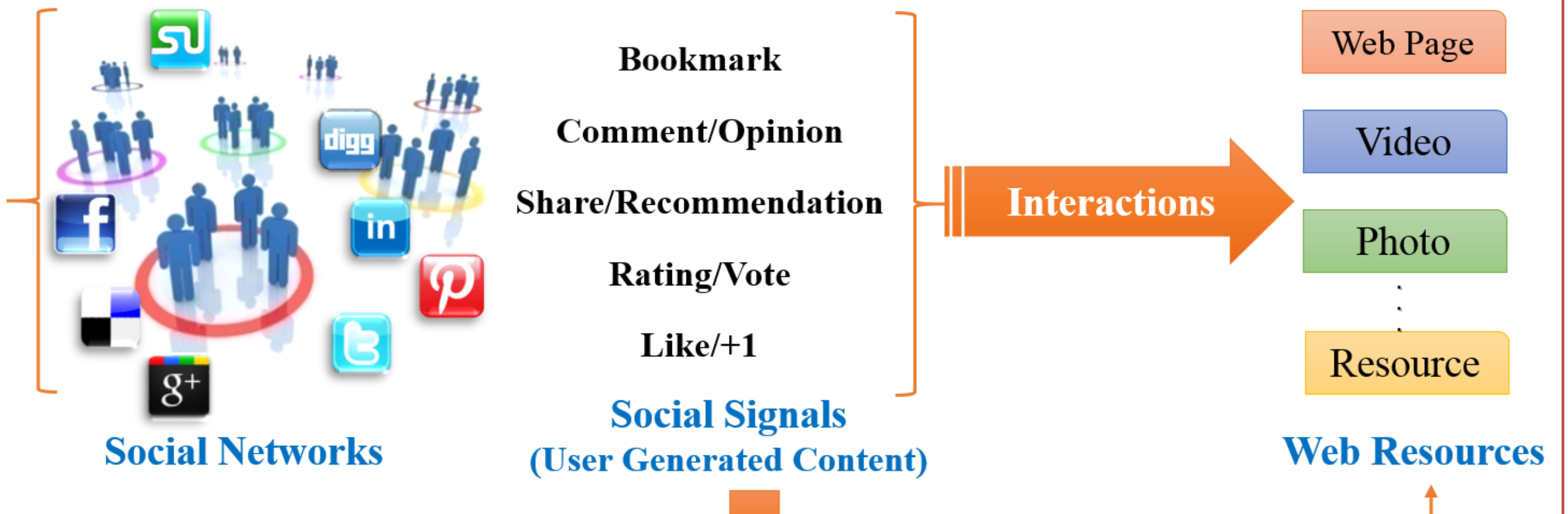
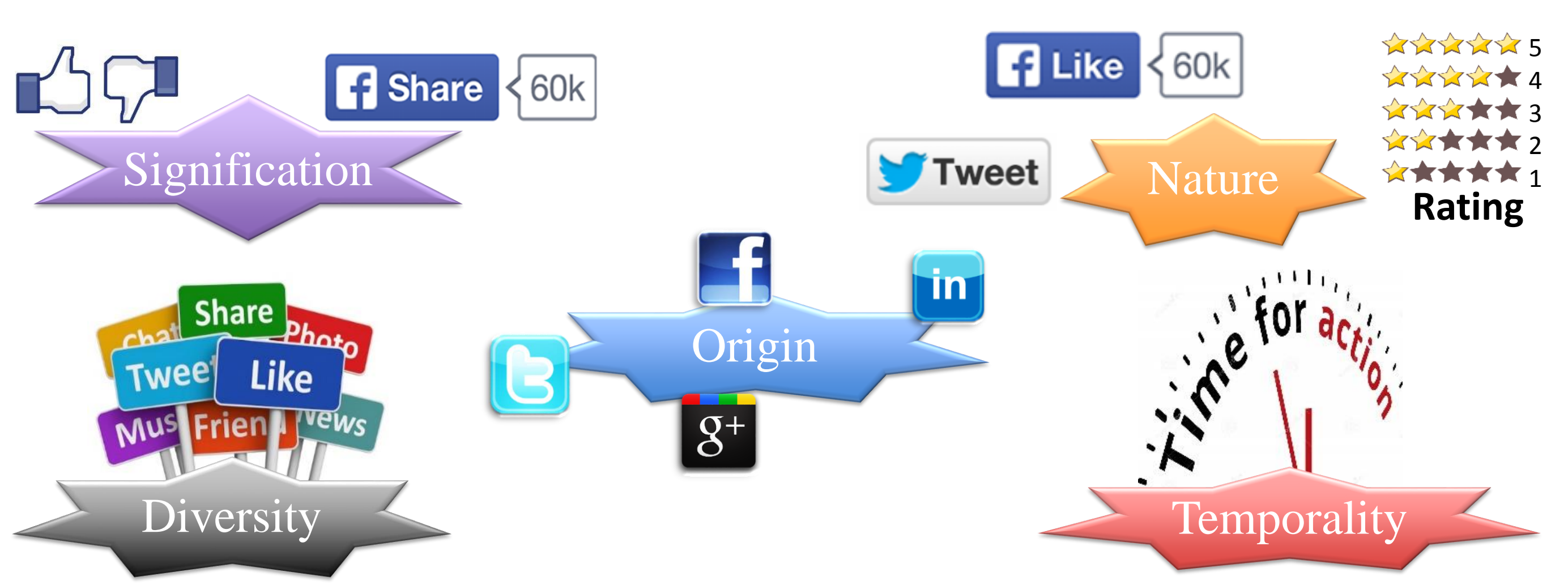
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## Information Retrieval, Social Signals, Popularity, Reputation, Freshness, Diversity, Ranking

### 1. Introduction

#### Context:

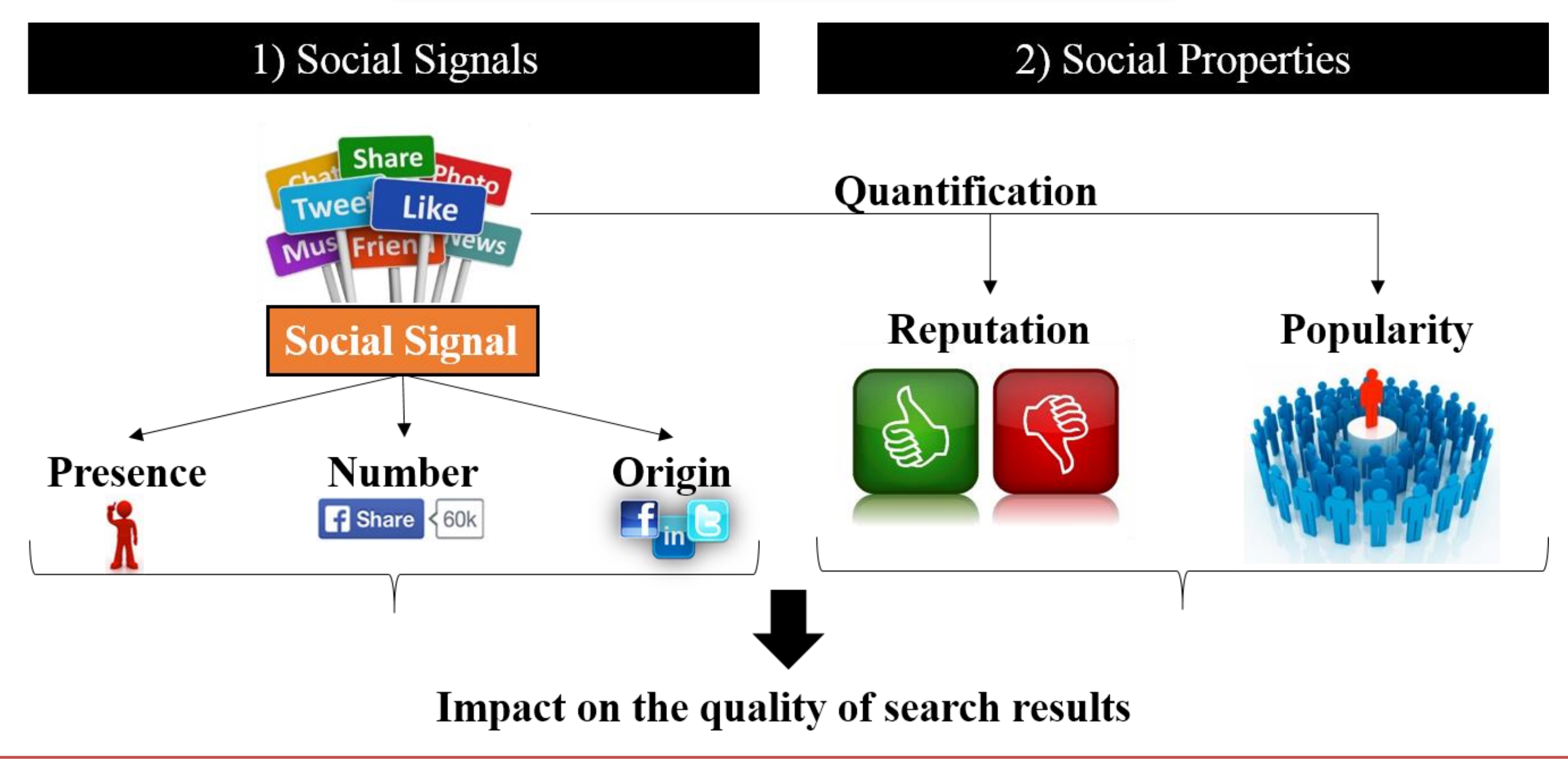
- Exploiting social signals to enhance a search.
- Do the quality, temporality and diversity of signals matter to capture relevant documents?



#### Research Questions:

- How to estimate the *popularity* and *reputation* of a resource using social signals?
- What is the impact of *signals diversity* and *signals freshness* on IR system?
- How to normalize signals with *resource age*?

### 2. Signals and Properties



### 3. Signals Diversity

The diversity of signals: clue measuring the interest of a resource beyond a social network or community

#### Nature

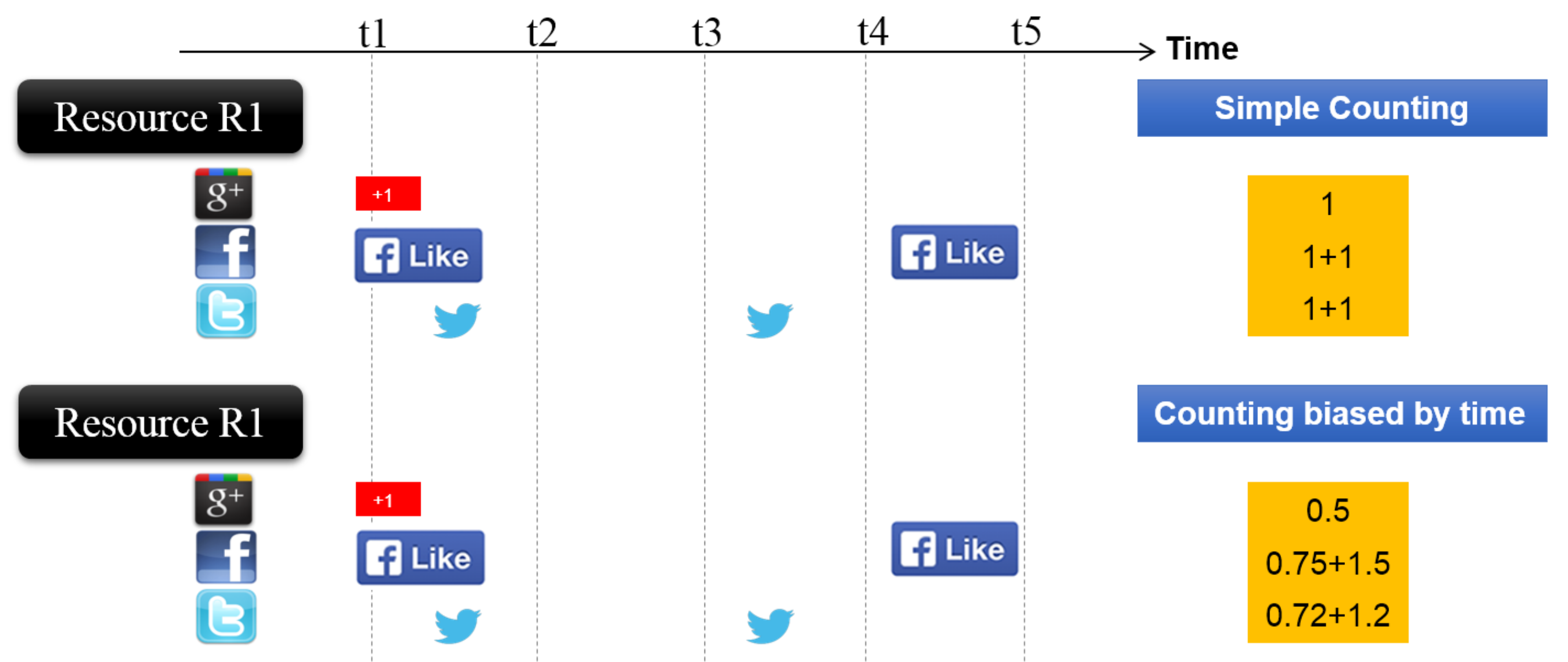


#### Origin



### 4. Time-Aware Signals

#### Signals freshness in a resource



Promote the resources associated with *recent* signals

#### Signals normalization with resource age



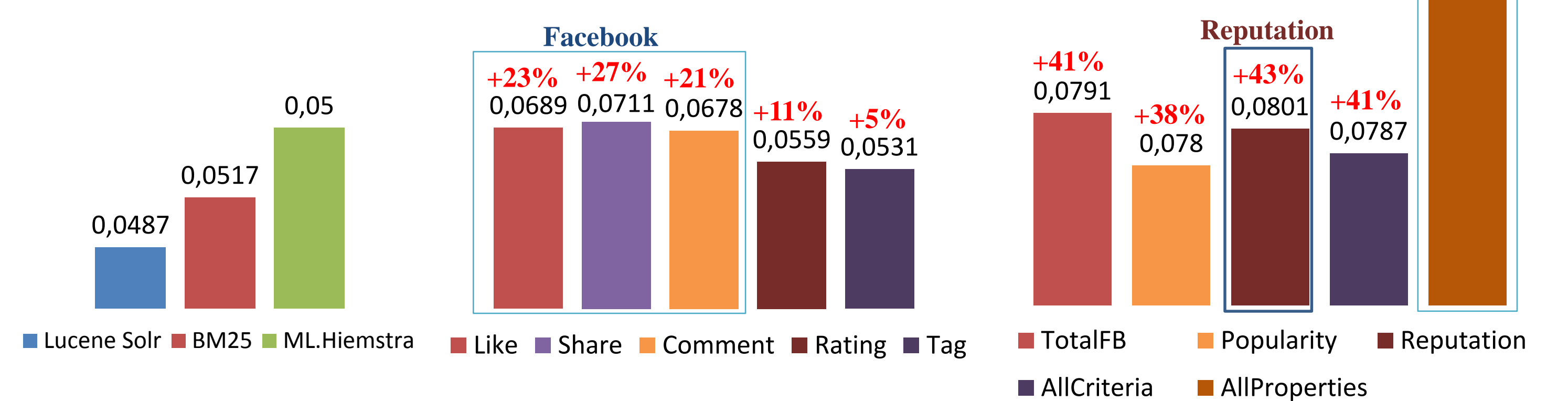
The *old* resources are more likely to get more signals than the *recent*

Standardization of signals by the age of the resource

### 5. Experimental Evaluation

#### Dataset:

- INEX Social Book Search 2015.
- 208 INEX SBS Topics and their relevance judgments.



#### Time-Aware Signals

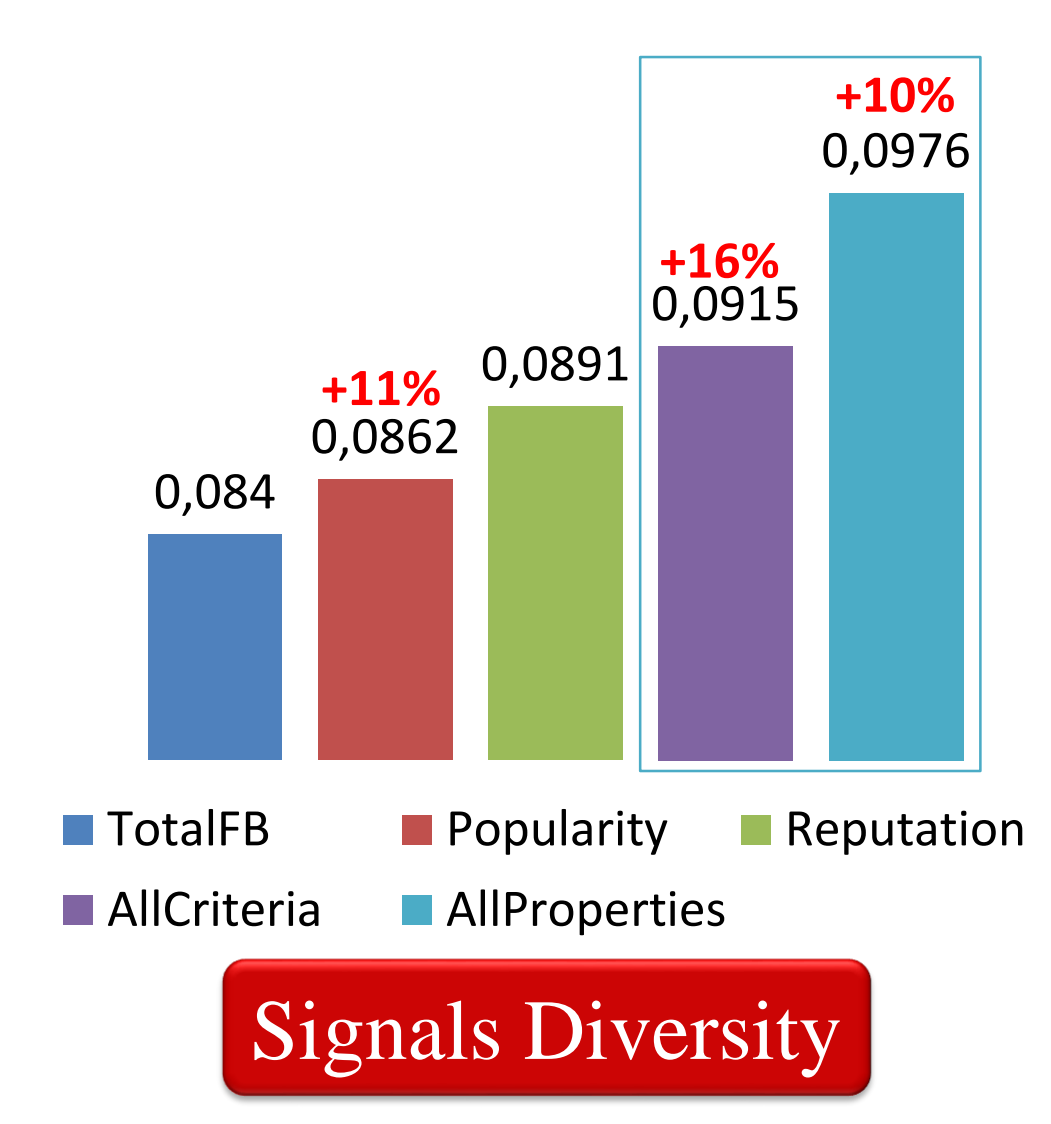
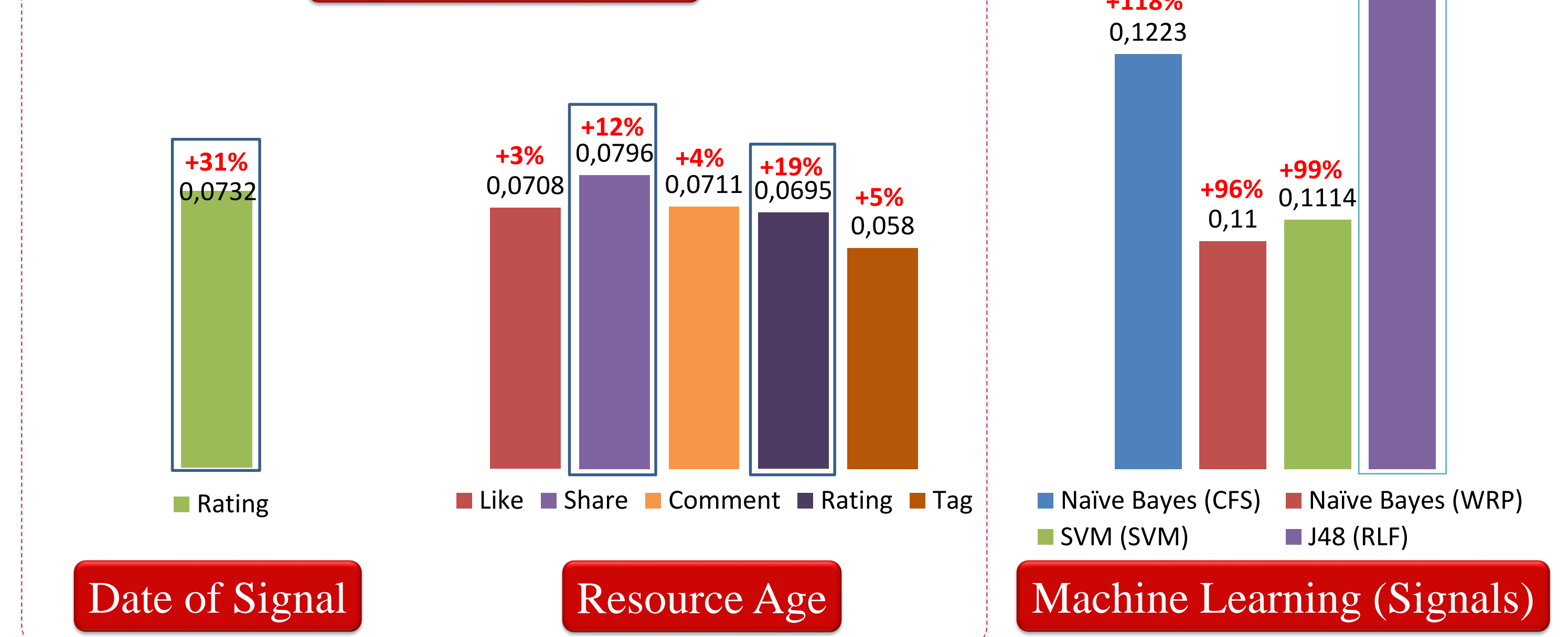


Table 1. Exploited social signals in quantification

Property	Social signal	Social Network
Popularity	Number of <i>Comment</i>	Facebook
	Number of <i>Share</i>	Facebook
	Number of <i>Tag</i>	Amazon/LT
Reputation	Number of <i>Like</i>	Facebook
	Number of <i>Rating</i>	Amazon/LT