Where Are the Values? A Systematic Literature Review on News Recommender Systems

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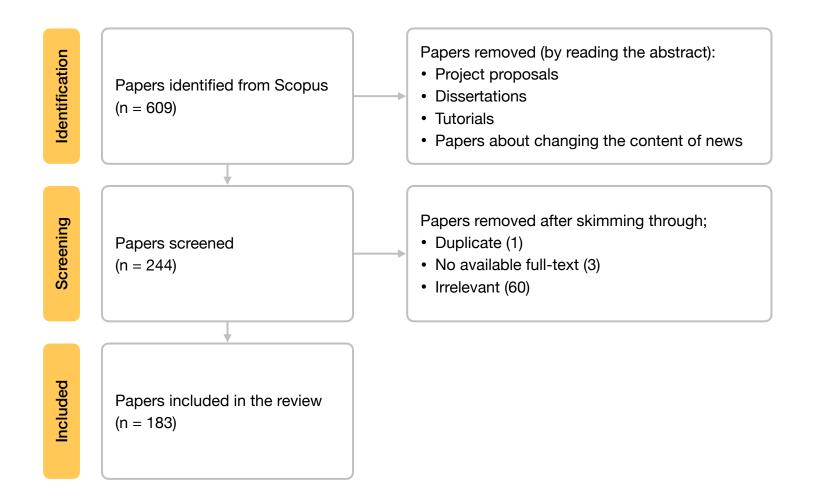


Motivation

- Increasing interest in values "beyond accuracy" → particularly pronounced in the news domain
- News recommender systems (NRS) perform parts of the editorial function → uphold journalistic values
- Primary aim:
 Study the development, scope, and focus of value-aware NRS over time.



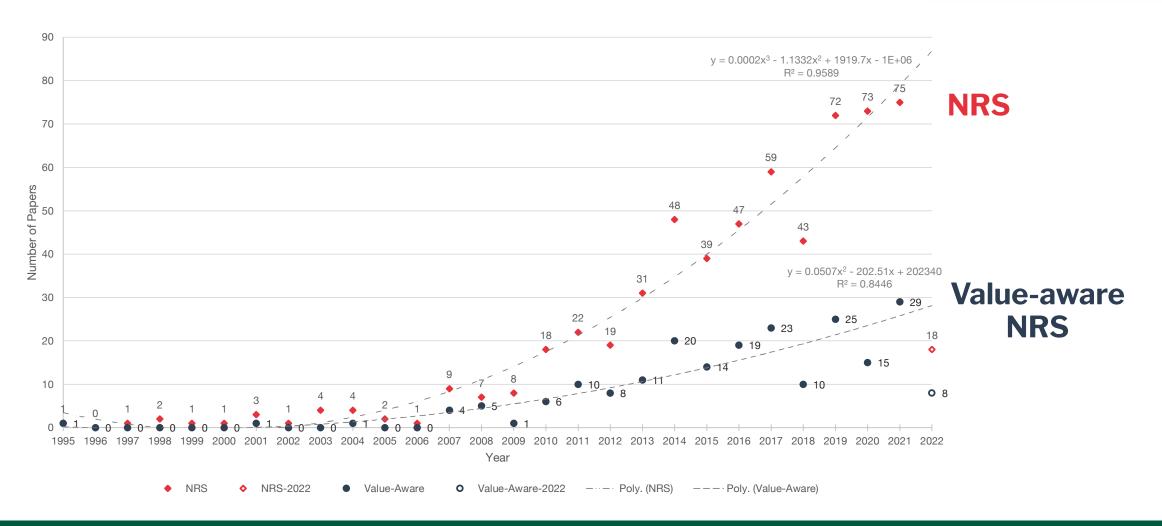
Paper selection process







While the number of NRS papers has grown rapidly from 2008 onward, the number of value-aware NRS papers did not grow proportionally.





We identified a comprehensive set of 40 values. We developed a categorization scheme to group these into 5 value groups.

Standard

Coverage Diversity Novelty

Popularity

Responsibility

Accountability
Explainability
Fairness
Manipulation Prevention

Privacy Transparency

Trust

Responsible Agency

Agency Autonomy Future Impact

User Experience (UX)

Convenience
Curiosity
Emotion
Engagement
Fatigue
Serendipity
Surprise
Temporality of Interests
User Satisfaction

Editorial

Authority
Credibility
Democracy
Editorial Influence
Freedom
Journalistic Values
Objectivity

Recommenderspecific

Location Recency Relevancy Saliency

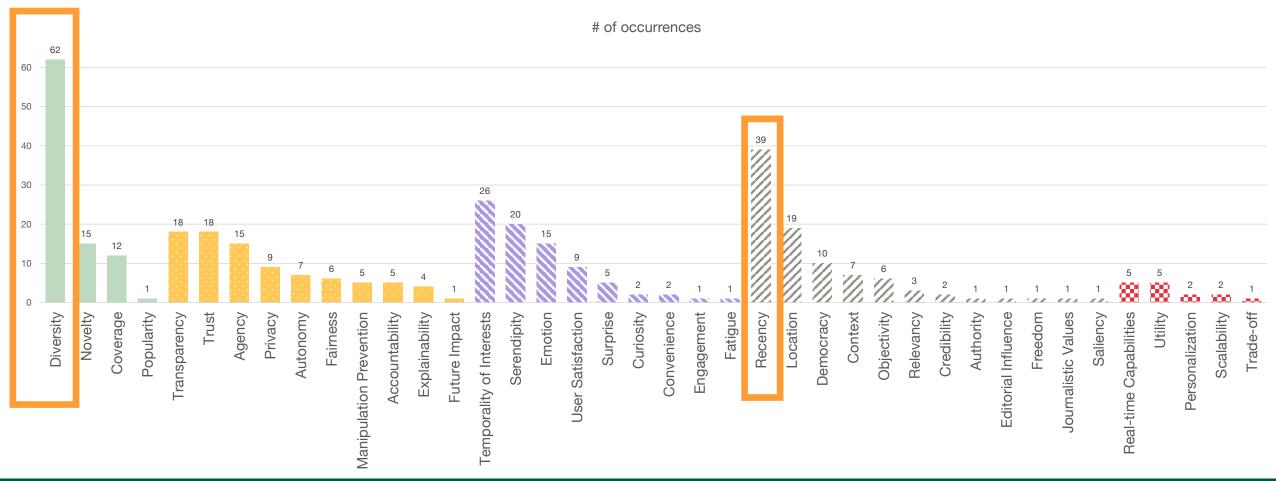
Context

Technical

Personalization
Real-time Capabilities
Scalability
Trade-off
Utility

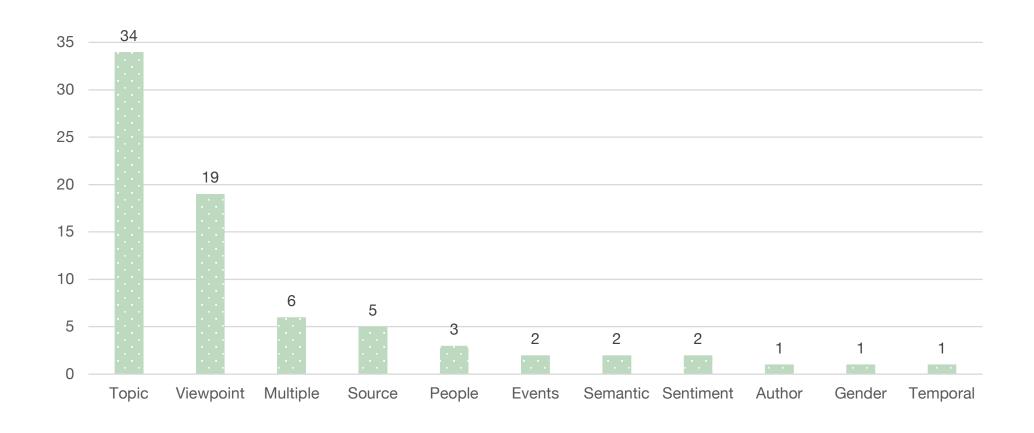


Diversity far outnumbers other values in terms of occurrences (62 occurrences).



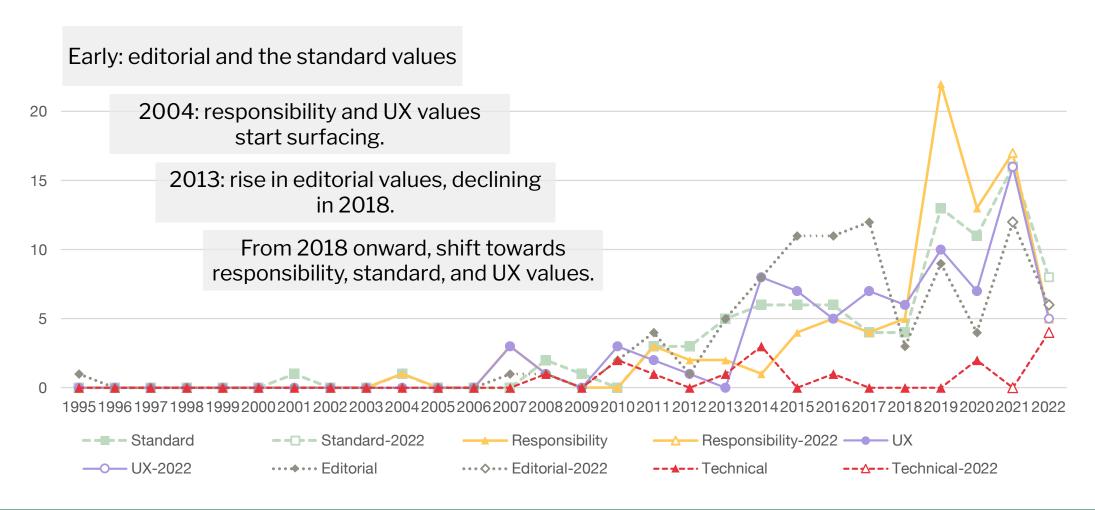


Diversity is addressed on a more fine-granular level.



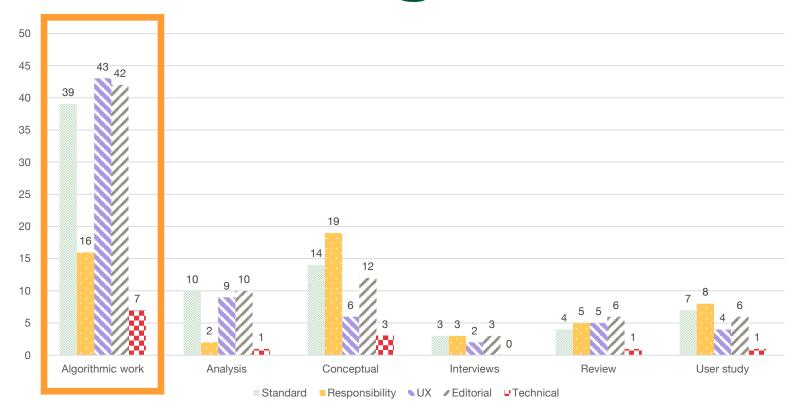


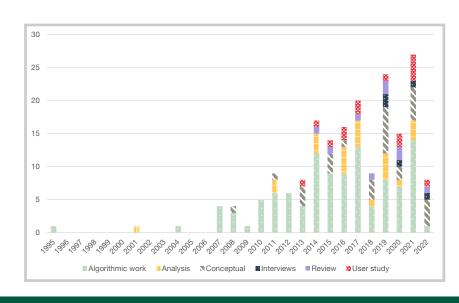
Interesting publishing patterns over time.





Focus on algorithmic work





Take away

- Identified a total of 40 values
- Categorization scheme with 5 value groups
- → Future: expand and refine
- Indicates the under-researched values
- Direction where values need to be targeted on a more fine-grained and specific level
- Driving force comes from outside computer science
- Inter- and transdisciplinary research collaborations are strongly encouraged
- → Challenge: putting these collaborations into practice



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