Digging for unspecified user requirements
a case study of Digital Library of Arne Novák users

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Introduction

How to transform the unrecognized information needs of users of research data into the design of interface and support tools? Humanity scholars working with the research infrastructure at the Masaryk University often do not know what part of their intellectual work can be automated or augmented using technological tools. Their information needs are often unconscious and not reflected in information requirements; this poses a barrier for the stage of scientific work and the development of support tools.

Digital Library of Arne Novák

— a research platform
— works of Czech **literary scientist**
— established in 2009
— MySQL database and web interface
— MARC/XML for titles
— included works are in **public domain**
— approx. **2000 unique users** per year

Current Digital Library of Arne Novák interface

Making sense of research

We applied **Dervin's Sense-Making approach**, specifically, the **Micro-Moment Time-Line interview** method, to study the work of six literary scholars with the Digital Library of Arne Novák.

This approach has enabled us to:

— Explore in depth the **challenges** that scientists face in various research situations
— Understand the **trajectory of research activity**
— Identify the places where scientists **make sense of information** they work with in the virtual space

Based on Dervin's sense-making model

The research process

The participants were interviewed about their interaction with the digital library in **their own research**

— ways of use
— questions addressed
— approach to answering them

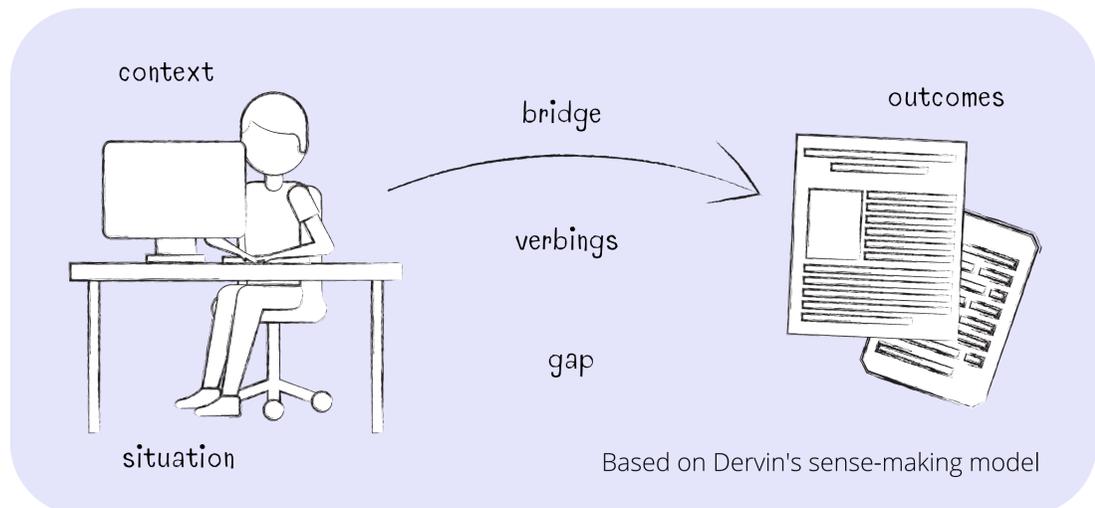The participants demonstrated the last studied research problem

— **step-by-step interaction** with DLAN
— situation of the researcher's activities, examined at each step
— questions asked
— making **decisions**, **challenges** faced
— constructing further procedure and **making sense**
— **purpose** and complexity of each step

6 researchers interviewed   **472** minutes of recordings   **30** requirements identified
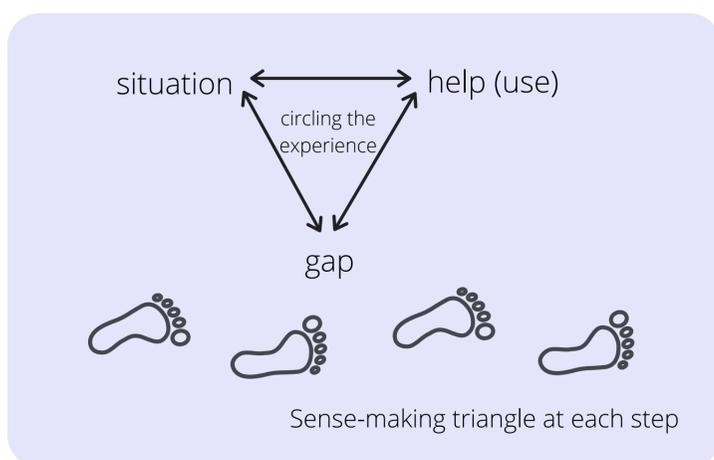
Results

Key interactions	Scholarly primitives	
Searching	**Classifying**	**Formulating**
specific texts	categorization	search queries
topics across texts	selection	identifying synonyms
genres	filtering	
recognized entities		

Required values

— content in the first place
— completeness of the collection
— trustworthiness of the collection
— discoverability of the texts
— authenticity of the texts
— recognition of entities
— links to external sources

Requirements

— train AI for better OCR
— implement hints from the corpus
— implement thesaurus
— implement tagging system
— enrich metadata
— support linked data

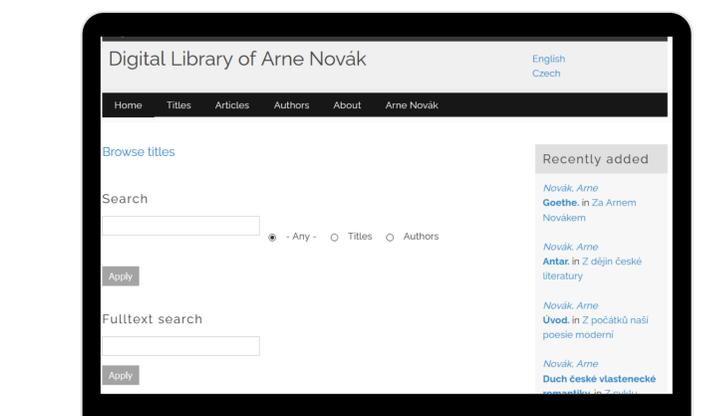Sense-making triangle at each step

Conclusion

Information is not about certainties and uncertainties in the Shannonian sense (what I do not know and need to know), but about the situational awareness and combining associations and revealed perspectives into a single horizon.

References

Dervin, B., Foreman-Wernet, L., & Lauterbach, E. (2003). *Sense-making methodology reader: Selected writings of Brenda Dervin*. Cresskill, New Jersey: Hampton Press, inc.

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Prototype of the new Digital Library of Arne Novák