

## Information Need: Introduction to the special issue

### Introduction

Information Need is one of the most significant and controversial concepts within Information Science. It is a concept that has one of the most substantial literatures within our field and appears widely across disciplines (Wilson 2018) and extensively within both the research and practitioner literatures.

Although information ‘need’ has an intuitive and common-sense nature, its accessibility and instinctive nature may well mask serious problems with it as one of our most important theoretical constructs and many authors feel that it is a concept that lacks theoretical clarity and that other concepts, such as tasks or situations, better represent what searchers care about. In spite of major treatments of the concept, e.g. (Savolainen 2017, Cole 2018), there are still many debates over the concept and, surprisingly given its long history, there is a great deal of uncertainty about it. As Savolainen noted in a recent review ‘*even though information need is probably the most widely used construct explaining why people engage in information seeking, this concept is still vague*’ (Savolainen 2017).

This Special Issue is inspired in part by Robert Taylor’s 1968 famous paper “Question-negotiation and information seeking in libraries” (Taylor 1968). One of the key contributions in this paper was his proposal that information needs lie across four levels:

- the visceral need level, that is the actual, but unexpressed need for information which only appears as a ‘*vague feeling of dissatisfaction*’ and that is ‘*probably inexpressible in linguistic terms*’;
- the conscious need level which is the conscious, within brain description of the need or a ‘*a conscious mental description of an ill-defined area of indecision*’;
- the formalized need level which manifests as the formal statement of the need;
- finally, the compromised need level which is the question as presented to the human or technical information system.

Taylor was particularly interested in how information professionals should respond to these levels, realising that sometimes librarians may need to roll library patrons back from the compromised level to the conscious level of need in order to properly understand the need that requires resolution. He also made clear that, regardless of what level of need is being presented, ultimately it is the visceral level of need that requires satisfaction and that we often need external support to help us move from early stage information needs to later stage, more answerable statements of need.

Taylor’s research was a major theoretical advance and is one of the most cited and influential works within Information Science (Tyckoson 2015). All papers in this special issue cite Taylor’s paper as inspiration for their research. Half a century since its publication we wish to both honour this significant intellectual contribution and reflect on the status of Information Need within Information Science. For this special issue, we sought papers that contributed to our understanding of information needs in various ways: through novel theoretical discussions, through empirical investigations of information need and through the study of information needs in novel contexts. We were rewarded with contributions on all these lines of enquiry.

### The contributions

Our first paper tackles, head-on, one of the key theoretical contributions made by Taylor’s seminal paper, namely the visceral level of information need. In “Taylor’s Q1 “Visceral” Level of Information Need: What is it?” Cole examines the most challenging, and under-investigated level in Taylor’s scheme: the visceral level. As he notes ‘*Taylor’s idea of finding and using the searcher’s Q1-level real information need as the basis of the search is more than ever relevant to information retrieval.*’. Following a path from Belkin’ et al.’s Anomalous State of Knowledge (Belkin, Oddy et al. 1982) to the design of current search systems, Cole theorizes about the nature of the visceral level of information need and why we need to rethink the basis of what we are doing when designing search systems. He specifically proposes search systems as an *intervention* that can help move the searcher from their ‘transactional’ compromised level of need back to their original visceral level of need, the one that Taylor saw as the main one to be satisfied.

Implicit Information Need as Explicit Problems, Help, and Behavioral Signals’ by Sarkar et al., also examines the challenge of how to work with ‘*the very elusive and inexpressible nature of information need*’: if we cannot easily express what we need, then how can we get the information we require? The

approach taken here tries to work round the challenge of asking searchers to express their needs by analysing their behaviours, that is asking if we can understand need by examining behavioural signals such as the number of bookmarks, query length, and time spent on search results. The findings are positive showing that it is possible to build accurate predictive models to infer perceived problems within searching including articulation of queries and therefore raises the possibility of better system interventions.

In our introduction we noted the transdisciplinary nature of information need. Outside of information science, health is the discipline that focusses most on information needs (Wilson 2018). In “Consumer Health Information Needs: A Systematic Review of Measures”, Zhang et al., consider the non-expert seeker of health information and how their perspective has been considered within the literature. Specifically, they consider how health information needs have been conceptualised and measured within the health information seeking literature. They found that few articles explicitly define what is meant by information need and that information need is primarily used to mean the topic of need, findings that no doubt apply to non-health uses of the concept as well. The stark conclusion is that information need is an undertheorized concept ‘*reflected not only in a lack of solid and comprehensive definitions, but also in the fact that CHIN is mostly investigated as a stand-alone topic, with few studies in the sample examining it in relation to other variables that can help elucidate the conceptual meaning of the concept*’. This is in spite of several decades of our use of information need as a primary one within Information Science, demonstrating a real need for robust theorizing about the concept of information need.

Over the years, various alternatives to information need have been proposed as better units of analysis for studying information behaviours. Recently we have seen many scholars arguing that the concept of task is such a better alternative. In “Vertical and Horizontal Relationships amongst Task-Based Information Needs” Kumpulainen and Byström propose such a viewpoint, arguing that information need is secondary to task as ‘*information are gathered from various, heterogeneous sources, not primarily to fulfil any expressed formulation of information needs, but in order to make progress in the task.*’ As opposed to some views that see information needs as decontextualized, free-floating entities that somehow appear and disappear, Kumpulainen and Byström firmly nail information needs into place as part of a practice-theoretic understanding of work place activities. Contributing a new framework for thinking about information needs, the clear value to such an approach is the ability to talk with nuance about the origin of and resolution of information needs.

Our final two papers are stimulated by the context and lived experiences of those who seek information. In “Nothing’s available”: Young fathers’ experiences with unmet information needs and barriers to resolving them”, Mniszak et al. consider the information needs of young fathers and the way fathers attempt to resolve these needs. The recent literature has seen many contributions on the information behaviour of mothers, particularly first-time mothers, but has been far quieter on father’s experiences of accessing information to support their parenting. Through interviews and extended field investigation Mniszak et al. investigate these experiences with a particular focus on the gendered nature of these experience. They show a range of barriers to fathers’ information access including unsupportive information environments, stigma due to their status as early age parents and, occasionally, their own unwillingness to ask for information. The results are unanswered information needs or needs that are satisfied by using mothers as information intermediaries. As Msnizak et al. conclude ‘*supporting young fathers equates to supporting young families.*’ and it is clear that such valuable studies can be the strong basis for redesigning information services to be effective support systems.

In Msnizak’s et al.’s study of young fathers, stigma was one reason not to request information. Conditions that are socially stigmatising can force us to seek information from outside normal social arenas (Davison, Pennebaker et al. 2000) and Internet spaces have become valuable for people who wish to find others who shared stigmatised situations (Hasler, Ruthven et al. 2014). In “Information needs of drug users on a local dark Web marketplace” Hassio, Harviainen and Savolainen, use a Finnish Dark Web marketplace to investigate what they propose as the concept of *disnormative* information, information that ‘*goes strongly against prevailing societal norms.*’ in this case selling drugs and obtaining drug related information. Strongly influenced by Chatman’s theory of Information Poverty and the concept of ‘way of life’, this article investigates how communities that are marginalised by host societies can express themselves (mostly) freely in online environments. This paper examines what information needs arise and their relation to the world of drug users and sellers. A particularly novel focus is on the physical side of drug taking and its relation to information need: ‘*In the case of drug addiction, physiological reasons (addiction, withdrawal symptoms) are the foremost drivers that cause an ongoing information-seeking*

*process... Dependency therefore acts as a catalyst for continuous information seeking, and makes sure the user experiences the same information need on a daily basis.'* Novel contexts such as these continue to theoretically and empirically enrich our understanding of information need.

### **Thanks**

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These papers we selected for this issue are as diverse as the study of Information Need itself. They demonstrate that Information Need is still a troublesome concept in some ways but one that gives rise to fruitful and interesting research studies that reflect our aims of supporting the needs of information users.

**Pia Borlund (Oslo Metropolitan University)**  
**Ian Ruthven (University of Strathclyde)**

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