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**Scholarly publishing orientations and patterns of
print and electronic literature use**

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Research aims and question

- cultural differences in publishing orientations and literature use patterns
- the primacy of the book in the humanities and the primacy of the article in the sciences, with social sciences falling somewhere in between is well established (Lariviere et al, 2007; Huang & Chang, 2008)
- how are differences in the valuation of publication types and types of e-resources used related to frequency of e-resources use and preferences for additional scholarly materials in electronic format?
- data from a web-based survey targeted at faculty and researchers in Finnish universities



Explaining cultural differences: Whitley's theory

- Whitley argues that differences between scholarly disciplines (or specialist fields) can be understood in terms of variations in two dimensions: mutual dependence (MD) and task uncertainty (TU)
- TU: 1) degree of establishment of a standardized set of research techniques; 2) degree to which research results are easy to discern and agree on, or subject to a variety of conflicting interpretations
- MD: 1) interdependency between fields, degree of reliance on ideas, procedures and bodies of knowledge developed in other fields; 2) dependence between fellow specialists; e.g., degrees of collaboration and coordination in research programs and goals



Explaining cultural differences: Whitley's theory

Cultural identity	High MD and low TU	Low MD and high TU
Research problem and topics	Stable; dominated by a particular paradigmatic view; admissible problems restricted in type and conception	Multiple paradigms; disagreements about intellectual priorities; large number of different types of problems and views of how they should be conceived
Research techniques	Standardized & well-established. Contributions need to fit with existing knowledge and rely on similar techniques & methods.	Not standardized; tied to particular topics and research areas. Less coordination in research strategies and procedures
Audience	Mainly specialist colleagues.	Audience variety is higher; may incorporate "lay audiences."



Extending Whitley to information practices

Cultural identity	High MD and low TU	Low MD and high TU
Literature reviews	Formalized; requirement to demonstrate how the contribution fits in with existing research.	Based on choice of theory and discourse communities; more variation in literature use and monitoring practices
Scatter of literature use	Relevant material is more concentrated within core disciplinary resources	Relevant material can be found and is produced across diverse specialist fields and resources
Book versus article orientation	Predominant reliance on articles; centralized resources (preprint archives), resources developed in collaborative projects; preference for e-journals	Books, book articles, journal articles, conference papers, and decentralized (locally produced) resources; valuing print journals as much or more than e-journals



Data

- web-based questionnaire on FinElib's homepage
- advertised in university libraries main pages (April 2007)
- addressed to all 22 Finnish universities
- covers all disciplines
- faculty and full-time researcher respondents: 767
- sample is based on self-selection
 - data is biased towards humanities, social sciences, and natural sciences
 - humanities and social sciences scholars are in comparison to medicine and health sciences, economics & life sciences typically less frequent users of e-resources, especially e-journals



Publishing orientations according to most valued publication types: Practical publishing (1), monograph publishing (2), journal article publishing. Varimax rotation (n=740)

Type of publication	Factor 1	Factor 2	Factor 3
Monograph	-.114	<u>.904</u>	-.133
Journal article	-.009	-.007	<u>.929</u>
Conference article	.361	<u>.557</u>	<u>.447</u>
Textbook	<u>.802</u>	.005	-.003
Technical manual	<u>.866</u>	-.004	-.000



Book versus journal article orientations

Factor analysis of e-resource use orientations. Varimax rotation (n=740)

Electronic resource	Factor 1	Factor 2
Journals	.005	<u>.877</u>
Books	<u>.535</u>	.352
Reference works	<u>.854</u>	.005
Dictionaries	<u>.736</u>	.153
Reference databases	.249	<u>.689</u>



Willingness to give up printed materials

- article orientation is associated with the preparedness to give up printed journals and dictionaries - but not printed scholarly books or reference works
- book orientation is associated with reluctance to give up printed journals and books - but readiness to give up printed reference works and dictionaries
 - common explanations of e-resources use patterns in terms of attitudes ("print-lovers", resistance to technology, gender, age, generation) miss the key factors at play



National/international publishing profile (target audiences)

- calculated from number of publications in national and international forums
- those who publish frequently in national fora strongly prefer publishing monographs, and place less value on practical publishing
- the more scholars publish internationally, the more they use electronic articles, the less they value monographs as publications channels, and the more ready they are to give up printed journals



Needs for additional resources in electronic format

- bifurcation between those who want more international materials and those in favor of a national supply
- those who publish internationally wish more international journals and reference databases
- the more scholars publish nationally, the more they wish additional national journals in electronic form and national reference databases; the less they favour international journals



Scholarly communication system in transition

- the equation: rapidly increasing licencing costs for e-journal databases, increasing prices of scholarly monographs; libraries' decreasing purchasing power
- supporting all publication orientations may not be possible to the same extent as until now
- high resources fields that attract external funding are better equipped to co-fund their information infrastructure
- low resources and book oriented specialties - less possibilities to do so
- when internal funding becomes increasingly dependent on expternal funding, will book oriented specialties attempt to change to win more external funding? start publishing more articles and more in English? develop entirely new publishing models or forums?