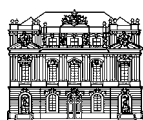


Michael Nentwich

# cyberscience

Research in the Age of the Internet

ABBREVIATIONS, ANNEXES & REFERENCES



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## ABBREVIATIONS

(...)	signifies that some text has been omitted from the original quote	BMC	BioMed Central (free publications server for the biomedical sector)
4S	see: SSSS	BMJ	British Medical Journal
AAP	Association of American Publishers	Caltech	California Institute of Technology
AAU	American Association of Universities	CAQDAS	Computer Assisted Qualitative Data Analysis Software
AAUP	American Association of University Presses	CD	compact disc
ACM	Association for Computing Machinery (US)	CD-ROM	compact disc with read only memory
ACMDL	ACM digital library	CELEX	Communitas Europea Lex (legal database of the EU)
AHCI	Arts & Humanities Citation Index (edited by ISI)	CEP	Consortium for electronic publishing
AI	artificial intelligence	CEPR	Centre for Economic Policy Research
ALAAF	Artificial Languages And Arts Forum (Cologne)	CERN	Centre Européen pour la Recherche Nucléaire (now: Organisation Européen pour la Recherche Nucléaire)
AMF	Academic Metadata Format	CESSDA	Council of European Social Science Data Archives
ANT	actor network theory	CETUS	Consortium for Educational Technology for University Systems
ANTH	anthropology (case study)	CFAR	Center for Aids Research
AOL	America Online	CIAO	Columbia International Affairs Online
AOLA	Austria On-Line Archive	CLEF	Cross-Language Evaluation Forum
APA	American Psychological Association	CMC	computer-mediated communication
APIS	Advanced Papyrological Information System	CMI	computer-mediated information
APS	American Physical Society	CMS	content management system
APSA	American Political Studies Association	CORC	Cooperative Online Resource Catalog
ARL	(US) Association of Research Libraries	CSCW	computer supported collaborative work
ARPA	Advanced Research Project Agency	CSS	cascading style sheets
ARPANet	the early Internet, managed by ARPA	CSTB	(US) Computer Science and Telecommunications Board
ASCII	American Standard Code for Information Interchange	CSU	California State University
BBS	Behavioral & Brain Science (journal)	CUNY	City University of New York
BIO	biology (case study)	D <sup>3</sup> E	Digital Document Discourse Environment
BIO <sup>M</sup>	molecular micro biology (case study)		
BIO <sup>B</sup>	biotechnology (case study)		
BIO <sup>O</sup>	molecular oncology (case study)		
BIO <sup>E</sup>	evolution-development (case study)		

DANTE.....	Delivery of Advanced Network Technology to Europe Limited	ERPA .....	European Research Papers Archive
DAS .....	Distributed (Sequence) Annotation System	ESP .....	Electronic Scholarly Publishing
DC.....	Dublin Core (bibliographic meta-data standard)	ESTO .....	European Science and Technology Observatory
DL.....	digital library	EU .....	European Union
DLS .....	distributed linking service	EUI .....	European University Institute (in Florence)
DML .....	discourse mark-up language (M. Rost)	Eurostat.....	Statistical Office of the European Union
DNS.....	Domain Name System	FAQ.....	frequently asked question
DOI.....	digital object identifier	f.....	and the following page
DRM .....	digital rights management	ff.....	and the following pages
DSEJ .....	Directory of Scholarly Electronic Journals	fn.....	footnote
DTD.....	document type definition (needed for SGML documents)	FQS.....	Forum Qualitative Social Research
DTP .....	desktop publishing	FTP .....	File Transfer Protocol
DVI.....	Digital Visual Interface	GBP.....	British Pound Sterling
E-..., e-....	electronic (...) (mail, publications, prints, journals etc.)	GESIS .....	Gesellschaft Sozialwissenschaftlicher Infrastruktureinrichtungen (Germany)
EASST.....	European Association for the Study of Science and Technology	Gbps.....	Gigabytes per second (1,000,000,000 B/s)
E(E)C.....	European (Economic) Community	GII.....	Global Information Infrastructure
ECO .....	Economics (case study)	GNU.....	“GNU is Not Unix” (an operating system for computers)
ECO <sup>P</sup> .....	political economy (case study)	GPL.....	GNU General Public Licence
ECO <sup>E</sup> .....	economic European studies (case study)	HCI .....	human-computer interaction
ECO <sup>M</sup> .....	macroeconomics (case study)	HINARI .....	Health InterNetwork Access to Research Initiative
ECO <sup>R</sup> .....	regional economics (case study)	HIST .....	history (case study)
ed. (eds.) .....	editor (editors)	HIST <sup>E</sup> .....	early modern history (case study)
EDP .....	electronic data processing	HIST <sup>A</sup> .....	North-American history (case study)
EIoP.....	European Integration online Papers	HIST <sup>P</sup> .....	pre-history (case study)
EITO.....	European Information Technology Observatory	HPCC.....	High Performance Computing & Communication
eLib.....	electronic library (inter alia a programme in the UK)	HPKB .....	High Performance Knowledge Bases
ELSSS .....	ELectronic Society for Social Scientists (in economics)	HTML .....	hypertext mark-up language
emph.....	emphasis	HUGO .....	Human Genome project
EPISTLE.....	environmental, psychological, institutional/political, social, technological, legal and economic (impact)	ibid. ....	ibidem (at the same location in a referenced text)
		IC(T).....	information and communication (technologies)

ICQ.....	“I Seek You” (an IRC software)	LAN.....	1. language studies (case study) 2. local area network
IDF.....	International DOI Foundation	LAN <sup>S</sup> .....	Slavic studies (case study)
IETF.....	Internet Engineering Task Force	LAN <sup>L</sup> .....	applied linguistics (case study)
IMAP.....	Internet Messages (or Interactive Mail) Access Protocol	LAN <sup>C</sup> .....	transdisciplinary cultural studies (case study)
IMEJ, imej...	1. interactive multimedia electronic journals (pronounced as “image”) 2. The Interactive Multimedia Electronic Journal of Computer-Enhanced Learning	LAW.....	legal studies (case study)
INST.....	Research Institute for Austrian and International Literature and Cultural Studies	LAW <sup>I</sup> .....	information law (case study)
IP.....	1. the Internet Protocol 2. intellectual property (law)	LAW <sup>E</sup> .....	European law (case study)
IPS.....	Internet service provider	LAW <sup>T</sup> .....	tax law (case study)
IPTS.....	Institute for Prospective Technology Studies (Seville)	MATH.....	mathematics (case study)
IPv6.....	Internet Protocol version 6	MATH <sup>C</sup> .....	constructivistic mathematics (case study)
IQC.....	Information Quality Control (UK)	MATH <sup>K</sup> .....	K-theory (case study)
IRC.....	Internet relay chatting	MATH <sup>N</sup> .....	number theory (case study)
ISBN.....	International Standard Book Number	MathML.....	mathematical mark-up language (a specific XML)
IScAN.....	International Scholars Academic Network	MAUD.....	Multi Academic User Domain (an academic MOO)
ISI.....	Institute of Scientific Information (Philadelphia)	MBone.....	Multicast Backbone
ISP.....	Internet service provider	Mbps.....	Megabytes per second (1,000,000 B/s)
ISSN.....	International Standard Serial Number	MED.....	medicine (case study)
IT.....	information technologies	MED <sup>C</sup> .....	cardiology (case study)
ITA.....	Institute of Technology Assessment (Vienna)	MED <sup>N</sup> .....	neurology/pain research (case study)
ITAS.....	Institute for Technology Assessment and Systems Analysis (Germany)	MED <sup>I</sup> .....	immunology (case study)
IWI.....	Institut für Wissenschaftliche Information (Germany)	MED <sup>T</sup> .....	thorax anaesthesia (case study)
JAIR.....	Journal of Artificial Intelligence Research	MIT.....	Massachusetts Institute of Technology
JIME.....	Journal of Interactive Media in Education	...ML.....	...-Mark-up-Language (e.g. MathML)
JSTOR.....	Journal Storage project	MN.....	Michael Nentwich (this author)
Kbps.....	Kilobytes per second (1,000 B/s)	MOO.....	MUD Object Oriented
KVK.....	Karlsruher Virtueller Katalog	MUD.....	Multiple User Dimension or Dungeon or Dialogue
		NCRR.....	National Center for Research Resources
		NEDLIB.....	Networked European Deposit Library
		NERDI.....	Networked Research and Digital Information (research unit at NIWI)
		NGOs.....	Non-governmental organisations
		NIH.....	National Institute of Health

NIWI.....	Netherlands Institute for Scientific Information Services, Amsterdam	PHY <sup>F</sup> .....	fluorescence analysis (case study)
NLM.....	(US) National Library of Medicine	PHY <sup>S</sup> .....	theoretical surface physics (case study)
OAI.....	Open Archives Initiative	PICS.....	Platform for Internet Content Selection
OCLC.....	Online Computer Library Center	PMC.....	PubMed Central (server for free full text publications in the biomedical sector)
OECD.....	Organisation for Economic Co-operation and Development	PoD.....	print-on-demand
OJ.....	official journal	POL.....	political science/European studies (case study)
OLAC.....	Open Language Archives Community	POP3.....	post office protocol, version 3
OLE.....	Object Linking and Embedding	PROLA.....	Physical Review Online Archive
ome.....	abbreviation for genome, proteome etc., that is, the whole of the gene sequences	PS.....	PostScript (a printer language)
OPAC.....	Online Public Access Catalogue	PubMed.....	Publications in Medicine server
OPL.....	Open Content License	PURL.....	Persistent Universal Resource Locator
orig.....	original	RAND.....	a US research corporation (the name is a contraction of the term research and development)
OTA.....	Office of Technology Assessment (US)	RCS.....	revision control system
OUP.....	Oxford University Press	R&D.....	research and development
p.....	page	RDA.....	remote data access
para.....	paragraph	RDB.....	Rechtsdatenbank (Austria)
pp.....	pages	RDF.....	Resource Description Framework
P-..., p-.....	paper (...) or print (...) (e.g. p-journal = paper or print journal)	RePEc.....	Research Papers in Economics
P+E.....	parallel print and electronic	RTF.....	rich text format
PAP.....	papyrology (case study)	SCI.....	Science Citation Index (edited by ISI)
PC.....	personal computer	SCOT.....	social construction of technology
PDF.....	Portable Data Format (a proprietary format for documents of Adobe Inc.)	SCS.....	scholarly communication system
PeP.....	Perspectives in Electronic Publishing (an innovative web portal)	SETI.....	Search for Extra-terrestrial Intelligence project
PGP.....	Pretty Good Privacy (cryptographic algorithm)	SGML.....	Standardised Generalised Mark-up Language
Ph.D.....	doctorate in philosophy	SICI.....	Serial Item and Contribution Identifier
PHIL.....	philosophy (case study)	SMTP.....	Simple Mail Transfer Protocol
PHIL <sup>R</sup> .....	ethics in risk analysis (case study)	SOC.....	sociology (case study)
PHIL <sup>A</sup> .....	analytical philosophy (case study)	SOC <sup>E</sup> .....	empirical social research (case study)
PHY.....	physics (case study)	SOC <sup>S</sup> .....	social policy research (and related fields) (case study)
PHY <sup>H</sup> .....	high-energy physics (case study)		



SOC <sup>T</sup> .....	social science studies of technology (case study)	UNESCO .....	United Nations Educational, Scientific and Cultural Organization
SOSIG .....	Social Science Information Gateway	UNO .....	United Nations Organization
SPARC .....	1. Space Physics and Aeronomy Research Collaboratory 2. Scholarly Publishing and Academic Resource Coalition	URI .....	Uniform Resource Identifier
SPRU .....	Science Policy Research Unit (UK)	URL .....	Uniform Resource Locator (WWW addresses)
SSCI .....	Social Science Citation Index (edited by ISI)	URN .....	Uniform Resource Names
SSRN .....	Social Science Research Network	US .....	United States of America
SSSS .....	Society for Social Studies of Science	USENET .....	USERS' NETWORK
SST .....	social shaping of technology	UVC .....	Universal Virtual Computer
STM .....	scientific, technical and medical (publishers, journals)	vBNS .....	very high performance Backbone Network Service
STS .....	Science and technology studies	VEE .....	virtual educational environment
SUNY .....	State University of New York	VL .....	virtual library
TA .....	technology assessment	VPN .....	virtual private network
TCP .....	Transmission Control Protocol	VRML .....	virtual reality modeling language
TEI .....	Text Encoding Initiative	VRVS .....	Virtual Room Videoconferencing System
TeX .....	tau epsilon chi (for Techne, a typesetting system mainly used by physicists and mathematicians)	vs. ....	versus
ThML .....	theological mark-up language (a specific XML)	W3C .....	World Wide Web Consortium
TMR .....	The Medieval Review	WAIS .....	Wide Area Information System
transl. ....	translation	WAN .....	wide area network
TRIPS .....	Trade-Related Aspects of Intellectual Property Rights (a WTO agreement)	WCS .....	Worm Community System (a biology collaboratory)
TRLN .....	Triangle Research Libraries Network Durham/Raleigh/Chapel Hill	WebDAV .....	Web Distributed Authoring and Versioning
UARC .....	Upper Atmospheric Research Collaboratory	WebPAC .....	WWW Public Access Catalogues
UC .....	ubiquitous computing	WIPO .....	World Intellectual Property Organization
UD .....	United Devices Inc.	WTO .....	World Trade Organization
UK .....	United Kingdom	WWW .....	World Wide Web
		XLL .....	Extensible Linking Language
		XML .....	Extended Mark-up Language
		ZIM .....	Heinz Nixdorf Center for Information Management in the Max Planck Society

## ANNEXES

### Annex I: Data-sets

Table A-1: Fuzzy values for disciplines and groups of disciplines

	E-journals <sup>1</sup>	Hyper/multimedia	E-conferences	E-lists <sup>1</sup>	Databases	E-archives	Digital libraries	Virtual institutes
Mathematics	0.18	0.50	0.50	0.08	0.25	0.75	1.00	1.00
Law	0.05	0.00	0.50	0.16	1.00	0.00	1.00	0.25
<b>Formal sciences</b>	<b>0.12</b>	<b>0.25</b>	<b>0.50</b>	<b>0.12</b>	<b>0.63</b>	<b>0.38</b>	<b>1.00</b>	<b>0.63</b>
History	0.11	1.00	0.50	0.21	0.75	0.00	1.00	0.00
Classical studies	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Language studies	0.13	0.50	0.50	0.40	0.50	0.50	1.00	1.00
Philosophy	0.05	0.50	0.00	0.17	0.00	0.25	1.00	0.00
Anthropology	0.01	0.00	0.00	0.02	0.50	0.00	1.00	0.00
<b>Humanities</b>	<b>0.06</b>	<b>0.40</b>	<b>0.20</b>	<b>0.16</b>	<b>0.55</b>	<b>0.15</b>	<b>0.80</b>	<b>0.20</b>
Biology	0.48	1.00	0.50	0.17	1.00	0.00	1.00	0.00
Physics	0.15	1.00	1.00	0.09	0.75	1.00	0.50	0.00
Medicine	1.00	0.50	1.00	1.00	0.25	0.00	1.00	1.00
<b>Natural sciences</b>	<b>0.54</b>	<b>0.83</b>	<b>0.83</b>	<b>0.42</b>	<b>0.67</b>	<b>0.33</b>	<b>0.83</b>	<b>0.33</b>
Political science	0.12	0.50	0.50	0.25	0.25	0.25	0.00	0.50
Sociology	0.06	0.50	0.50	0.10	0.75	0.00	0.00	1.00
Economics	0.06	0.50	0.00	0.10	1.00	1.00	0.50	1.00
<b>Social sciences</b>	<b>0.08</b>	<b>0.50</b>	<b>0.33</b>	<b>0.15</b>	<b>0.67</b>	<b>0.42</b>	<b>0.17</b>	<b>0.83</b>

<sup>1</sup> The values for E-journals and E-lists in this table are computed on the basis of the weighted numbers of pure E-journals included in the DSEJ (see 3.3.2). The only exception is papyrology (classical studies) as it is not included in the DSEJ; these figures are based on the answers of the interviewees.

Table A-2: Fuzzy values for sub-disciplines

	E-mail	E-journals <sup>1</sup>	E-journal prestige	hyper/multimedia	E-conferences	E-lists <sup>1</sup>	Groupware	Databases	E-archives	Digital libraries	Virtual institutes
MATH C	0.75	0.00	0.25	0.25	0.00	0.25	0.00	0.50	0.00	0.00	0.25
MATH K	1.00	0.75	1.00	0.25	0.50	1.00	0.00	0.50	1.00	1.00	0.25
MATH N	0.75	0.50	0.75	1.00	0.00	0.25	0.00	0.50	0.25	0.00	0.00
LAW I	1.00	0.00	0.75	0.00	0.25	0.25	0.00	1.00	0.00	1.00	0.25
LAW E	1.00	0.50	0.25	0.00	0.50	0.25	0.00	1.00	0.25	1.00	0.25
LAW T	0.75	0.50	0.25	0.00	0.00	0.75	0.00	1.00	0.00	1.00	0.00
HIST E	0.75	0.50	0.25	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.25
HIST A	0.75	1.00	0.75	1.00	0.75	1.00	0.25	1.00	0.00	1.00	0.75
HIST P	0.75	1.00	0.25	1.00	0.50	0.50	0.00	0.50	0.00	0.00	0.00
PAP	0.75	0.25	0.00	0.25	0.00	1.00	0.00	1.00	0.00	0.00	0.25
LAN S	0.50	0.00	0.25	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00
LAN L	0.75	0.75	0.50	1.00	0.00	0.50	0.50	1.00	0.50	0.50	0.75
LAN C	0.75	1.00	0.75	0.25	0.50	0.75	0.00	0.50	0.00	0.75	1.00
PHIL R	0.75	0.50	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.75	0.00
PHIL A	0.25	0.50	0.25	0.50	0.00	0.25	0.00	0.50	0.25	0.75	0.00
ANTH L	0.75	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
ANTH P	1.00	0.00	0.25	0.25	0.00	0.75	0.00	0.50	0.00	0.75	0.00
BIO M	0.75	1.00	0.25	1.00	0.50	1.00	0.25	1.00	0.00	1.00	0.00
BIO B	1.00	0.50	0.25	1.00	0.00	0.50	0.00	1.00	0.00	1.00	0.00
BIO O	1.00	1.00	0.25	1.00	0.00	1.00	0.50	1.00	0.00	1.00	0.00
BIO E	1.00	0.50	0.25	0.00	0.00	0.50	0.00	1.00	0.00	1.00	0.00
PHY H	0.75	0.00	0.75	1.00	1.00	1.00	0.50	1.00	1.00	0.50	0.25
PHY F	0.75	0.25	0.25	0.25	0.00	1.00	0.00	0.50	0.00	0.50	0.00
PHY T	1.00	0.50	0.25	1.00	0.00	0.50	0.00	0.75	0.00	1.00	0.00
MED C	0.75	0.50	0.25	0.75	1.00	0.75	0.00	0.00	0.00	1.00	0.25
MED N	1.00	0.75	0.25	1.00	0.50	0.75	0.00	1.00	0.00	1.00	0.00
MED I	0.75	0.50	0.25	0.00	0.25	0.25	0.00	0.50	0.00	1.00	0.00
MED T	1.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00	1.00	0.00
POL	0.75	0.50	0.50	0.25	0.25	0.75	0.00	0.50	0.50	0.50	0.25
SOC E	0.75	0.00	0.25	0.00	0.00	0.50	0.00	0.50	0.00	0.25	0.00
SOC S	0.75	0.00	0.00	0.50	0.00	0.75	0.25	1.00	0.00	0.25	0.25
SOC T	0.75	0.50	0.25	0.00	0.50	0.75	0.50	0.50	0.00	0.25	1.00
ECO P	0.75	0.00	0.25	0.00	0.00	0.25	0.00	1.00	0.00	0.00	1.00
ECO E	1.00	0.50	0.25	0.25	0.00	0.50	0.25	1.00	0.50	0.00	1.00
ECO M	1.00	0.00	0.25	1.00	0.00	0.75	0.00	1.00	1.00	0.75	1.00
ECO R	0.75	0.50	0.25	0.50	0.00	0.75	0.00	0.50	0.50	0.25	0.00

<sup>1</sup> The values for E-journals and E-lists in this table are computed on the basis of the answers of the interviewees, as the structure of the DSEJ is not precise enough for my purposes here.

Table A-3: Fuzzy values for two dimensions of “cyberness”

Sub-discipline	Cyber-co-operation	Cyber-publishing	Sub-discipline	Cyber-co-operation	Cyber-publishing
<b>LAW</b>	<b>0.45</b>	<b>0.43</b>	<b>BIO</b>	<b>0.54</b>	<b>0.68</b>
LAW I	0.45	0.43	BIO M	0.58	0.81
LAW E	0.50	0.43	BIO B	0.58	0.68
LAW T	0.41	0.43	BIO O	0.58	0.81
<b>MATH</b>	<b>0.36</b>	<b>0.47</b>	BIO E	0.41	0.43
MATH C	0.29	0.12	<b>MED</b>	<b>0.37</b>	<b>0.53</b>
MATH K	0.54	0.75	MED C	0.45	0.62
MATH N	0.25	0.56	MED N	0.54	0.75
<b>ANTH</b>	<b>0.41</b>	<b>0.15</b>	MED I	0.29	0.43
ANTH L	0.45	0.00	MED T	0.20	0.31
ANTH P	0.37	0.31	<b>PHY</b>	<b>0.50</b>	<b>0.52</b>
<b>HIST</b>	<b>0.54</b>	<b>0.72</b>	PHY H	0.75	0.56
HIST E	0.50	0.68	PHY F	0.37	0.31
HIST A	0.75	0.93	PHY T	0.37	0.68
HIST P	0.37	0.56	<b>ECO</b>	<b>0.52</b>	<b>0.29</b>
<b>LAN</b>	<b>0.44</b>	<b>0.47</b>	ECO P	0.50	0.06
LAN S	0.16	0.06	ECO E	0.62	0.25
LAN L	0.58	0.68	ECO M	0.62	0.50
LAN C	0.58	0.68	ECO R	0.33	0.37
<b>PHIL</b>	<b>0.22</b>	<b>0.65</b>	<b>SOC</b>	<b>0.48</b>	<b>0.18</b>
PHIL R	0.29	0.81	SOC E	0.29	0.12
PHIL A	0.16	0.50	SOC S	0.50	0.18
<b>PAP</b>	<b>0.50</b>	<b>0.12</b>	SOC T	0.66	0.25
			<b>POL</b>	<b>0.41</b>	<b>0.43</b>

Table A-4: Proxies for size of disciplines

Discipline	Doctorates in 1999 in US	ISI authors	ISI journals	Estimates from interviewees	Fuzzy ranking
PAP	–	–	–	<100	0.1
ANTH	487	–	–	a few 100s to >1,000**	0.3
PHIL	–	–	–	<1,000	0.3
LAW	37	62,750*	299.5*	a few 100s to >1,000**	0.4
LAN	1,769	–	–	>1,000	0.5
HIST	962	62,750*	299.5*	a few 100s to >>1,000**	0.5
ECO	1,076	71,500	352*	<1,000 to >>1,000**	0.6
MATH	1,085	76,900	296	<100 to >>1,000**	0.6
SOC	571	62,750*	299.5*	>1,000	0.7
POL	1,016	62,750*	299.5*	<1,000 to >>1,000**	0.7
PHY	1,271	394,200	320	a few 100s to >>1,000**	0.8
BIO	5,600	958,900	597	>>1,000	0.9
MED	606	1,223,200	1,794	<1,000 to >>1,000**	1.0

Legend: \* ... The ISI breakdown gives only the overall figure for “Social Sciences in General” which is divided here by 4 with a view to give a relative indication

\*\* ... If a range is given, the interviewees were either not univocal or gave different figures for the different sub-disciplines included

>> ... Signifies “much more than”, i.e. several thousands

## Annex II: Interviewees

Table A-5: Distribution of interviewees, sorted by field

No.	Code	City	Sex	University/ extra univ.	Status I	Status II	ICT use
5	BIO-1	Vienna	m	univ	junior	junior	much
29	BIO-2	Vienna	m	extra	senior	head	much
35	BIO-3	Vienna	m	extra	senior	head	average
42	BIO-4	Cologne	m	extra	senior	head	average
3	ECO-1	Vienna	m	extra	leading	head	average
23	ECO-2	Vienna	m	univ	leading	head	average
30	ECO-3	Vienna	m	univ	senior	senior	much
49	ECO-4	Vienna	m	univ	senior	senior	much
11	ANTH-1	Cologne	f	univ	senior	senior	much
20	ANTH-2	Nijmegen	m	univ	senior	senior	average
25	ANTH-3	Vienna	m	univ	senior	senior	average

No.	Code	City	Sex	University/ extra univ.	Status I	Status II	ICT use
6	HIST-1	Vienna	f	univ	senior	senior	average
16	HIST-2	Cologne	m	univ	senior	head	much
17	HIST-3	Cologne	m	univ	senior	head	average
32	HIST-4	Vienna	m	extra	senior	head	much
24	LAN-1	Vienna	m	univ	senior	senior	little
36	LAN-2	Vienna	f	extra	leading	head	average
34	LAN-3	Vienna	m	univ	senior	senior	much
40	LAN-4	Vienna	m	extra	senior	head	much
31	LAW-1	Vienna	m	univ	senior	senior	much
47	LAW-2	Vienna	m	univ	senior	senior	much
46	LAW-3	Vienna	m	univ	leading	head	average
48	LAW-4	Vienna	m	univ	senior	senior	average
8	MATH-1	Vienna	m	univ	senior	senior	little
18	MATH-2	Osnabrück	m	univ	senior	group director	much
19	MATH-3	Nijmegen	m	univ	senior	senior	average
38	MATH-4	Vienna	m	extra	senior	senior	average
26	MED-1	Vienna	m	univ	senior	senior	little
33	MED-2	Vienna	m	univ	senior	senior	much
37	MED-3	Vienna	m	univ	leading	head	little
39	MED-4	Vienna	f	univ	senior	senior	average
7	PAP-1	Vienna	m	extra	leading	group director	average
9	PAP-2	Cologne	m	univ	junior	junior	average
12	PAP-3	Heidelberg	m	univ	leading	head	much
22	PHIL-1	Vienna	m	univ	senior	senior	much
27	PHIL-2	Vienna	m	univ	senior	group director	much
45	PHIL-3	Cologne	m	univ	senior	senior	average
13	PHY-1	Nijmegen	m	univ	leading	head	average
14	PHY-2	Nijmegen	m	univ	senior	senior	much
21	PHY-3	Vienna	m	univ	senior	head	average
50	PHY-4	Vienna	m	univ	senior	head	average
1	POL-1	Cologne	f	extra	senior	group director	average
15	POL-2	Cologne	m	univ	senior	senior	average
41	POL-3	Cologne	m	extra	senior	senior	average
43	POL-4	Cologne	m	univ	leading	head	little
44	POL-5	Cologne	m	univ	senior	senior	much
2	SOC-1	Vienna	m	extra	senior	senior	average
4	SOC-2	Vienna	m	extra	senior	senior	average
10	SOC-3	Cologne	m	extra	senior	senior	average
28	SOC-4	Vienna	m	univ	leading	head	average

## Annex III: Interview questionnaire and guide

As announced in the note that I have sent you in advance, I shall ask you questions in four groups. The first group is related to you personally and your own experiences. For the rest of our conversation I shall ask you to have a look at your discipline as a whole and to abstract from your own experiences.

### I. Personal questions

I begin with a set of questions related to your personal position in academia and your personal experiences with information and communication technologies.

#### *Academic status and expertise of interviewee*

1. How long have you been working in your research field?
2. What is your position in your department/research unit?
3. I expect that you have a pretty good overview/expertise on your field. Do you follow what others do, what the latest developments are, both in research and in organisational, procedural terms?
4. Are you involved in your fields' national or international association?  
In what function?
5. Do you attend international conferences in your field?  
How often?
6. Are you or were you involved in research co-operations with people outside your home institution?

#### *Personal cyberscience experiences*

7. Would you call yourself experienced with the new media?
8. How many professional E-mails do you receive per day?
9. For what professional purposes do you use E-mail?  
Do you discuss substance with colleagues through this channel?  
Or is it rather organisational matters?  
Or simple exchanges of bits of information, such as where to find what?
10. How much do you use the phone for your research activities? And the fax?
11. Do you use the Internet (World Wide Web) for research purposes?  
If so, in what respect?  
Do you use online databases?  
Please give me examples where you have recently used the Internet resources.
12. Are you subscribed to E-mail discussion lists or newsgroups? If so, how many?  
Do you regularly read these messages?
13. Have you ever published in a pure E-journal?
14. Have you ever uploaded an E-print?
15. Do you have your own homepage?  
Do you update it yourself or does your institute's webmaster (or someone else) do so?  
What type of information do you give on your homepage?
16. Do you have any personal experience with video-conferencing?  
Was this via an Internet-based service?
17. Do you have any personal experience with groupware?
18. Do you know what the following terms denote: SQL? Perl? XML?

## II. Sub-disciplinary parameters

So far, I have addressed you as an individual researcher. For the rest of the interview, I would like you to put down your hat as an individual and put on the “disciplinary hat”. In your answers, please try to consider the perspective of your whole speciality, not only what you have done or experienced but also what you observe and hear from others in your scientific community.

19. What is the name of the academic field/speciality/sub-discipline you are working in?
20. What type of discipline is your speciality if I give you the following choices: natural sciences, social sciences, humanities, applied sciences, other?
21. How “big” is your sub-discipline?  
Do you have a clue how many people are working in the same area world-wide/in your country?  
Are you aware of any person or association which might know this, at least nationally?  
Is the number constant, growing or diminishing?
22. Are the people in your sub-discipline rather distributed around the globe or packed at a few locations?  
Would you say that it is an international field?
23. Would you say that your sub-discipline is visually oriented, that is, do pictures, photographs or artefacts to be watched/touched/manipulated play an essential role?
24. Would you say that your sub-discipline is data-dependent, that is, are numerical data an essential part of your work?
25. Generally speaking, do most of your colleagues more or less apply the same set of methods when doing research – or would you describe your sub-discipline as one with no uniform methodology?
26. Is your sub-discipline close or remote to economic application, that is, is there an applied science side in your field, which can be economically interesting?  
(I am not talking about commissioned research in general here.)
27. Are there people in your field whom you would call trendsetters or entrepreneurs or activists with regard to the introduction of new communication technologies (including publishing)?  
How many are there? Please describe their activities. Please give me their names and co-ordinates if you happen to have them.
28. Is your field competitive in the sense that researchers tend to hide or withhold their new insights with a view to having a competitive advantage (e.g. vis-à-vis funding agencies, evaluation boards etc.) as long as possible? (I am not talking here about the general competition between researchers for posts, but with regard to the content of research.)
29. Is research in your sub-discipline generally carried out alone or rather in teams of two or more researchers? Is your research area collaborative?
30. Would you say that researchers in your field are engaged in the production of cumulative knowledge? In other words, do they produce additive knowledge as opposed to working on different and only loosely connected “construction sites”?  
Is the knowledge produced in your field “interconnected”?
31. What status do project reports, working papers, conference papers and pre-prints have in your speciality?  
Are they being cited in journal articles?  
Do some/many/most/all academic papers first appear as a working paper?



32. Is research in your sub-discipline under constant time-pressure or do you have “almost all the time it takes” to complete your research?  
(I am not talking here about the general time-pressure because one has many parallel projects or teaching or administrative obligations.)
33. What is the pace of discovery in your field?  
Does new knowledge appear and replace older findings quickly?  
One indicator might be how often you still use older literature?  
Do you typically quote articles and books older than two/five/ten years more than occasionally?
34. What status do books have in your sub-discipline as opposed to journal papers?  
For a research career, is it necessary to have published one or two single-authored books?  
Are books being read and used frequently in subsequent research?

### III. How “cyber” is your sub-discipline?

In this third part of the interview, I am trying to find out how much information and communication technologies are used in your field. First, we will focus on the status quo, then you will be given the chance to tell me your thoughts about the future trends.

#### *What is the status quo in your field of ICT use?*

35. Is E-mail used widely throughout the whole field?  
In general, is it promising to send an E-mail to a colleague or unknown researcher if you want to establish a contact?  
Or is it rather advisable to phone first?
36. Are there pure, i.e. online-only, E-journals in your field? How many?
37. If yes, are they relevant?  
Please tell me something about their prestige. Are they quoted?  
Are they credited in tenure, quality assessment or evaluation procedures?
38. Are you aware of any innovative features of these E-journals if compared to traditional journals?  
Are there examples of multimedia publications?  
Are you aware of any hypermedia publication?
39. Are you aware of E-conferences in your field, that is, wholly or partially digital communication around a set topic, similar to face-to-face workshops but without actually meeting in person?  
Is video-conferencing used more than just for trying it out?
40. Are there E-mail discussion lists or newsgroups in your field?  
Tell me more about each of them: Are they an important instrument for information, for scholarly exchange, for genuine debate and discussion, or for announcement of new publications and conferences?  
Are there important electronic newsletters?
41. Are there field-specific databases or data repositories?  
(I am not talking here about bibliographic databases.)
42. Is there a field-specific E-print server where researchers can upload their E-prints?
43. Are you aware of any field-specific digital libraries?
44. Are groupware applications used in your field?
45. Do virtual research units exist, i.e. research organisations with no physical existence, but only meeting places in the Internet?

***What are the perspectives of ICT use in your speciality?***

46. Given the present situation in your field, what immediate changes/trends do you see on the horizon? Please look about five years ahead and try to describe the state of affairs with respect to the use of ICT.
47. In a longer perspective (ten to fifteen years), how would your assessment look like?
48. Do you think that, fifteen years from now, there will be printed academic publications or will it be all-electronic?
49. What factors influence the trend? What could be the most important reasons, for your area, why non-cyber ways of doing research will sustain?
50. Have scholarly associations in your field taken any initiatives with regard to the use of ICT?

**IV. Assessment of possible impact on the substance of research**

I shall present you now with a number of statements combining a change of scientific communication and a possible impact on content or substance of research and I would like to ask you to indicate whether you agree or disagree with the sentence for your field and why:

51. Distributed and networked working with computers leads to new results which would not have been possible otherwise.
52. Because it is easier to get in contact with researchers from other disciplines and to get access to the publications of other disciplines, interdisciplinary research is favoured.
53. Due to the wealth of information in the Internet and in online databases, the researcher starts a project with a much broader information base (initial input).
54. There is a creative potential in the “chaos” produced by the wealth of information in the network, the various forms of interactivity and participation. Brainstorming may thus be raised to a new level, awareness of concurring approaches may rise and ideas may more easily influence each other.
55. The Internet increases the chances that people outside of academia become involved in research. Research will be more reflective of its societal uses.
56. E-mail, websites and groupware applications lead to more collaborative work.
57. Collaborative work leads to different results than non-collaborative work.
58. The use of E-mail, E-prints, video-conferencing and E-journals accelerates the research process.
59. Electronic publishing leads to more output in terms of more publications.
60. ICT use increases efficiency.
61. Electronic publishing and Internet databases lead to a level-playing field for all researchers since everyone can more easily be “up-to-date” and informed of ongoing projects and recent findings worldwide (synchronisation of research).
62. Electronic publishing has the potential of increasing transparency, as it will be possible to disclose all information on which the conclusions of an article are based (e.g. raw data).
63. Full accessibility and disclosure of academic output (transparency) will lead to more connectivity, i.e. to a better interface of research results with other results and, hence, to cumulative knowledge production.
64. Collaboration patterns may become more mediated by substantive fit, i.e. competence-oriented selection, rather than geographic or personal linkages.

65. The possibility of becoming involved in worldwide co-operations may favour the trend to more specialisation as these very specific skills and expertise can be fertile despite the lack of local projects in need of them.
66. Groupware and E-mail collaboration leads to research that is more “chewed” or thoroughly elaborated, that is more often sent back and forth between the collaborators and revised by them.
67. Does collaborative research in your field mean including different theoretical or methodological approaches, or, in essence, sharing of tasks?  
In the first case, the results will be richer in the sense that they take into account more perspectives, isn't this so?
68. The choice of the research topic might be influenced by the new opportunities of organising scientific work. Do networked researchers do different things than those not working in the net?  
Can questions be tackled with ICT that could not be before?
69. The possibility of being able to update constantly the electronic version of a scholarly article may trigger a new culture of “preliminarity”.
70. Electronic publishing leads to a faster turnover of scholarly publications. The publication system could become more dynamic. New results are being published earlier and outdate older ones more quickly.
71. Bearing in mind, in what format academic knowledge will be presented after the research will be completed, already influences the production of the knowledge itself (e.g. type of journal plus audience, but also hypertext vs. linear text, inclusion of multimedia) [anticipated effect].
72. What else is conceivable?  
Do you see any other likely and note-worthy consequence of the use of ICT in your field? Please focus your answer on possible impacts on the substance of research.

Many thanks for your time!

## Annex IV: Note to the interviewees in advance of the interview

### Cyberscience

#### A study on the impact of information and communication technologies on science and research

##### Introduction

This note is meant to set the background for a series of open-ended interviews with practitioners in various academic disciplines. We hope that those who have agreed to participate are interested in a reflective discussion of the way their own subject speciality is affected by the new information and communication technologies (ICT), and are willing to make their views known to an interested, but uninitiated, enquirer.

##### Context

Science and research are faced with incremental changes in the scientific community due to the increasing use of ICT, that is E-mail, the Internet, online databases etc. Faced with almost messianic technology-euphoric pleas, on the one hand, and great scepticism with respect to the actual potentials and even a tendency to refuse the use of computers altogether, on the other hand, it seems necessary to critically evaluate and carefully extrapolate existing trends.

The enquiry – of which it is hoped that the proposed discussion with you would form a part – is directed towards solving a three-headed puzzle: (1) to describe and explain the differences in the use of ICT among the various disciplines; (2) to draw a realistic and differentiated picture of the future developments; and (3) to assess the impact of ICT on the substance of research.

##### Content

There are likely to be four main areas for discussion:

- Your personal experiences with ICT
- General characteristics of your speciality
- Status quo of ICT use in your field and trends
- Evaluation of possible impact on the output or substance of research

##### Format

The length of the session would be a matter of the informant's own choice, but – on the basis of experience – I would expect the time span to lie somewhere between an upper limit of two hours and a lower limit of 45 minutes. The normal conventions of anonymity and confidentiality will of course be strictly observed.

##### Additional information

The project "Cyberscience" is carried out at the Institute of Technology Assessment (ITA), a research unit of the Austrian Academy of Sciences in Vienna, and is partially funded by the Austrian Research Fund FWF. Further information is available in the Internet:

<http://www.oeaw.ac.at/ita/cyberscience.htm>

## Annex V: Definitions of key conceptual terms (glossary)

Connectivity of research .....	the fact that one piece of research has a good enough “interface” towards the rest of the relevant research, in other words that it fits well and is related to and embedded in the cumulative knowledge
Cyberness .....	the level of ICT use of an academic field, speciality or discipline
Cyberscience.....	all scholarly and scientific research activities in the virtual space generated by the networked computers and by advanced information and communication technologies, in general
Embeddedness .....	the fact that some research is closely linked to physical locations and apparatus (like laboratories) and can hardly be displaced
ICT .....	(information and communication technologies) those technologies which are the basis of computers and telecommunications; we distinguish information technologies, i.e. research tools, and communication technologies which link people to people or to machines as well as machines to machines
Impact .....	used in a broad sense as any form of influence that the technologies may have on scholarly communication and the latter on the output of research
Mediation .....	used in a broad sense as any form of influence which the various factors (disciplinary, technical, socio-economic) may have on both the impact of technologies on scholarly communication and of the latter on the output of research
Methodology .....	the sets of rules of “how to” and of standardised ways how researchers carry out research, e.g. surveys, experiments, literature research, either mono- or multi-/inter-/trans-disciplinary
Outcome of research.....	generic term for both substance of research and research output
Preliminarity.....	documents produced by researchers remain dynamic and open in the sense that they can be updated at any time, as opposed to fixation of text
Research tools .....	the devices (machines) used by researchers to treat the research questions and to produce research results; e.g. computers used for modelling, expert systems, artificial intelligence (AI), but also simple word-processing, numerical computing, experimental tools such as measurement devices or, more generally, all types of programmes running on stand-alone computers, i.e. computers with no communicative link. The term is used to distinguish computers as a research aid from the use of networked computers for scholarly communication. In this later respect networked computers can also be said to be research tools, but in a different meaning, i.e. indirectly as a means of communication while communication is also a tool
Researchers .....	people who do academic or applied research in whatever discipline either in a university context or in extra-university research settings; used synonymously for academics and scholars
Scholarly communication.....	communication in whatever form or with the help of whatever medium (oral, written, face-to-face, video etc.), which involves at least one scholar (that is, among researchers, between researchers and the object of research as well as between researchers and the “outside world”); takes place with or without the help of IC

Scholarly output.....	the results of research in the sense of new knowledge in whatever form, be it an entry in a database, a scholarly article, a research note describing an experiment or a lengthy report reviewing and analysing the results of previous literature; the form of representation is part of the output (output = substance + form)
Science(s).....	if not otherwise indicated, refers to all fields of science, including not only the natural, but also the social sciences, the humanities and cultural studies
Scientific.....	used synonymously to academic and scholarly
(Sub-)discipline .....	all researchers world-wide who work in a particular field which is defined by a more or less shared set of research questions, methodologies, journals, conferences etc.; except for a few special cases, even sub-disciplines are too large that everyone knows each other, but most people would know at least the most prominent researchers of the sub-discipline
Substance of research .....	in contrast to “scholarly output”, “substance of research” is used to depict the essence proper of the research results, devoid of the form or representation
Work modes.....	the practical, day-to-day carrying out of research, e.g. whether the research is done collaboratively or not, how fast or efficiently it is done, how it relates to others’ work etc.

## REFERENCES

Note: If texts downloaded from the Internet are quoted with specific page numbers in the above text, it may not in each case lead the reader to the right page in his/her print-out or screen page on-screen. If the electronic document is in PDF format, the page number should be roughly the same for everyone printing out the file. For HTML pages, however, I quoted the page number showing on my *personal* printout, except in the rare cases where there are paragraph numbers. The length and pagination of print-outs differs not only with printers, printer drivers and Internet browsers used, but also with personal settings of the browser (margins, fonts, orientation of page). I nevertheless decided to give specific page numbers since they give at least a rough idea of where to find a particular quote in the text. Even if this is not precise, it seems better than nothing. See also subsection 7.2.5.

- A. B., 1999, Das Netz ändert Regeln, *Computer Zeitung*, 5, 1999-02-04, 8.
- AAAS (Scientific Freedom Responsibility and Law Program of the American Association for the Advancement of Science), 1998, *Developing Practices and Standards for Electronic Publishing in Science, a project description*, commissioned by: AAAS; ICSU; UNESCO, May 1998.
- AAU Task Forces, 1994, *Acquisition and Distribution of Foreign Language and Area Studies Materials; A National Strategy for Managing Scientific and Technological Information; Intellectual Property Rights in an Electronic Environment*; report, commissioned by: Association of American Universities and Association of Research Libraries, May, Washington: ARL <<http://www.arl.org/aaufrontmatter.html>>.
- Abeles, T. P., 1998, The academy in a wired world, *Futures* 30(7), 603-613.
- Agre, P., 1999, Infrastructure and Institutional Change in the Networked University, *New Media in Higher Education and Learning*, 27-30 October 1999, Los Angeles <<http://www-rcf.usc.edu/~ics/ed/agre.html>>.
- Alton-Scheidl, R., Schmutzer, R., Sint, P.-P. and Tscherteu, G. (Eds), 1997, *Voting, Rating, Annotation – Web4Groups and other Projects: Approaches and First Experiences*, Wien/München: R. Oldenbourg.
- Alvoni, G., 2000, *Altertumswissenschaften digital – Datenbanken, Internet und e-Ressourcen in der altertumswissenschaftlichen Forschung*; in series: Studienbücher Antike, Vol. 5, Hildesheim: Georg Olms Verlag <<http://www.olms.de/buchtips/alvoni/alvoni.html>>.
- Appel, A. W., 1996, How to Edit a Journal by E-mail, *Journal of Scholarly Publishing* 27(2), 82-99.
- Arlt, H. (Ed.), 1999, *Kulturwissenschaft – transdisziplinär, transnational, online – Zu 5 Jahren INST-Arbeit und Perspektiven kulturwissenschaftlicher Forschungen*; in series: Österreichische und internationale Literaturprozesse, Vol. 6, St. Ingbert: Röhrig Universitätsverlag.
- Armstrong, C. J. and Lonsdale, R., 1998, *The publishing of electronic scholarly Monographs and textbooks*; report, commissioned by: JISC, Aberystwyth <<http://www.ukoln.ac.uk/dlis/models/studies/elec-pub/elec-pub.htm>>.
- Atkinson, R., 1993, Networks, hypertext, and academic information services: some longer-range implications, *College & Research Libraries* 54(3), 199-215.
- Atkinson, R., 1996, Library Functions, Scholarly Communication, and the Foundation of the Digital Library: Laying Claim to the Control Zone, *The Library Quarterly* 66(3), 239-265.
- Atkinson, R., 2000, A rationale for the redesign of scholarly information exchange, *Library Resources and Technical Services* 44(2), 59-69.
- Aubert, J. E. and Bayar, V., 1999, Maximising the Benefits of Information Technology for Science: Overview and Major Issues, *Science Technology Industry Review (OECD)* (24), 7-28.
- Axmann, H.-P. and Payr, S., 1999, A Global Research Infrastructure for the Global Research Village: The European Perspective, *Science Technology Industry Review (OECD)* (24), 29-48.

- Bachrach, S., Berry, R. S., Blume, M., Foerster, T. v., Fowler, A., Ginsparg, P., Heller, S., Kestner, N., Odlyzko, A., Okerson, A., Wigington, R. and Moffat, A., 1998, Who Should Own Scientific Papers?, *Science* 281(5382), 1459-1460  
<<http://www.sciencemag.org/cgi/content/full/281/5382/1459>>.
- Bailey, C. W. J., 1995 ff., *Scholarly Electronic Publishing Bibliography* 1999 ff.  
<<http://info.lib.uh.edu/sepb/sepb.html>>.
- Bainbridge, W. S., 1999, Information Infrastructures in the Social Sciences, *Science Technology Industry Review (OECD)* (24), 123-135.
- Banse, G. and Langenbach, C. J. (Eds), 1999, *Geistiges Eigentum und Copyright im multimedialen Zeitalter – Positionen, Probleme, Perspektiven – Eine fachübergreifende Bestandsaufnahme*; in series: Graue Reihe, Vol. 13, ed. by Europäische Akademie zur Erforschung von Folgen wissenschaftlich-technischer Entwicklungen, Bad Neuenahr-Ahrweiler.
- Bär, S., 1999, Das große Würgen, *Laborjournal* (4)  
<<http://www.biotech-europe.de/rubric/editorials/verlage.html>>.
- Barlow, J. P., 1994, *Wine Without Bottles – The Economy of Mind on the Global Net* [Accessed on: 02-08 2001] <[http://www.eff.org/pub/Intellectual\\_property/idea\\_economy.article](http://www.eff.org/pub/Intellectual_property/idea_economy.article)>; also published as: Wired 2.03, March 1994.
- Bates, S., 1994, *How Electronic Information is Affecting Science Publishing: A Summary*; Course, Fall 1994, University of Colorado.
- Bazin, P., 1996, Toward metareading, in: Nunberg, G. (Ed.): *The Future of the Book*, Berkeley, USA: University of California Press, 153-168.
- Becher, T., 1989, *Academic Tribes and Territories*, edited by Society for Research into Higher Education, Milton Keynes: Open University Press.
- Becker, H. S., 1995, Hypertext Fiction, in: Lourdes Lima dos Santos, M. (Ed.): *Cultura & Economia*, Lisbon: Edições do Instituto de Ciências Sociais, 67-81  
<<http://www.soc.ucsb.edu/faculty/hbecker/lisbon.html>>.
- Bennett, S., 1994, Repositioning University Presses in Scholarly Communication, *Journal of Scholarly Publishing* 25(July), 243-248.
- Bennett, S., 1996, Re-engineering Scholarly communication: Thoughts Addressed to Authors, *Journal of Scholarly Publishing* 27(July), 185-196.
- Bennett, S., 1998, Just-in-Time Scholarly Monographs, *Journal of Electronic Publishing* 4(1)  
<<http://www.press.umich.edu/jep/04-01/bennett.html>>.
- Bennett, S. and Matheson, N., 1992, Scholarly Articles: Valuable Commodities for Universities, *Chronicle of Higher Education*, 27 May 1992, B1-B3.
- Berkemeyer, J. and Weiß, B., 1999, Sammlung von Online-Dissertationen an der Deutschen Bibliothek, *Bibliotheksdienst* 33(7), 1092-1097.
- Berkowitz, I., 2002, The Effects of New Communication and Information Technologies on Academic Research Paradigms, *AoIR* 3.0, 14-16 Oct., Maastricht  
<[http://astro.temple.edu/~berkowitz/AoIR\\_competition.rtf](http://astro.temple.edu/~berkowitz/AoIR_competition.rtf)>.
- Berners-Lee, T., 1998, *Semantic Web Road map* [Accessed on: 06-11 2002]  
<<http://www.w3.org/DesignIssues/Semantic.html>>.
- Bernhofer, M., 2001, Cyberscience – Was macht die Wissenschaft im Internet?, *Gegenworte – Zeitschrift für den Disput über Wissen*, 8, 27-31.
- Bessen, J. and Maskin, E., 1997, Intellectual Property on the Internet: What's Wrong with Conventional Wisdom?, *Internet Publishing and Beyond: Economics of Digital Information and Intellectual Property*, 1997-01-23/25, Cambridge, MA  
<<http://ksgwww.harvard.edu/iip/econ/bessen.html>>.
- Best, H., Endres-Niggemeyer, B., Herfurth, M. and Ohly, H. P., 1994, *Informations- und Wissensverarbeitung in den Sozialwissenschaften*, Opladen: Westdeutscher Verlag.
- Big12Plus Libraries Consortium, 1998, *Scholarly Communication and the Need for Collective Action: A Statement by the Chief Academic Officers of the Big 12* [Accessed on: 16-01 2001].
- Bijker, W., Hughes, T. P. and Pinch, T. (Eds), 1987, *The Social Construction of Technological Systems – New Directions in the Sociology and History of Technology*, Cambridge/MA: MIT Press.



- Birkerts, S., 1997, *Die Gutenberg Elegien – Lesen im elektronischen Zeitalter*, Frankfurt a.M.: S. Fischer.
- Bishop, A. P., 1998, Logins and Bailouts: Measuring Access, Use, and Success in Digital Libraries, *Journal of Electronic Publishing* 4(2) <<http://www.press.umich.edu/jep/04-02/bishop.html>>.
- Bloom, F. E., 1998a, Embracing the Embargo, *Science* 282, 877.
- Bloom, F. E., 1998b, The Rightness of Copyright, *Science* 281(5382), 1459-1460 <<http://www.sciencemag.org/cgi/content/summary/281/5382/1451>>.
- Böhle, K., Riehm, U. and Wingert, B., 1997, *Vom allmählichen Verfertigen Elektronischer Bücher – Ein Erfahrungsbericht*, Frankfurt/New York: Campus <[http://www.itas.fzk.de/deu/projekt/peb/proda\\_t.htm](http://www.itas.fzk.de/deu/projekt/peb/proda_t.htm)>.
- Böhler, C., 2001, Das elektronische Taschenbuch, *Der Standard (Wien)*, 2001-01-11.
- Bolz, N., 1993, *Am Ende der Gutenberg-Galaxis – Die neuen Kommunikationsverhältnisse*, München: Wilhelm Fink Verlag.
- Bourguignon, J.-P. and European Mathematical Society, 1999, The Future of Mathematical Databases, *Science Technology Industry Review (OECD)* (24), 107-122.
- Bowman, B. F., 1999, Information Management Services for Scientists – New Challenges and Opportunities, *Annual Conference of the IuK Initiative*, 22-24 March 1999, Jena <<http://www.biochem.mpg.de/iv/iuk99/index.html>>.
- Brand, S., 1999, *The Clock of the Long Now*, London: Phoenix.
- Brandtner, A., 1998, Zur Vernetzung der österreichischen Literaturarchive, *Bibliotheksdienst* 32(12), 2055-2064.
- Bressan, S. and Lee, T., 1997, *Information Brokering on the World Wide Web*; PDF paper [Accessed on: 18-07 2002] <<http://context2.mit.edu/coin/publications/webnet97/webnet97.pdf>>.
- Bröchler, S., Simonis, G. and Sundemann, K. (Eds), 1999, *Handbuch Technikfolgenabschätzung (3 Bände)*, Berlin: Edition Sigma.
- Brown, S. D., 1999, Groupware and the Mediation of Memory, *XIIth General Meeting, European Association for Experimental Social Psychology*, July 1999, Oxford <<http://devpsy.lboro.ac.uk/psygroup/sb/groupware.htm>>.
- Brüggemann-Klein, A., 1995, Wissenschaftliches Publizieren im Umbruch – Bestandsaufnahme und Perspektiven aus der Sicht der Informatik, *Informatik Forschung und Entwicklung* (10), 171-179.
- Brumfiel, G., 2002, Fraud inquiry leaves online paper in the ether, *Nature*, 29 August, 907.
- Bryant, J. M., 1997, *The Electronic Book – A Users Wishlist* [Accessed on: 18-03 1999] <<http://www.luna.co.uk/~jbryant/pages/ebook.htm>>.
- Büchle, M., 2002, *Urheberrecht im World Wide Web*, Wien: Lexis Nexis ARD Orac.
- Buck, A. M., Flagan, R. C. and Coles, B., 1999, *Scholars' Forum: A New Model For Scholarly Communication* [Accessed on: 16-01 2001] <<http://library.caltech.edu/publications/scholarsforum/>>.
- Burg, J., Wong, Y.-L., Yip, C.-W. and Boyle, A., 2000, The State of the Art in Interactive Multimedia Journals for Academia, *Interactive Multimedia Electronic Journal of Computer-enhanced Learning* 2(2) <<http://imej.wfu.edu/articles/EDMEDIA2000paper/index.asp>>.
- Burg, T. N., 1999, Electronic Publishing – Inhalt, Wissen, Dienstleistung, in: Haberl, H. and Strohmeier, G. (Eds): *Kulturlandschaftsforschung*, Wien/New York: Springer, 119-124.
- Burke, J., 2001, *Gutenbergs Irrtum und Einsteins Traum – Eine Zeitreise durch das Netzwerk menschlichen Wissens*, München/Zürich: Piper; original published as: *The Pinball Effect*, Little, Brown and Company, Boston, 1996.
- Bush, V., 1945, As we may think, *The Atlantic Monthly*, April <<http://www.ps.uni-sb.de/~duchier/pub/vbush/vbush.shtml>>; also published in: in: Nelson, Theodor H., 1987, *Literary Machines*.
- Calise, M. and Lowi, T. J., 2000, Hyperpolitics – Hypertext, Concepts and Theory-Making, *International Political Science Review* (July), from manuscript.

- Cameron, R. D., 1997, A Universal Citation Database as a Catalyst for Reform in Scholarly Communication, *First Monday* 2(4) <[http://www.firstmonday.dk/issues/issue2\\_4/cameron/index.html](http://www.firstmonday.dk/issues/issue2_4/cameron/index.html)>.
- Carley, K. and Wendt, K., 1991, Electronic Mail and Scientific Communication – A Study of the Soar Extended Research Group, *Knowledge: Creation, Diffusion, Utilization* 12(4), 406-440.
- Carr, L., Davis, H., De Roure, D., Hall, W. and Hill, G., 1996a, Open Information Services, *Fifth International World Wide Web Conference 1996*, <<http://www.ecs.soton.ac.uk/~lac/WWW96/Overview.html>>.
- Carr, L., Davis, H., Hall, W. and Hey, J., 1996b, *Using the World Wide Web as an electronic library* <<http://www.ecs.soton.ac.uk/~lac/elvira-full.html>>.
- Carr, L., Davis, H. C., De Roure, D. and Hall, W., 1998, *Application-independent link processing* <<http://eprints.ecs.soton.ac.uk/archive/00000820/>>.
- Carr, L., De Roure, D., Hall, W. and Hill, G., 1995, The Distributed Link Service: A tool for publishers, authors and readers, *ECSTR '95*, 1995 <<http://www.mmrg.ecs.soton.ac.uk/publications/papers/ecstr95/m95.1/ecstr.html>>.
- Carter, L. M., 1997, *Arguments in Hypertext: Order and Structure in Non-Sequential Essays*, Dissertation, Faculty of the Graduate School, University of Texas Austin.
- Chodorow, S., 1998, The Faculty, the University, and Intellectual Property, *Journal of Electronic Publishing* 3(3) <<http://www.press.umich.edu/jep/03-03/chodorow.html>>.
- Chompalov, I. and Shrum, W., 1999, Institutional Collaboration in Science: A Typology of Technological Practice, *Science, Technology, & Human Values* 24(3), 338-372.
- Christie, J., 1998, Texas Board of Education: Paving the Way for Electronic Textbooks, *Future of Print Media*, Fall, Kent State University <<http://www.futureprint.kent.edu/articles/christie01.htm>>.
- Coalition of Online Law Journals, 1998, *Citation Proposal: How to Cite to Electronic Journals* [Accessed on: 08-07 1998] <[http://www.richmond.edu/~jolt/e-journals/citation\\_proposal.html](http://www.richmond.edu/~jolt/e-journals/citation_proposal.html)>.
- Coates, J. F., 1971, Technology Assessment, The Benefits ... the Costs ... the Consequences, *The Futurist* (5), 225-231.
- Cole, J. R. and Cole, S., 1972, The Ortega Hypothesis, *Science* 178(4059), 368-178.
- Cole, S., 1998, How Does Peer Review Work and Can It be Improved? (Review Article), *Minerva* 36, 179-189.
- Cornford, J., 1999, The Virtual University is (paradoxically) the University Made Concrete, *joint Annenberg and iCS conference on New Media and Higher Education*, October 27-30, 1999, University of Southern California <<http://virtualsociety.sbs.ox.ac.uk/pick/pick6.htm>>.
- Coy, 1999, Die Entgrenzung der wissenschaftlichen Arbeit, *Virtuelle Wissenschaft, GEW Sommerschule*, Sylt <[http://waste.informatik.hu-berlin.de/Coy/Vortrag\\_Sylt\\_8\\_99/index.html](http://waste.informatik.hu-berlin.de/Coy/Vortrag_Sylt_8_99/index.html)>.
- Crane, D., 1972, *Invisible Colleges – Diffusion of Knowledge in Scientific Communities*, Chicago/London: The University of Chicago Press.
- Cristofori, A., Salvaterra, C. and Schmitzer, U. (Eds), 2000, *La rete di Arachne – Arachnes Netz. Beiträge zu Antike, EDV und Internet im Rahmen des Projekts “Telemachos” – Contributi su nuove tecnologie, didattica ed antichità classica nell’ambito del progetto “Telemaco”*, in series: Palingenesia, Vol. 71, Stuttgart: Steiner.
- CSTB (Computer Science and Telecommunications Board – Committee Toward a National Collaboratory: Establishing the User-Developer Partnership), 1993, *National Collaboratories: Applying Information Technology for Scientific Research*, Washington D.C.: National Academy Press <<http://www.nap.edu/catalog/2109.html>>.
- CSTB (Computer Science and Telecommunications Board), 1998, *Computing and the Humanities: Summary of a Roundtable Meeting*. Occasional Paper, No. 41, edited by American Council of Learned Societies <<http://www.acls.org/op41-toc.htm>>.
- CSU-SUNY-CUNY Joint Committee, 1997, *The Academic Library in the Information Age: Changing Roles*, commissioned by: Consortium for Educational Technology for University Systems: CETUS <[http://www.cetus.org/acad\\_lib.pdf](http://www.cetus.org/acad_lib.pdf)>.

- Cummings, A. M., Witte, M. L., Bowen, W. G., Lazarus, L. O. and Ekman, R. H., 1992, *University Libraries and Scholarly Communication*; report, commissioned by: The Andrew W. Mellon Foundation: Association of Research Libraries  
<<http://www.lib.virginia.edu/mellon/mellon.html>>.
- Darnton, R., 1999, The New Age of the Book, *New York Review of Books*, March 18, 1999  
<<http://www.nybooks.com/nyrev/WWWarchdisplay.cgi?19990318005F#top>>.
- Dator, J., 1998, The future of universities, *Futures* 30(7), 615-623.
- Davenport, E. and Cronin, B., 1990, Hypertext and the conduct of Science, *Journal of Documentation* 46(3), 175-192.
- David, M. and Zeitlyn, D., 1996, What are they doing? Dilemmas in analyzing bibliographic searching: cultural and technical networks in academic life, *Sociological Research Online* 1(4)  
<<http://www.socresonline.org.uk/1/4/2.html>>.
- Davidson, L. A. and Douglas, K., 1998, Digital Object Identifiers: Promise and Problems for Scholarly Publishing, *Journal of Electronic Publishing* 4(2)  
<<http://www.press.umich.edu/jep/04-02/davidson.html>>.
- Day, C., 1998, Digital Alternatives: Solving the Problem or Shifting the Costs?, *Journal of Electronic Publishing* 4(1) <<http://www.press.umich.edu/jep/04-01/day.html>>.
- de Alva, J. K., 1999, Remaking the Academy in the Age of Information, *Issues in Science and Technology (Winter 1999/2000)*, 52-58.
- De Rosa, R., 2000, Political Science Scholarly Sources on the Web: What, Where and Why?, *IPSA*, August 1-5, 2000, Quebec.
- Delamothe, T. and Smith, R., 2001, PubMed Central: creating an Aladdin's cave of ideas, *British Medical Journal online* (322), 1-2 <<http://www.bmj.com/cgi/content/full/322/7277/1>>.
- Dementi, M. A. E., 1998, Access and Archiving as a New Paradigm, *Journal of Electronic Publishing* 3(3) <<http://www.press.umich.edu/jep/03-03/dementi.html>>.
- Dennett, D. C., 1997, *Darwins gefährliches Erbe – Die Evolution und der Sinn des Lebens*, Hamburg: Hoffmann und Campe.
- Denning, P. J., 1996, Journals' End? or Electronic publishing Plan a Must, *Computing Research News (September)* <<http://www.acm.org/pubs/JournalsEnd.html>>.
- Denning, P. J. and Rous, B., 1995, The ACM Electronic Publishing Plan, *Communications of the ACM (April)* <[http://www.acm.org/pubs/epub\\_plan.html](http://www.acm.org/pubs/epub_plan.html)>.
- Deutsche Sektion ISKO (Internationale Gesellschaft für Wissensorganisation), 1999, *Empfehlungen zu Listserver-Diskussionen (Vorversion)*; web document [Accessed on: 15-07 2002]  
<[http://www.bonn.iz-soz.de/wiss-org/emp\\_f\\_in-diskussionen.htm](http://www.bonn.iz-soz.de/wiss-org/emp_f_in-diskussionen.htm)>.
- Dewar, J. A., 1998, *The information age and the printing press: Looking backward to see ahead*; RAND Online Papers, Washington: RAND Corp.  
<<http://www.rand.org/publications/P/P8014/>>.
- DiBona, C., Ockman, S. and Stone, M., 1999, Introduction, in: DiBona, C., Ockman, S. and Stone, M. (Eds): *Open Sources: Voices from the Open Source Revolution*, Cambridge et al.: O'Reilly  
<<http://www.oreilly.com/catalog/opensources/book/intro.html>>.
- Dicks, B. and Mason, B., 1998, Hypermedia and Ethnography: Reflections on the Construction of a Research Approach, *Sociological Research Online* 3(3)  
<<http://www.socresonline.org.uk/3/3/3.html>>.
- Diekmann, A., 2002, *Diagnose von Fehlerquellen und methodische Qualität in der sozialwissenschaftlichen Forschung*. ITA manu:script, No. ITA-02-04 (June), edited by Institute of Technology Assessment <[http://www.oew.ac.at/ita/pdf/ita\\_02\\_04.pdf](http://www.oew.ac.at/ita/pdf/ita_02_04.pdf)>.
- Doane, W., 1998, A Comparison of Display Technologies Suitable for E-Books, *Future of Print Media*, Fall, Kent State University <<http://www.futureprint.kent.edu/articles/doane01.htm>>.
- Dreier, T., 1998, Copyright principles in a digital scientific world, in: Butterworth, I. (Ed.): *The impact of electronic publishing on the academic community: an international workshop organized by the Academia Europaea and the Werner-Gren Foundation*, London/Miami: Portland Press, 48-51.

- Dresskell, A., 1996, Computer-Enhanced Copy-Editing: A Survey Report, *Journal of Scholarly Publishing* 27(3), 151-165.
- Drösser, C., 1996, Ein verhängnisvolles Erbe, in: Bollmann, S. (Ed.): *Kursbuch Neue Medien – Trends in Wirtschaft und Politik, Wissenschaft und Kultur*, 2<sup>nd</sup> edition, Mannheim: Bollmann, 148-151.
- Duguid, P., 1996, Material matters: The past and futurology of the book, in: Nunberg, G. (Ed.): *The Future of the Book*, Berkeley, USA: University of California Press, 63-102.
- Dunbar, R., 1998, *Klatsch und Tratsch – Wie der Mensch zur Sprache fand*, München: C. Bertelsmann.
- Dutton, W. H. and Loader, B. D. (Eds), 2002, *Digital Academe – New Media in Higher Education and Learning*, London: Routledge.
- Duursma, D., 2002, Wettbewerbsrechtlicher Unterlassungsanspruch gegen Hyperlinks, in: Plöckinger, O., Duursma, D. and Helm, G. (Eds): *Aktuelle Entwicklungen im Internet-Recht. Beiträge zur zivil-, straf- und verwaltungsrechtlichen Diskussion*, Wien: Neuer Wissenschaftlicher Verlag, 75-88.
- Eaves, M., 1998, Behind the Scenes at the William Blake Archive: Collaboration Takes More Than E-mail, *Journal of Electronic Publishing* 3(2) <<http://www.press.umich.edu/jep/03-02/blake.html>>.
- Encarnaço, J. L., Ledihold, W. and Reuter, A., 1998, *Hochschulentwicklung durch neue Medien – Vision 2005*, commissioned by: BIG – Bildungswege in der Informationsgesellschaft, Bertelsmann Stiftung and Heinz Nixdorf Stiftung, No. 153: Expertenkreis 'Hochschulentwicklung durch neue Medien – Vision 2005' <<http://www.big-internet.de/download/Szenario2005.doc>>.
- European Commission (Information Society Directorate-General), 2002, *Research Networking in Europe – Striving for global leadership*; Glossy Report, 15.9., Luxembourg: Office for Official Publications of the European Communities <<http://www.dante.net/pubs/ECbrochure.html>>.
- Euzenat, J., 1995, Building consensual knowledge bases: context and architecture, in: Mars, N. (Ed.): *Towards very large knowledge bases (actes 2nd international conference on building and sharing very large-scale knowledge bases (KBKS), Enschede (NL), (10-13 avril) 1995)*, Amsterdam: IOS press, 143-155 <<ftp://ftp.inrialpes.fr/pub/shepa/publications/euzenat95a.ps.gz>>.
- Euzenat, J., 1998, *Cooperative elaboration of knowledge bases on the World-wide web* [Accessed on: 02-01 2001] <<http://www.inrialpes.fr/exmo/papers/bullafia98/related.html>>; also published as: Bulletin de l'AFIA 34:6-9, 1998.
- Evans, R. J., 1997, *In defence of history*, London: Granta Books.
- Ferris, S. P., 2002, The effects of computers on traditional writing, *Journal of Electronic Publishing* 8(1) <<http://www.press.umich.edu/jep/08-01/ferris.html>>.
- Fidler, R., 1998a, Electronic Books: A Good Idea Waiting for the Right Technology, *Future of Print Media*, Fall, Kent State University <<http://www.futureprint.kent.edu/articles/fidler02.htm>>.
- Fidler, R., 1998b, Life After 2001: Redefining Print Media in the Cyber Age, *Future of Print Media*, Summer, Kent State University <<http://www.futureprint.kent.edu/articles/fidler01.htm>>.
- Finholt, T. A., 2001, Collaboratories, in: Cronin, B. (Ed.): *Annual Review of Information Science and Technology*, (quoted from manuscript) <[http://intel.si.umich.edu/crew/Technical%20reports/Finholt\\_Collaboratories\\_10\\_06\\_00.pdf](http://intel.si.umich.edu/crew/Technical%20reports/Finholt_Collaboratories_10_06_00.pdf)>.
- Finholt, T. A. and Brooks, J. M., 1997, Collaboratory for Research on Electronic Work – Analysis of JSTOR: The impact on scholarly practice of access to on-line journal archives, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/finholt.html>>.
- Finholt, T. A. and Olson, G. M., 1997, From Laboratories to Collaboratories: A New Organisational Form for Scientific Collaboration, *Psychological Science* 8(1), 28-36 <[http://intel.si.umich.edu/crew/Technical%20reports/Finholt\\_From\\_laboratories\\_to\\_collaboratories\\_07\\_22\\_96.pdf](http://intel.si.umich.edu/crew/Technical%20reports/Finholt_From_laboratories_to_collaboratories_07_22_96.pdf)>.

- Fishburn, P. C., Odlyzko, A. M. and Siders, R. C., 1997, Fixed fee versus unit pricing for information goods: competition, equilibria, and price wars, *Internet Publishing and Beyond: Economics of Digital Information and Intellectual Property*, 1997-01-23/25, Cambridge, MA  
<<http://ksgwww.harvard.edu/iip/econ/odlyzko.html>>.
- Fisher, J. H., 1993, Copyright: The Glue of the System, *Journal of Electronic Publishing* 1(15)  
<<http://www.press.umich.edu/jep/works/fisher.copyright.html>>.
- Fisher, J. H., 1997, Comparing Electronic Journals to Print Journals: Are There Savings?, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/fisher.html>>.
- Flusser, V., 1996, Hypertext – Über das Schicksal von Büchern, in: Bollmann, S. (Ed.): *Kursbuch Neue Medien – Trends in Wirtschaft und Politik, Wissenschaft und Kultur*, 2<sup>nd</sup> edition, Mannheim: Bollmann, 109-111.
- Frankel, M. S., Elliott, R., Blume, M., Bourgois, J.-M., Hugenholtz, B., Lindquist, M. G., Morris, S. and Sandwall, E. (International Working Group), 1999, *Defining and Certifying Electronic Publication in Science – A Proposal to the International Association of STM Publishers*; Last update: October 1999 [Accessed on: 06-09 2001]  
<<http://associnst.ox.ac.uk/~icsuinfo/aaas-stm.htm>>.
- Franks, J., 1993, *What is an Electronic Journal? (Message to the Public-Access Computer Systems Forum <PACS-L> in four parts)*; Last update: January 1993  
<<http://listserv.uh.edu/cgi-bin/wa?A2=ind9301c&L=pacs-l&P=5953,6067,6181,6295>>.
- Freeman, L. C., 1984, The impact of computer based communication on the social structure of an emerging scientific speciality, *Social Networks* 6, 201-221.
- Friedewald, M., 1998, Blick zurück auf den Memex: Anmerkungen zu Vannevar Bushs Aufsatz "As we may think", *Informatik Forum* 12(3-4), 177-185.
- Frisch, E., 1996, Elektronische Fachzeitschriften im WWW als Paradigmenwechsel im System wissenschaftlichen Publizierens, in: Krause, J., Herfurth, M. and Marx, J. (Eds): *Herausforderungen an die Informationswirtschaft – Informationsverdichtung, Informationsbewertung und Datenvisualisierung – Proceedings des 5. Internationalen Symposiums für Informationswissenschaft (ISF96), Humboldt-Universität zu Berlin, 17-19 October 1996*, Konstanz: UVK-Universitätsverlag, 361-374.
- Fröhlich, G., 1988, Beiträge von Information und Dokumentation zur Verbesserung von Wissenschaftskommunikation und Forschungssynthetisierung, in: Kreutz, H. (Ed.): *Pragmatische Soziologie: Beiträge zur wissenschaftlichen Diagnose und praktischen Lösung gesellschaftlicher Gegenwartprobleme*, Opladen: Lesek und Budrich, 435-444.
- Fröhlich, G., 1992, Die wissenschaftliche Informationsexplosion – eine Herausforderung für Lehre und Forschung – Zum Symposium 'Mangel im Überfluß, Wissenschaftskommunikation im Zeitalter der Informationsexplosion' an der Johannes Kepler Universität Linz, *FDZ* (3-4), 9-11.
- Fröhlich, G., 1993, 'Demokratisierung' der Wissenschaftskommunikation durch Fachinformationssysteme und Computernetze?, in: Institut für Höhere Studien (Ed.): *Information und Macht*, Wien.
- Fröhlich, G., 1996a, Netz-Euphorien – Zur Kritik digitaler und sozialer Netz(werk-)metaphern, in: Schramm, A. (Ed.): *Philosophie in Österreich*, Wien: Hoelder-Pichler-Tempsky, 292-306  
<<http://www.iwp.uni-linz.ac.at/lxe/wf2k/pdf/Netz-Euphorien.pdf>>.
- Fröhlich, G., 1996b, The (Surplus) Value of Scientific Communication, *Review of Information Science* 1(II) <[http://www.inf-wiss.uni-konstanz.de/RIS/1996iss02\\_01/articles01/02.html](http://www.inf-wiss.uni-konstanz.de/RIS/1996iss02_01/articles01/02.html)>.
- Fröhlich, G., 1997, *online 'classic' – Datenbankrecherchen im 'Expertenmodus'*; online syllabus, commissioned by: Institut für Datenverarbeitung in den Sozial- und Wirtschaftswissenschaften, Linz: Universitätsbibliothek <<http://www.ubl.uni-linz.ac.at/Informationsgewinnung/>>.
- Fröhlich, G., 1999, Das Messen des leicht Meßbaren. Output-Indikatoren, Impact-Maße: Artefakte der Szientometrie?, in: Becker, J. and Göhring, W. (Eds): *Kommunikation statt Markt – Zu einer alternativen Theorie der Informationsgesellschaft*; *GMD Report 61*, Sankt Augustin: Gesellschaft für Mathematik und Datenverarbeitung, 27-38  
<<http://www.gmd.de/publications/report/0061/>>.

- Frühwald, W., 1998, Das Ende der Gutenberg-Galaxis – Über den Einfluß des Mediums auf den Inhalt wissenschaftlicher Publikationen, *Leviathan* 26(3), 305-318.
- Fuller, S., 1998, Why even scholars don't get a free lunch in cyberspace – My adventures with a tunnelvisionary, in: Loader, B. D. (Ed.): *Cyberspace Divide – Equality, Agency, and Policy in the Information Society*, London/New York: Routledge, 123-145.
- Füssel, S., 2001, Geisteswissenschaften und digitale Medien, in: *Wissenschaftspublikationen im digitalen Zeitalter*, Wiesbaden: Harrassowitz, 19-42.
- Gerling, R. W., 1996, Internet: juristische Probleme und kein Ende, *Datenschutz und Datensicherheit* 20, 218-223.
- Geser, H. (University of Zurich: Institute of Sociology), 1996, *Computer-induced changes in intellectual and scientific work – A sociological perspective*; online manuscript [Accessed on: 17-02 2003] <<http://www.geser.net/cowo.htm>>.
- Getz, M., 1997, Electronic Publishing in Academia: An Economic Perspective, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/getz.html>>; also published in: *Journal of Electronic Publishing* Vol 3 No 1.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. and Trow, M., 1994, *The new production of knowledge – The dynamics of science and research in contemporary societies*, London et al.: Sage.
- Gibbons, M. and Wittrock, B. (Eds), 1985, *Science as a Commodity. Threats to the open community of scholars*, Harlow: Longman.
- Gibson, W., 1984, *Neuromancer*, New York: ACE Books.
- Ginsparg, P., 1994, *After Dinner Remarks, 14 Oct '94, APS meeting at LANL* [Accessed on: 13-08 2002] <<http://arxiv.org/blurb/pg14Oct94.html>>.
- Ginsparg, P., 1996, Winners and Losers in the Global Research Village, *UNESCO conference, session Scientist's View of Electronic Publishing and Issues Raised*, 19-23 Feb 1996, Paris <<http://xxx.lanl.gov/blurb/pg96unesco.html>>.
- Givler, P., 2000, Hat die wissenschaftliche Monographie noch eine Chance?, *IBLC 2000*, 21.-22.10. 2000, Frankfurt.
- Glanz, J., 2001, The Web as Dictator of Scientific Fashion, *New York Times*, 19-06 2001.
- Glaser, B. G. and Strauss, A. L., 1967, *The Discovery of Grounded Theory – Strategies for Qualitative Research*, New York: Aldine.
- Glatthaar, W., 1996, Wissenschaft braucht Kommunikation: wissenschaftliche Kommunikation in einer digitalen Welt, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek: digitale Information in Wissenschaft, Verlag und Bibliothek*, Wiesbaden: Harrassowitz, 30-37.
- Glott, P., 1998, Medienpolitik als Wissenschafts- und Bildungspolitik, in: Kubicek, H., Braczyk, H.-J., Klumpp, D., Müller, G., Neu, W., Raubold, E. and Roßnagel, A. (Eds): *Lernort Multimedia*, Heidelberg: R.v.Decker's Verlag, 11-21.
- Godlee, F., 2001, Editorial: Publishing study protocols: making them visible will improve registration, reporting and recruitment, *BMC News and Views (online)* 2(4) <<http://www.biomedcentral.com/1471-8219/2/4/>>.
- Goldhaber, M. H., 1997, The Attention Economy and the Net, *Internet Publishing and Beyond: Economics of Digital Information and Intellectual Property*, 1997-01-23/25, Cambridge, MA <<http://ksgwww.harvard.edu/iip/econ/goldhaber.htm>>.
- Goltzsch, P., 1997, *Das soziale Paradox der Technik illustriert am Usenet*, Wissenschaftliche Hausarbeit, Universität Hamburg Hamburg <<http://www.minerva.hanse.de/use/>>.
- Gomes, S. and Meadows, J., 1998, Perceptions of Electronic Journals in British Universities, *Journal of Scholarly Publishing* 29(April), 174-181.
- Gordesch, J. and Raasch, A. (Eds), 1996, *Wissensvermittlung und Informationstechnologien in den Geistes- und Sozialwissenschaften*, Frankfurt am Main.
- Göttker, S., 1999, Elektronische Zeitschriften – Wie kommen die Volltexte in die Bibliothek?, *Bibliotheksdienst* 33(6), 972-979.



- Götze, D., 1996, Die Rolle des Verlags, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek: digitale Information in Wissenschaft, Verlag und Bibliothek*, Wiesbaden: Harrassowitz, 68-72.
- Gradmann, S., 2002, German Academic Publishers. Ein Vernetzungsprojekt für akademische E-Verlage, *Bibliotheksdienst* 36(7), 857-872 <<http://bibliotheksdienst.zlb.de/2002>>.
- Graetzel von Graetz, P., 2000, Ein Paradigmenwechsel in der Wissenschaftspublizistik, *Telepolis*, 27.1.2000 <<http://www.heise.de/tp/deutsch/inhalt/co/5726/1.html>>.
- Granger, S., Russell, K. and Weinberger, E., 2000, *Cost Elements of Digital Preservation*. Cedars Working Papers (October) <<http://www.leeds.ac.uk/cedars/colman/costElementsOfDP.doc>>.
- Grassmuck, V., 2002, *Freie Software zwischen Privat- und Gemeineigentum*; in series: Themen und Materialien, edited by Bundeszentrale für politische Bildung, Bonn: bpb.
- Grenier, G., 1998, Creating Wiley Interscience: Moving from Ink Molecules to Computer Bits, *Journal of Electronic Publishing* 3(4) <<http://www.press.umich.edu/jep/03-04/grenier.html>>.
- Grenquist, P., 1998, Why I Don't Read Electronic Journals: An Iconoclast Speaks Out, *Journal of Electronic Publishing* 3(1) <<http://www.press.umich.edu/jep/03-01/iconoclast.html>>.
- Gresham, J. L., 1994, From invisible college to cyberspace college: computer conferencing and the transformation of informal scholarly communication networks, *Interpersonal Computing and Technology* 2(4), 37-52 <<http://jan.ucc.nau.edu/~ipct-j/1994/n4/gresham.txt>>.
- Grötzer, R., 2002, Google Studium Einfluss? – Eine Forschungsaufgabe: Wie verändern Suchmaschinen wissenschaftliches Arbeiten?, *Telepolis*, 18-11 2002 <<http://www.heise.de/tp/deutsch/special/auf/13419/1.html>>.
- Grötschel, M. and Lügger, J., 1996, Neue Produkte für die digitale Bibliothek: die Rolle der Wissenschaften, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek – Digitale Information in Wissenschaft, Verlag und Bibliothek*, Wiesbaden: Harrassowitz, 38-67 <[http://www.zib.de/groetschel/pubnew/paper/groetschelluegger1996b\\_pp.ps.gz](http://www.zib.de/groetschel/pubnew/paper/groetschelluegger1996b_pp.ps.gz)>; also published in: Konrad-Zuse-Zentrum für Informationstechnik Berlin (ZIB) Technical Report TR 96-05 (März 1996).
- Grudin, J., 1994, Groupware and Social Dynamics: Eight Challenges for Developers, *ACM'94* <<http://www.ics.uci.edu/~grudin/Papers/CACM94/cacm94.html>>; also published in: Communications of the ACM, 37, 1, 92-105.
- Guedon, J.-C., 1994, Why Are Electronic Publications Difficult to Classify? The Orthogonality of Print and Digital Media, in: Association of Research Libraries (Ed.): *Directory of Electronic Journals, Newsletters and Academic Discussion Lists*, 4<sup>th</sup> edition <<http://www.people.virginia.edu/~pm9k/libsci/guedon.html>>.
- Guernsey, L., 1998, A Provost Challenges His Faculty to Keep Copyright on Journal Articles, *The Chronicle of Higher Education*, 1998-09-18 <<http://www.chronicle.com/free/v45/i04/04a02901.htm>>.
- Guthrie, K. M., 1997, JSTOR: The Development of a Cost-Driven, Value-Based Pricing Model, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/guthries.html>>.
- Hagler, M. O., Rutledge, J. C., Marcy, W. M. and Batchman, T. E., 1998, Archival Journals: perspectives Gained by E-Publishing IEEE Transactions on Education, *Journal of Electronic Publishing* 4(2) <<http://www.press.umich.edu/jep/04-02/hagler.html>>.
- Hahn, S., 1998, Akademische HeimarbeiterInnen – Die Forschung in den Geistes- und Kulturwissenschaften ist eine sehr intime, *BUKO Info* (2), 32-35.
- Hamilton, R. and Shory, P., 1997, Patterns of Use for the Bryn Mawr Reviews, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/hamilton.html>>.
- Hapke, T., 1999, eXamples of Modern Libraries – Publikation, Dokument und Format (XML – PDF) in der Bibliothek der Zukunft, *ABI-Technik* 19(3), 244-249.
- Harasim, L. M. and Winkelmann, T., 1990, Computer-Mediated Scholarly Collaboration – A Case Study of an International Online Educational Research Workshop, *Knowledge: Creation, Diffusion, Utilization* 11(4), 382-409.

- Hardie, A., 1999, Why is XML the future for the sharing of parliamentary information?, *ECPRD Conference*, 11 October 1999, Stockholm.
- Harmsze, F. A. P., 2000, *A modular structure for scientific articles in an electronic environment*, Ph.D. thesis, Van der Waals-Zeeman Laboratorium Amsterdam  
<<http://www.science.uva.nl/projects/commphys/papers/thesisfh/Front.html>>.
- Harmsze, F.-A. P. and Kircz, J. G., 1998, Form and Content in the Electronic Age, *IEEE- ADL'98 Advances in Digital Libraries Conference Session: Electronic Publishing: Defining the Technical and Scientific Information Package of the Future*, April 22/25, Santa Barbara CA  
<<http://www.science.uva.nl/projects/commphys/papers/adl98m.htm>>.
- Harmsze, F. A. P., van der Tol, M. C. and Kircz, J. G., 1999, A modular model for electronic scientific articles, *Conferentie Informatiewetenschap 1999*, November 12, Centrum voor Wiskunde en Informatica, Amsterdam  
<<http://www.science.uva.nl/projects/commphys/papers/infwet/infwet.html>>.
- Harnad, S., 1990, Scholarly Skywriting and the Prepublication Continuum of Scientific Inquiry, *Psychological Science* 1, 342-343  
<<http://www.cogsci.soton.ac.uk/~harnad/Papers/Harnad/harnad90.skywriting.html>>;  
also published in: *Current Contents* 45: 9-13.
- Harnad, S., 1991, Post-Gutenberg Galaxy: The Fourth Revolution in the Means of Production of Knowledge, *The Public-Access Computer Systems Review* 2(1), 39-53  
<<http://www.cogsci.soton.ac.uk/~harnad/Papers/Harnad/harnad91.postgutenberg.html>>.
- Harnad, S., 1993, Implementing Peer Review on the Net: Scientific Quality Control in Scholarly Electronic Journals, *International Conference on Refereed Electronic Journals: Towards a Consortium for Networked Publications – Implementing Peer Review on the Net: Scientific Quality Control in Scholarly Electronic Journals*, 1993-10-01/02, Univ. of Manitoba, Winnipeg  
<<http://cogsci.soton.ac.uk/~harnad/Papers/Harnad/harnad96.peer.review.html>>.
- Harnad, S., 1995, The Post-Gutenberg Galaxy: How to get there from here, *Times Higher Education Supplement (THES)*, 1995-05-12 <<http://cogsci.soton.ac.uk/~harnad/THES/thes.html>>.
- Harnad, S., 1997, Learned Inquiry and the Net: The Role of Peer Review, Peer Commentary and Copyright, *Antiquity* (71), 1042-1048  
<<http://cogprints.ecs.soton.ac.uk/archive/00001694/00/harnad98.toronto.learnedpub.html>>.
- Harnad, S., 1998a, The Invisible Hand of Peer Review, *Nature [online]*, 1998-11-05  
<<http://www.cogsci.soton.ac.uk/~harnad/nature2.html>>.
- Harnad, S., 1998b, On-line journals and financial fire walls, *Nature* 395(9), 127-128  
<<http://www.nature.com/cgi-taf/DynaFixer.taf?rqid=/395127A0.frameset>>.
- Harnad, S., n.y., *Copyright FAQ – (CogPrint Archive)*; Last update: no date given [Accessed on: 15.2.2001 (no longer available; a copy is with the author)] <<http://cogprints.soton.ac.uk/>>.
- Harnad, S. and Hemus, M., 1998, All or none: no stable hybrid or half-way solutions for launching the learned periodical literature into the post-Gutenberg galaxy, in: Butterworth, I. (Ed.): *The impact of electronic publishing on the academic community: an international workshop organized by the Academia Europaea and the Werner-Gren Foundation*, London/Miami: Portland Press, 18-27.
- Harnad, S., Varian, H. and Parks, B., 2000, Academic publishing in the online era what will be for-fee and what will be for-free?, *Culture Machine* (2)  
<[http://culturemachine.tees.ac.uk/Cmach/Backissues/j002/Articles/art\\_harn.htm](http://culturemachine.tees.ac.uk/Cmach/Backissues/j002/Articles/art_harn.htm)>.
- Harter, S. P., 1996a, The Impact of Electronic Journals on Scholarly Communication: A Citation Analysis, *The Public-Access Computer Systems Review* 7(5)  
<<http://info.lib.uh.edu/pr/v7/n5/hart7n5.html>>.
- Harter, S. P., 1996b, What is a Digital Library? Definitions, Content, and Issues, *KOLISS DL '96: International Conference on Digital Libraries and Information Services for the 21st Century*, 1996-09-10/13, Seoul, Korea <<http://php.indiana.edu/~harter/korea-paper.htm>>.
- Harter, S. P. and Kim, H. J., 1996, Electronic Journals and Scholarly Communication: A Citation and Reference Study, *Midyear Meeting of the American Society for Information Science*, 1996-05-20/22, San Diego <<http://php.indiana.edu/~harter/harter-asis96midyear.html>>.



- Hartmann, F., 2001, Akademische OpenCulture oder globales WissensBusiness, *Telepolis*, 10.5.2001 <<http://www.heise.de/tp/deutsch/inhalt/co/7593/1.html>>.
- Hartmann, F., 2002, Wissensgesellschaft und Medien des Wissens, *SWS-Rundschau* 42(3), 245-266.
- Hauffe, H., 1996, Die elektronische Revolution und ihre Auswirkungen auf Verlage und Bibliotheken, in: Bollmann, S. (Ed.): *Kursbuch Neue Medien – Trends in Wirtschaft und Politik, Wissenschaft und Kultur*, 2<sup>nd</sup> edition, Mannheim: Bollmann, 137-147.
- Hearn, G. and Scott, D., 1998, Students staying home – Questioning the wisdom of a digital future for Australian universities, *Futures* 30(7), 731-737.
- Hecllo, H., 1978, Issue Networks and the Executive Establishment, in: King, A. (Ed.): *The New American Political System*, Washington DC: American Enterprise Institute, 87-124.
- HEFC (Higher Education Founding Councils in the U.K.), 1994, *RAE96 1/94 1996 Research Assessment Exercise, circular letter*; Last update: June 1994 [Accessed on: 27.8. 2002] <[http://www.niss.ac.uk/education/hefc/rae96/c1\\_94.html](http://www.niss.ac.uk/education/hefc/rae96/c1_94.html)>.
- Heidrich, J., 2003, Who is to flame, *Telepolis* 07-01 2003 <<http://www.heise.de/tp/deutsch/inhalt/on/13916/1.html>>.
- Heimeriks, G. and van der Besselaar, P., 2002, Computer Mediated Science: A case study, *AoIR* 3.0, 14-16 Oct., Maastricht.
- Hellweg, H., 1999, Der GESIS Socio-Guide: ein kooperatives Link-verwaltungs-System, *ISKO 99 "Globalisierung und Wissensorganisation"*, 23.-25.9.1999, Hamburg <<http://www.bonn.iz-soz.de/wiss-org/beitraege/Hellweg.doc>>.
- Hert, P., 1997, The Dynamics of On-line Interactions in a Scholarly Debate, *The Information Society* 13(4), 329-360.
- Hibbitts, B. J., 1996a, Last Writes? Reassessing the Law Review in the Age of Cyberspace, *New York University Law Review* 71(June), 615-688 <<http://www.law.pitt.edu/hibbitts/lastrev.htm>>; also published in: online original February 5, 1996.
- Hibbitts, B. J., 1996b, Yesterday Once More: Skeptics, Scribes and the Demise of Law Reviews, *Akron Law Review* 30, 267 <<http://www.law.pitt.edu/hibbitts/akron.htm>>; also published in: online original March 6, 1997.
- Hilberer, T., 2001, Gründung eines elektronischen Hochschulverlages auf Verbund-Ebene. Vorüberlegungen und Thesen, *Bibliotheksdienst* 35(12), 1629-1632 <[http://bibliotheksdienst.zlb.de/2001/01\\_12\\_03.pdf](http://bibliotheksdienst.zlb.de/2001/01_12_03.pdf)>.
- Hitchcock, S., 2002, *Perspectives in Electronic Publishing: Experiments with a New Electronic Journal Model*, Ph.D. thesis, Faculty of Engineering and Applied Science, Department of Electronics and Computer Science, Southampton University <<http://www.ecs.soton.ac.uk/~sh94r/Jnls-research/thesis/>>.
- Hitchcock, S., Carr, L. and Hall, W., 1996, A survey of STM online journals 1990-95: the calm before the storm, in: Mogge, D. (Ed.): *Directory of Electronic Journals, Newsletters and Academic Discussion Lists*, 6<sup>th</sup> edition, Washington, D.C.: Association of Research Librarians, 7-32 <<http://journals.ecs.soton.ac.uk/survey/survey.html>>.
- Hitchcock, S., Carr, L. and Hall, W., 1997a, Web journals publishing: a UK perspective [updated paper given at the 20<sup>th</sup> annual conference of the UK Serials Group, Edinburgh, April 1997], *Serials* 10(3), 285-299 <<http://journals.ecs.soton.ac.uk/uksg.htm>>.
- Hitchcock, S., Carr, L., Harris, S., Hey, J. M. N. and Hall, W., 1997b, Citation Linking: Improving Access to Online Journals, *Second ACM International Conference on Digital Libraries*, 1997-06-23/26, Philadelphia <<http://journals.ecs.soton.ac.uk/acmdl97.htm>>.
- Hitchcock, S., Kimberley, R., Harris, S., Carr, L. and Hall, W., 1998, Webs of Research: Putting the User in Control, *IRISS '98*, 1998-03-25/27, Bristol, U.K. <<http://sosig.ac.uk/iriss/papers/paper42.htm>>.
- Hitchcock, S., Queck, F., Carr, L., Hall, W., Witbrock, A. and Tarr, I., 1997c, Linking Everything to Everything: Journal Publishing Myth or Reality, *ICCC/IFIP Conference on Electronic Publishing: New Models and Opportunities '97*, August 1997, Canterbury, U.K. <<http://journals.ecs.soton.ac.uk/IFIP-ICCC97.html>>.

- Hochschulrektorenkonferenz (BRD), 1996, *Moderne Informations- und Kommunikationstechnologien ("Neue Medien") in der Hochschullehre (Empfehlung des 179 – Plenums vom 9 – Juli 1996)*; Last update: 1996-07-09 [Accessed on: 09-07 1999] <<http://www.hrk.de/beschluesse/1868.htm>>.
- Hockey, S., 1997a, Electronic Texts: The Promise and the Reality, *American Council of Learned Societies Newsletter* 4(4) <<http://www.acls.org/n44hock.htm>>.
- Hockey, S., 1997b, Making Technology Work for Scholarship: Investing in the Data, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/hockey.html>>.
- Hoeren, T., 1997a, Das Problem des Multimediaentwicklers: der Schutz vorbestehender Werke, in: Lehmann, M. (Ed.): *Internet- und Multimediarecht (Cyberlaw)*, Stuttgart: Schäffer-Poeschel Verlag, 79-94.
- Hoeren, T., 1997b, Die Reichweite gesetzlicher Schranken und Lizenzen, in: Lehmann, M. (Ed.): *Internet- und Multimediarecht (Cyberlaw)*, Stuttgart: Schäffer-Poeschel Verlag, 95-110.
- Hoffman, A. C., 1993, Die Texaco-Entscheidung: Fotokopieren und "Fair use" im U.S.-amerikanischen Urheberrecht, *Medienrecht* (1), 8.
- Holling, C. S., 1999, Lessons for Sustaining Ecological Science and Policy through the Internet, *Conservation Ecology* 3(2), 16 <<http://www.consecol.org/Journal/vol3/iss2/art16/>>.
- Hrachovec, H., 1999, Unregelmäßigkeiten im Wissenschaftsbetrieb, in: Haberl, H. and Strohmeier, G. (Eds): *Kulturlandschaftsforschung*, Wien/New York: Springer, 125-127.
- Hunter, K., 1997, The Effect of Price: Early Observations, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/hunter.html>>.
- Hunter, K., 1998, Adding Value by Adding Links, *Journal of Electronic Publishing* 3(3) <<http://www.press.umich.edu/jep/03-03/hunter.html>>.
- Inayatullah, S., 1998, Alternative futures of the university, *Futures* 30(7), 589-602.
- Ingraham, B. D., 2000, Scholarly Rhetoric in Digital Media, *Journal of Interactive Media in Education*, labelled "pre-print version" <<http://www.jime.open.ac.uk/00/ingraham/ingraham.pdf>>.
- Interquest, 1997, *Network, Screen and Page: The Future of Reading in a Digital Age*; Report, commissioned by: The Electronic Document Systems Foundation, Torrance, CA: EDSF <<http://www.xplor.org/pubs/edsf/network.cfm>>.
- Jensen, K. B. (Ed.), 2002a, *A Handbook of Media and Communication Research. Qualitative and Quantitative Methodologies*, London: Routledge.
- Jensen, K. B., 2002b, Introduction – The state of convergence in media and communication research, in: Jensen, K. B. (Ed.): *A Handbook of Media and Communication Research. Qualitative and Quantitative Methodologies*, London: Routledge, 1-11.
- Jensen, M., 1998, Cost Recovery and Destiny: Developing the Appropriateness Matrix, *Journal of Electronic Publishing* 4(1) <<http://www.press.umich.edu/jep/04-01/jensen.html>>.
- Jochum, U. and Wagner, G., 1996, Cyberscience oder vom Nutzen und Nachteil der neuen Informationstechnologie für die Wissenschaft, *Zeitschrift für Bibliotheks- und Bibliographie* (6) <[http://www.klostermann.de/verlegen/jochu\\_02.htm](http://www.klostermann.de/verlegen/jochu_02.htm)>.
- Johnston, C., 1998, Electronic technology and its impact on libraries, *Journal of Librarianship and Information Science* 30(1), 7-24.
- Kartchner, C., 1998, Content Management Systems: Getting from Concept to Reality, *Journal of Electronic Publishing* 3(4) <<http://www.press.umich.edu/jep/03-04/kartchner.html>>.
- Kasdorf, B., 1998, SGML and PDF – Why We Need Both, *Journal of Electronic Publishing* 3(4) <<http://www.press.umich.edu/jep/03-04/kasdorf.html>>.
- Keller, A., 2001a, *Elektronische Zeitschriften im Wandel: Eine Delphi-Studie*, Wiesbaden: Harrasowitz.
- Keller, A., 2001b, Future Development of Electronic Journals: A Delphi Survey, *The Electronic Library* 19(6), 383-396.

- Keller, A., 2001c, Zukünftige Entwicklung Elektronischer Zeitschriften: eine Delphi-Stuide, 91. *Deutscher Bibliothekarstag*, 4. April, Bielefeld  
<<http://www.ethbib.ethz.ch/pub/EZeitschriften-BielefeldBibliothekartag.ppt>>.
- Kilker, J. and Gay, G., 1998, The Social Construction of a Digital Library: A Case Study Examining Implications for Evaluation, *Information Technology and Libraries* 17(2), 60-70.
- King, G., Keohane, R. O. and Verba, S., 1994, *Designing Social Inquiry. Scientific Inference in Qualitative Research*, Princeton, New Jersey: Princeton University Press.
- Kircz, J. G., 1995, Journal's end: scientific communications in the electronic future, *Wavelength, The Journal of Science, Society, and the Media* (10)  
<<http://www.science.uva.nl/projects/commphys/papers/bristolm.htm>>.
- Kircz, J. G., 1998a, Changing Presentations! Changing Science?, *Colloque L'écrit de la science/Writing Science, Organised by the journal Alliance for The European Science & Technology Form of the European Commission (DG XII)*, 1998-03-12/14, Nice  
<<http://www.science.uva.nl/projects/commphys/papers/nicem.htm>>.
- Kircz, J. G., 1998b, Modularity: The next form of scientific information presentation?, *Journal of Documentation* 54(2), 210-235  
<<http://www.science.uva.nl/projects/commphys/papers/jkmodulm.htm>>.
- Kircz, J. G., 2001, New practices for electronic publishing: how to maintain quality and guarantee integrity, *UNESCO-ICSU Conference Electronic Publishing in Science*, 2001-02-20/23, Paris  
<<http://users.ox.ac.uk/~icsuinfo/kirczppr.htm>>.
- Kircz, J. G. and Roosendaal, H. E., 1996, Understanding and shaping scientific information transfer, in: *Electronic publishing in science – Proceedings of the joint ICSU Press – UNESCO Expert Conference*, Paris, 106-116  
<<http://www.science.uva.nl/projects/commphys/papers/unescom.htm>>.
- Kirkup, G. and Jones, A., 2000, Information and Communication Technologies in Distance and Lifelong Learning, in: Ducatel, K., Webster, J. and Herrmann, W. (Eds): *The Information Society in Europe – Work and Life in an Age of Globalization*, Lanham et al.: Rowman&Littlefield.
- Klein, H. K. and Kleinman, D. L., 2002, The Social Construction of Technology: Structural Considerations, *Science, Technology & Human Values* 27(1), 28-52.
- Kling, R. and Callahan, E., 2002, *Electronic Journals, the Internet, and Scholarly Communication*. CSI Working papers, No. 01-04 (Draft 6.03), edited by Center for Social Informatics of Indiana University <<http://www.slis.indiana.edu/csi/WP/wp01-04B.html>>.
- Kling, R. and Covi, L., 1995, Electronic Journals and Legitimate Media in the Systems of Scholarly Communication, *The Information Society, Special issue on Electronic Journals and Scholarly Publishing* 11(4) <<http://www.kcl.ac.uk/humanities/cch/chwp/kling/index.html>>.
- Kling, R., Fortuna, J. and King, A., 2001, *The Real Stakes of Virtual Publishing: The Transformation of E-Biomed into PubMed Central*. CSI Working papers, No. 01-03 (Version 4.41B-2), edited by Center for Social Informatics of Indiana University  
<<http://www.slis.indiana.edu/csi/Wp/wp01-03B.html>>.
- Kling, R. and McKim, G., 1997, *Electronic Media and Scientific Communication: Opportunities, Complexities and Limitations*; consultancy paper, mimeo, commissioned by: OECD, September 1997: Indiana University School of Library and Information Science.
- Kling, R. and McKim, G., 1998, The Shaping of Electronic Media in Supporting Scientific Communication: The Contribution of Social Informatics, *European Science and Technology Forum: Electronic Communication and Research in Europe*, 15-17.4., Darmstadt/Seeheim  
<<http://www.slis.indiana.edu/kling/pubs/seeheim.htm>>;  
also published in: Maedows, J. and Böcker, H.-D., *Electronic Communication and Research in Europe*, Academia Europaea: European Commission, 175-192.
- Kling, R. and McKim, G., 1999, Scholarly Communication and the Continuum of Electronic Publishing, *Journal of the American Society for Information Science and Technology* 50(9), 890-906  
<<http://xxx.lanl.gov/ftp/cs/papers/9903/9903015.pdf>>.
- Kling, R. and McKim, G., 2000, Not Just a Matter of Time: Field Differences in the Shaping of Electronic Media in Supporting Scientific Communication, *Journal of the American Society for Information Science and Technology* 51(14), 1306-1320 (cited from manuscript)  
<<http://xxx.lanl.gov/ftp/cs/papers/9909/9909008.pdf>>.

- Kling, R., McKim, G., Fortuna, J. and King, A., 2000, *Scientific Collaboratories as Socio-Technical Interaction Networks: A Theoretical Approach* <<http://www.arxiv.org/abs/cs.CY/0005007>>.
- Knorr Cetina, K., 1999, *Epistemic Cultures – How the Sciences Make Knowledge*, Cambridge, MA/London: Harvard University Press.
- Kolb, D., 1994, *Socrates in the labyrinth: hypertext, argument, philosophy*; E-book (written in Story-space 1.75) on diskettes.
- Kolb, D. A., 1981, Learning Styles and Disciplinary Differences, in: Chickering, A. W. (Ed.): *The modern American college – Responding to the new realities of diverse students and a changing society*, San Francisco/London: Jossey-Bass, 232-255.
- Krajewski, M., 1997, Käptn Mnemo – Zur hypertextuellen Wissensspeicherung mit elektronischen Zettelkästen, in: Rost, M. (Ed.): *PC und Netz effektiv nutzen*, Kaarst: bhv Verlag, 90-102.
- Krempel, L., 2002, Introduction and Overview (translation from German), in: *Netzwerkvisualisierung: Prinzipien und Elemente einer graphischen Technologie zur multidimensionalen Exploration sozialer Strukturen (Network Visualization: Principles and Elements of a Graphical Technology for the Multidimensional Exploration of Social Structures)* <<http://www.mpi-fg-koeln.mpg.de/~lk/netvis/onlinepdf/englishintro1.pdf>>.
- Kresh, D. N., 2000, Offering High Quality Reference Service on the Web – The Collaborative Digital Reference Service (CDRS), *D-Lib Magazine* 6(6 (June)) <<http://www.dlib.org/dlib/june00/kresh/06kresh.html>>.
- Kuhlen, R., 1991, *Hypertext – Ein nicht-lineares Medium zwischen Buch und Wissensbank*, Berlin/Heidelberg et al.: Springer.
- Kulchitsky, R. and Lavoie, D., 2000, Hypertext Systems, Hypertext Computing and Case Study Research, *APSA Annual Meeting*, September 1-3, 2000, Washington D.C.
- Laga, G., 1998, *Internet im rechtsfreien Raum? Zur Anwendbarkeit bestehender Gesetze auf das Internet*, Dissertation, Universität Wien <<http://www.juridicum.at/forschung/laga/dissertation/diss.html>>.
- Langston, L., 1996, Scholarly Communication and Electronic Publication: Implications for Research, Advancement, and Promotion, in: Duda, A. L. (Ed.): *Untangling the Web: Proceedings of the Conference Sponsored by the Librarians Association of the University of California, Santa Barbara and Friends of the UCSB Library*, Santa Barbara: University of California, Santa Barbara Library <<http://www.library.ucsb.edu/untangle/langston.html>>.
- LaPorte, R. E., Marler, E., Akazawa, S., Gamboa, C., Shenton, C., Glosser, C., Villasenor, A. and Maclure, M., 1995, The death of biomedical journals, *British Medical Journal online* 310(May), 1387-1390 <<http://www.bmj.com/cgi/content/full/310/6991/1387>>.
- Law, J., 1992, *Notes on the Theory of the Actor Network: Ordering, Strategy and Heterogeneity*, edited by Centre for Science Studies – Lancaster University <<http://www.comp.lancs.ac.uk/sociology/soc054jl.html>>.
- Lederbogen, U. and Trebbe, J., 1999, Wissenschaft im Netz – Die Nutzung des Internets als Quelle für Wissenschaftsinformationen – Ergebnisse einer Online-Befragung, *ISKO 99 "Globalisierung und Wissensorganisation"*, 23.-25.9.1999, Hamburg <<http://www.bonn.iz-soz.de/wiss-org/beitraege/Lederbogen.doc>>.
- Lehmann, M., 1997a, Die Europäische Datenbankrichtlinie und Multimedia, in: Lehmann, M. (Ed.): *Internet- und Multimediarecht (Cyberlaw)*, Stuttgart: Schäffer-Poeschel Verlag, 67-78.
- Lehmann, M., 1997b, *Internet- und Multimediarecht (Cyberlaw)*, Stuttgart: Schäffer-Poeschl.
- Leib, V. and Werle, R., 1997, Wissenschaftsnetz in Europa und den USA – Die Rolle staatlicher Akteure, in: Werle, R. and Lang, C. (Eds): *Modell Internet? Entwicklungsperspektiven neuer Kommunikationsnetze*, Frankfurt/New York: Campus, 157-185.
- Lejeune, L., 1998, Before its Time: The Internet Public Library, *Journal of Electronic Publishing* 3(2) <<http://www.press.umich.edu/jep/03-02/IPL.html>>.
- Lesk, M., 1997, Digital Libraries: A Unifying or Distributing Force?, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/lesk.html>>.
- Lesk, M., 1998, How can we get high-quality electronic journals?, *IEEE Intelligent Systems (Jan/Feb)*, 12-13.

- Leskien, H., 1996, Von der Notwendigkeit der Differenzierung, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek: digitale Information in Wissenschaft, Verlag und Bibliothek*, Wiesbaden: Harrassowitz, 109-117.
- Lessig, L., 2001, *Code und andere Gesetze des Cyberspace*, Berlin: Berlin Verlag.
- Lewenstein, B. V., 1995, Do public electronic bulletin boards help create scientific knowledge? The cold fusion case, *Science, Technology & Human Values* 20(2), 123-149.
- Leydesdorff, L., 2001, *The Challenge of Scientometrics: The Development, Measurement, and Self-Organization of Scientific Communications*, Parkland: Universal Publishers/uPUBLISH <<http://www.upublish.com/books/leydesdorff-sci.htm>>.
- Lidman, T., 2002, Schweden: Neue Verordnung zur Internet-Archivierung, *Bibliotheksdienst* 36(7), 920-921.
- Lievrouw, L. A., 1988, Four programs of research in scientific communication, *Knowledge in Society* 1(2), 6-22.
- Lievrouw, L. A. and Carley, K., 1991, Changing patterns of communication among scientists in an era of 'telescience', *Technology in Society* 12, 457-477.
- Lubanski, A. and Matthew, L., 1998, Socio-economic Impact of the Internet in the Academic Research Environment, *IRISS '98*, 25.-27.3., Bristol <<http://www.sosig.ac.uk/iriss/papers/paper18.htm>>.
- Luhmann, N., 1992, Kommunikation mit Zettelkästen: Ein Erfahrungsbericht, in: Luhmann, N. (Ed.): *Universität als Milieu*, Bielefeld: Haux, 53-61.
- Luther, J., 1997, Full Text Journal Subscriptions: An Evolutionary Process, *Against the Grain*, 1997-06-03, v.9, 18-24 <<http://db.arl.org/luther.html>>; also published in: ARL Directory of Electronic Journals, Newsletters and Academic Discussion Lists.
- Lynch, C., 1997, Identifiers and Their Role In Networked Information Applications, *Association of Research Libraries Newsletter* (194) <<http://www.arl.org/newsltr/194/identifier.html>>.
- MacKenzie, D. and Wajeman, J., 1988, *The Social Shaping of Technology – How the Refrigerator got its Hum*, Milton Keynes: Open University Press.
- MacKie-Mason, J. K. and Riveros, J. F., 1997, Economics and Electronic Access to Scholarly Information, *Internet Publishing and Beyond: Economics of Digital Information and Intellectual Property*, 1997-01-23/25, Cambridge, MA <<http://ksgwww.harvard.edu/iip/econ/mason.html>>; also published in: MIT Press Books, Deborah Hurley et al. (Eds).
- Manicas, P., 1998, The radical restructuring of higher education, *Futures* 30(7), 651-656.
- Mann, C. C., 1998, Who Will Own Your Next Good Idea?, *The Atlantic Monthly* 282(3 (September)) <<http://www.theatlantic.com/issues/98sep/copy.htm>>.
- Marks, G., Hooghe, L. and Blank, K., 1996, European Integration from the 1980s: State-Centric v. Multi-level Governance, *Journal of Common Market Studies* 34, 341-377.
- Marshall, C. C., 1997, Toward an ecology of hypertext annotation, *ACM Hypertext '98*, 1998-06-20/24, Pittsburgh, PA <<http://csdl.tamu.edu/~marshall/hf98-final.pdf>>.
- Marshall, C. C., 1998a, Annotation: from paper books to the digital library, *ACM Digital Libraries '97 Conference*, 1997-07-23/26, Philadelphia, PA <<http://csdl.tamu.edu/~marshall/dl97.pdf>>.
- Marshall, C. C., 1998b, The Future of Annotation in a Digital (Paper) World, *35th Annual GSLIS Clinic: Successes and Failures of Digital Libraries*, 1998-03-24, Univ. of Illinois at Urbana-Champaign <<http://csdl.tamu.edu/~marshall/uiuc-paper-complete.pdf>>.
- Marshall, E., 1998c, Embargoes: Good, Bad, or 'Necessary Evil'?, *Science*, 282, 1998-10-30, 860-867.
- Massy, W. F. and Zemsky, R., 1995, Using Information Technology to Enhance Academic Productivity, *Enhancing Academic Productivity*, June 1995, Wingspread <<http://www.educause.edu/nlii/keydocs/massy.html>>.
- Matzat, U., 1999, Academic Communication and Internet Discussion Groups: Transfer of Information or Creation of Social Contacts?, *ISKO 99 "Globalisierung und Wissensorganisation"*, 23.-25.9.1999, Hamburg <<http://www.bonn.iz-soz.de/wiss-org/beitraege/Abstract.htm>>.
- Matzat, U., 2000, *Informal Academic Communication and Active Participation in Internet Discussion Groups: Different Models of the collective Good Problem*; work-in-progress report, 5.4. <<http://www.ppsw.rug.nl/matzat/1998c.htm>>.



- Matzat, U., 2001, *Social networks an cooperation in electronic communities: a theoretical-empirical analysis of academic communication and internet discussion groups*; in series: ICS dissertation series, Vol. 80, edited by Interuniversitair Centrum voor Sociaal-Wetenschappelijke Theorievorming en Methodenontwikkeling, Amsterdam.
- Mayntz, R., 1999, *Betrug in der Wissenschaft – Randerscheinung oder wachsendes Problem?* Working Papers of the Max Planck Institute for the Study of Societies, No. 99/4, Cologne <<http://www.mpi-fg-koeln.mpg.de/pu/workpap/wp99-4/wp99-4.html>>.
- Mayntz, R., 2002, Zur Theoriefähigkeit makro-sozialer Analysen, in: Mayntz, R. (Ed.): *Akteure – Mechanismen – Modelle. Zur Theoriefähigkeit makro-sozialer Analysen*, Frankfurt a.M.: Campus.
- McArthur, D. J. and Lewis, M. W., 1998, *Untangling the Web – Applications of the Internet and Other Information Technologies to Higher Learning*, Vol. MR-975-EDU, Santa Monica/Washington, D.C.: RAND <<http://www.rand.org/publications/MR/MR975>>.
- McEldowney, P., 1995, *Scholarly Electronic Journals – Trends and Academic Attitudes: A Research Proposal*; Last update: 1995 <<http://www.people.virginia.edu/~pm9k/libsci/ejs.html>>.
- McHoul, A. and Roe, P., 1996, *Hypertext and reading cognition*; Last update: 1996-05-15 [Accessed on: 10-02 1998] <<http://wwwmcc.murdoch.edu.au:80/ReadingRoom/VID/cognition.html>>.
- McLuhan, M., 1962, *The Gutenberg Galaxy*, Toronto: Toronto University Press; also published as: *Die Gutenberg-Galaxis: das Ende des Buchzeitalters*, Bonn/Paris/Reading: Addison-Welsey, 1995.
- McLuhan, M., 1964, *Understanding Media. The Extensions of Man*, London: Routledge & Kegan Paul.
- Meadows, J. and Böcker, H.-D. (Eds), 1999, *Electronic Communication and Research in Europe*; in series: Euroscientia Conferences, Luxembourg: Office for Official Publication of the European Communities,.
- Meier, G. and Wildberger, A., 1993, *In 8 Sekunden um die Welt: Kommunikation über das Internet*, Bonn: Addison Wesley.
- Mellander, E., Savvidiou, E. and Gunnarsson, G., 2001, *Is Human Capital the Key to the IT Productivity Paradox?* IUI Working Paper Series, No. 551 (27.2.), edited by The Research Institute of Industrial Economics <<http://swopec.hhs.se/iuiwop/papers/iuiwop0551.pdf>>.
- Merton, R. K., 1968, The Matthew Effect in Science, *Science* 159(3810), 56-63; also published in: Chapter 20 in Merton, R.K., *The Sociology of Science. Theoretical and Empirical Investigations*, Chicago/London: Univ. of Chicago Press, 1973.
- Merz, M., 1997, Formen der Internetnutzung in der Wissenschaft, in: Werle, R. and Lang, C. (Eds): *Modell Internet? Entwicklungsperspektiven neuer Kommunikationsnetze*, Frankfurt/New York: Campus, 241-262.
- Merz, M., 1998, 'Nobody Can Force You When You Are Across the Ocean' – Face to Face and E-Mail Exchanges Between Theoretical Physicists, in: Smith, C. and Agar, J. (Eds): *Making Space for Science*, London: Macmillan, 313-329.
- Meyer, T., Blair, D. and Hader, S., 1994, *A MOO-Based Collaborative Hypermedia System for WWW* [Accessed on: 16-05 2002] <<http://www.virtualschool.edu/mon/ElectronicCommunity/WwwMoo.html>>.
- Meyrowitz, J., 1994, Medium Theory, in: Crowley, D. and Mitchell, D. (Eds): *Communication Theory Today*, Cambridge/UK: Polity Press, 50-77.
- Miller, S. K., 1998, Transforming Print Encyclopedias into Successful Electronic Reference Products, *Journal of Electronic Publishing* 3(4) <<http://www.press.umich.edu/jep/03-04/miller.html>>.
- Miller-Adams, M. and Trager, E. M., 1998, What We Learned From The Bible: A Catechism for Digital Publishing, *Journal of Electronic Publishing* 3(2) <<http://www.press.umich.edu/jep/03-02/bible.html>>.
- Mills, K., 1998, Collaborating on the Infobahn: A Case Study of Using the Internet for Scholarly Discussion, *International Studies Notes* 23(1) <<http://csf.colorado.edu/isa/isn/23-1/mills.html>>.
- Mittelstraß, J., 1996, Der wissenschaftliche Verstand und seine Arbeits- und Informationsformen, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek: digitale Information in Wissenschaft*, Verlag und Bibliothek, Wiesbaden: Harrassowitz, 25-29.

- Mittler, E., 1996, Die Rolle der Bibliothek, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek: digitale Information in Wissenschaft, Verlag und Bibliothek*, Wiesbaden: Harrassowitz, 73-82.
- Mlynek, J., 2001, Der Wissenschaftler als Autor und Nutzer – Die Anforderungen der Wissenschaft an das Publikationswesen im digitalen Zeitalter, in: *Wissenschaftspublikationen im digitalen Zeitalter*, Wiesbaden: Harrassowitz, 43-54.
- Mogge, D., 1997, *Forward to the 7th Edition of the Directory of Electronic Journals, Newsletters and Academic Discussion Lists* [Accessed on: 13-08 2002] <<http://db.arl.org/foreword.html>>.
- Mogge, D., 1999, Seven Years of Tracking Electronic Publishing: The ARL Directory of Electronic Journals, Newsletters and Academic Discussion Lists, *Library Hi Tech* 17(1), 17-25 <<http://dsej.arl.org/dsej/2000/mogge.html>>.
- Morton, B., 1997, Is the Journal as We Know It an Article of Faith? An Open Letter to the Faculty, *The Public-Access Computer Systems Review* 8(2) <<http://info.lib.uh.edu/pr/v8/n2/mort8n2.html>>.
- Mueller, M., 1997, Memory and Technology: Literary Studies after the Millennium, *Centennial Review* 41, 83-101 <<http://faculty-web.at.northwestern.edu/english/mmueller/MyPapers/MemTechframe.htm>>.
- Mueller, M., 2000a, *The library catalog, the word processor, and the digital archive: Three stages of information technology in humanities scholarship*, online manuscript [Accessed on: 23-10 2000; not available any more].
- Mueller, M., 2000b, Technological change and the struggle for recognition in the culture of the scholarly book, *IBLC 2000*, October 21-22, Frankfurt <<http://faculty-web.at.nwu.edu/english/mmueller/MyPapers/Frankfurt5.htm>>.
- Müller-Böling, D. and Küchler, T., 1998, Hochschulentwicklung durch Multimedia? Szenario Hochschule 2010, in: Kubicek, H., Braczyk, H.-J., Klumpp, D., Müller, G., Neu, W., Raubold, E. and Roßnagel, A. (Eds): *Lernort Multimedia*, Heidelberg: R.v.Decker's Verlag, 187-195.
- Munyan, D., 1998, Everybook, Inc: Developing the E-Book in Relation to Publishing Standards, *Future of Print Media*, Fall, Kent State University <<http://www.futureprint.kent.edu/articles/munyan01.htm>>.
- Nathenson, C., 2001, Electronic Publishing and the Future of Humanities Scholarship, *Trans, Internet-Zeitschrift für Kulturwissenschaften* (10) <<http://www.inst.at/trans/10Nr/nathenson10.htm>>.
- Neal, J. G., 1997, Models of analysis and Data Drawn from the Project Muse Experience at Johns Hopkins University, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/neal.html>>.
- Nelson, T. H. (Ed.), 1992 (1981), *Literary machines*, 93.1. edition, Sausalito, Calif.: Mindful Press.
- Nentwich, M., 1999a, *Cyberscience: Die Zukunft der Wissenschaft im Zeitalter der Informations- und Kommunikationstechnologien*. Working papers, no. 99/6, edited by Max Planck Institute for the Study of Societies, Cologne <<http://www.mpi-fg-koeln.mpg.de/pu/workpap/wp99-6/wp99-6.html>>.
- Nentwich, M., 1999b, The European Research Papers Archive: Quality Filters in Electronic Publishing, *Journal of Electronic Publishing* 5(1) <<http://www.press.umich.edu/jep/05-01/nentwich.html>>.
- Nentwich, M., 2000a, Academia: Challenges and Opportunities in the Age of Cyberscience, *XVIIIth World Congress of Political Science (IPSA 2000)*, *Internet conference "Macro and Micro Societal Change Resulting from the Development of Internet"*, August 1-5 (Internet: July 12), Québec City <[http://www.oew.ac.at/ita/ebene5/Nentwich\\_IPSA.pdf](http://www.oew.ac.at/ita/ebene5/Nentwich_IPSA.pdf)>.
- Nentwich, M., 2000b, The Future of Academic Knowledge Representation in the Age of Cyberscience, *American Political Science Association (APSA) Annual Meeting, panel "Information Technology and political Science Research"*, August 31 – September 3, Washington D.C. <<http://www.oew.ac.at/ita/ebene5/dsk/APSA/>>.
- Nentwich, M., 2001, (Re-)De-commodification in academic knowledge distribution?, *Science Studies* 14(2), 21-42.

- Nentwich, M. and Gagliardi, M., 1999, *Cyberscience – ein Multimedia-Feature*; web feature [Accessed on: 14-12 2002] <<http://www.bmbwk.gv.at/extern/cyberscience/index.htm>>.
- Nicholson, P. A., 1998, Higher education in the year 2030, *Futures* 30(7), 725-729.
- Nickl, M., 1996, Web Sites – Die Entstehung neuer Textstrukturen, in: Bollmann, S. and Heibach, C. (Eds): *Kursbuch Internet – Anschlüsse an Wirtschaft und Politik, Wissenschaft und Kultur*, Mannheim: Bollmann, 389-400.
- Noam, E. M., 1995, Electronics and the Dim Future of the University, *Science* 270(13 October 1995), 247-249.
- Nolte, C., 1998, *Multimedia im Wissenschaftsmarketing – Informationsangebote der Hochschulen im Internet*; in series: Interaktives Marketing, edited by Silberer, G., Wiesbaden: Gabler/Dt. Universitätsverlag.
- NRENAISSANCE Committee, Computer Science and Telecommunications Board, Commission on Physical Sciences Mathematics and Applications and National Research Council, 1994, *Realizing the Information Future – The Internet and Beyond – Chapter 3: Research, Education, and Libraries*, Washington, D.C.: National Academy Press.
- Nunberg, G., 1996a, Farewell to the information age, in: Nunberg, G. (Ed.): *The Future of the Book*, Berkeley, USA: University of California Press, 103-138.
- Nunberg, G., 1996b, *The Future of the Book*, Berkeley, USA: University of California Press.
- Oakley, B., Kueter, D., O’Hea, K. and et al., 1997, *The Future of Content – Discussions on the Future of European Electronic Publishing*, commissioned by: European Commission, 09/1997.
- Odlyzko, A., 1997, The Economics of Electronic Journals, *Andrew W. Mellon Foundation Conference “Scholarly Communication and Technology”*, 1997-04-24/25, Emory Univ. <<http://www.press.umich.edu/jep/04-01/odlyzko.html>>; also published in: *Journal of Electronic Publishing* 4 (1998) 1; *First Monday* 2 (1997) 8.
- Odlyzko, A., 1999, Competition and cooperation: Libraries and publishers in the transition to electronic scholarly journals, *Journal of Scholarly Publishing* 30(4), 163-185 <<http://www.dtc.umn.edu/~odlyzko/doc/competition.cooperation.pdf>>.
- Odlyzko, A., 2000, The future of scientific communication, in: Wouters, P. and Schroeder, P. (Eds): *Access to Publicly Financed Research: The Global Research Village III*, Amsterdam: NIWI, 273-278 <<http://www.dtc.umn.edu/~odlyzko/doc/future.scientific.comm.pdf>>.
- Odlyzko, A. M., 1994, Tragic Loss or Good Riddance? The Impending Demise of Traditional Scholarly Journals, *Journal of Universal Computer Science* 0(0), 71-122 (quoted according to manuscript) <[http://www.jucs.org/jucs\\_0\\_0/tragic\\_loss\\_or\\_good](http://www.jucs.org/jucs_0_0/tragic_loss_or_good)>.
- OECD, 1998, *Science, Technology and Industry Outlook 1998 – Chapter 7: The Global Research Village: How Information and Communication Technologies Affect the Science System*, Paris: Organisation for Economic Co-operation and Development <<http://www.oecd.org/pdf/M000014000/M00014833.pdf>>.
- Oechtering, V., 1996, Bibliotheken im Netz, in: Bollmann, S. and Heibach, C. (Eds): *Kursbuch Internet – Anschlüsse an Wirtschaft und Politik, Wissenschaft und Kultur*, Mannheim: Bollmann, 401-412.
- O’Hara, K. and Sellen, A., 1997, A Comparison of Reading Paper and On-Line Documents, *CHI ’97 – Conference on Human Factors and Computing Systems*, 1997-08-27, Atlanta, Georgia <<http://www.rxc.xerox.com/publis/cam-trs/pdf/1997/epc-1997-101.pdf>>.
- Okerson, A., 1991a, Back to Academia? The Case for American Universities to Publish Their Own Research, *Logos* 2(2), 106-112 <<http://www.library.yale.edu/~okerson/case.html>>.
- Okerson, A., 1991b, The Electronic Journal: What, Whence, and When? [Paper delivered at the OCLC Users Council Annual Meeting in February 1991], *The Public-Access Computer Systems Review* 2(1), 5-24 <<http://www.library.yale.edu/~okerson/pacs.html>>.
- Okerson, A., 1997a, The Transition to Electronic Content Licensing – the Institutional Context in 1997, *Andrew W. Mellon Foundation Conference “Scholarly Communication and Technology”*, 1997-04-24/25, Emory Univ. <<http://www.library.yale.edu/~okerson/mellon.html>>.
- Okerson, A. S., 1997b, *Introduction to the 6th Edition (1996) of the Directory of Electronic Journals, Newsletters and Academic Discussion Lists*; Last update: 1997 <<http://www.people.virginia.edu/~pm9k/libsci/96/intro.html>>.



- Okerson, A. S., 1997c, *Midnight in the Garden of Good and Evil? Libraries, Academic Publishing, Copyright, and other Miasmas*, <<http://www.library.yale.edu/~okerson/okerson-sf.html>>.
- Okerson, A. S. and O'Donnell, J. J. (Eds), 1995, *Scholarly Journals at the Crossroads: A Subversive proposal for Electronic Publishing*: Association of Research Libraries' Office of Scientific and Academic Publishing <<http://www.library.yale.edu/~okerson/subversive.html>>.
- Oliner, S. D. and Sichel, D. E., 2000, The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?, *Journal of Economic Perspectives* 14, 3-22 <<http://www.federalreserve.gov/pubs/feds/2000/200020/200020pap.pdf>>.
- Olivieri, R., 1997, Publishing Economics: The Site Licence Effect, *Journal of Scholarly Publishing* 28(January), 81-91.
- Orthmann, C. and Nacke, L., 1999, Die Chancen virtueller sozialer Gemeinschaften im Internet fur einen interkulturellen Wissenschaftsdiskurs, *ISKO 99 "Globalisierung und Wissensorganisation"*, 23.-25.9.1999, Hamburg <<http://www.bonn.iz-soz.de/wiss-org/beitraege/Orthmann.doc>>.
- OTA (U.S. Congress Office of Technology Assessment), 1982, *Informational Technology and Its Impact on American Education*; Report, November, Washington, DC <[http://www.wws.princeton.edu/~ota/disk3/1982/8216\\_n.html](http://www.wws.princeton.edu/~ota/disk3/1982/8216_n.html)>.
- OTA (U.S. Congress Office of Technology Assessment), 1986, *Intellectual Property Rights in an Age of Electronics and Information*; Report, No. OTA-CIT-302, April, Washington, DC <[http://www.wws.princeton.edu/~ota/disk2/1986/8610\\_n.html](http://www.wws.princeton.edu/~ota/disk2/1986/8610_n.html)>.
- OTA (U.S. Congress Office of Technology Assessment), 1988, *Power On! New Tools for Teaching and Learning*; Report, No. OTA-SET-379, September, Washington, DC <[http://www.wws.princeton.edu/~ota/disk2/1988/8831\\_n.html](http://www.wws.princeton.edu/~ota/disk2/1988/8831_n.html)>.
- OTA (U.S. Congress Office of Technology Assessment), 1989, *High Performance Computing and Networkig for Science*; Background Paper, No. OTA-BP-CIT-59, September, Washington, DC <[http://www.wws.princeton.edu/~ota/disk1/1989/8918\\_n.html](http://www.wws.princeton.edu/~ota/disk1/1989/8918_n.html)>.
- OTA (U.S. Congress Office of Technology Assessment), 1991, *Seeking Solutions: High Performance Computing for Science*; Background Paper, No. OTA-BP-TCT-77, March, Washington, DC <[http://www.wws.princeton.edu/~ota/disk1/1991/9138\\_n.html](http://www.wws.princeton.edu/~ota/disk1/1991/9138_n.html)>.
- OTA (U.S. Congress Office of Technology Assessment), 1995a, *Education and Technology: Future Visions*; Report, No. OTA-BP-EHR-169, September, Washington, DC <[http://www.wws.princeton.edu/~ota/disk1/1995/9522\\_n.html](http://www.wws.princeton.edu/~ota/disk1/1995/9522_n.html)>.
- OTA (U.S. Congress Office of Technology Assessment), 1995b, *Teachers and Technology: Making the Connection*; Report, No. OTA-EHR-616, April, Washington, DC <[http://www.wws.princeton.edu/~ota/disk1/1995/9541\\_n.html](http://www.wws.princeton.edu/~ota/disk1/1995/9541_n.html)>.
- Owen, J. M., 1997, The future role of libraries in the information age, *International Summer School on the Digital Library*, 10-22 August, Tilburg University <<http://www.org.uva.nl/bai/home/jmackenzie/pubs/New%20distribution%20models.htm>>.
- Owen, J. M., 2000, The New Dissemination of Knowledge: Digital Libraries and Institutional Roles in Scientific Publishing, *Workshop "The Economics of Scientific Publication" of the Erasmus Institute for Philosophy and Economics*, 19 April, Rotterdam <<http://www.eur.nl/fw/philecon/WESP-jmo.PDF>>.
- Page, M. E., 1996, *A Brief Citation Guide For Internet Sources in History and the Humanities* (2.1); Last update: February 1996 <<http://www.h-net.msu.edu/~africa/citation.html>>.
- Peters, J., 1996, The Hundred Years War Started Today: An exploration of electronic peer review, *Journal of Electronic Publishing* 1(6) <<http://www.press.umich.edu/jep/works/PeterHundr.html>>.
- Peters, K., 1998, Rechtsfragen der Bestandserhaltung durch Digitalisierung, *Bibliotheksdienst* 32(11), 1949-1955 <[http://www.dbi-berlin.de/dbi\\_pub/bd\\_art/98\\_11\\_07.htm](http://www.dbi-berlin.de/dbi_pub/bd_art/98_11_07.htm)>.
- Pew Higher Education Roundtable, 1998, To Publish and Perish, *Policy Perspectives* 7(4) <<http://www.arl.org/scomm/pew/pewrept.html>>.
- Pfaffenberger, B., 2001, Why Open Content Matters, *Knowledge, Technology, & Policy* 14(1), 93-102.

- Pfeffer, T., 1999, Are Cyber Universities the Future of Higher Education? Protocoll of a lecture of Eli Noam at the Bruno Kreisky Forum for international Dialogue, 10-06 1999, Vienna.
- Plöckinger, O., Duursma, D. and Helm, G. (Eds), 2002, *Aktuelle Entwicklungen im Internet-Recht. Beiträge zur zivil-, straf- und verwaltungsrechtlichen Diskussion*, Wien: Neuer Wissenschaftlicher Verlag.
- Plümer, J., 2000, CARMEN: An Approach to Content Analysis, *1. wissenschaftliches Symposium des IBLC "Wissenstransfer und Wissensorganisation im 21. Jahrhundert"*, 21.-22. Oktober 2000, Frankfurt <<http://www.stub.uni-frankfurt.de/messe/proceedings/pluemer.doc>>.
- Plümer, J. and Schwänzl, R., 1996, Harvesting Mathematics, *Euromath Bulletin 2(1)* <<http://www.emis.de/epub/harvest.ps.gz>>.
- Pollock, N. and Cornford, J., 2000, Theory and Practice of the Virtual University, *Ariadne (24)* <<http://www.ariadne.ac.uk/issue24/virtual-universities/intro.html>>.
- Pope, S. and Miller, L., 1998, *Using the web for peer review and publication of scientific journals*; Last update: September 1998 [Accessed on: 02-15 2001] <<http://www.consecol.org/Journal/consortium.html>>.
- Porter, A. L., Rossini, F. A., Carpenter, S. R., Roper, A. T., Larson, R. W. and Tiller, J. S., 1980, *A Guidebook for Technology Assessment and Impact Analysis*; in series: System Science and Engineering, Vol. 4, edited by Sage, A. P., New York/Amsterdam/Oxford: North-Holland.
- Poser, H., 2001, Geisteswissenschaften und neue Medien – eine wissenschaftsphilosophische Perspektive, in: *Wissenschaftspublikationen im digitalen Zeitalter*, Wiesbaden: Harrassowitz, 55-72.
- Price, D. J. d. S., 1986 (1963), *Little Science, Big Science – and Beyond*, New York: Columbia University Press.
- Price, M. N., Golovchinsky, G. and Schilit, B. N., 1998a, Linking By Inking: Trailblazing in a Paperlike Hypertext, *Hypertext '98*, 1998-06-20/24, Pittsburgh, PA <<http://www.fxpal.xerox.com/PapersAndAbstracts/papers/pri98a.pdf>>.
- Price, M. N., Schilit, B. N. and Golovchinsky, G., 1998b, XLibris: The Active Reading Machine, *CHI'98*, 1998-04-19/26, Los Angeles, CA, April 19-26 <<http://www.fxpal.xerox.com/PapersAndAbstracts/papers/pri98.pdf>>.
- Quarterman, J. S. and Hoskins, J. C., 1986, Notable Computer Networks, *Communications of the ACM 29*, 932-971.
- Ragin, C. C., 1987, *The Comparative Method – Moving beyond qualitative and quantitative strategies*, Berkeley/Los Angeles/London: Univ. of California Press.
- Ragin, C. C., 2000, *Fuzzy-set social science*, Chicago/London: University of Chicago Press.
- Rammert, W., 1990, Telefon und Kommunikationskultur – Akzeptanz und Diffusion einer Technik im Vier-Länder-Vergleich, *Kölner Zeitschrift für Soziologie und Sozialpsychologie 42(1)*, 20-40; also published in: Rammert, 1993, Technik aus soziologischer Perspektive, Westdeutscher Verlag, 239-266.
- Raney, R. K., 1998, One Scientist's View: Into a Glass Darkly, *Journal of Electronic Publishing 4(2)* <<http://www.press.umich.edu/jep/04-02/raney.html>>.
- Rauber, A. and Aschenbrenner, A., 2001, Part of Our Culture is Born Digital – On Efforts to Preserve it for Future Generations, *Trans, Internet-Zeitschrift für Kulturwissenschaften (10)* <<http://www.inst.at/trans/10Nr/rauber10.htm>>.
- Raymond, E., 1999, Die Kathedrale und der Basar, *Linux-Magazin*, 132-145.
- Regier, W. G., 1997, Epic: Electronic Publishing is Cheaper, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/regier.html>>.
- Regier, W. G., 1998, Scholarly Press Websites, *Journal of Electronic Publishing 4(1)* <<http://www.press.umich.edu/jep/04-01/regier.html>>.
- Remler, A., 2000, Lässt sich wissenschaftliche Leistung messen?, *Telepolis*, 24-10 2000 <<http://www.heise.de/tp/deutsch/special/auf/8976/1.html>>.

- Rey, E., 1996, Elektronisches Publizieren, in: Bollmann, S. (Ed.): *Kursbuch Neue Medien – Trends in Wirtschaft und Politik, Wissenschaft und Kultur*, 2<sup>nd</sup> edition, Mannheim: Bollmann, 130-136.
- Riehm, U., 1988, *Befragung von Fachverlagen zum Elektronischen Publizieren – Ergebnisse*; PEP-Arbeitspapier, No. 6, März: Kernforschungszentrum Karlsruhe.
- Riehm, U., 1990a, *Befragung von Fachautoren zum Elektronischen Publizieren – Ergebnisse*; PEP-Arbeitspapier, No. 9, Januar: Kernforschungszentrum Karlsruhe.
- Riehm, U., 1990b, Werden die Rollen neu verteilt? Autoren und Verleger im Zeitalter des Schreibens am Computer, *Informationstechnik* 32(3), 203-208.
- Riehm, U., 1996, Is Electronic Information Worth More? An Empirical Comparison of the Usability of Printed and Electronic Versions of the Same Information, *Review of Information Science I(II)* <[http://www.inf-wiss.uni-konstanz.de/RIS/1996iss02\\_01/articles01/01.html](http://www.inf-wiss.uni-konstanz.de/RIS/1996iss02_01/articles01/01.html)>.
- Riehm, U., Böhle, K., Gabel-Becker, I. and Wingert, B., 1992, *Elektronisches Publizieren – eine kritische Bestandsaufnahme*, Berlin/Heidelberg et al.: Springer.
- Riggs, F. W. and et al., 1998, *Improving efficiency through better utilization of the internet – Suggestions, prepared for the International Sociological Association*; online manuscript [Accessed on: 14-10 1999] <<http://www2.hawaii.edu/~fredr/WWWnotes.htm>>.
- Rink, J., 1999, Die Geister, die ich rief – Chancen und Risiken der elektronischen Bücher, *c't*, 6, 192-202.
- Risak, V., 2000, Langfristige Wissensspeicherung gestern und heute, *computer kommunikativ*, 5, 19-23.
- Roberts, R. J., Varmus, H. E., Ashburner, M., Brown, P. O., Eisen, M. B., Khosla, C., Kirschner, M., Nusse, R., Scott, M. and Wold, B., 2001, Building A 'GenBank' of the Published Literature, *Science* 291(5512), 2318-2319 <<http://www.sciencemag.org/cgi/content/full/291/5512/2318a>>.
- Rogers, E. M., 1995, *Diffusion of Innovations*, 4<sup>th</sup> edition, New York/London: The Free Press.
- Rohe, T. A., 1998, How Does Electronic Publishing Affect the Scholarly Communication Process?, *Journal of Electronic Publishing* 3(3) <<http://www.press.umich.edu/jep/03-03/rohe.html>>.
- Ronzheimer, M., 1988, Szenario: Die Universität im Jahre 2005, *BeliNews*, 153.
- Rosenblatt, B., 1998, The Digital Object Identifier: Solving the Dilemma of Copyright Protection Online, *Journal of Electronic Publishing* 3(2) <<http://www.press.umich.edu/jep/03-02/doi.html>>.
- Rosenthal, G. G., 1998, Message to Christopher Makins, forwarded to [ecsa@list.pitt.edu](mailto:ecsa@list.pitt.edu), E-mail (1998-07-31).
- Rost, M., 1996a, Koautoren per E-Mail koordinieren, in: Rost, M. (Ed.): *Die Netz-Revolution – Auf dem Weg in die Weltgesellschaft*, Frankfurt am Main: Eichborn, 208-215.
- Rost, M., 1996b, Vorschläge zur Entwicklung einer wissenschaftlichen Diskurs-Markup-Language, in: Heibach, C. and Bollmann, S. (Eds): *1996: Kursbuch Internet – Anschlüsse an Wirtschaft und Politik, Wissenschaft und Kultur*, Mannheim: Bollmann, 413-423 <[http://www.netzservice.de/Home/mr/mr\\_dml.html](http://www.netzservice.de/Home/mr/mr_dml.html)>.
- Rost, M., 1996c, Wissenschaft und Internet: Zunft trifft auf High-Tech, in: Rost, M. (Ed.): *Die Netz-Revolution – Auf dem Weg in die Weltgesellschaft*, Frankfurt am Main: Eichborn, 165-179.
- Rost, M., 1997, Anmerkungen zu einer Soziologie des Internet, in: Gräf, L. and Krajewski, M. (Eds): *Soziologie des Internet – Handeln im elektronischen Web-Werk*, Frankfurt/New York: Campus, 14-38 <[http://www.NetzService.de/Home/mar/mr\\_sdi.html](http://www.NetzService.de/Home/mar/mr_sdi.html)>.
- Rost, M., 1998a, Die Modernisierung des wissenschaftlichen Diskurses, *perspektive 21 – Brandenburgische Hefte für Wissenschaft und Politik, "Informationsgesellschaft" (3)*, 51-57 <[http://www.NetzService.de/Home/mar/mr\\_mdwd.html](http://www.NetzService.de/Home/mar/mr_mdwd.html)>.
- Rost, M., 1998b, Elektronische Foren als Medien wissenschaftlicher Diskurse – Oder: Warum elektronische Foren in der vorliegenden Form nicht für den wissenschaftlichen Diskurs geeignet sind, *Telepolis Aktuell*, 1998-02-06 <[http://www.netzservice.de/Home/mr/mr\\_efmwd.html](http://www.netzservice.de/Home/mr/mr_efmwd.html)>.

- Rost, M., 1998c, Industrialisierte Wissenschaft – Zwei Projekte: ObM- und Scoring-Server, *Machtfragen der Informationsgesellschaft, Tagung der IMD*, 1998-06-17, Frankfurt/Main <[http://www.NetzService.de/Home/maro/imd2\\_obmsv\\_scosv.html](http://www.NetzService.de/Home/maro/imd2_obmsv_scosv.html)>.
- Rost, M., 1998d, Zur Industrialisierung wissenschaftlicher Kommunikation, in: Hartmann, F. (Ed.): *Informationsgesellschaft – Sozialwissenschaftliche Aspekte*, Wien, 123-136.
- Rothblatt, S., 1985, The Notion of an Open Scientific Community in Historical Perspective, in: Gibbons, M. and Wittrock, B. (Eds): *Science as a Commodity. Threats to the open community of scholars*, Harlow: Longman, 21-75.
- Rötzer, F., 2001, Open Source und offene Tauschbörsen für das postgenomische Zeitalter?, *Telepolis*, 2001-02-16 <<http://www.heise.de/tp/deutsch/special/leb/4926/1.html>>.
- Rowen, L., Wong, G. K. S., Lane, R. P. and Hood, L., 2000, Publication Rights in the Era of Open Data Release Policies, *Science* 289(2000-09-15), 1881.
- Rowland, F., 1994, Electronic Journals: Neither Free Nor Easy, *EJournal* 4(2) <<http://www.people.virginia.edu/~pm9k/libsci/rowland.html>>.
- Rusch-Feja, D., 1999, *The Use of Paper and Electronic Journals by Researchers – Discussion of research results*, commissioned by: Steering Group iWI (Innovatie Wetenschappelijke Informatievoorziening), January 1999.
- Rusch-Feja, D. and Siebeky, U., 1999, Evaluation of an Electronic Survey of Max Planck Society Researchers including Usage Statistics from Elsevier, Springer and Academic Press, *Max Planck Society – Information Provision Project*.
- Rutenfranz, U., 1997, *Wissenschaft im Informationszeitalter – Zur Bedeutung des Mediums Computer für das Kommunikationssystem Wissenschaft*; in series: Studien zur Kommunikationswissenschaft, Vol. 19, Opladen: Westdeutscher Verlag.
- Sabatier, P. A., 1993, Advocacy-Koalitionen, Policy-Wandel und Policy-Lernen: Eine Alternative zur Phasenheuristik, in: Héritier, A. (Ed.): *Policy-Analyse. Kritik und Neuorientierung*, Opladen: Westdeutscher Verlag, 116-148.
- Scharpf, F. W., 1997, *Games Real Actors Play. Actor-Centered Institutionalism in Policy Research, Theoretical Lenses on Public Policy*, Colorado/Oxford: Westview Press.
- Scheidl, R., 1999, Vor uns die Infflut, *Das österreichische Industriemagazin*, 9, September, 100-102.
- Schilit, B. N., Golovchinsky, G. and Price, M. N., 1998a, Beyond Paper: Supporting Active Reading with Free Form Digital Ink Annotations, *CHI'98*, 1998-04-19-26, Los Angeles, CA, April 19-26 <<http://www.fxpal.xerox.com/PapersAndAbstracts/papers/sch98a.pdf>>.
- Schilit, B. N., Price, M. N. and Golovchinsky, G., 1998b, Digital Library Information Appliances, *Digital Libraries '98*, 1998-06-23/26, Pittsburgh, PA <<http://www.fxpal.xerox.com/PapersAndAbstracts/papers/sch98b.pdf>>.
- Schlegel, J., 1998, Neue Entwicklungen im Informationsretrieval, *Bibliotheksdienst* 32(11), 1938-1941 <[http://www.dbi-berlin.de/dbi\\_pub/bd\\_art/98\\_11\\_05.htm](http://www.dbi-berlin.de/dbi_pub/bd_art/98_11_05.htm)>.
- Schlitt, G., 1996, Urheberrecht: Gebühren und Lizenzen, in: Börsenverein des Deutschen Buchhandels e.V. (Ed.): *Die unendliche Bibliothek: digitale Information in Wissenschaft, Verlag und Bibliothek*, Wiesbaden: Harrassowitz, 102-108.
- Schmidt, A. P., 1999, *Der Wissensnavigator – Das Lexikon der Zukunft*, Stuttgart: Deutsche Verlags-Anstalt.
- Schmidt, S. K. and Werle, R., 1998, *Coordinating Technology. Studies in the International Standardization of Telecommunications*; in series: Inside Technology, edited by Bijker, W. E., Carlson, W. B. and Pinch, T., Cambridge, MA/London: MIT Press.
- Schneider, V. and Mayntz, R., 1995, Akteurzentrierter Institutionalismus in der Technikforschung, in: Halfmann, J., Bechmann, G. and Rammert, W. (Eds): *Technik und Gesellschaft Jahrbuch*, Frankfurt/New York, 107-130.
- Scholl, W., Pelz, J. and Rode, J., 1996, *Computervermittelte Kommunikation in der Wissenschaft*, Münster: Waxmann.
- Schweighofer, E., 1999, *Rechtsinformatik und Wissensrepräsentation*; in series: Forschungen aus Staat und Recht, Vol. 124, edited by Winkler, G., Wien: Springer.

- Selwyn, N. and Robson, K., 1998, Using e-mail as a research tool, *Social research update* (21) <<http://www.soc.surrey.ac.uk/sru/SRU21.html>>.
- Shipton, R., 1996, Value Added: Professional Editors and Publishers, *Journal of Scholarly Publishing* 27(4), 222-229.
- Shirrell, R., 1997, Economics of Electronic Publishing: Cost Issues, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/shirrell.html>>.
- Shoham, S., 1998, Scholarly communication: a study of Israeli academic researchers, *Journal of Librarianship and Information Science* 30(2), 113-121.
- Sietmann, R., 1999, Zirkelspiele – Die wissenschaftliche Literaturversorgung steckt weltweit in der Krise, *c't*, 20, 216-231.
- Siler, J. M., 2000, From Gutenberg to Gateway: Electronic Publishing at University Presses, *Journal of Scholarly Publishing* 32(1), 9-23.
- Sim, I., 1998, Medical publishing meets AI, *IEEE Intelligent Systems* (Jan/Feb), 10-12.
- Skolnik, M. L., 1998, Higher education in the 21<sup>st</sup> century – Perspectives on an emerging body of literature, *Futures* 30(7), 635-650.
- Smith, R., 1999, Editorial: Opening up BMJ peer review. A beginning that should lead to complete transparency, *British Medical Journal online* 318(January), 4-5 <<http://bmj.com/cgi/content/full/318/7175/4>>.
- So, C. Y. K., 1998, Citation ranking versus expert judgment in evaluating communication scholars: effects of research speciality size and individual prominence, *Scientometrics* 41(3), 525-333.
- Sommer, W., 1998, Globalisierung der Bildungsmärkte durch moderne Informations- und Kommunikationssysteme – Neue Chancen für die Hochschulen, in: Kubicek, H., Braczyk, H.-J., Klumpp, D., Müller, G., Neu, W., Raubold, E. and Roßnagel, A. (Eds): *Lernort Multimedia*, Heidelberg: R.v.Decker's Verlag, 196-212.
- Spiewak, M., 2001, Next Exit Phoenix, *Die Zeit*, 2001-01-18.
- St. Laurent, S., 1992, *Why hypertext for History*; online manuscript [Accessed on: 18-08 1999] <<http://www.simonstl.com/articles/hypehist.htm>>.
- Starbuck, W. H., 1999, Our shrinking Earth, *Academy of Management Review* 24(2), 187-190.
- Stegbauer, C. and Rausch, A., 1999, Ungleichheit in virtuellen Gemeinschaften, *Soziale Welt* 50, 93-110.
- Stichweh, R., 1989, *Computer, Kommunikation und Wissenschaft: Telekommunikative Medien und Strukturen der Kommunikation im Wissenschaftssystem*; in series: MPIFG Discussion Paper, no. 89/11, edited by Max Planck Institute for the Studies of Societies, Cologne.
- STOA (Scientific and Technological Options Assessment/European Parliament), 1999, *Linguistic Diversity on the Internet: Assessment of the Contribution of Machine Translation*; Report, No. PE 289 662/Fin, Luxembourg <[http://www.europarl.eu.int/stoa/publi/99-12-01/default\\_en.htm](http://www.europarl.eu.int/stoa/publi/99-12-01/default_en.htm)>.
- Stodolsky, D. S., 1990, Consensus Journals: Invitational journals based upon peer consensus, *Psychology* 1(15) <<http://psycprints.ecs.soton.ac.uk/>>.
- Strauss, A. and Corbin, J., 1990, *Basics of Qualitative Research – Grounded Theory Procedures and Techniques*, Newbury Park/London/New Delhi: Sage.
- Strong, W. S., 1995, Copyright in the New World of Electronic Publishing, *Journal of Electronic Publishing* 1 <<http://www.press.umich.edu/jep/works/strong.copyright.html>>.
- Sumner, T. and Shum, S. B., 1997, From Documents to Discourse: Shifting Conceptions of Scholarly Publishing, *CHI '98*, 1998-04-18/23, Los Angeles <<http://kmi.open.ac.uk/tr/abstracts/kmi-tr-50-abstract.html>>.
- Taubes, G., 1996, Electronic Preprints Point the Way to 'Authors Empowerment', *Science*, 271, 1996-02-09, 767-768.
- Tauss, J., 2001, Szenario 2010 – Anmerkungen aus der Perspektive der Politik, in: *Wissenschaftspublikationen im digitalen Zeitalter*, Wiesbaden: Harrassowitz, 205-218.

- Teasley, S. and Wolinsky, S., 2001, Scientific Collaborations at a Distance, *Science* 292(5525), 2254-2255 <<http://www.sciencemag.org/cgi/content/full/292/5525/2254>>.
- Tehrani, M., 1996, The End of University?, *The Information Society* 12, 441-447.
- Tenopir, C. and King, D. W., 1998, Designing Electronic Journals With 30 Years of Lessons from Print, *Journal of Electronic Publishing* 4(2) <<http://www.press.umich.edu/jep/04-02/king.html>>.
- Teubener, K. and Zurawski, N., 2000, Welt Weite Wissenschaften – Internet, Fernsehen und Probleme der Wissenschaftsvermittlung, *kommunikation@gesellschaft* 1(2) <[http://www.uni-frankfurt.de/fb03/K.G/B2\\_2000\\_Teubener\\_Zurawski.pdf](http://www.uni-frankfurt.de/fb03/K.G/B2_2000_Teubener_Zurawski.pdf)>.
- Thagard, P., 1997a, Collaborative Knowledge, *Noûs* 31(2), 242-261 <<http://cogsci.uwaterloo.ca/articles/pages/Collab.html>>.
- Thagard, P., 1997b, *Internet Epistemology: Contributions of New Information Technologies to Scientific Research* [Accessed on: 15-01 2000] <<http://cogsci.uwaterloo.ca/articles/pages/Epistemology.html>>.
- Thaller, M., 1989, Warum brauchen die Geschichtswissenschaften fachspezifische datentechnische Lösungen? Das Beispiel kontextsensitiver Datenbanken, *Computer in den Geisteswissenschaften. Konzepte und Berichte* 7, 237-264.
- Thaller, M., 1990, Entzauberungen. Die Entwicklung einer fachspezifischen historischen Datenverarbeitung in der Bundesrepublik, in: Prinz, W. and Weingart, P. (Eds): *Die sogenannten Geisteswissenschaften: Innenansichten*, Frankfurt a. Main: Suhrkamp, 138-158.
- Thatcher, S. G., 1996, Re-engineering Scholarly Communication: A Role for University Presses?, *Journal of Scholarly Publishing* 27(4), 197-207.
- Tichy, G., 2002, *Over-optimism Among Experts in Assessment and Foresight*. ITA manu:script, No. ITA-02-05 (Oktober), edited by Institute of Technology Assessment <[http://www.oew.ac.at/ita/pdf/ita\\_02\\_05.pdf](http://www.oew.ac.at/ita/pdf/ita_02_05.pdf)>.
- Tomlins, C. L., 1998, The Wave of the Present: The Printed Scholarly Journal on the Edge of the Internet, *Journal of Scholarly Publishing* 29(April), 133-150.
- Toschi, L., 1996, Hypertext and authorship, in: Nunberg, G. (Ed.): *The Future of the Book*, Berkeley, USA: University of California Press, 169-208.
- Traweek, S., 1988, *Beamtimes and Lifetimes – The world of high energy physicists*, Cambridge/Ma.: Harvard University Press.
- Treloar, A. E., 1996, Electronic Scholarly Publishing and the World Wide Web, *Journal of Scholarly Publishing* 27(3), 135-150.
- Treloar, A. E., 1998, *Hypermedia Online Publishing: the Transformation of the Scholarly Journal*, Ph.D. thesis, School of Information Management and Systems, Monash University <<http://andrew.treloar.net/Research/Theses/PhD/>>.
- Treloar, A. E., 1999, Applying Hypertext and Hypermedia to Scholarly Journals Enables Both Product and Process Innovation, *ACM Computing Surveys* 31(4) <[http://www.cs.brown.edu/memex/ACM\\_HypertextTestbed/papers/4.html](http://www.cs.brown.edu/memex/ACM_HypertextTestbed/papers/4.html)>.
- TRLN (Copyright Policy Task Force of the Triangle Research Libraries Network Durham/Raleigh/Chapel Hill), 1993, *Model University Policy Regarding Faculty Publication in Scientific and Technical Scholarly Journals – A Background Paper and Review of the Issues* <<http://www.lib.ncsu.edu:80/scc/trln.html>>.
- Twigg, C. A. and Oblinger, D. G., 1996, *The Virtual University – A Report from a Joint Educom/IBM Roundtable, Washington DC, November 5-6, 1996* [Accessed on: 03-10 1999] <<http://www.educause.edu/nlii/VU.html>>.
- Ullman, J. D., 1996, Research Publication Modes Need to be Reengineered – A discussion, *Computing Research News*, July <<http://www-db.stanford.edu/~ullman/pub/nopaper.html>>.
- Valkenburg, P., 1998, BSCW and Web4Groups as Tools for Wide-Area Collaboration, *Scimitar* 10(1998) <<http://www.iihe.ac.be/scimitar/J0698/groupware.html>>.
- van Alstyne, M. and Brynjolfsson, E., 1997a, The Net Effect: Modeling and Measuring the Integration of Electronic Communities, *17th International Conference on Information Systems*, 15-18 December 1996, Cleveland, OH.



- van Alstyne, M. and Brynjolfsson, E., 1997b, Widening Access and Narrowing Focus: Could the Internet Balkanize Science, *Science* 274(5292), 1479-1480.
- van den Hoven, M. J., 1999, Ethics, social epistemics, electronic communication and scientific research, *European Review* 7(3), 341-349.
- Varmus, H. and et al., 1999, *PubMed Central: An NIH-Operated Site for Electronic Distribution of Life Sciences Research Reports*; Last update: 1999-08-30 [Accessed on: 02-02 2000] <<http://www.nih.gov/about/director/pubmedcentral/pmcprint.htm>>.
- Vasileiadou, E., 2001, *Formal scientific communication through the internet. The case study of online journals*, MA thesis, International School of Humanities and Social Sciences. European Communication Studies, University of Amsterdam.
- Vasileiadou, E., 2002, Studying Scientific Communication through the Internet: A Theoretical Framework, *AoIR* 3.0, 14-16 Oct., Maastricht.
- Vinzant, C., 1998, Electronic Books Are Coming At Last!, *Fortune*, 1998-07-06 <<http://library.northernlight.com/SG19990714120006341.html?cb=13&sc=0#doc>>.
- Walker, N., 1995, The University Press in the 21<sup>st</sup> Century, *Journal of Scholarly Publishing* 27(1), 37-42.
- Walker, T. J., 1998, Free Internet Access to Traditional Journals, *American Scientist* 86(5) <<http://www.sigmaxi.org/amsci/articles/98articles/Walker.html>>.
- Walsh, J. P., 1997, *Telescience: The Effects of Computer Networks on Scientific Work*; consultancy report, mimeo, commissioned by: OECD, April 1997: University of Illinois at Chicago.
- Walsh, J. P. and Bayma, T., 1996, The Virtual College: Computer-mediated Communication and Scientific Work, *The Information Society* 12(4), 343-363.
- Walsh, J. P. and Maloney, N. G., 2002, Computer Network Use, Collaboration Structures and Productivity, in: Hinds, P. and Kiesler, S. (Eds): *Distributed work*, Cambridge, MA: MIT Press, pages from manuscript <<http://tigger.uic.edu/~jwalsh/Collab.html>>.
- Walsh, J. P. and Roselle, A., 1999, Computer Networks and the Virtual College, *Science Technology Industry Review (OECD)* (24), 49-78.
- Want, R., Schilit, B. N., Adams, N. I., Gold, R., Petersen, K., Goldberg, D., Ellis, J. R. and Weiser, M., 1996, The ParcTab Ubiquitous Computing Experiment, in: Korth, H. F. and Imielinski, T. (Eds): *Mobile Computing*: Kluwer Academic Press <<http://sandbox.parc.xerox.com/parctab/csl9501/paper.html>>.
- Wasserman, M., 1998, How Much Does It Cost to Publish A Monograph and Why?, *Journal of Electronic Publishing* 4(1) <<http://www.press.umich.edu/jep/04-01/wasserman.html>>.
- Wearden, S., 1998a, Electronic Books: A Study of Potential Features And Their Perceived Value, *Future of Print Media*, Fall, Kent State University <<http://www.futureprint.kent.edu/articles/wearden02.htm>>.
- Wearden, S., 1998b, Landscape vs. Portrait Formats: Assessing Consumer Preferences, *Future of Print Media*, Summer, Kent State University <<http://www.futureprint.kent.edu/articles/wearden01.htm>>.
- Wellman, M. P. and Minton, S., 1998, JAIR: an electronic journal by and for the AI research community, *IEEE Intelligent Systems (Jan/Feb)*, 7-9.
- Werle, R. and Lang, C. (Eds), 1997, *Modell Internet? Entwicklungsperspektiven neuer Kommunikationsnetze*; in series: Veröffentlichungen aus dem Institut für Sozialwissenschaftliche Forschung eV, ISF München, Frankfurt/New York: Campus.
- West, J., 1998, Liquid Crystal Institute: In Search of The Ultimate Digital Ink, *Future of Print Media*, Summer, Kent State University <<http://www.futureprint.kent.edu/articles/west01.htm>>.
- Wheary, J., Wild, L., Schutz, B. and Weyher, C., 1998, Living Reviews Relativity: Thinking and Developing Electronically, *Journal of Electronic Publishing* 4(2) <<http://www.press.umich.edu/jep/04-02/wheary2.html>>.
- Whisler, S. and Rosenblatt, S. F., 1997, The Library and the University Press: Two Views of the Costs and Problems of the Current System of Scholarly Publishing, *Andrew W. Mellon Foundation Conference "Scholarly Communication and Technology"*, 1997-04-24/25, Emory Univ. <<http://www.arl.org/scomm/scat/rosenblatt.html>>.

- Wilcox, L. D., Schilit, B. N. and Sawhney, N., 1997, Dynamite: A Dynamically Organized Ink and Audio Notebook, *CHI97*, 1997-03-22/27  
<<http://www.acm.org/sigchi/chi97/proceedings/paper/ldw.htm>>.
- Wildman, P., 1998, From the monophonic university to polyphonic multiversities, *Futures* 30(7), 625-633.
- Wingert, B., 1996, Die neue Lust am Lesen? Erfahrungen und Überlegungen zur Lesbarkeit von Hypertexten, in: Bollmann, S. (Ed.): *Kursbuch Neue Medien – Trends in Wirtschaft und Politik, Wissenschaft und Kultur*, 2<sup>nd</sup> edition, Mannheim: Bollmann, 112-129.
- Winiwarter, V., 2000, Zur Rolle von Computer Mediated Communication (CMC) für interdisziplinäre Wissensarchitekturen am Beispiel der österreichischen Kulturlandschaftsforschung, *Land-schaftsplanungnet* (2) <[http://www.lapla-net.de/texte/02\\_00/winiwarter/winiwarter.pdf](http://www.lapla-net.de/texte/02_00/winiwarter/winiwarter.pdf)>.
- Wittenberg, K., 1998, CIAO: A New Model for Scholarly Publishing, *Journal of Electronic Publishing* 3(4) <<http://www.press.umich.edu/jep/03-04/ciao.html>>.
- Woodward, H., Rowland, F., McKnight, C., Pritchett, C. and Meadows, J., 1998, Café Jus: an Electronic Journals User Survey, *Journal of Digital Information* 1(3)  
<<http://jodi.ecs.soton.ac.uk/Articles/v01/i03/Woodward/>>.
- Woolf, P. K., 1993, Integrity and accountability in research and publication, *Journal of Scholarly Publishing* 24(4), 204-213.
- Woolgar, S., 2000, Where is the paperless office?, *THES*, 23rd June 2000  
<<http://virtualsociety.sbs.ox.ac.uk/reports/paperless.htm>>.
- Woolley, D. R., 1998, The Future of Web Conferencing, in: Robinson, P. (Ed.): *Web-based Computer Conferencing* <<http://thinkofit.com/webconf/wcfuture.htm>>.
- Wouters, P.F., 1996, Cyberscience, *Kennis en Methode* 20(2), 155-186.
- Zeigler, J. F., 1997, Gutenberg, the Scriptoria, and Websites, *Journal of Scholarly Publishing* 29(October), 36-43.
- Zelman, A. G., 2002, *Mediated Communication and the Evolving Science System: Mapping the Network Architecture of Knowledge Production*, Ph.D. thesis, University of Amsterdam  
<<http://www.rozenbergps.com/files/zelman.pdf>>.
- Zerdick, A., Picot, A., Schrape, K., Artope, A., Goldhammer, K., Heger, D. K., Lange, U. T., Vierkant, E., Lopez-Escobar, E. and Silverstone, R., 1999, *Die Internet-Ökonomie – Strategien für die digitale Wirtschaft (European Communication Council Report)*, Berlin/Heidelberg: Springer-Verlag (quoted from online manuscript).
- Zhang, Y., 1998, The impact of Internet-based electronic resources on formal scholarly communication in the area of library and information science: A citation analysis, *Journal of Information Science* 24(4), 241-254.
- Zhang, Z., 1997, Design and Implementation of a Web-based Electronic Refereeing System, *Review of Information Science* 2(1)  
<[http://www.inf-wiss.uni-konstanz.de/RIS/1997iss01\\_01/articles01/01.html](http://www.inf-wiss.uni-konstanz.de/RIS/1997iss01_01/articles01/01.html)>.
- Ziman, J., 1984, *An Introduction to Science Studies – The Philosophical and Social Aspects of Science and Technology*, Cambridge: Cambridge University Press.
- Zimmer, D. E., 2001, *Die Bibliothek der Zukunft. Text und Schrift in Zeiten des Internets*, Hamburg: Hoffmann und Campe.
- Zuckerman, H. and Merton, R. K., 1971, Patterns of Evaluation in Science: Institutionalization, Structure and Functions of the Referee System, *Minerva* 9(1), 66-100; also published in: Chapter 21 in Merton, R.K., *The Sociology of Science. Theoretical and Empirical Investigations*, Chicago/London: Univ. of Chicago Press, 1973.