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TO WHOM IT MAY CONCERN

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- Explanation of the research problem & investigative questions
- Quality of the literature analysis
- Appropriateness of the research method(s)
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Can *information ethics* be conceptualized by using the core/periphery model?

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Abstract

The term 'information ethics' (IE) is rapidly evolving and diversifying as new technologies enter the milieu and add to already existing 'entanglements'. It is therefore not surprising that the term lacks a universally accepted definition, although there is some common ground as to its constitution. This paper explores the term using the most commonly co-occurring terms in IE literature as indexed in nine databases, namely the EBSCO-hosted Academic Search Premier (ASP); Communication and Mass Media Complete; ERIC; Library, Information Science and Technology Abstracts (LISTA); Newspaper Complete; Business Premier; Master File Premier; and Wilson's Library Literature and Information Science (LLIS) Full Text. Core/periphery analysis, the co-occurrence of words as subject terms, and social network techniques were applied using UCINET for windows, text STAT and Bibexcel computer-aided software to determine how best to define and understand IE. The paper consequently identifies the most commonly used terms to describe IE and the core terms with which IE can be defined. Information obtained from this study can inform LIS research and education (e.g. in understanding IE content and development) as well as help out with the development of IE taxonomy and definitions, some of which may apply to the African understanding of IE.

Keywords: Information Ethics, Informetrics, Webometrics, Content analysis, Core/periphery model, Information science

Introduction

The concept of information ethics (IE) may not be new in information science circles, but a renewed interest in the topic (and its **'**re-birth' in the term 'information ethics') in the 90's is generally believed to have been inspired by the sterling contributions of authors such as Rafael Capurro, Luciano Floridi and Robert Hauptman (among others recognized by Thomas Froehlich in "*Brief history of information ethics*" [2005]), and the sterling work done towards the development of IE education by the University of Pittsburg through the initiative of Toni Carbo. Core work on the development of IE has been done since the early nineties at the University of Pretoria in South Africa, and this led to the first ever Africa Information Ethics conference in

2007. The epistemology of information ethics largely resides in applied professional ethics, which provides the fundamental theoretical framework underpinning the concept. Ethical theories that define what right actions and wrong actions people may take under different circumstances (also reflected in teleology and deontology) are generally accommodated under four widely known theories, i.e. consequence-based theories, duty-based theories, rights-based theories and virtue-based theories. These theories demonstrate the difficulties and contradictions that arise in the conceptualization and contextualization of ethics. Generally, all four ethical theories bear weight in information practice. For instance, Fallis (2007) reminds us that consequence–based theories are founded on utilitarianism and built on the premise that "*what distinguishes right actions from wrong actions is that they [actions] have better consequences*", and he associates this theory closely to the ethical dilemmas facing information providers in modern society. In rights-based theories, "*the right thing to do is determined by the rights that human beings have*", such as the rights agreed on in 1948's[1] Universal Declaration of Human Rights (UDHR). UDHR provides common standards for understanding the rights of all nations and information workers from all corners of the world. Article 19 in the declaration stipulates that: *"Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers"* (UNDHR, 1948). Over time, recognizing such fundamental rights has meant defining information ethics and creating an inclusive paradigm with an emphasis on benefits and shared values and understanding.

The problem with these theories is the difficulties encountered in their application, particularly because of the contradictions that arise when attempting comparisons, both within and without. This has led to ethical relativism. For example, an excellent consequence that brings happiness to an individual, a family, a community or an institution may not necessarily be either right or virtuous. Likewise, the way different people understand duty varies, and the most likely question is therefore duty to whom - family, beliefs/religion, employer, government or nation? Some of the most virile conflicts in family units, workplaces, governments and international relationships have largely arisen from conflicts in the interpretation and application of ethical values.

Furthermore, the interpretation and implementation of rights across communities around the world is not uniform. For example, marginalized groups (referring here to children, women, the illiterate, rural dwellers or others who are disadvantaged because of race, creed, religion, poverty, age, unemployment, etc) may not necessarily benefit from the human rights that others (the more privileged) enjoy. In most cases, equality and human rights as experienced and perceived by these groups are utopian in nature - what is naturally right to them is often decided not by themselves, but by some 'superior' body (those at the top in a given social hierarchy through politics, culture, traditions and/or the religion of a community).

An alternative or supplementary approach to the question of ethical theories can be found in the relationships and tensions between mores, ethics and laws (see Froehlich, 1997:1-2). While distinguishing between the three concepts, he notes that morals, ethics and laws may contravene one another (see Froehlich, 1997:3). Ultimately, the nature, level and challenges of such contraventions must be understood by the information ethics scholar and professional.

From these definitions, ethics seem to primarily focus on the norms and standards of behavior of individuals or groups within a society based on normative conduct and moral judgment. Information ethics is generally believed to provide "*a critical framework for considering moral issues concerning informational privacy, moral agency (e.g. whether artificial agents may be moral), new environmental issues (especially how agents should one behave in the infosphere),*

[1] See http://www.un.org/overview/rights.html

problems arising from the life-cycle (creation, collection, recording, distribution, processing, etc.) of information (especially ownership and copyright, digital divide)"(Information Ethics, nd:np)

The purpose of this paper is to explore the term 'information ethics' using the most commonly co-occurring terms in IE literature as indexed in nine databases (highlighted under methodology) in order to identify the terms most commonly used to describe IE and the core terms with which IE can be defined. The paper attempts to answer the following research questions: What are the most common subject terms related to IE in the databases? What core, commonly occurring single terms occur the most in IE literature? What are the most frequently used terms in IE's full-text articles? What is the distribution of the terms according to the number of records in which they occur? Can IE be conceptualised by using the core/periphery model?

Methodology

As mentioned earlier, the term 'information ethics' is relatively new, and this was strongly reflected in the absence of the term from EBSCO-hosted and other databases' subject thesauri. Apart from the ISI's citation indexes, none of the databases contained the term 'information ethics' in their subject fields. This necessitated our selection of several databases in order to better represent the topic (the subject is multidisciplinary) and to extract as many records as possible in order to enhance the study's reliability and validity. We opted for nine databases, namely the EBSCO-hosted Academic Search Premier (ASP); Communication and Mass Media Complete; ERIC; Library, Information Science and Technology Abstracts (LISTA); Newspaper Complete; Business Premier; Master File Premier; and Wilson's Library Literature and Information Science (LLIS) Full Text; to extract information ethics' specific records using a uniform search query ('information ethics') within the title, subject and abstract fields. Because the databases in the two indexing services do not share a search platform, the searches and subsequent analyses of the retrieved data were achieved separately. Emphasis was, however, placed on the analysis of data extracted from EBSCO-hosted databases because they provide several subject terms per record, unlike the LLIS which tends to provide only one subject term per record.

The databases hosted by EBSCO yielded a total of 583 records, while Wilson's LLIS generated a total of 493 unique items. The extracted data was saved in text format in conformity with the requirements of the computer software that was used for data analysis. Data was analyzed using Bibexcel, TI, Simple Concordance Program (version 4.0) and UCINET 6 for Windows (version 6.170). Further analysis was carried out in order to identify the core terms with which IE literature is described using the core/periphery model as outlined in Onyancha & Ocholla's (2009) study: *Conceptualizing 'knowledge management' in the context of Library and Information Science using the core/periphery model*.

As a way of triangulation, 23 full-text articles were identified and downloaded from the EBSCO-hosted databases (this was based entirely on their level of relevance. Their contents were then analyzed in order to find the most frequently and commonly used IE-related terms in the texts. It was assumed that the most frequent terms, both within a given text and across a number of documents, would form the core of the terms that are used to describe IE. In order to obtain accurate results, the data was cleaned of irrelevant data, such as acknowledgements and lists of references and authors' names, addresses and journal titles that are occasionally provided as headers or footers in some articles. Included in each analysis were the article's title, author-supplied keywords, abstracts and contents in the body of the text.

The contextual use of words was used to describe or modify nouns or pronouns that appeared most frequently. In-text terms were also considered to help us determine the compound phrases that can be used to describe IE literature as well as to identify terms with which the IE course or curriculum can be developed. For instance, terms such as intellectual, legal, economic, moral, etc; are meaningless when looked at individually. It was believed that contextually using them would render them more meaningful.

Results

The findings from the two indexing services are presented separately because the indexing subject terms used by EBSCO-hosted and Wilson's databases are mostly dissimilar. This section provides the frequency counts of both the compound and single subject terms used to describe IE literature. The levels of association of the most common subject terms in relation to each other are also illustrated.

Most common compound subject terms in EBSCO-hosted databases

SUBJECT TERMS	NO.	SUBJECT TERMS	NO.
ETHICS	167	BUSINESS ETHICS	8
ACCESS TO INFORMATION/ETHICS	81	COMPUTERS	8
INFORMATION TECHNOLOGY	57	DISCLOSURE/LEGISLATION & JURISPRUDENCE	8
INTERNET	32	GENETIC RESEARCH/ETHICS	8
ACCESS TO INFORMATION/LEGISLATION & JURISPRUDENCE	31	GUIDELINES AS TOPIC	8
INTELLECTUAL PROPERTY	31	ASSOCIATIONS, INSTITUTIONS, ETC.	7
INFORMATION SCIENCE	27	PERSONAL AUTONOMY	7
WEB SITES	27	COMPUTER SECURITY/ETHICS	7
LIBRARY SCIENCE	25	DECISION MAKING	7
MORAL & ETHICAL ASPECTS	25	ETHICS, RESEARCH	7
RESEARCH	24	INFORMED CONSENT/LEGISLATION & JURISPRUDENCE	7
AUTHORSHIP	23	INTELLECTUAL FREEDOM	7
PRIVACY	21	PEER REVIEW	7
PROFESSIONAL ETHICS	18	POLITICAL SCIENCE	7
LIBRARIANS	18	UNIVERSITIES & COLLEGES	7
CONFIDENTIALITY/LEGISLATION & JURISPRUDENCE	16	PATIENT RIGHTS/ETHICS	7
COMPUTER NETWORK RESOURCES	16	RESEARCH SUBJECTS	6
CONFIDENTIALITY/ETHICS	16	MEDICAL RECORDS SYSTEMS, COMPUTERIZED/ETHICS	6
PUBLISHERS & PUBLISHING	15	SCIENTIFIC MISCONDUCT	6

DISCLOSURE/ETHICS	15	MASS MEDIA	6
CENSORSHIP	15	INFORMATION THEORY	6
INFORMATION SERVICES	15	COMPUTER SECURITY	6
INFORMATION TECHNOLOGY -- MORAL & ETHICAL ASPECTS	13	INFORMATION DISSEMINATION	6
SOCIAL RESPONSIBILITY	13	INTANGIBLE PROPERTY	6
INFORMED CONSENT/ETHICS	12	CONFIDENTIALITY	6
INFORMATION SOCIETY	12	STANDARDS	6
COPYRIGHT	12	COPYRIGHT INFRINGEMENT	6
PLAGIARISM	12	PATIENT RIGHTS/LEGISLATION & JURISPRUDENCE	6
CODES OF ETHICS	11	MEDDICAL RECORDS SYSTEMS, COMPUTERIZED/LEGISLATION & JURISPRUDENCE	6
LIBRARIES	11	VALUES	6
INFORMATION RESOURCES MANAGEMENT	11	SOCIAL ASPECTS	6
EDUCATION	10	EDITING	5
INFORMATION RESOURCES	10	COMPUTER SECURITY/LEGISLATION & JURISPRUDENCE	5
SCHOLARLY PUBLISHING	10	SOCIAL SCIENCES	5
AUTHORS	10	DISCLOSURE	5
TECHNOLOGY	9	COMPUTER CRIMES	5
HUMAN RIGHTS	9	BUSINESS ENTERPRISES	5
INFORMATION POLICY	9	MEDICAL RECORDS/LEGISLATION & JURISPRUDENCE	5
HIGHER EDUCATION	9	LITERATURE	5
PHILOSOPHY	9	COMMUNICATION	5
GENETIC PRIVACY/ETHICS	9	CONSUMER HEALTH INFORMATION/ETHICS	5
PRIVACY/LEGISLATION & JURISPRUDENCE	9	STUDENTS	5
INFORMATION & COMMUNICATION TECHNOLOGIES	8	INFORMATION SOURCES	5
BIOMEDICAL RESEARCH/ETHICS	8	SCHOLARS	5
INFORMATION BEHAVIOR	8	APPLIED ETHICS	5

Table 1: Top 90 subject terms describing IE literature (EBSCO-hosted databases)

Table 1 provides the compound subject terms that yielded 5 or more documents each. As expected, the first position (referring here only to documents that recorded 30 or more hits) was held by the term *ethics,* which was used to index 167 documents, followed by *access to*

information/ethics (81), *information technology* (57), *Internet* (32), *access to information/legislation & jurisprudence* (31) and *intellectual property* (31). These and other subject terms in Table 1 constitute the core subject terms that have been used to describe IE literature and to broadly define IE. Some of these terms originate from different disciplines, e.g. *Information Technology* (which generated 57 documents), *Information Science*, *Library Science*, *Technology*, *Political Science*, *Medicine* and *Health, Communication Science, Education, Publishing, Business, Philosophy, Sociology,* and *Computer Science.*

Most commonly occurring single terms in the IE literature's subject field

SINGLE SUBJECT TERM	NO	SINGLE SUBJECT TERM	NO	SINGLE SUBJECT TERM	NO	SINGLE SUBJECT TERM	NO
ETHICS	613	INTELLECTUAL	39	INFORMATICS	18	TRUTH	10
INFORMATION	380	PROFESSIONAL	39	ELECTRONIC	17	ADVOCACY	9
LEGISLATION	200	RECORDS	38	NETWORK	16	COLLEGES	9
JURISPRUDENCE	194	RIGHTS	37	ORGANIZATION	16	CONFLICT	9
RESEARCH	178	WEB	36	PUBLISHERS	16	DEVELOPMENT	9
ACCESS	128	CONSENT	35	SOCIETY	16	DISSEMINATION	9
TECHNOLOGY	101	PERIODICALS	35	THEORY	16	EMPLOYEES	9
STANDARDS	79	COMMUNICATION	32	CENSORSHIP	15	EVALUATION	9
HEALTH	74	SECURITY	32	FREEDOM	15	MATERIALS	9
COMPUTER	71	INFORMED	29	MEDIA	15	MEDICINE	9
EDUCATION	68	MANAGEMENT	29	RESPONSIBILITY	15	RETRIEVAL	9
LIBRARY	63	LIBRARIANS	28	SCREENING	15	REVIEWING	9
INTERNET	56	BUSINESS	27	PATENTS	14	SOURCES	9
ECONOMICS	55	COPYRIGHT	27	UNIVERSITIES	14	CORPORATIONS	8
LIBRARIES	53	BEHAVIOR	24	AUTHORS	13	GENOMICS	8
PRIVACY	53	AUTHORSHIP	23	PLAGIARISM	13	PUBLICATIONS	8
CONFIDENTIALITY	48	COMPUTERIZED	23	SCHOLARLY	13	TECHNOLOGIES	8
SERVICES	48	DATABASES	21	CODES	12	ACADEMIC	7
PSYCHOLOGY	46	PEER	21	COMPUTERS	12	CITATION	7
PUBLISHING	46	PERSONNEL	21	OWNERSHIP	11	INFRINGEMENT	7
SYSTEMS	44	PHILOSOPHY	19	SCIENTIFIC	11	JOURNALISM	7

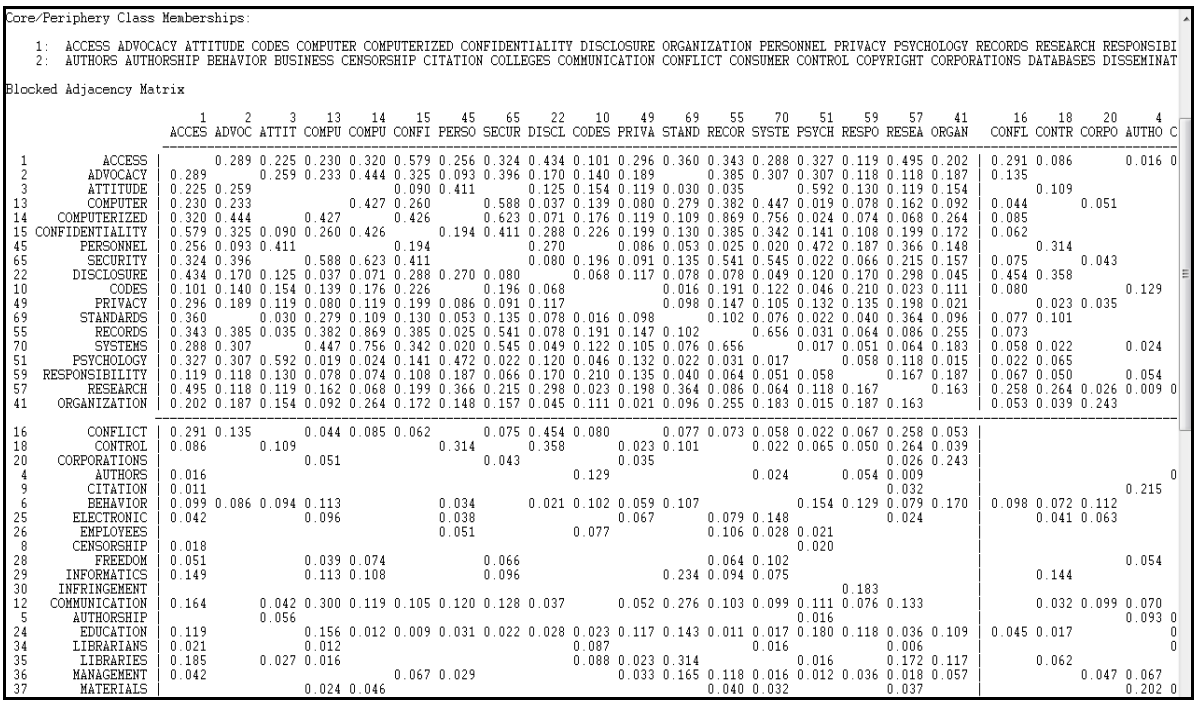
DISCLOSURE	43	POLICY	19	ATTITUDE	10	MISCONDUCT	7
PROPERTY	43	RELATIONS	19	CONSUMER	10	NETWORKS	7
RESOURCES	42	CONTROL	18	TRIALS	10	VALUES	7

Table 2: Top 100 single subject terms in EBSCO-hosted databases

The compound subject terms in Table 1 were put through further analysis using a computer-based concordance program that generated single subject terms, illustrated in Table 2. Altogether, there were 938 unique single terms that occurred within the compound subject terms that described IE literature. As in Table 1, the most common term was *ethics* with 613 hits (in the compound subject terms), followed by *information* (380), *legislation* (200), *jurisprudence* (194), *research* (178), *access* (128), *technology* (101), *standards* (79), *health* (74), *computer* (71), *education* (68) and *library* (60). Others that produced a high number of hits include *Internet* (56), *economics* (55), *libraries* (53), and *privacy* (53). Table 2 shows that single terms yielded a higher number of hits than compound subject terms. For instance, while the term *ethics* as a compound subject term produced a total number of 167 records, it yielded 613 hits as a single term. The term *information* did not feature as a compound subject term but yielded a total of 380 hits as a single term that describes IE literature. Some of the terms, e.g. *Internet, research, librarianship, privacy, copyright,* and *authorship,* featured both as single and compound subject terms but recorded different frequency counts.

Core IE single subject terms

The core/periphery model illustrated in Fig 1 reveals two clusters that were generated using the most common 75 single terms that appeared in the compound subject terms of IE literature. As the complete illustration could not fit into this page, only the core single terms and their strengths of association are provided. Excluding the terms *ethics, information, legislation,* and *jurisprudence* – terms that could have created unnecessary 'noise' in the model – 18 core terms were identified. These were: *access, advocacy, computer (and computerized), confidentiality, personnel, security, disclosure, codes, privacy, standards, records, systems, psychology, responsibility, research* and *organization.* The term *computerized* originates from the compound subject term(s) *medical records systems, computerized/ethics (legislation & jurisprudence),* which denotes the term(s) used to describe literature discussing ethical and legal considerations in creating, storing, and accessing medical records. The terms *records* and *computerized* produced the highest strength of association (i.e. 0.868) followed by *computerized* and *systems* (0.756), *records* and *systems* (0.656), *computerized* and *security* (0.623), *psychology* and *attitude* (0.592), *computer* and *security* (0.588), *access* and *confidentiality* (0.579), *systems* and *security* (0.545), and *records and security* (0.541). The second group consisted of terms that can be said to belong to the periphery of the clusters of IE terms. Their dissociatedness with some of the most commonly used terms does not, however, mean that they are not at all related to IE. These terms may be related to IE but less used as subject terms in indexing IE literature, hence their appearance in the peripheral cluster.



Core/Periphery Class Memberships:

1: ACCESS ADVOCACY ATTITUDE CODES COMPUTER COMPUTERIZED CONFIDENTIALITY DISCLOSURE ORGANIZATION PERSONNEL PRIVACY PSYCHOLOGY RECORDS RESEARCH RESPONSIBI
2: AUTHORS AUTHORSHIP BEHAVIOR BUSINESS CENSORSHIP CITATION COLLEGES COMMUNICATION CONFLICT CONSUMER CONTROL COPYRIGHT CORPORATIONS DATABASES DISSEMINAT

Blocked Adjacency Matrix

		1 ACCES	2 ADVOC	3 ATTIT	13 COMPU	14 COMPU	15 CONFI	45 PERSO	65 SECUR	22 DISCL	10 CODES	49 PRIVA	69 STAND	55 RECOR	70 SYSTE	51 PSYCH	59 RESPO	57 RESEA	41 ORGAN	16 CONFL	18 CONTR	20 CORPO	4 AUTHO	C
1	ACCESS		0.289	0.225	0.230	0.320	0.579	0.256	0.324	0.434	0.101	0.296	0.360	0.343	0.288	0.327	0.119	0.495	0.202	0.291	0.086		0.016	0
2	ADVOCACY	0.289		0.259	0.233	0.444	0.325	0.093	0.396	0.170	0.140	0.189		0.385	0.307	0.307	0.118	0.118	0.187	0.135				
3	ATTITUDE	0.225	0.259				0.090	0.411		0.125	0.154	0.119	0.030	0.035		0.592	0.130	0.119	0.154		0.109			
13	COMPUTER	0.230	0.233			0.427	0.260		0.588	0.037	0.139	0.080	0.279	0.382	0.447	0.019	0.078	0.162	0.092	0.044		0.051		
14	COMPUTERIZED	0.320	0.444		0.427		0.426		0.623	0.071	0.176	0.119	0.109	0.869	0.756	0.024	0.074	0.068	0.264	0.085				
15	CONFIDENTIALITY	0.579	0.325	0.090	0.260	0.426		0.194	0.411	0.288	0.226	0.199	0.130	0.385	0.342	0.141	0.108	0.199	0.172	0.062				
45	PERSONNEL	0.256	0.093	0.411			0.194			0.270		0.086	0.053	0.025	0.020	0.472	0.187	0.366	0.148		0.314			
65	SECURITY	0.324	0.396		0.588	0.623	0.411			0.080	0.196	0.091	0.135	0.541	0.545	0.022	0.066	0.215	0.157	0.075		0.043		
22	DISCLOSURE	0.434	0.170	0.125	0.037	0.071	0.288	0.270	0.080		0.068	0.117	0.078	0.078	0.049	0.120	0.170	0.298	0.045	0.454	0.358			
10	CODES	0.101	0.140	0.154	0.139	0.176	0.226		0.196	0.068			0.016	0.191	0.122	0.046	0.210	0.023	0.111	0.080			0.129	
49	PRIVACY	0.296	0.189	0.119	0.080	0.119	0.199	0.086	0.091	0.117			0.098	0.147	0.105	0.132	0.135	0.198	0.021		0.023	0.035		
69	STANDARDS	0.360		0.030	0.279	0.109	0.130	0.053	0.135	0.078	0.016	0.098		0.102	0.076	0.022	0.040	0.364	0.096	0.077	0.101			
55	RECORDS	0.343	0.385	0.035	0.382	0.869	0.385	0.025	0.541	0.078	0.191	0.147	0.102		0.656	0.031	0.064	0.086	0.255	0.073				
70	SYSTEMS	0.288	0.307		0.447	0.756	0.342	0.020	0.545	0.049	0.122	0.105	0.076	0.656		0.017	0.051	0.064	0.183	0.058	0.022		0.024	
51	PSYCHOLOGY	0.327	0.307	0.592	0.019	0.024	0.141	0.472	0.022	0.120	0.046	0.132	0.022	0.031	0.017		0.058	0.118	0.015	0.022	0.065			
59	RESPONSIBILITY	0.119	0.118	0.130	0.078	0.074	0.108	0.187	0.066	0.170	0.210	0.135	0.040	0.064	0.051	0.058		0.167	0.187	0.067	0.050		0.054	
57	RESEARCH	0.495	0.118	0.119	0.162	0.068	0.199	0.366	0.215	0.298	0.023	0.198	0.364	0.086	0.064	0.118	0.167		0.163	0.258	0.264	0.026	0.009	0
41	ORGANIZATION	0.202	0.187	0.154	0.092	0.264	0.172	0.148	0.157	0.045	0.111	0.021	0.096	0.255	0.183	0.015	0.187	0.163		0.053	0.039	0.243		
16	CONFLICT	0.291	0.135		0.044	0.085	0.062		0.075	0.454	0.080		0.077	0.073	0.058	0.022	0.067	0.258	0.053					
18	CONTROL	0.086		0.109				0.314		0.358		0.023	0.101		0.022	0.065	0.050	0.264	0.039					
20	CORPORATIONS				0.051				0.043			0.035						0.026	0.243					
4	AUTHORS	0.016									0.129				0.024		0.054	0.009						0
9	CITATION	0.011																0.032					0.215	
6	BEHAVIOR	0.099	0.086	0.094	0.113			0.034		0.021	0.102	0.059	0.107			0.154	0.129	0.079	0.170	0.098	0.072	0.112		
25	ELECTRONIC	0.042			0.096			0.038				0.067		0.079	0.148			0.024			0.041	0.063		
26	EMPLOYEES							0.051			0.077			0.106	0.028	0.021								
8	CENSORSHIP	0.018														0.020								
28	FREEDOM	0.051			0.039	0.074			0.066					0.064	0.102								0.054	
29	INFORMATICS	0.149			0.113	0.108			0.096				0.234	0.094	0.075						0.144			
30	INFRINGEMENT																0.183							
12	COMMUNICATION	0.164		0.042	0.300	0.119	0.105	0.120	0.128	0.037		0.052	0.276	0.103	0.099	0.111	0.076	0.133			0.032	0.099	0.070	
5	AUTHORSHIP			0.056												0.016							0.093	0
24	EDUCATION	0.119			0.156	0.012	0.009	0.031	0.022	0.028	0.023	0.117	0.143	0.011	0.017	0.180	0.118	0.036	0.109	0.045	0.017			0
34	LIBRARIANS	0.021			0.012						0.087				0.016			0.006						0
35	LIBRARIES	0.185		0.027	0.016						0.088	0.023	0.314			0.016		0.172	0.117		0.062			
36	MANAGEMENT	0.042					0.067	0.029				0.033	0.165	0.118	0.016	0.012	0.036	0.018	0.057			0.047	0.067	
37	MATERIALS				0.024	0.046								0.040	0.032			0.037					0.202	0

Fig 1: Core/periphery model of terms describing IE literature

Most frequently used terms in IE full-text articles

Appendix A provides the top 102 terms that recorded over 15 hits each. A comparison featuring the contents of Table 2 above and Appendix A reveals a lot of similarities in the occurrence of terms in full-text articles and as subject indexing terms of IE literature. Leading the pack is i*nformation*, which recorded a total of 1862 hits in 23 full-text articles, followed by *ethics* (803), *ethical*[2] (770), *moral* (570), *society* (333), *behavior* (265), *privacy* (257), *students* (242), *justice* (210), *global* (178), *computer* (172), *access* (166), *values* (154), and *data* (149), to name a few. Besides examining the use of in-text concepts/terms as the subject indexing terms of IE literature, this triangulation exercise identified the core terms that describe full-text IE articles. In total, 8780 unique words occurred in the 23 IE full-text articles. Only 102 of these recorded over 15 hits each (1.16%). This implies that only about 1.16% of the words appear in IE literature.

Distribution of terms according to the number of records in which they occur

When analyzed according to the number of full-text articles in which they occurred, only 3 of the 102 terms co-occurred in all 23 articles, namely *information*, *ethics* and *ethical*. These words' dominance in IE literature was expected as the articles extracted from the databases were about information ethics. The terms *moral* and *society* appeared in 22 articles, while *values, research, technology* and *responsibility* were mentioned in 21 articles. 80 (78.4%) of the 102 terms occurred in 50% of the articles. Although terms such as *marginalized, entropy, infosphere, cognition, ideology, poor, attitude, traditions, virtue, ICTs, censorship,* and *libraries* recorded a high frequency of occurrence (as shown in Appendix A), they nevertheless only occurred in 7 (6.86%) or less full-text articles. This implies that these terms, together with *normative, institutions, library, accuracy, services, behaviors, truth, discourse, protection* and

[2] See contextual use of the adjectives in the section on '*contextual use of terms in the full-text articles*'

conflict, were extensively used in only a small percentage of the articles, while a few terms occurred in the majority.

Term	Records	%	Term	Records	%	Term	Records	%
Information	23	100.0	Computers	15	65.2	electronic	12	52.2
Ethics	23	100.0	Principles	15	65.2	academic	12	52.2
Ethical	23	100.0	Management	15	65.2	law	12	52.2
Moral	22	95.7	communication	15	65.2	justice	11	47.8
Society	22	95.7	Economic	15	65.2	cultures	11	47.8
Values	21	91.3	Sense	15	65.2	codes	11	47.8
Research	21	91.3	Community	15	65.2	theories	11	47.8
Technology	21	91.3	Processes	15	65.2	policies	11	47.8
Responsibility	21	91.3	Standards	15	65.2	authors	11	47.8
Privacy	20	87.0	Security	14	60.9	societies	10	43.5
Business	20	87.0	Decision	14	60.9	principle	10	43.5
Rights	19	82.6	Knowledge	14	60.9	beliefs	10	43.5
System	19	82.6	Public	14	60.9	normative	9	39.1
Computer	18	78.3	Political	14	60.9	institutions	9	39.1
Access	18	78.3	Software	14	60.9	library	8	34.8
Systems	18	78.3	Education	14	60.9	accuracy	8	34.8
Property	18	78.3	Morality	14	60.9	services	8	34.8
Internet	18	78.3	Respect	14	60.9	behaviors	8	34.8
Right	18	78.3	Professionals	14	60.9	truth	8	34.8
Analysis	18	78.3	Interests	14	60.9	discourse	8	34.8

Practices	18	78.3	Students	13	56.5	protection	8	34.8
Legal	17	73.9	Cultural	13	56.5	conflict	8	34.8
Intellectual	17	73.9	Managers	13	56.5	libraries	7	30.4
Freedom	17	73.9	Organizations	13	56.5	censorship	7	30.4
Relationships	17	73.9	Philosophy	13	56.5	icts	6	26.1
Policy	17	73.9	Government	13	56.5	virtue	6	26.1
Behavior	16	69.6	Morally	13	56.5	traditions	6	26.1
Culture	16	69.6	Media	13	56.5	attitude	5	21.7
University	16	69.6	Norms	13	56.5	poor	4	17.4
Technologies	16	69.6	Professional	12	52.2	ideology	4	17.4
Resources	16	69.6	Digital	12	52.2	cognition	3	13.0
Organization	16	69.6	Control	12	52.2	infosphere	3	13.0
Global	15	65.2	Theory	12	52.2	entropy	3	13.0
Data	15	65.2	Attitudes	12	52.2	marginalized	2	8.7

Table 3: Distribution of most common terms by the number of IE full-text articles (N=23)

Contextual use of non-proper nouns/pronouns

This subsection concentrates on the contextual use of some of the **most common terms that described the nouns or pronouns and verbs** ordain order to identify the phrases (from within the full-text articles) that can be used to describe IE. These terms include *ethical, moral, legal, intellectual, global, economic, political, public, cultural, morally, digital, electronic, academic, normative,* and *marginalized.* The term ***ethical***, which occurred in all the full-text articles and was one of the terms with the highest frequency counts, **was qualified** with terms such as *arguments, attitude(s), behavior, challenges, codes, conflict, correctness (corrections), decision(s), dilemmas, dimension(s), issues, judgment, norms, principles, problems, reasons and reasoning, reflection, standards,* and *theory or theories*. The words that accompanied the term ***moral*** include *action(s), agency or agents, agenda, behavior, belief, business, conflict, decision(s), deliberation, discourse, identity, nature, norm, principles, practice, responsibility, standing, standards, status, subject(s), turing test,* and *virtue.* The contextual use of the other terms was as follows: ***legal*** *- concerns, environment, framework, issues,* and *recognition;*

intellectual *- property, freedom, capability, work(s),* and *entities;* ***global*** *- challenges, community, connectivity, digital divide, information society, justice,* and *social justice;* ***economic*** *- activities, social justice, development, expectations, growth, justice,* and *system(s);* ***political*** *- activities, advocacy, processes, power,* and *morality;* ***public*** *- international affairs, social matters, good(s), interest, library, policy,* and *sector;* ***cultural*** *- background(s), diversity, distance, differences, hospitality, information, influences, memory,* and *values;* ***morally*** *- acceptable, justified, protected, relevant, responsible,* and *wrong;* ***digital*** *- content, divide, information, rights, technologies,* and *world;* ***electronic*** *- information, communication, and age;* ***academic*** *- community, culture, discourse, discipline, library, publishers,* and *research;* ***normative*** *- evaluation, ethical theory or theories, guidelines, practices, principles, structure,* and *rightness;* and ***marginalized*** *- communities, people, societies,* and *information-poor.*

Subject terms used to index IE literature in the LLIS database

SUBJECTS	RECORDS	SUBJECTS	RECORDS
ETHICS	101	REFERENCE SERVICES	3
INFORMATION RETRIEVAL/SOCIAL ASPECTS	25	INFORMATION BROKERS/LEGAL ASPECTS	3
SCHOLARLY PUBLISHING	18	SCIENTIFIC RESEARCH/EVALUATION	3
RIGHT OF PRIVACY	13	RESEARCH	2
ETHICS/INTERNET RESOURCES	9	FORGERIES, FRAUDS, ETC.	2
INTELLECTUAL FREEDOM	8	SCHOLARLY PUBLISHING/EVALUATION	2
INTERNET/LEGAL ASPECTS	8	DIGITAL MILLENNIUM COPYRIGHT ACT	2
LIBRARIANSHIP AS A PROFESSION	7	INFORMATION POLICY/DEVELOPING COUNTRIES	2
INFORMATION POLICY	6	OBSCENITY AND PORNOGRAPHY	2
ETHICS/TEACHING	6	HUMAN RIGHTS/INTERNET RESOURCES	2
AUTHORSHIP	6	PRESSURE GROUPS AND THE LIBRARY	1
COMPUTER SECURITY	6	LIBRARY LEGISLATION	1
CENSORSHIP	5	LIBRARIES/LEGAL ASPECTS	1
COPYRIGHT	5	LIBRARY BILL OF RIGHTS	1
CENSORSHIP/INTERNET	5	SURVEYS/ETHICS	1
FREEDOM OF INFORMATION	5	SURVEYS/INTELLECTUAL FREEDOM	1
INTERNET	5	COPYRIGHT/INTERNET RESOURCES	1

INTERNET/SECURITY MEASURES	4	COPYRIGHT/MUSIC	1
INTERNET SEARCHING	4	COPYRIGHT/FINANCE	1
CITATION ANALYSIS	3	COPYRIGHT/GREAT BRITAIN	1
INTERNET/PUBLIC LIBRARIES	3	ELECTRONIC MAIL/LEGAL ASPECTS	1
PLAGIARISM	3	ETHICS/CASE STUDIES	1
ETHICS/BIBLIOGRAPHY	3	ETHICS/EVALUATION	1
SCIENTIFIC RESEARCH	3	COMPUTER HACKERS	1
COPYRIGHT/COMPUTER-STORED INFORMATION	3	INFORMERS	1
CORPORATIONS/INTERNET RESOURCES	3	LIBRARIANSHIP/LEGAL ASPECTS	1

Table 4: IE indexing subject terms in LLIS

Table 4 showcases the indexing terms that are (presently) used to index IE literature in the LLIS database. The most commonly used terms, which may constitute the core of terms with which IE can be described, include: *ethics* (101), *scholarly publishing* (25), *right of privacy* (13), *intellectual freedom* (8), *internet/legal aspects* (8), *librarianship as a profession* (7), *information policy* (6), *ethics/teaching* (6), *authorship* (6), and *computer security* (6). Some subject terms are used to index IE literature in LLIS but not in EBSCO-hosted databases. These include *computer hackers, informers; electronic mail/legal aspects; obscenity and pornography; Digital Millennium Copyright Act; forgeries, fraud, etc; information brokers; corporations/internet resources;* and *citation analysis.* Most of the terms presented in Table 4, however, are in keeping with the terms described in Tables 1 to 3.

Discussion, conclusion and recommendations

The core (inner, centre, heart) and periphery (outer edge, borderline) model seems to be used widely in many disciplines for reasons that can, by their nature, be developmental, interventionist and/or highly prioritized. We have considered the three strands, for convinience, in this study by exploring some elements of co-word/co-occurrence analysis (see Onyancha and Ocholla, 2005) to assess the strengths of association between information ethics and other related terms in order to determine what constitutes the core and the periphery of IE terms. This was achieved by analyzing 1099 records, including 23 full text articles, from nine databases. Although the indexing subject terms used by the two database hosts (EBSCO and LLIS) were not similar, the frequency counts of both compound and single subject terms showed distinct core subject terms with which IE can be associated (see Tables 1 and 2). For instance, the top compound subjects (generating 30 or more hits) were ***ethics,*** *access* ***to information****,* ***information*** *technology, Internet,* ***access to legislation and*** **jurisprudence** and *intellectual property*. Single subject terms (with 56 - 613 hits) were ***ethics, information, legislation, jurisprudence****, research,* ***access, technology,*** *standards, health, computer, education and library (ies),* ***Internet*****,** *economics* and *privacy*. The term *intellectual property* was split into two in the single subject term display. Although legal aspects/issues are not articulated in some of the definitions of information ethics (see Information Ethics, nd: np), there is a strong association between IE and legal issues. There were, of course, other IE applications and implications (e.g. to/with computers, Internet education, economics, health, etc.) suggesting a strong link between IE and other fields, such as with computers and the Internet. As illustrated in Fig.2, we noted

that the terms *records* and *computerized* produced the highest strength of association. We also noted that the most frequently used terms in the IE full text articles (Table 3) reveal significant similarities to what was found in previous analyses (Tables 1 and 2).

The most core, commonly occurring single terms in IE literature (with 803-146 hits) were found to be *ethics, **ethical**, moral, **society,** behaviour, privacy, **students,** justice, **global,** computer, access, values,* and *data*. We took note of single terms without meaning unless used as compound terms (see bold). We further observed that in this particular (full text analysis) instance, there were no legal terms.Through triangulation, we noticed that the most frequently used terms in IE full-text articles were largely similar to those indexed from non-full text records.

With regard to the distribution of the terms according to the number of records or full texts in which they occur (see Table 3), it emerged that only 3 of the 102 terms (*information, ethics* and *ethical*) co-occurred in the 23 articles. Other close terms were *moral, society, values, **research, technology*** and *responsibility*. It is possible to identify core and peripheral terms even with the use of full text article (see Table 3).

The main research question was: Can IE be conceptualised by using the core/periphery model? The answer is yes. It is possible to identify the core and peripheral terms and show the strengths of association between the terms. It is also possible to identify the close link between information ethics and legal aspects of information. This linkage was not projected clearly from the concepts generated in the 23 full text titles that were analysed. For instance, we observed that whereas the occurrence of terms such as *copyright, publishers & publishing, censorship, plagiarism, scholarly publishing, computer security/ethics, information dissemination, copyright infringement,* and *information sources* in IE literature can be clearly explained, the inclusion of terms that relate to legal and ethical aspects of information handling among the terms that describe IE is rather obscure.

Additionally, we noted that the library seems to be at the center of teaching/imparting IE to its users, which could explain the high frequency counts recorded by *librarianship* and *libraries*. *Scholarly publishing*, *research, authorship*, *authors*, *citation analysis*, *plagiarism*, *copyright*, *publishing* and *publishers* are some of the words that appear to emphasize ethical considerations in scholarship. We also assume that the terms *universities* and *colleges* that were associated with IE refer to elements of information ethics education (see Ocholla, 2009).

We conclude that the *Internet, information and communication technologies (ICTs), email,* and *websites* pose new challenges to IE *norms* and *standards*. It is perhaps necessary to re-visit the relationship between information ethics and legal aspects/issues of information in order to link the two more closely. The outcome from re-visiting this relationship would strongly serve future decisions on IE and legal issues/aspects of education and research.

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APPENDIX A: Most frequently used terms in the IE full-text research articles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
Information	228	151	36	33	162	65	218	23	41	117	76	94	92	31	15	30	109	80	105	70	26	26	34	1862
Ethics	24	50	22	16	102	59	1	14	37	57	64	67	29	38	16	6	61	14	66	16	23	17	4	803
Ethical	13	40	20	97	63	4	32	18	20	23	46	21	18	45	24	1	58	34	36	43	12	94	8	770
Moral	8	122	7	0	94	3	42	0	15	5	18	15	17	2	39	3	15	11	138	11	2	1	2	570
Society	6	5	8	2	7	1	170	17	10	36	6	15	3	2	6	0	6	12	0	8	8	1	4	333
Behavior	0	0	4	33	2	122	5	1	1	0	0	1	11	8	2	0	11	3	27	15	0	19	0	265
Privacy	1	1	5	9	3	32	4	0	36	7	1	2	1	5	104	0	1	6	2	25	3	0	9	257
Students	0	1	0	11	0	72	1	0	0	1	83	5	1	0	0	1	35	1	0	27	0	3	0	242
Justice	11	0	1	0	2	0	167	9	0	4	2	10	0	0	1	0	0	2	1	0	0	0	0	210
Global	15	0	2	0	0	3	115	1	6	8	1	13	8	0	1	0	1	1	2	1	0	0	0	178
Computer	2	25	2	0	6	44	0	6	2	2	1	3	5	5	11	0	0	0	25	17	12	3	1	172
Access	5	2	10	0	13	15	39	0	0	11	0	1	2	6	2	0	9	13	1	32	1	1	3	166
Values	3	1	11	10	4	1	11	7	13	10	6	1	10	5	2	0	5	4	0	9	3	37	1	154
Data	0	36	5	0	11	3	0	0	4	0	0	1	10	45	7	0	3	1	1	6	0	9	7	149
Security	1	0	0	2	1	0	0	2	0	2	2	3	3	1	116	0	0	0	1	2	0	8	2	146
Computers	2	98	0	0	6	11	0	4	1	0	0	1	1	1	1	0	0	1	12	1	5	1	0	146
Research	5	6	5	0	1	6	6	4	2	12	4	11	2	3	18	0	11	8	1	18	4	8	2	137
Technology	9	7	5	1	6	5	1	7	0	18	5	11	5	7	10	0	1	1	7	13	7	3	3	132
Cognition	1	0	0	0	0	119	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
Legal	3	0	3	65	1	2	4	0	2	0	2	3	2	7	5	0	7	7	2	6	0	0	2	123

Business	0	1	6	4	1	3	2	3	0	1	5	3	23	5	4	0	26	2	0	17	6	5	2	119
Systems	5	4	1	7	20	0	1	2	0	0	8	4	22	5	8	0	2	10	0	8	2	3	3	115
Professional	0	0	2	3	3	0	0	0	0	0	3	5	1	2	0	2	43	40	1	0	2	0	0	107
Property	4	1	5	0	1	31	7	1	0	1	1	7	1	1	2	0	2	5	12	21	4	0	0	107
Principles	0	1	4	0	13	0	26	6	4	7	10	7	1	1	0	0	10	0	13	2	1	0	0	106
Library	0	0	0	0	1	0	1	0	0	2	26	10	0	0	0	1	42	16	0	0	0	0	0	99
Decision	1	4	12	15	3	0	3	0	0	0	19	0	2	4	0	0	4	2	0	26	0	3	1	99
Digital	57	0	1	0	15	1	1	0	7	6	2	3	0	0	3	1	0	0	1	0	0	0	0	98
Internet	7	1	1	0	4	24	12	2	1	15	1	2	0	4	2	9	1	2	1	0	1	0	0	90
Management	0	0	18	1	1	0	0	0	1	0	14	2	5	16	2	0	11	1	0	4	0	5	6	87
Cultural	11	0	11	1	3	0	2	0	10	14	15	2	6	1	0	0	0	2	0	8	0	0	0	86
Right	5	2	3	1	4	2	10	0	2	3	1	3	0	0	12	1	4	13	12	4	0	0	2	84
Communication	7	3	0	0	18	3	4	7	3	18	2	5	0	6	2	0	0	3	1	0	0	2	0	84
Accuracy	1	1	5	0	0	47	0	0	0	0	2	0	0	2	0	5	0	0	0	21	0	0	0	84
Culture	1	0	9	2	1	2	0	0	8	4	1	0	10	2	0	0	2	1	1	37	0	1	2	84
Knowledge	5	2	0	0	6	0	14	5	2	18	9	7	0	0	1	1	5	5	3	0	0	0	0	83
Analysis	1	8	0	4	4	0	2	1	5	7	3	2	1	0	13	0	0	1	11	9	1	9	0	82
Economic	11	1	1	0	1	2	30	0	1	7	0	0	12	0	3	0	1	3	1	5	2	0	0	81
University	3	1	1	3	2	0	0	0	2	9	19	14	2	0	0	0	5	3	0	7	6	3	1	81
Sense	8	12	0	0	4	0	3	4	7	3	0	1	1	0	2	3	5	0	19	4	0	4	0	80
Rights	0	2	8	0	2	0	14	0	2	3	7	2	1	1	6	1	3	7	8	6	2	0	4	79
System	30	0	3	3	5	0	4	3	2	1	0	2	2	2	4	0	1	5	3	6	1	1	1	79
Control	0	1	3	1	15	0	0	3	1	0	0	4	1	0	0	0	0	0	1	1	0	40	5	76
Technologies	7	0	2	3	11	1	1	8	1	5	1	3	3	0	5	0	0	1	20	0	0	2	0	74

Public	2	0	0	0	4	0	6	2	0	1	4	3	1	0	1	0	23	12	0	2	7	0	5	73
Cultures	4	0	2	0	1	0	1	0	12	8	8	0	23	0	0	0	4	2	0	7	0	0	0	72
Political	0	0	3	0	14	0	16	0	2	5	3	4	8	0	3	0	5	5	1	1	1	0	0	71
Managers	0	0	31	1	1	0	0	2	0	0	1	2	1	8	0	0	9	1	0	2	0	9	2	70
Poor	37	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	0	69
Intellectual	1	2	2	0	2	0	9	4	1	1	3	7	4	0	2	0	7	7	6	7	2	0	0	67
Responsibility	0	13	1	0	1	0	14	4	2	2	1	3	3	1	1	1	6	3	4	2	2	2	1	67
Freedom	0	1	0	0	9	0	8	11	3	5	5	3	1	0	1	6	5	3	1	1	0	2	1	66
Theory	16	6	3	1	6	0	0	4	3	0	0	0	3	0	10	0	0	0	9	2	1	0	0	64
Software	0	1	7	0	1	0	0	1	0	1	0	2	4	2	8	0	3	0	0	26	2	2	3	63
Resources	10	0	1	0	2	1	13	1	0	0	2	0	11	2	2	0	2	1	4	7	0	2	1	62
Organization	0	0	5	4	1	1	0	2	0	2	2	1	1	20	3	0	11	1	0	3	0	2	3	62
Relationships	0	3	4	1	1	6	7	0	3	1	1	3	3	0	6	0	3	4	0	6	1	7	0	60
Education	0	0	2	1	1	4	10	0	0	2	19	3	2	0	0	1	7	1	0	5	0	1	0	59
Societies	1	1	4	0	3	0	17	0	5	6	0	0	2	0	0	0	1	0	0	16	0	0	0	56
Attitudes	3	0	5	5	0	1	2	0	1	1	2	0	2	0	0	0	8	0	0	20	0	6	0	56
Organizations	0	0	0	3	1	0	0	0	0	3	6	3	6	5	4	0	9	0	0	1	3	3	8	55
Principle	0	0	0	0	3	0	21	0	9	0	1	10	1	0	0	0	2	2	3	0	1	0	0	53
Community	0	0	0	2	1	1	7	2	1	13	2	1	1	0	0	2	6	8	3	3	0	0	0	53
Morality	0	15	1	0	2	0	0	0	5	1	1	2	1	0	3	0	6	6	7	2	0	0	1	53
Infosphere	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	6	0	0	0	0	52
Services	0	0	0	0	1	0	15	0	0	0	1	2	4	0	0	0	20	7	0	0	0	0	1	51
Respect	0	0	2	0	1	0	5	0	3	5	4	2	2	1	2	1	0	0	18	0	0	2	2	50
Attitude	0	0	0	2	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	20	0	26	0	50

Electronic	0	0	0	0	8	1	0	4	1	2	2	1	9	15	1	0	0	0	0	0	2	0	3	49
Practices	0	0	5	0	6	0	1	2	1	1	1	1	1	11	7	0	1	1	1	6	1	1	1	49
Philosophy	5	5	0	0	0	0	1	0	7	11	3	2	1	0	4	1	2	0	3	1	2	0	0	48
Processes	0	4	3	2	23	0	4	0	1	1	1	1	1	1	1	0	0	2	0	0	1	0	1	47
Government	0	0	1	4	1	0	8	4	1	5	2	3	3	0	1	0	0	0	0	3	1	0	10	47
Codes	0	0	0	1	2	0	0	0	0	1	6	2	1	4	0	0	15	4	0	0	0	7	2	45
Morally	1	10	0	0	2	0	4	0	1	2	1	6	0	0	3	0	1	0	12	1	0	0	1	45
Theories	1	13	0	1	1	0	0	0	2	3	1	0	0	0	1	0	2	0	17	0	1	0	0	43
Professionals	0	0	0	0	1	1	0	2	0	1	3	4	1	2	0	0	8	9	3	0	4	1	2	42
Behaviors	0	0	3	2	0	11	0	0	0	0	0	0	3	0	0	0	4	0	2	1	0	16	0	42
Ideology	0	0	2	0	0	0	0	0	0	0	1	0	0	0	37	0	0	1	0	0	0	0	0	41
Standards	0	1	2	0	3	1	0	1	1	0	2	0	1	2	0	0	6	9	9	1	1	0	1	41
Policy	1	0	1	1	3	0	0	3	0	2	2	3	2	6	2	1	2	0	0	1	2	2	4	38
Media	3	0	1	0	5	1	0	0	5	4	2	5	0	1	1	3	2	4	0	0	0	0	0	37
Norms	4	3	2	0	0	0	9	0	4	2	2	3	1	0	2	0	1	2	0	1	0	0	0	36
Interests	1	0	1	0	1	0	1	0	2	1	1	6	0	0	13	0	1	3	1	1	0	1	0	34
Policies	0	0	1	0	0	0	3	6	0	0	7	0	0	0	2	0	2	1	0	1	2	3	2	30
Academic	1	3	0	1	0	0	0	3	2	2	4	3	0	0	0	4	5	0	1	0	0	1	0	30
Marginalized	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	30
Authors	0	2	0	0	4	0	2	0	0	2	1	9	0	3	1	2	0	0	1	2	0	0	0	29
Truth	0	11	0	0	5	0	1	0	4	1	0	0	0	0	4	1	0	0	0	1	0	0	0	28
Normative	1	4	0	0	1	0	6	0	1	0	0	2	0	0	3	0	1	0	8	0	0	1	0	28
Discourse	3	2	0	0	4	0	0	0	1	1	2	1	0	0	14	0	0	0	0	0	0	0	0	28
Institutions	0	0	1	2	5	0	7	0	0	0	4	4	0	0	0	1	0	1	0	0	0	0	2	27

ICTS	1	0	0	0	0	3	11	0	0	5	0	3	0	0	0	0	0	0	4	0	0	0	0	27
Protection	0	0	0	0	0	0	4	0	4	3	0	5	0	0	3	0	3	0	1	0	0	0	4	27
Law	0	0	1	0	0	0	0	1	1	2	0	4	0	0	0	2	7	3	1	1	1	0	2	26
Libraries	1	0	0	0	0	0	2	0	0	1	10	2	0	0	0	0	2	8	0	0	0	0	0	26
Virtue	0	0	0	0	6	0	2	0	0	0	0	0	0	0	3	1	2	0	12	0	0	0	0	26
Beliefs	1	0	2	0	0	0	0	0	1	1	0	0	4	0	0	0	4	6	2	4	0	1	0	26
Conflict	0	0	1	0	12	0	1	0	1	3	0	0	0	0	0	0	0	1	0	2	0	0	1	22
Traditions	1	0	1	0	0	0	0	0	7	0	0	1	10	0	0	0	0	0	1	0	0	0	0	21
Entropy	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	10	0	0	4	0	0	0	0	18
Censorship	0	0	0	0	2	0	3	0	0	0	1	1	0	0	0	1	2	7	0	0	0	0	0	16