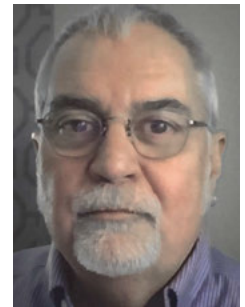


Ethos, Geopolitical Realities, and the Digital Realm— An Editorial[†]

Richard P. Smiraglia

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[†] I am grateful to Xin Cai for his assistance with analysis of these proceedings.



1.0 Tracking the Shifting Intension of Knowledge Organization

Knowledge organization (KO), our science, is a vital and always evolving scholarly domain. At the core of the domain are applications—knowledge organization systems (KOSs)—some of which are very well known with long-established usage (e.g., the Universal Decimal Classification), while many others (e.g., semantic web ontologies, enterprise thesauri, etc.) are designed for use in precise and sometimes exclusive environments. Of course, a wide range of applications falls between those two poles as well. While a segment of scholarship in KO is always focused on tweaking general KOSs, much of the rest of the scholarship falls either into ontological or epistemological clusters and aligns epistemologically along a spectrum that engages both empirical and humanistic approaches (Smiraglia 2013a). This is the delightfully malleable core of KO.

I use this editorial space from time to time to post observations of that malleability. That is, I post partial analyses of segments of the KO research front as evidence becomes available. In this way I have hoped to point to areas for broader research about KO that can be used to establish our theoretical bases with greater confidence. For example, after each international ISKO conference since 2010 I have created a series called “ISKO’s Bookshelf,” presenting informetric overviews of those conferences (Smiraglia 2008; 2011; 2013b; 2014; 2017). Other examples are analyses of the international UDC symposia (Beak et al. 2014; Cai et al. 2016), the North American Symposium on Knowledge Organization (NASKO) (e.g., Smiraglia 2007) and the research stream focused on ethics in KO (e.g., Smiraglia 2015b). In this manner, various snapshot visualizations of KO have allowed us to embrace new ideas as they enter the consciousness of our domain’s intension and also have provided a backdrop for further research. It is gratifying to see such work emerge—examples include Guimarães, Sales, Martínez-Ávila and Alencar (2014) on conceptual dimensions of KO, Araújo and

Guimarães (2016) on epistemic communities in KO, and two papers projected for the 2017 NASKO by Castanha, Hilário, Araújo and Grácio using citation analysis to analyze NASKO proceedings and Martínez-Ávila, Guimarães and Evangelista analyzing epistemic communities in NASKO. These papers and many others I have not cited here contribute to our ability to view our domain meta-analytically, to generate theoretical positions of significance, and to hone our methodological skills in tracking domain evolution and coherence.

In this editorial I use the same domain analytical tools to briefly visualize three sets of conferences that all contribute in some way to the shifting intension of KO. To follow on from the loosely applied metaphor above, if we take it that the core of KO is malleable (its intension), we might also infer that the mantle (the extension) is not. It is to observe bits of the granularity in motion in the core that is the objective of this editorial. Because this is editorial space, because I hope to encourage further research, and because in some cases data are incomplete, these analyses are of necessity quite brief. Domain analytical tools in KO are quite well established as are the specific methodologies for co-word and author co-citation analysis (see Smiraglia 2015a). As before, my objective is not to report on the specific proceedings of these conferences, but rather to seek to define core themes from each and relate them to KO in general. The three conferences analyzed here are the Third Milwaukee Conference on Ethics in Knowledge Organization (May 2015), Global and Local Knowledge Organization (2015), and two workshops based on the idea of a KOS Observatory (2015 and 2017).

2.0 Ethics in Knowledge Organization (EKO3) 2015

The Third Milwaukee Conference on Ethics in Knowledge Organization was held on May 28-29, 2015. New in 2015 was the shift in the name of the conference series

from “information organization” to “knowledge organization.” The fact of the international participation in this third in a sequence of ethics-focused research gatherings helps to demonstrate the concretizing subdomain of ethics in and ethical applications of KO. The conference was sponsored by two groups from The University of Wisconsin-Milwaukee’s iSchool, the KOrg Knowledge Organization Research Group and the CIPR Center for Information Policy Research. Two keynote presentations focused the event dichotomously in ethical KO (from an ontological and epistemological perspective), on the one hand, and ethics in KO practice, on the other. Seventeen formal papers were contributed in five categories; these

are shown below in Table 1 below. Most of the papers (all but two) were published as formal proceedings in an issue of this journal—*Knowledge Organization* volume 42 number 5, 2015.

Although most of the authors were affiliated with institutions in the United States, one paper came from Canada and there were several submitted by teams from Brazil.

Co-word analysis was possible using paper titles, cited paper titles, and abstracts (including data from the two papers that do not appear in the proceedings). All data were entered into the Provalis ProSuite™ using its Simstat™ module and then analyzed using WordStat™ for

Author	Paper Title
Joseph T. Tennis	Keynote: Constructs and Construct Patterns for Ethical Knowledge Organization
Tina Gross	Keynote: Naming and Reframing: A Taxonomy of Attacks on Knowledge Organization
Representation in Representations	
Daniel Martínez-Ávila, José Augusto Chaves Guimarães, Fabio Assis Pinho and Melodie J. Fox	The Representation of Ethics and Knowledge Organization in the WoS and LISTA Databases
Margaret E.I. Kipp, Jihee Beak and Ann M. Graf.	Tagging of Banned and Challenged Books
Standpoints and Epistemologies	
Jihee Beak	Where is Childrens’ Voice in KO?
Lynnsey K. Weissenberger	Traditional Musics and Ethical Considerations of Knowledge and Documentation Processes
Richard P. Smiraglia	Bibliocentrism Revisited: RDA and FRBRoo
Ethics in Practices and Technologies	
Wan-Chen Lee	Culture and Classification: An Introduction to Thinking about Ethical Issues of Adopting Global Classification Standards to Local Environments
Jill McTavish	The Ethics of Querying and Permeating Canadian Everyday Life Nutritional Classification Technologies and Processes
Jo Ann Oravec	The Moral Imagination in an era of “Gaming Academia”: Implications of Emerging Reputational Issues in Scholarly Activities for Knowledge Organization Practices
Aline Elis Arboit and José Augusto Chaves Guimarães	The Ethics of Knowledge Organization and Representation from a Bakhtinian Perspective
Kelli McQueen	Ethical Issues of Knowledge Organization in Designing a Metadata Schema for the Leo Kottke Archives
Codes of Ethics	
Maurine W. McCourry	Domain Analytic, and Domain Analytic-like, Studies of Catalog Needs: Addressing the Ethical Dilemma of Catalog Codes developed with Inadequate Knowledge of User Needs
Andrieli Pachú da Silva, José Augusto Chaves Guimarães and Natália Bolfarini Tognoli	Ethical Values in Archival Arrangement and Description: An Analysis of Professional Codes of Ethics
Elizabeth Shoemaker	No One Can Whistle a Symphony: Seeking a Catalogers’ Code of Ethics
Aesthetics and Ethics	
Emily Lawrence	Everything is a Recommendation: Netflix, Altgenres and the Construction of Taste
Thomas D. Walker	An Ethical Burden in the Structure of Knowledge: How Music Suggests Enhanced Conceptual Models

Table 1. Papers from the Third Milwaukee Conference on Ethics in KO 2015.

co-word analysis. Multi-dimensional scaling (MDS) is possible to visualize the co-occurrence of themes, in this case those occurring with high frequencies. Frequency distributions of keywords and multi-word phrases are combined, then enhanced by checking the KWIC (key-word in context) feature for additional terms. In this way a data dictionary in the form of a simple taxonomy can be constructed and then used to filter the content to produce a visualization. The MDS plot generated from paper titles is shown in Figure 1. (In all MDS plots in this editorial, goodness of fit is judged by the low stress (closest to zero) and high R^2 (closest to 1). Goodness of fit can be improved by removing single-word clusters, but sometimes this is done at the expense of expressivity in the visualization.) There were 101 keywords, and only three multi-word phrases among the paper titles, which generated a fairly small and straightforward taxonomy.

Remembering that this visualization is formed from key terms in the titles of the conference papers, we can say that ethical processes and issues associated with the applied dimension of KO (and, in particular, cataloging) constitute one cluster, while ethics of knowledge organization and representation from the ontological and epistemological dimension constitutes the other. These obviously reflect the core themes of the conference.

Analysis of the cited paper titles reveals a much denser underlying taxonomy; there were 976 keywords altogether and 112 multi-word phrases that occurred more than once. Using the highest frequencies of occurrence an MDS plot of major themes was produced and this is shown in Figure 2.

The view of this plot has been moved from front and center to a bird's eye view from above, which was necessitated by the density of the underlying taxonomy. This was necessary to unpack the tight cluster on the right; in particular, the theme “ethos and ideology” that is tightly coupled with “engaged knowledge organization.” We also see the roles of “cultural warrant” and “knowledge representation” as they expand the intension of the domain of literature that influenced conference authors.

Similarly, the abstracts from the papers were entered using the QDAMiner™ module and analyzed using WordStat™. Another dense taxonomy results including 812 keywords but with only 12 multi-word phrases occurring more than once; an MDS plot of the most frequently-occurring terms is shown in Figure 3.

One indicator of the density of the taxonomy is the lack of cluster differentiation; all of these core terms are in close proximity to each other, with “knowledge organization” clearly at the center. An interesting observation is that cultural and ethical concerns are in the mix but are not predominant. Another is the prevalence of the domain-centric approach to KOSs.

When complete citation data are available it is possible to use author co-citation analysis as a means of methodological triangulation. That is, author co-citation analysis reveals topically oriented clusters of co-citation that themselves reveal the perceptions of the citing authors. The relationship of these clusters to those produced using co-word analysis helps to reveal greater insight concerning the thematic focus of a domain. One useful approach, then, is to look for internal author co-citation; a matrix of the authors most highly cited within the domain is created by recording the numbers of co-citations of these authors in the conference papers. This matrix can then be loaded into IBM-SPSS™ for analysis and production of an MDS-plot. The plot produced in this manner for EKO3 is shown in Figure 4.

Three clusters are visible in this plot. The large cluster at the top reaches from classically cited Hjørland to enclose work by Hope Olson, Sanford Berman and David Bade. The Berman and Bade papers cited in this context have to do with library catalogs; thus this cluster ties library catalogs to the core theoretical work on KO as a domain as well as to core writing about epistemic stances and exclusivity in KOSs. The central cluster combines Beak and Guimarães representing the promotion of ethics as a core issue in KO together with specific problems concerning children and KOSs. The largest cluster, presumably the research front as perceived by the authors at the time the conference papers were being created, ties together critical work on discourse analysis, cultural warrant, ethics, ethos and bibliocentrism.

From this analysis it seems that core values of EKO3 were the ethical processes and issues associated with cataloging, and the ethics of knowledge organization and representation. There were heavy emphases on library applications and on domain-analytical solutions. Ethos and ideology combined with engaged KO as critical values in the analysis of ethics of KO, and problems of cultural warrant remain critical. The EKO sub-domain remains in close proximity both with librarianship and with information science.

3.0 Global and Local KO 2015 and 2016

“Global and Local Knowledge Organization,” was held under the auspices of the iSchool at the University of Copenhagen in August 2015 and organized by Jens-Erik Mai. The invited speakers were, in fact, global both in terms of their geographic affiliations and their research interests. The point of the conference was at least in part to encourage the KO community to move toward human realities—both explicitly global and local—with regard to knowledge representation and organization. The papers are shown in Table 2.

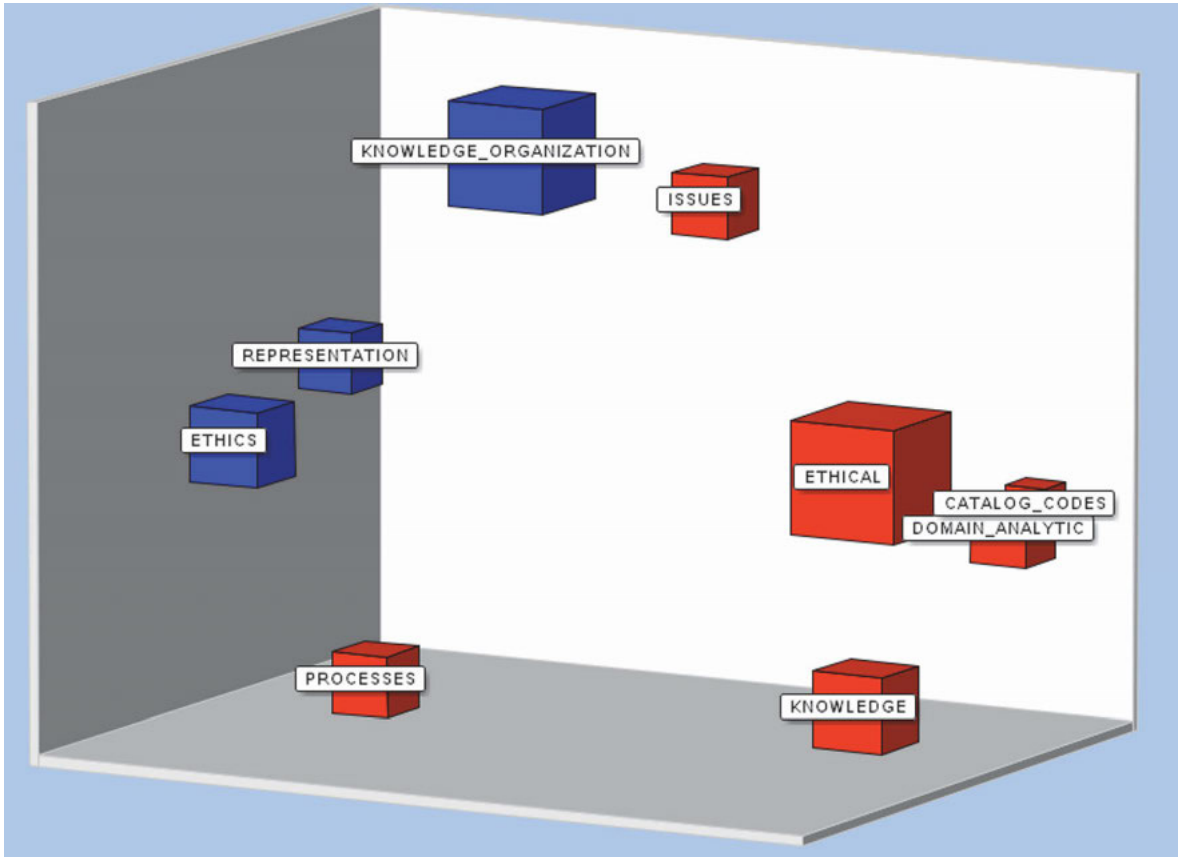


Figure 1. MDS visualization of themes from the EKO3 papers (stress = 0.10185; R² = 0.9747).

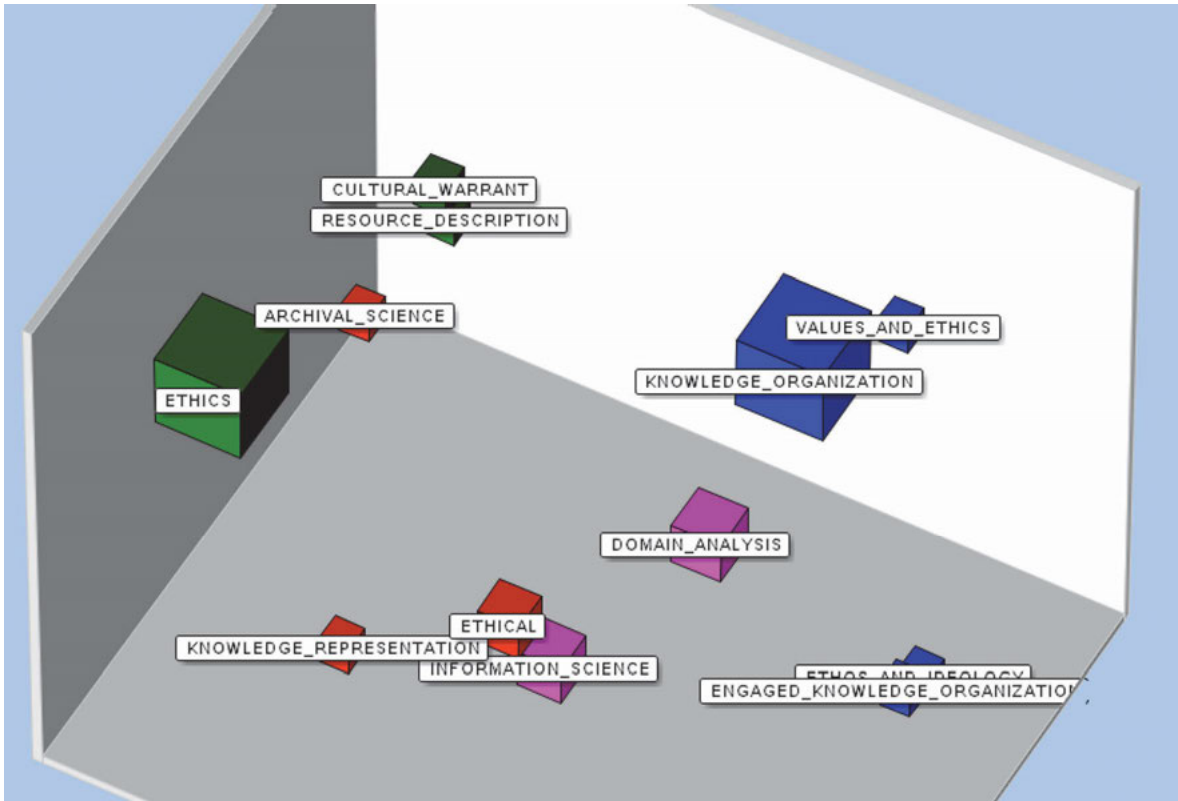


Figure 2. MDS visualization of themes from the EKO3 cited paper titles (stress = 0.20689; R² = 0.9075).

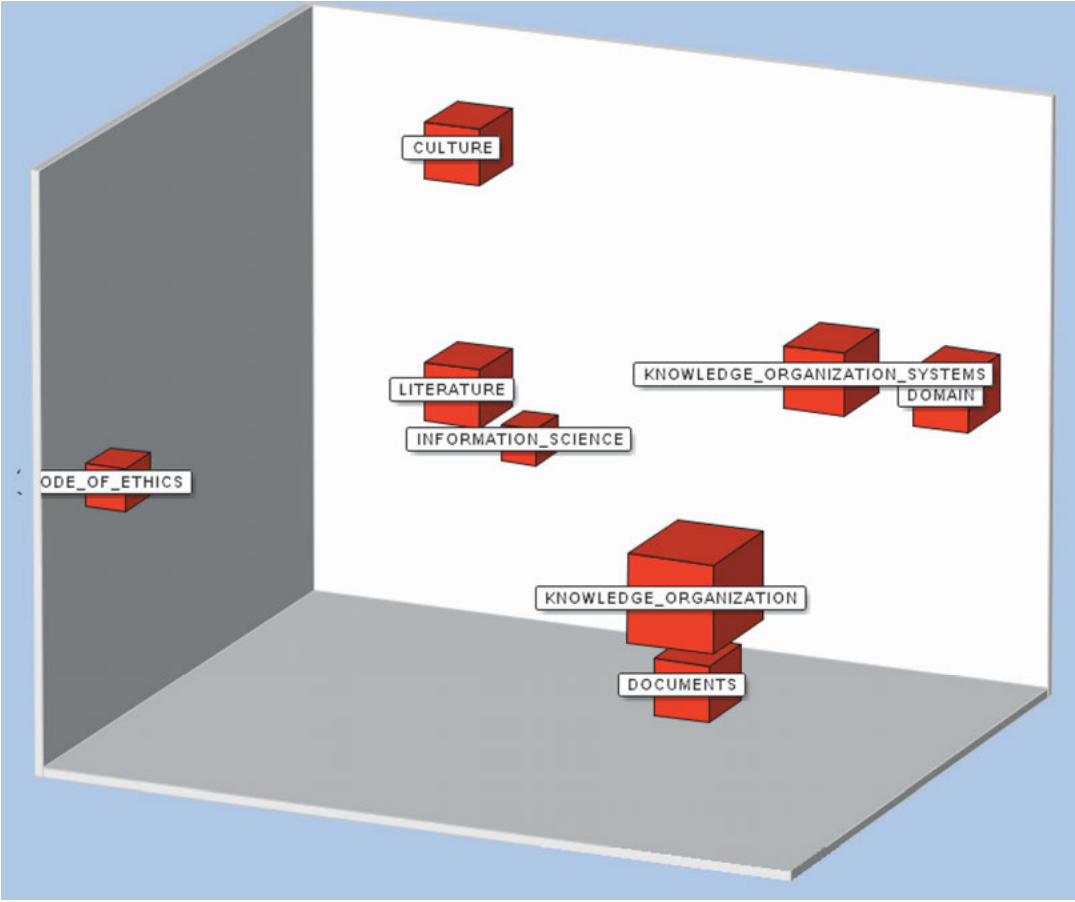


Figure 3. MDS visualization of themes from the EKO3 abstracts (stress = 0.15945; $R^2 = 0.9505$).

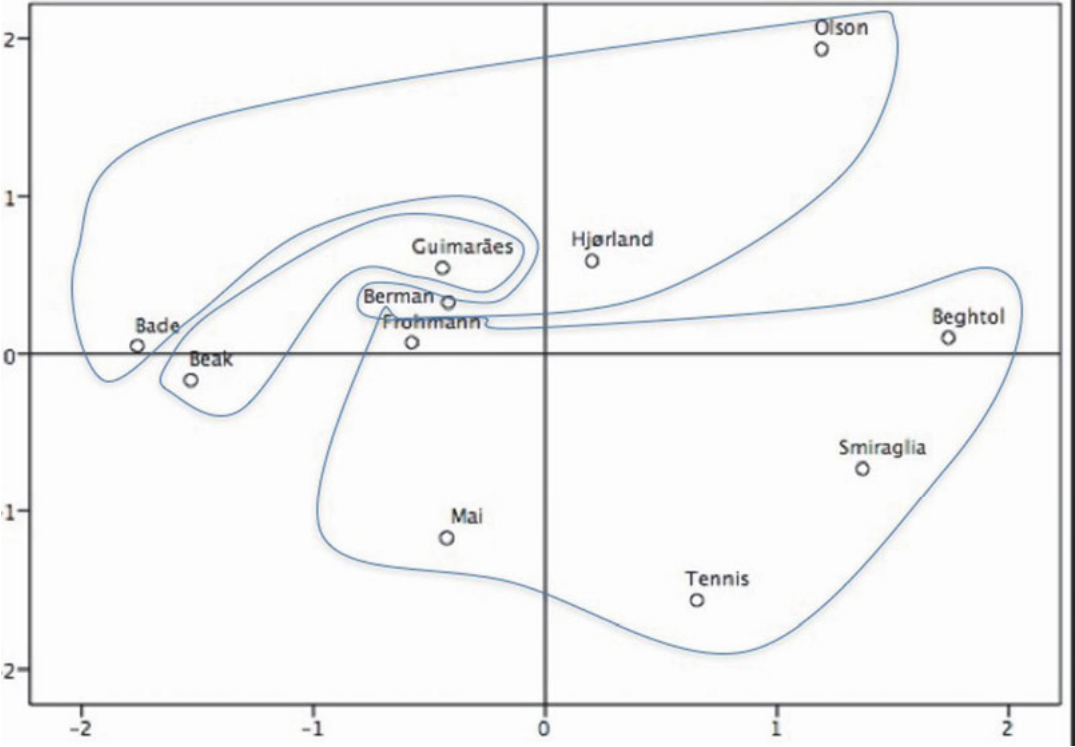


Figure 4. MDS visualization of EKO3 internal author co-citation (stress = 0.07642; $R^2 = 0.96605$).

Author	Paper Title
José Augusto Chaves Guimarães	Time and Space: Two Axes for Slanted Knowledge Organization
Melissa Adler	Library of Congress Classification and Cultural Imperialism
Laura Skouvig	Information Cultures: Shaping Information
Fabio Assis Pinho	Knowledge Representation of Photographic Documents on Local Systems
Karolina Lindh	Breathing Life into a Standard – Turning Universal Resuscitation Guidelines into Embodied Knowledge
Shigeo Sugimoto	Metadata for Manga – Metadata Vocabulary, Schema and Tools
Sam Oh	A Role of Ontology in Social Data Analytics
Jack Andersen	Meaning-making in Global and Local Information Infrastructures – An Argument Coming From Genre Theory
Daniel Martínez-Ávila	Reader-interest Classifications: Local Classifications or Global Industry Interest?
Tsunagu Honma	Organizing Existing Metadata Terms and Structural Constraints to Support Metadata Schema Creation
Ole Olesen-Bagneux	The Post-global Internet
Melanie Feinberg	Simplicity and Disempowerment
Joseph Tennis	Concluding Remarks

Table 2. Papers from the 2015 Global and Local Knowledge Organization conference.

The global reach of the authors can be visualized by the pie chart showing their countries of academic affiliation (Figure 5).

The public conference was well attended by an international audience, and lasted one full day. The invited participants also met on a second day for open discussion. A report of the conference was published in this journal (Martínez-Ávila 2015).

The attendant paper and poster abstracts were available at the time on the conference website. Those were downloaded and used to generate three summary co-word analyses—one based on terms and phrases from paper titles, one based on the titles of works cited (five of the abstracts were accompanied by citations), and another based on the abstracts. Figure 6 shows the MDS plot of terms from the paper titles.

The themes of the conference are reiterated by high frequency co-occurrence in the titles of the papers. The predominance of “metadata” is interesting; it co-occurs with higher frequency than “classifications.” Otherwise,

this plot forms the core. A second plot based on the abstracts is more complex and is shown in Figure 7.

Again a bird’s eye view is necessary to unpack the tight cluster on the right that includes “LOD datasets,” “structural constraints” “metadata terms” and “metadata schema—terms predominantly associated with the semantic web. We also see a cluster at the rear including cultural considerations related to meaning and communication, and surrounding the semantic web cluster is “local and global” paired with “construction of memory.” Here we move from the core themes of the conference to the specific themes of the participants who have embraced essentially epistemological implications and applications of KOSs. The final plot is based on the titles of the works cited by these authors and is shown in Figure 8.

These concepts align once again with the core themes, with the exception of a more distinct clustering of traditional KO and indexing over against the remaining themes representing the intersection of domain analysis, subject representation and information science.

Collectively we can see a thematic solidity in the papers and the works cited by their authors, bringing domain analysis to the fore and with an emphasis beyond classification and instead on metadata. In the texts of the authors’ abstracts we see an emphasis on epistemological points of view—taking culture, meaning and communication into account alongside applications, many of which are based in or in proximity to the semantic web. A year later, a panel titled “Global/Local Knowledge Organization: Contexts and Questions” was held at the Annual Meeting of the Association for Information Science and Technology, in Copenhagen. The panel was sponsored by the ASIST SIG/Classification Research and included some of the same participants (<https://www.asist.org/files/meetings/am16/proceedings/submissions/panels/18panel.pdf>). Rather than present papers, the panelists presented brief positions and the majority of the allotted time was spent in conversation with the audience. It seems clear this activity has the potential for impact on the development of KO in general and also on the intersection of KO with information as a science and a discipline.

4.0 KOS Observatory 2015 and 2017

One exciting development from my point of view is the project to develop the idea of a KOS observatory. The idea grew from work by Tennis (e.g., 2002, 2012) on subject ontogeny, which by necessity requires instantiated visualizations of major classifications at specific points in time. Under the auspices of a project known as Knowscape (a cleverly humorous mashup of knowledge, landscape and the “e” badge developed by the eHumanities Group¹), which was led by Andrea Scharnhorst, two in-

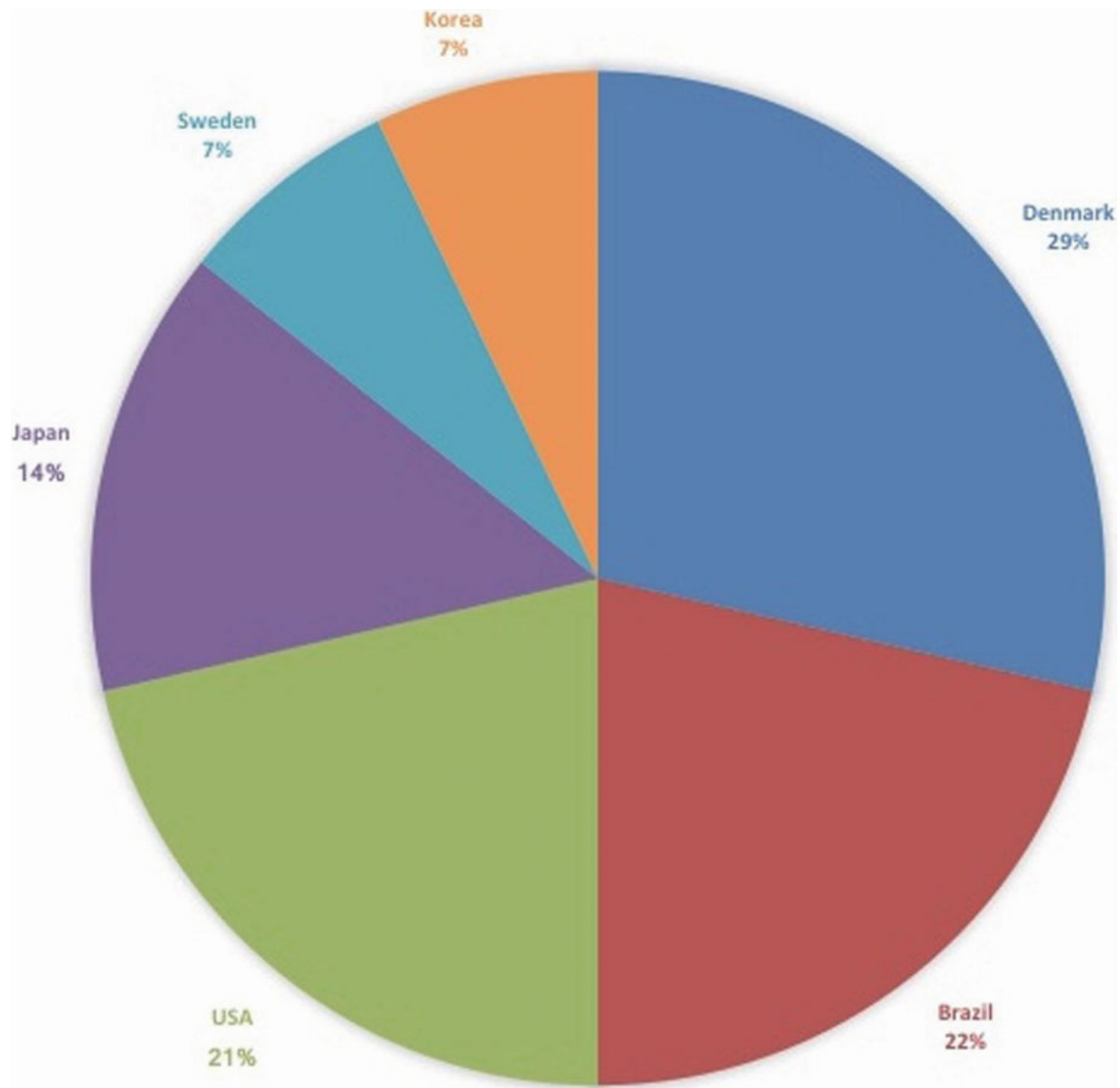


Figure 5. Countries of author affiliation in the 2015 Global and Local Knowledge Organization conference.

ternational invitational workshops were funded by the European Union's COST (Cooperation in Science and Technology) project. The two workshops were held in Amsterdam, Netherlands in March of 2015 and in Valletta, Malta in February of 2017. Both workshops drew together scholars from the knowledge organization community, digital humanities, the semantic web, and also from publishing—all very intensive users of knowledge organization systems (KOSs) of all kinds from bibliographic classifications to industrial classifications to semantic web ontologies and everything in between. The entire community was motivated both by the desire to develop a registry of all such KOSs and by the very real need to create means of tracking change in KOSs over time.

The 2015 workshop was titled “Evolution and Variation of Classification Systems – How Stable is the Organization of Knowledge and How Diverse is its Representations? Toward a Metadata Observatory,” with the stated rationale (<http://knowscape.org/evolution-and-variation-of-classification-systems-knowscape-workshop-march-4-5-2015-amsterdam/>):

For digital libraries and archives mapping schemas, ontologies, all different kind of Knowledge Organization Systems (KOS) [belong] to the daily practice when ingesting information from different sources. In computer science, the technical term for this task is ontology alignment. In particular with the emergence of the semantic web, the need to in-

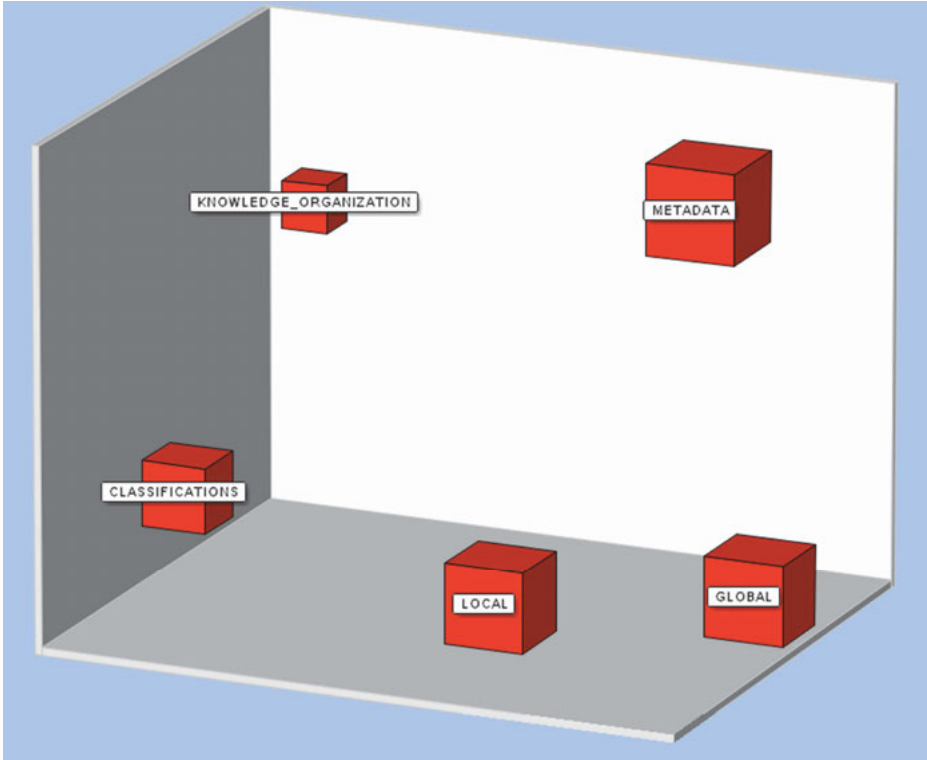


Figure 6. MDS visualization of themes from the Global and Local KO papers (stress = 0.08321; $R^2 = 0.9676$).

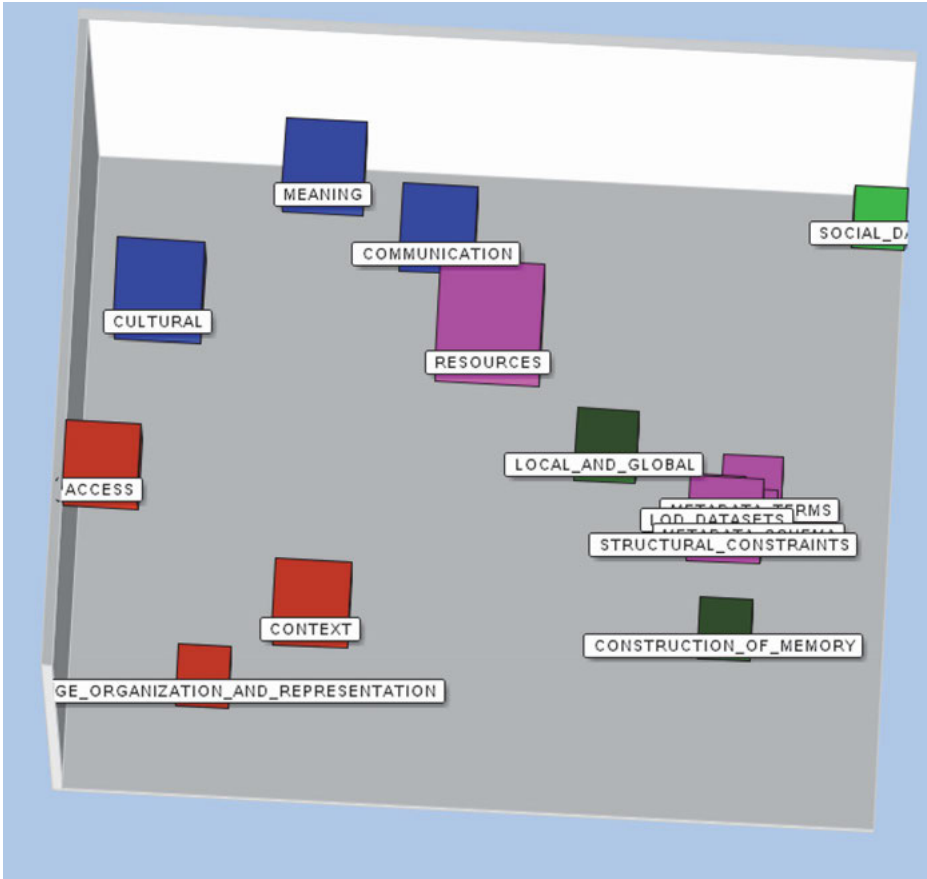


Figure 7. MDS visualization of themes from the Global and Local KO abstracts (stress = 0.14234; $R^2 = 0.9472$).

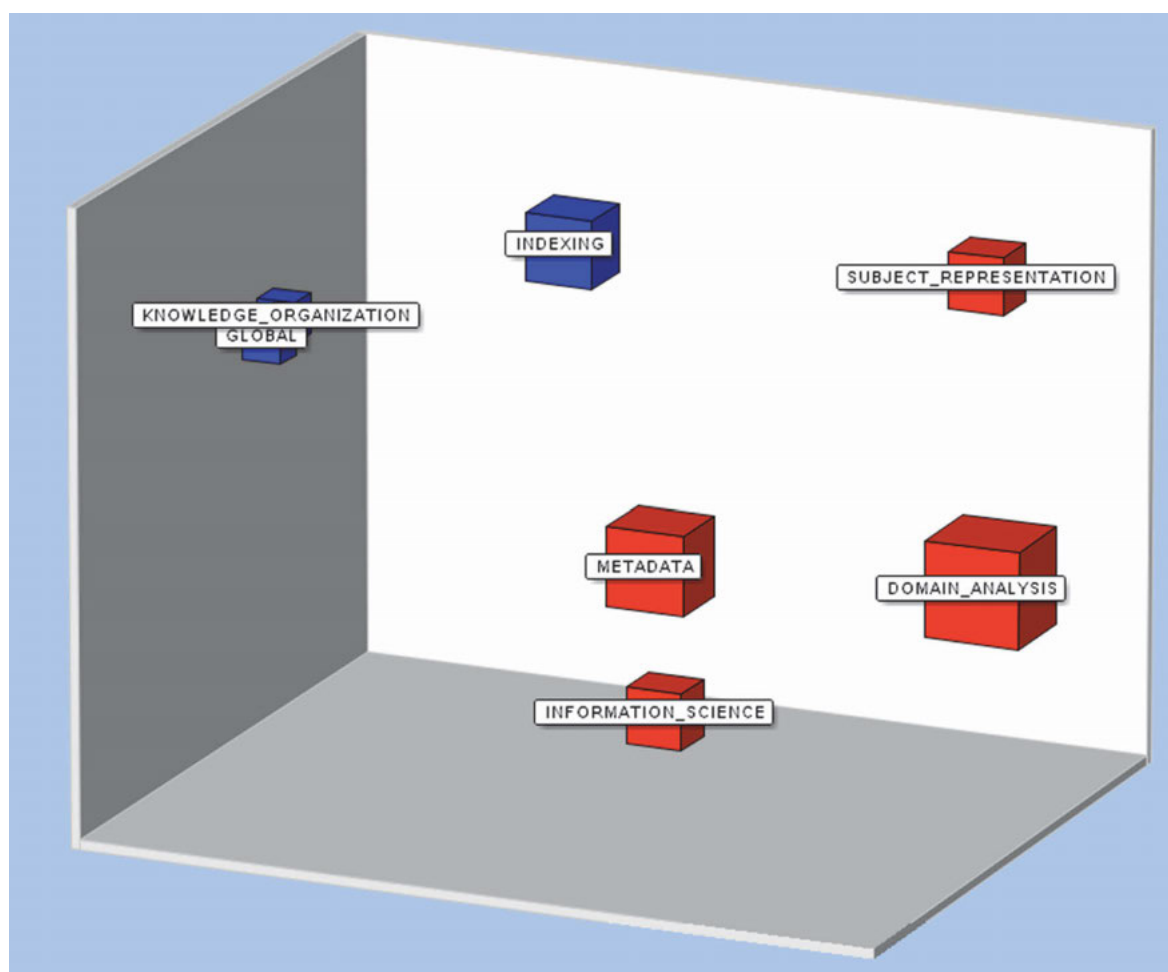


Figure 8. MDS visualization of themes from works cited in the Global and Local KO papers (stress = 0.11319; $R^2 = 0.9724$).

tegrate heterogeneous data into one web of knowledge has grown. Further, these ontologies under revision... change over time. So the complexity of ontology alignment is exacerbated by the challenge of version identification and control. Ontologies have a long history, and are as a topic of reflection situated among philosophy and computer science. However, there is no atlas of ontologies, KOS or metadata schemes nor a registry or index to search across different existing ones, including all versions. The current landscape is a set of isolated registries with disjunct purposes and scopes. We miss a common language to describe [such] basic attributes of KOS, as their knowledge domain specificity, depth, age, or complexity. This workshop explores way to define an attribute space in which KOS can be compared among each other and across time. Inspired by the study of planets and stars in the heavens, the long-term goal is to build a metadata observatory.

The metaphor of the planetary observatory is important because it brings to the problem of a registry the idea of

a stable center for visualization of conceptual content within the contexts of its representation in KOSs at particular moments in time. Just as the alignment of the heavens can be viewed at a specific moment in time in a planetary observatory, so can researchers record such observations for later comparison and meta-analysis. It is by such means that otherwise potentially unobservable minute quivering observed only by comparing observations of the same point in space have turned out to reveal the existence of heretofore unknown planets (NASA 2017). It is precisely this operational ability that is required, not just for preserving editions of general classifications or for registering semantic web KOSs, but also for providing the ability to visualize knowledge spatially in its many and various representational contexts. The 2015 workshop had nine formal presentations; these are shown in Table 3.

This workshop was remarkable for the combination of computer science, semantic web, publishing and knowledge organization domains, and the discussions provided an opportunity for the members of these distinct communities with overlapping priorities to compare

Author	Title
Joseph T. Tennis	Keynote: Casting Our Eyes Over the Threads of the Cataloguer's Work: Population Perspective in Metadata Research
Albert Merono-Penuela	Understanding Change in Versioned Web-Knowledge Organisation Systems
Paul Groth	Data Analysis in a Changing Discourse: The Challenges of Scholarly Communication
Aida Slavic	Managing KOS: Evolution of Concepts and their Representation
Richard P. Smiraglia	Empirical Methods for Knowledge Evolution Across Knowledge Organization Systems
Valentine Charles	Linking Cultural Heritage with KOS: the Europeana Example
Toby Burrows	Vernacular Classification: Knowledge Organization in the Humanities Networked Infrastructure
Almila Akdag Salah	Looking at Classification Systems from the Point of View of Users: Analyzing deviantArt's Categories
Christophe Gueret	Publish Web Data: An Interactive Session

Table 3. Papers from the 2015 KnoweScape Observatory workshop.

notes, discuss common vocabulary and attempt to visualize the idea of a potential observatory.

The 2017 workshop was titled simply “Observatory on Knowledge Organization Systems, with the stated rationale (<http://knowescope.org/event/observatory-knowledge-organisation-systems/>):

Systems to organise our knowledge are as old as knowledge production itself. Today we talk about knowledge graphs, and in them library classifications stay next to domain-specific controlled vocabulary, and domain specific ontologies. [Weaving] all this structured information into one connected graph requires interoperability of data and metadata schema, but also keeping track of provenance and versions. This includes to curate also the versions of Knowledge Organisation Systems which enable access to our cultural heritage. To be able to develop research strategies we first need to gain an overview about the multiplicity of KOS, their size and features. This [workshop] brings together experts to discuss a first framework for such a typology which will develop ... a backbone for a KOS observatory.

As a follow-on from the 2015 workshop this was notably a push forward toward the “framework” for a “backbone” of a blend of communities that might, in fact, generate

Authors	Title
Richard P. Smiraglia	Keynote: KOS on a Space-Time Continuum: Empirical Implications for a KOS Observatory
Joseph T. Tennis	Keynote: Do We Have All the Terms for this Art?: Exploring the Nature and Continued Conceptualization of KOS through their Collective and Individual Histories
Philipp Mayr	Measuring the Usefulness of Knowledge Organization Systems in Information Retrieval Applications
Wouter Beek	The ‘K’ in Semantic Web stands for ‘Knowledge’
Rob Koopman and Shenghui Wang	Semantic Indexing Techniques and their Application in Studying Concept Drift
Peter Hook	Visualizing Knowledge Organization Systems: Context, Frameworks, Steps, and Exemplars
Marc Koscijew	Materializing Knowledge: Distinctions Between Documentation and Classification
Jan Kozłowski	“Distant Cataloguing”—A step towards Digital and Qualitative Humanities
Aida Slavic	Universal Knowledge Classifications: From Linking Information to Linked Data
Inkyung Choi	Map of Cross-cultural Bibliographic Classifications: The Adaptation of the KDC into the DDC
Panayiota Polydorou	Some of the Challenges and Lessons Learned from the Translation of UDC in Greek
Paul Groth	New Sources of Change in Knowledge Organization Systems
Birte Christensen-Dalsgaard	Designing a Website for Digital Humanities, Including the Use of the Taxonomy TaDiRAH
Kalpna Shankar	Social Science Data Archives, Institutional Sustainability, and Implications for KOS
Rebecca O'Neill	Wikipedians and Other Citizen Curators
Owen Sacco	Semantic-based Game Generation
Sarven Capadisli	dokieli: Decentralised Authoring, Annotations and Social Notifications
Sahar Vahdati	OpenResearch: Collaborative Management and Analysis of Scholarly Communication Metadata

Table 4. Papers from the 2017 KnoweScape Observatory workshop.

such an observatory. This time there were eighteen presentations, twice as many as before, all demonstrating both a deeper and more granular intension and a solidifying extension around the idea of the development of an observatory. These papers are listed in Table 4.

No formal papers emerged from either workshop. Presentations slides from the 2015 workshop are available

on the workshop's website, and some papers from the 2017 workshop might yet be gathered as a special issue of another journal. Titles from all twenty-seven papers were used for co-word analysis. The MDS plot is shown in Figure 9.

The visualization shows three regions—one that is the home of the traditional KOS clustered with the concepts of “empirical” and “change;” another surrounding knowledge in its semantic web context of linking information; and a third embracing the challenges of scholarly communication in its new digital formulation. These represent the “backbone” of the observatory both metaphorically and in reality. That is, changing KOSs and empirical research are the driving force fueled by expanding scholarship that both grows and tends the semantic web of knowledge.

The 2017 workshop included a lengthy group discussion about the idea of an observatory—both for its potential uses and for brainstorming various approaches to building it. This discussion was captured on a series of

flipcharts that likewise were analyzed in the Provalis ProSuite™. A visualization generated from that exercise is shown in Figure 10.

Now we see some different terminology. The idea of a knowledge graph is correlated with SKOS, Linked Open Data and the UDC are correlated with the LOD Laundromat², a semantic web source for gathering and cleaning LOD, and most importantly some direct action words appear—play, understand, and ingest. The participants were very interested in creating an observatory by ingesting (combining) the various sources of data already identified in both workshops, by creating a tool for understanding change in KOSs, and by creating virtual play space for generating innovative scholarship.

Analysis of the observatory data shows a group that is well-grounded in classical KO but is committed to pushing the traditional intension of the domain into new territory, most notably semantic web applications, but also beyond into KO for new digital forms of research repository.

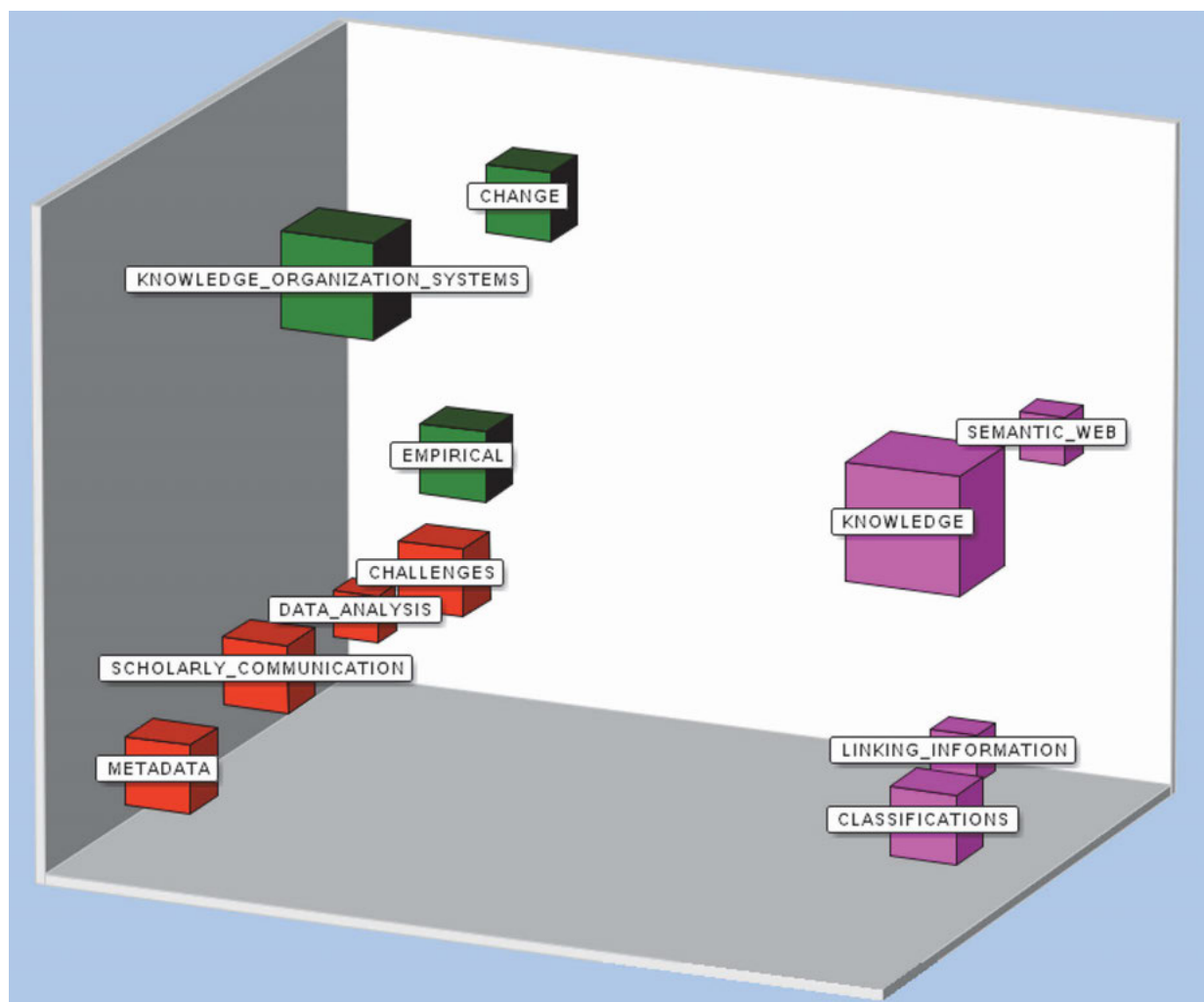


Figure 9. MDS visualization of themes from the Observatory workshop papers (stress = 0.15266; $R^2 = 0.8607$).

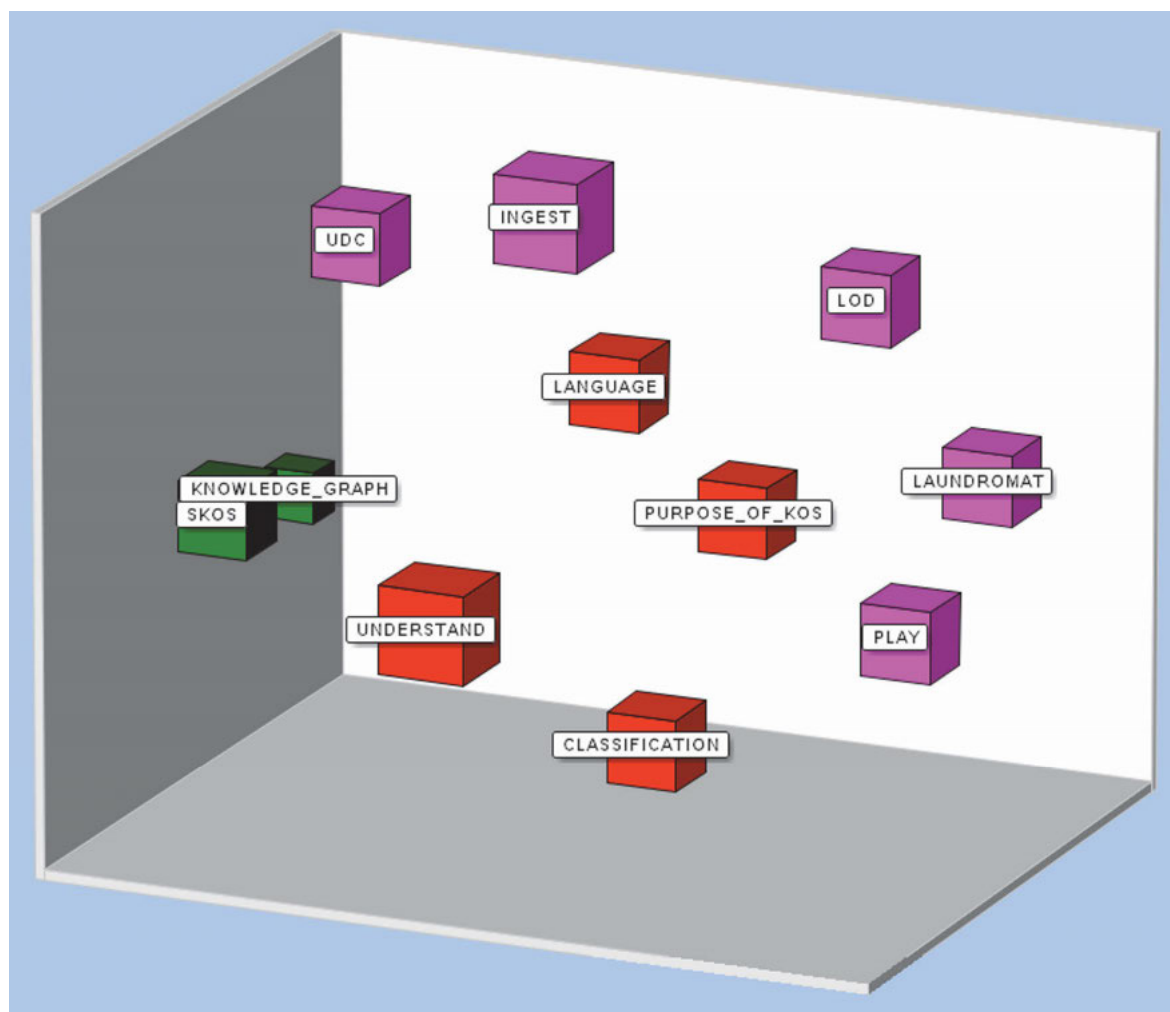


Figure 10. MDS visualization of themes from the Observatory discussion (stress = 0.20772; $R^2 = 0.9174$).

5.0 Ethos, geopolitical realities, and the digital realm

To conclude let us bear in mind that the purpose of this exercise is to visualize the shifting intension in KO overall, by generating specific analyses of these three sets of conferences. In each case, the data analyzed are placed in the context of a sequence of dynamic thinking about KO and its various applications. The ethics sub-domain has embraced core values of ethos and ideology, engaged KO and cultural warrant, but despite its embrace of domain analytical approaches it remains clearly situated in library applications. The global-local sub-domain has taken on the challenge of considering some human and geopolitical realities of KO especially with regard to knowledge organization and representation. Metadata applications, and epistemological points of view are recurring themes. The observatory workshops, meanwhile, look from the KO domain outward toward an embrace of communities creating and using KOSs but not necessarily within the

traditional realm of KO. Semantic web applications and digital research predominate in this sub-domain.

In our analysis of the EKO3 and the Global and Local KO conferences we were able to use citations gathered from some or all of the papers to generate co-word analyses of the cited paper titles (in both) and author co-citation analysis in EKO3. In both cases, the analyses point to the perceptions of the authors contributing papers to the conferences, as these perceptions are formed by their own research and preparation. Thus we also can say that these analyses point to the larger discourses in which these researchers are engaged. Discourse analysis is, in fact, the fastest growing methodology for domain analysis in KO (Smiraglia 2015, 97-98), partially because it can provide a window into the development of domain perception. In the two cases analyzed here, we see there is discourse between EKO3 and critical writings by Hope Olson, Clare Beghtol and Sanford Berman, for example, which collectively forms the consciousness of new developments in EKO as the domain discourse is extended

with new research. In the Global and Local KO analysis it is the prominence of metadata and proximity to information science that distinguish the discourse in this conference from much of that in traditional KO venues. Further analysis of these forms of discourse are yet another opportunity for extending research from this set of editorial contemplations.

Notes

1. The eHumanities Group was a project of the Royal Netherlands Academy of the Arts and Sciences (eHumanities Groep, Koninklijke Nederlandse Akademie van Wetenschappen), based in Amsterdam from 2013-2016 (<http://www.ehumanities.nl/archive/2013-2016/>). It was developed to merge digital humanities with computational humanities and e-science projects from the social sciences. It is succeeded by the network of projects known as eHumanities.nl (<http://www.ehumanities.nl/>).
2. LOD Laundromat is a web-based repository of linked open data, gathered using a crawler, and then republished in the repository in “cleaned” form (<http://lodlaundromat.org/>). The laundry metaphor is used to describe.

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