

## Conference Report

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### The 6th ISKO-UK Biennial Conference, 15–16 July 2019, London, UK

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The 6th Biennial Conference of the UK chapter of the International Society for Knowledge Organization (ISKO-UK) raised the question of “*The Human Position in an artificial world: creativity, Ethics and Artificial Intelligence in Knowledge Organization*”. As usual, the ISKO-UK team packed a very stimulating mix of presentations comprising 2 keynotes, 20 full papers in two parallel sessions, 4 posters, a panel and an innovative case studies session led by information professionals from the industry. The conference program offered a nice blend of theoretical and applied research on knowledge organization, delivered by academics and information professionals from the industries, government and civil associations.

The first keynote, Jem Reyfield from *Ontotext* gave participants a glimpse of a sophisticated knowledge management suite deployed in several enterprises and organisations, including media organisations such as the BBC. Applied to the media organisations, this knowledge organisation suite indexes news articles in real time, performs named entity recognition and similarity measures using the vector space model and builds graphs connecting related entities. This in turn enables more accurate information retrieval and question-answering, all in real time.

The second keynote by Neil Maiden from the Cass Business School at City, University of London, threw the spotlight on “Digital Creativity and the role of AI in helping human creativity”. Citing Boden (1998), Maiden observed that “digital creativity can be seen as an exhaustive search for information” whereby AI systems suggest to human specialists as many angles as possible through which a given problem can be solved or viewed. The domains of application of these “digital creative systems” with AI are varied. They are used in design, such as for urban planning, building and construction, in engineering, and in journalism and writing to perform tasks such as creative search, constraint removing, idea generation, and part-completing of ideas. In the case of journalism, after analysing millions of articles on a given topic, the system suggests new or rarely seen angles through which a topic could be dealt with by journalists so that they can write more “creative” stories. This presentation sparked a stimulating debate about the possible misuse of such “creative systems” for news reporting (the generation of misinformation and fake news, for instance). The audience was given assurances that the research group building these “creative

systems” and the people using them adopted ethical guidelines to only use trusted sources and generate “ideas” and “stories” whose bases have been vouched for by *bona fide* institutions in the real world. Thus, the creative algorithms are only tools for “nudging people into the right ideas”. The decision of what to write as a story for journalists or what is a good design in an engineering project ultimately resides with the human experts. But what happens if these “creative ideas generators” get into the “wrong hands”?

A theme that ran through many of the papers was the issue of ethics and bias in Knowledge Organization Systems (KOS). In her paper entitled “Human and Machine Intelligence. Sources of bias in the treatment of diversity”, Vanda Broughton showed that while bias in traditional KOS like Dewey and Universal Decimal Classification used in many public libraries all over the world have been well studied and to some extent corrected, the biases the current in AI-based KOS are even worse and are not receiving the same attention. Because AI-based KOS are not the primary data gatherers, they are dependent on the initial seed data they were provided with and they perpetuate the biases inherent in those data, resulting from skewed or incomplete data, the most frequent being gender and racial/ethnic biases (over-representation of white men and of Christianity and under-representation of women, other ethnic minorities and other religions). Thus, AI-based KOS are simply reflecting back to humans the biases of our “real world”. The problem here is that no one is really responsible for these automatic KOS such as WordNet because once the initial seed structure is built, they are automatically populated and maintained by the community using them. Her presentation ended with the image of the robot priest Bless-U2 unveiled in Germany to mark the 500<sup>th</sup> anniversary of the Reformation launched by Martin Luther in the 16<sup>th</sup> century to illustrate some speculative and futuristic ideas that in the future, machines may independently develop a sense of religion (see Fig. 1).



Fig. 1. Bless-U2, the robot priest. Courtesy of Guardian News & Media Ltd. (Sherwood, 2017).

Daniel Martinez Avila et al., of UNESP, Marilia, Brazil, raised the question of privacy violations in KOS and archival norms and standards. In “Power, Truth and creativity. The ethical dimensions of KO in art”, Deborah Lee raised the dilemma that “creative mistruths” and “unreal” events pose to knowledge workers (librarians and information professionals). She asked, “What happens if the ‘mistruth’ is a crucial part of the artwork and/or documentation of that artwork? Whose responsibility is it – if anyone’s – to signpost “creative mistruths?” Simply following the rules could lead to creating bibliographic records for things that did not happen but which, for reasons known to the actors involved, they wish to create the impression that they did happen!

One example concerned an exhibition that did take place in China but on a project that did not happen. The exhibition produced documents which then had to be catalogued. Should the cataloguer simply create a record for this exhibition whereas the thing it was based on is fictitious? A second example concerned a case where the document to be catalogued was a fabricated newspaper article reporting an exhibition that did take place. In this case, there is a real event but a fictitious document. Lee wondered what the role of the librarian in such case should be? Alert the user by adding notes to the bibliographic records highlighting the “tampered” nature of the document, and thus take an ethical stance? Or simply “shut up and catalog”<sup>1</sup> and risk perpetuating the false information? Lee’s presentation raised the eternal moral dilemma of the role of human expert: should we be the “guardians of the truth” in our work? How can we guarantee that in seeking to reflect this truth we are not simply imposing our worldview on things or that of our institutions, cultures and stakeholders and thereby creating other biases? She ended her presentation by asking what happens when instead of humans, AI systems begin indexing art works? Would they “care” about this ethical dilemma? The answer is, quite predictably, no!

The conference also boasted the first ISKO-UK “Case Study Café” which was certainly one of its highlights. It was organised by Patrick Lambe of *Straits Knowledge*, Singapore. Eight information professionals (taxonomists and knowledge workers) made a pitch for their case study in a plenary session. Then participants repaired to different rooms where they spent 30 minutes with each case study presenter. It was an informal and interactive participants-led session. At the end of each half hour, participants moved to another session and so on. The case studies covered different *scenarii* where companies were struggling with KOS and practices. The case studies illustrated the crucial role human information professionals continue to have in the Google and Big data era in helping private and public organisations find the relevant information they need in real-time.

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<sup>1</sup>Adapted from the well-known “*shut up and calculate*” attributed to particle physicists, who for decades, searched for the “boson” particle hypothesised by Peter Higgs in 1964 before finally “discovering” the Higgs Boson in 2012 at the Large Hadron Collider.

Cecilia Rask, a taxonomist working with the *Danish National Police* illustrated the importance of knowledge organization and taxonomies for finding relevant information that enable employees of the police force in Denmark to work efficiently. The taxonomy is the backbone of the internal information system used by the police force in Denmark for locating crucial information and documents to carry out their jobs. Her case study illustrated how the cliché “delivering the right information to the right person at the right time” is far from trivial or passé and is still very true.

A second case study presented by Marcus Ralphs from *Byzgen Limited* illustrated the importance of trust in the corporate industry for information sharing. Companies are loath to share their intellectual property (sensitive information) with other business partners due to lack of mutual trust. This lack of trust in the provenance of information is symmetrical to significant delays in decision making in the public sector and that “data at rest is nothing if there is no human to make sense of it”. Ralphs created an information sharing platform based on blockchain that enables industries to share sensitive information in order to carry out a project. His examples came from the defence and aeronautics industries but could apply to any corporate collaborative environment. The platform based on blockchain offers a failsafe encryption and real-time tracking mechanism which enables the originator of the information to manage access to his/her information by the other business partners. The aim being to slowly build trust and transparency in the industry about information sharing. His system offers industries a way of sharing sensitive information in a collaborative, transparent and trustworthy manner based on the blockchain technology.

Another case study by Dave Clarke of Synaptica entitled “Beyond Posting counts: Giving taxonomists a 360 degree view of How concepts are being applied to content” shows users of a taxonomy the concepts that are heavily or rarely used to index documents using the theatre sitting metaphor. The users can then decide to delete rarely used terms or think twice about changing a term that is heavily used. Participants were able to interact with each case study presenter to better understand the human position in an information environment increasingly populated with algorithms. A closing plenary session summarised the highlights and lessons learned from the case studies.

A hallmark of ISKO-UK chapter’s events is that it is very successful in keeping a foot in the academia and another one in the industry and market sectors, thus successfully bringing together academics and practitioners who mutually inform higher education curricula and research in Library and Information Science (LIS). This 2019 edition did not disappoint!

Contrary to what its name suggests, ISKO-UK Biennial Conferences has always been a global event, attracting participants from all over the world and this year was no exception. About seventy attendees came from 15 countries amongst which Belgium, Brazil, Croatia, Denmark, France, Germany, Hungary, Norway, Russia, Singapore, South Korea, Sweden, Taiwan, United States, and of course the UK.

## References

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