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The Grey Journal

An International Journal on Grey Literature

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The Grey Journal is a flagship journal for the international grey literature community. It crosses continents, disciplines, and sectors both public and private.
The Grey Journal not only deals with the topic of grey literature but is itself a document type classified as grey literature. It is akin to other grey serial publications, such as conference proceedings, reports, working papers, etc.

The Grey Journal is geared to Colleges and Schools of Library and Information Studies, as well as, information professionals, who produce, publish, process, manage, disseminate, and use grey literature e.g. researchers, editors, librarians, documentalists, archivists, journalists, intermediaries, etc.

CIP
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About *GreyNet*

The Grey Literature Network Services was established in order to facilitate dialog, research, and communication between persons and organizations in the field of grey literature. GreyNet further seeks to identify and distribute information on and about grey literature in networked environments. Its main activities include the International Conference Series on Grey Literature, the creation and maintenance of web-based resources, a moderated Listserv, and The Grey Journal. GreyNet is also engaged in the development of distance learning courses for graduate and post-graduate students, as well as workshops and seminars for practitioners.

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EDITOR'S NOTE

The Pisa Declaration Two Years on

The Pisa Declaration, an abbreviation for Pisa Declaration on Policy Development for Grey Literature Resources, is a document drawn up and endorsed by the international grey literature community. This document is published and comprises a 15 point roadmap intended to benefit open access to research and information for scholarship, government, civil society, education and the economy.

On April 7th 2014, a seminar was convened in Pisa, Italy by representatives from, ISTI-CNR, INIST-CNRS, DANS-KNAW, OpenAIRE, and GreyNet International. The seminar focused on Grey Literature and Policy Development related to open access, open data, open standards, and open science. Former EAGLE members, current OpenGrey partners, as well as other stakeholders both within and outside the grey literature community participated in this event, which produced a draft outline of the Pisa Declaration.

On May 16th 2014, after an exchange of textual revisions and recommendations, the final draft of the Pisa Declaration was published on the GreyGuide Portal and is online accessible for endorsement by both information professionals as well as organizations involved the field of grey literature. The document contains five main sections (Organizational, Research/Educational, Legal, Financial/Sustainable, and Technical) within which 15 points appear formulated. Two years on, there are over 140 endorsees from some 30 countries worldwide who have signed this document.

During 2015, a group of information professionals who endorsed the Pisa Declaration began work on translating the document into some twenty languages all of which are now published in the GreyGuide Repository alongside the original English language text. The translations are in Armenian, Bulgarian, Croatian, Czech, Dutch, French, German, Greek, Hindi, Hungarian, Italian, Japanese, Korean, Macedonian, Russian, Serbian, Spanish, Tagalog, and Turkish.

In May of 2016, two years from the date on which the Pisa Declaration was first published, an assessment study is underway in an effort to assess the impact that this document has had on policy development for grey literature resources. An online survey among those who endorsed the document will be carried out and their responses will be analyzed. Specific results of the survey should indicate those points in the document that in varying degrees have been implemented since its publication, as well as points that should now be added or which are in need of amendment. The results of the survey and its content analysis will be presented during the Eighteenth International Conference on Grey Literature this November in New York.

Dominic Farace,
Journal Editor

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Toward a Definition of Grey Legal Literature*

Taryn L. Rucinski (United States)

Abstract

Like the playwright Molière whose character M. Jourdain marveled that for more than forty years he had been speaking prose without knowing it,[1] lawyers, judges, law librarians, and law students alike have been using and citing grey literature in all its forms for years without recognizing it. From litigation documents, to administrative materials, to websites and more, the legal field is replete with information resources that justify the creation of a distinct group of grey legal literature that should be considered, if not taught, alongside the traditional primary and secondary legal sources.[2] However, before we can consider the emergence of a distinct information resource group known as grey legal literature, it is helpful to examine the existing role of grey literature in the legal community.

Grey Literature in the Legal Community

Notably, the field of law does not generally recognize the term "grey literature," much less "grey legal literature." As of the date of this article, only two known law dictionaries include definitions of grey literature.[3] Even more significant is that virtually all legal research textbooks, guides, study aids, and treatises are also silent on the issue.[4] Furthermore, references to grey literature in legal materials are scarce,[5] with only four reported cases[6] and proportionally few law review articles mentioning the term.[7] What may be just as telling is that in looking to the field of grey literature as a whole, virtually no articles discuss whether legal documents qualify as grey literature,[8] instead only discussing issues of law in terms of copyright and access.[9]

Moreover, historical references to "grey legal literature" are virtually nonexistent. The term appears to have first been used in the work *Indonesian Law 1949–1989: A Bibliography of Foreign Language Materials with Brief Commentaries on the Law*.[10] However, the first time grey legal literature was discussed as a distinct category was August 2006, by the Canadian online legal magazine *SLAW*,[11] which dedicated a series of blog posts in a "grey legal literature" theme week led by Michael Lines, law librarian and information coordinator at the Canadian Forum on Civil Justice.[12] In a series of eleven posts,[13] the blog provides us with a basic definition ("information produced on all levels of government, academics, business and industry in electronic and print formats not controlled by commercial publishing, i.e. where publishing is not the primary activity of the producing body"[14]) and then proceeds to ask key questions, such as: What constitutes commercial publishing? Is case law a form of grey literature? What about peer-reviewed e-journals? Or legal institute publications?[15] As a blog series this discussion is remarkably provocative; however, on review, these posts are incomplete. For that reason, to arrive at a viable definition of grey legal literature, we must look to synthesize all of the above within the context of the field of law.

Grey Legal Literature's New Definition

To craft a new definition of grey legal literature, the most important thing to consider is the fundamental nature of the law itself. What is the law? What constitutes the legal community? What groups, actors, and/or individuals are involved? What types of information resources are generated about the law or created as a result of the administration of the law? After taking into consideration these questions, and working off the consensus Prague definition of grey literature,[16] a new definition of grey legal literature emerges:

> Grey legal literature stands for manifold document types produced on all levels of government, academics, business and industry in print and electronic formats, which inform or are produced by entities affiliated with the law, as part of, or in furtherance of the legislative, executive, and/or judicial administration of the law at the international, federal, state, and/or local level. Grey legal literature is not typically indexed or abstracted but is of sufficient quality to be collected and preserved by government agencies, law libraries, or other interested organizations, but is not controlled by commercial publishers i.e., where publishing is not the primary activity of the producing body.[17]

* © Taryn L. Rucinski, 2015. Excerpt originally published in 107 L. LIBR. J. 543-59 (2015) and titled *The Elephant in the Room: Toward a Definition of Grey Legal Literature*. The author is grateful for the insight and feedback offered by her mentor Marie Stefanini Newman, Director Pace Law School Library, and the participants of the Sixth Annual Boulder Conference on Legal Information: Teaching and Scholarship (July 10–12, 2014, San Antonio, Texas).

In comparing the characteristics discussed [ ] above, issues of format, lifecycle, indexing, and research largely remain the same between grey literature and grey legal literature. However, characteristics concerning author, audience, content, and, to a lesser extent, distribution diverge greatly with grey legal literature. The characteristics of grey legal literature may be articulated as follows.

Q: Who can author grey legal literature?
A: Anyone. Any individual person, group, organization, nonprofit, or otherwise, including but not limited to academia, governments, and corporations. Individuals and organizations within the legal community are typically the authors of grey legal literature.

Q: What is the content of grey legal literature?
A: Anything related to the law or that is produced as a result of the administration of the three branches of government at the international, federal, state, and/or local level. This includes any pictorial representation (usually written) of facts, ideas, opinions, thoughts, and/or sentiments.

Q: What formats can grey legal literature take?
A: Any print or electronic format, excluding audio and visual images that do not convey information.

Q: Who is the audience of grey legal literature?
A: Anyone. Generally the legal community, although any individual person, group, organization, nonprofit, or otherwise, including but not limited to academia, governments, industry, and corporations. Note that the audience of grey legal literature is normally not the general information-consuming public.

Q: What is the lifecycle of grey legal literature?
A: From the author's perspective, grey legal literature is usually authored for a specific purpose so its intention is normally short and/or limited, although the long-term value is largely dependent on the researcher.

Q: Is grey legal literature subject to normal bibliographic controls?
A: No. Due to its amorphous nature, grey legal literature is not standardly indexed or abstracted. However, grey legal literature often has clearly marked citations.

Q: How is grey legal literature distributed?
A: By any means, electronic, print, or otherwise that does not involve normal commercial distribution channels.

Q: How is grey legal literature located?
A: There is no standard means of locating and identifying grey legal literature as by its nature it is difficult to find and/or lacks any means of permanent access. However, grey legal literature may be accessible through fee-based subscription databases in limited runs or on an ad hoc basis.

Practically speaking, the addition of "law" or that which is "legal" provides us with two main categories of grey legal information resources: (1) materials that would typically be labeled as grey literature that either discuss a legal topic or are produced by an entity that is affiliated with the legal community, and (2) materials that are produced as part of the administration of the three branches of government at the international, federal, state, and/or local level. The first group is the simplest to identify as it relates directly to the guidance provided by the library and information science field. In this context, grey legal literature is grey literature that contains legal subject matter or is produced by an entity affiliated with the law as part of its normal course of business (i.e., law schools, law firms, bar associations and other professional groups and organizations, legal advocacy groups and nonprofits, and international and nongovernmental organizations). The various types of grey legal information resources may include, but are not limited to, are shown in table 1.

Table 1 Types of Grey Legal Information Resources

Archives	Client alerts	Legal notices	Reports
Blogs	Conference materials	Logs	Social media
Bulletins	Conflict alerts	Memoranda	Statistics
Business records	Correspondence	Minutes & agendas	Surveys
Bylaws	E-mails & text messages	Model laws	Websites (archived versions)
CLE materials	Forms (nonstatutory)	Newsletters	Working papers

The second group of grey legal materials is at once more elusive and more relevant to legal scholars. These are information resources that are not included in general discussions of grey literature but that are of particular importance to legal professionals. While not exhaustive, a list of resources produced as part of the legislative, litigation, and regulatory processes that fall within the proposed definition of grey legal literature are shown in table 2.

Table 2 Materials Produced as Part of the Three Branches of Government

Legislative Process

Amendments	Bills (text)	Memoranda	Transcripts
Bill jackets & compiled legislative histories	Hearings	Reports	Voting records

Litigation Process

Affidavits	Consent decrees	Jury instructions	Slip opinions
Awards	Dockets Exhibits	Motions	Transcripts
Bail determinations	Exhibits	Oral arguments	Unpublished opinions
Briefs (& amicus curiae)	Expert reports	Petitions	Verdicts
Complaints	Interrogatories	Settlement agreements	Work product

Required by Statute or Regulation[18]

Applications	IRS determination orders	Orders	Rulemaking comments
Comprehensive plans	IRS tax filings	Patents[19]	Rulemaking petitions
Environmental impact statements & assessments	Letter rulings	Permits	SEC filings
Inspection documents	Memoranda	Reports	Zoning maps

Other Documents

Arbitration documents	Executive directives	MOUs/IMAs	Reports
Contracts	Guidance documents	Petitions	Signing statements
Court rules (nonstatutory)	Medical malpractice premium rates	Planning materials	Wills

However, just as with "regular" grey literature, the types of legal resources listed in tables 1 and 2 reflect a spectrum. This spectrum is directly impacted by technology, ease of access, preservation efforts, and the role of fee-based purveyors of subscription legal information databases.

For example, at one extreme, hard-to-find state trial court briefs from before the Internet clearly qualify as grey legal literature while, on the opposite end of the spectrum, U.S. Supreme Court briefs may not since several print and/or microfilm series capture this information.[20] Legislative histories are also very much a part of this spectrum. Here, bill text and amendments for individual laws are now readily available on websites such as Congress.gov[21] while references to the *Congressional Record* and *Federal Register* can be found on the U.S. Government Printing Office's FDsys website.[22] However, reports, transcripts, hearings, and testimony become more difficult to locate as the researcher moves further back in time, requiring access to specialized series, compiled legislative histories, or subscription websites like Westlaw, LexisNexis, HeinOnline, and Bloomberg Law. In some instances, primary law such as local ordinances may also be considered grey legal literature, especially those where the only copies are kept on file with the clerk's office or local library. Access issues, link rot, and the exclusivity (and high cost) of subscription databases may also impact the metes and bounds of this group of resources as it continues to evolve.

The Value of Grey Legal Literature

To many, the carving out of a new type of legal information resource to add to the legal resource lexicon of primary and secondary sources may be perceived as an empty exercise. After all, in the truest sense, grey literature in any form is a type of secondary source. However, for legal researchers in particular, secondary sources are taught at the law school level as a limited group that is dominated by a handful of commercial publishing houses. These resources span the gamut reflecting a print-heavy lineage of legal encyclopedias, dictionaries, treatises, hornbooks, law journals, legal newspapers, nutshells, and more. But juxtaposed against primary law—constitutions, statutes, regulations, and case law on one side, and the standardized concept of a secondary sources on the other—where does that leave the legal field's "little literature"?[23] Or, for that matter, how should researchers approach the law's reports, forms, administrative materials, and litigation documents? In attempting to answer these questions and others, the creation of a new group of grey legal documents fills this gap admirably.

Functionally, grouping all of these grey legal resources together almost as a "secondary source other" category also makes sense because of the particular research strategies that need to be employed to locate them. Instead of the illustrative Google or Westlaw/Lexis/Bloomberg legal database search that has become the new norm in the legal field, grey literature requests require an added level of knowledge and skill to locate and retrieve, thus supporting the idea that grey legal literature should be a separate and distinct collection.

As one colleague recently noted in response to viewing this list, trying to track down the resources enumerated [above] represent some of the most difficult questions that a researcher might face.[24] While much legal research can be represented in some form as a scavenger hunt, the grey legal information resources offered above generally require more complicated research strategies, access to nontraditional libraries or databases, and/or the use of extensive consortium contacts or networks to locate. What is more, even those documents that are readily available online today via the Internet may become lost over time as evidenced by periodic attempts to shut down the National Technical Information Service[25] and mismatched court efforts at preserving URLs in court decisions.[26] Finally, logistical lessons may also be learned by grouping these materials together with respect to developing unified cataloging, finding aids, and even research guides.

Conclusion

Whether [or not] we categorize our almost primary and/or our not quite secondary resources as grey legal literature, . . . [questions] remain[ ]. As the Internet continues to expand and our citations to grey and delegalized materials increase, the relevancy of grey legal literature will become even more important to researchers, practitioners, and students. However, by articulating a distinct definition of grey legal literature, we may offer these future researchers a new tool to add to their research toolbox, which will provide them with a useful framework for legal research instruction, strategy development, and information retrieval. After all, the world of legal information has been historically portrayed as black and white; perhaps what we need now is a new shade of grey.

References

[1] JEAN-BAPTISTE POQUELIN (MOLIÈRE), LE BOURGEOIS GENTILHOMME act 2, sc. 4 (1670) (*Par ma foi, il y a plus de quarante ans que je dis de la prose, sans que j'en susse rien*. ("Good heavens! For more than forty years I have been speaking prose without knowing it."), courtesy of Marie Stefanini Newman, Director Pace Law Library).

[2] Robert Linz, Assoc. Dir. & Head of Pub. Serv., U. of Colo. L. Libr., Sixth Annual Boulder Conference on Legal Information: Teaching & Scholarship (July 10–12, 2014, San Antonio, Texas) (paraphrasing conference statement).

[3] *Compare* PETER GROVES, A DICTIONARY OF INTELLECTUAL PROPERTY LAW 145 (2011) (grey literature defined as "[d]ocuments produced by government, academia, or business and industry, in print or electronic form, but not published commercially. May include technical reports, standards and specifications, and translations. Difficult to access because of inconsistent methods of publication and dissemination, but potentially fatal to a patent application if the examiner finds it."), *and* NICHOLAS A. ROBINSON & TARYN L. RUCINSKI, ENVIRONMENTAL LAW LEXICON, at G10 (1992 & 2015 Supp.) (grey literature defined as "this group of information resources is largely used in the health and environmental fields and refers to informal publications produced by governments, academics, business and industry in print and electronic formats, that is not controlled by commercial publishers. Examples of grey literature include but are not limited to: corporate documents, discussion papers, newsletters, surveys, working papers, technical reports, trade association publications, conference proceedings, and even maps, data sets, websites, blog posts, tweets, and social media updates."), *with* BALLENTINE'S LEGAL DICTIONARY/THESAURUS (1995); BLACK'S LAW DICTIONARY (10th ed. 2014); BLACK'S MEDICAL DICTIONARY (Harvey Marcovitch ed., 42d ed. 2009); JAMES J. KING, THE ENVIRONMENTAL REGULATORY DICTIONARY (4th ed. 2005).

[4] *See e.g.*, J.D.S. ARMSTRONG & CHRISTOPHER A. KNOTT, WHERE THE LAW IS: AN INTRODUCTION TO ADVANCED LEGAL RESEARCH (4th ed. 2012); STEVEN M. BARKAN ET AL., FUNDAMENTALS OF LEGAL RESEARCH (9th ed. 2009); MORRIS L. COHEN & KENT C. OLSON, LEGAL RESEARCH IN A NUTSHELL (11th ed. 2013); JULIUS J. MARKE ET AL., LEGAL RESEARCH AND LIBRARY MANAGEMENT (2d ed. 2010); MICHAEL D. MURRAY & CHRISTY H. DESANCTIS, LEGAL RESEARCH METHODS (2009); NADIA E. NEDZEL, LEGAL REASONING, RESEARCH AND WRITING FOR INTERNATIONAL GRADUATE STUDENTS (3d ed. 2012); AMY E. SLOAN, BASIC LEGAL RESEARCH TOOLS AND STRATEGIES (5th ed. 2012); SPECIALIZED LEGAL RESEARCH (Penny A. Hazelton gen. ed., 2014).

[5] For example, advance searches conducted on July 1, 2015, on WestlawNext and Lexis Advance yielded no results for the term "gr*y legal literature" (WestlawNext) and "gray legal literature" or "grey legal literature" (Lexis Advance). Minimal results were found for the terms "gr*y literature" (WestlawNext) and "gray literature" or "grey literature" (Lexis Advance).

WestlawNext	Cases	4
	Administrative decisions and Guidance	5
	Secondary sources	80
	Briefs	8
	Trial court documents	10
	Expert materials	48
	Proposed & adopted Regulations	5
Lexis Advance	Cases	5
	Statutes & legislation	4
	Administrative codes & regulations	74
	Administrative materials	32
	Secondary materials	64
	Briefs, pleadings & motions	116
	Expert witness analysis	12
	Directories	7
	Legal news	7
	Science	6580

Note: Searches with zero results or the response "get documents" (LexisAdvance) have been omitted.

[6] *See* Natural Res. Def. Council v. Pritzker, 62 F. Supp. 3d 969, 994 (N.D. Cal. 2014); Coal. for Responsible Reg., Inc. v. E.P.A., 684 F.3d 102, 125 (D.C. Cir. 2012); *In re* Neurontin Mktg. & Sales Practices Litig., 748 F. Supp. 2d 34, 44 (D. Mass. 2010); Wash. Toxics Coal. v. U.S. Dep't of Interior, Fish & Wildlife Serv., 457 F. Supp. 2d 1158, 1190 (W.D. Wash. 2006).

[7] As of July 1, 2015, a full-text search on HeinOnline's Law Journal Library for the terms "grey literature" OR "gray literature" yielded 142 results, with most references made in passing or as footnotes. *See, e.g.*, Michael J. Brennan et al., *Square Pegs and Round Holes: Application of the "Best Scientific Data Available" Standard in the Endangered Species Act*, 16 TUL. ENVTL. L.J. 387, 405 (2003) (describing what types of "gray literature" are considered when administering the Endangered Species Act: "surveys, biological assessments, and other unpublished material"); Corrado Pettenati, *Integration of Grey Literature with Electronic Journals*, 30 INT'L J. LEGAL INFO. 331 (2001); *New Research Directions: An Interview with Stephen A. Gage*, EPA J., Mar. 1979, at 12, 13 (discussing the "massive body of 'grey' literature, which has not been carefully reviewed by the best scientists"); John Ryle, *The Hazards of Reporting Complex Emergencies in Africa*, 10 TRANSNAT'L L. & CONTEMP. PROBS. 85, 88 (2000) (observing that "vast amounts of information, the field reports of hundreds of Egos and UN agencies, mountains of gray literature . . . gather dust in back-offices in Nairobi and Geneva, or reside unvisited, in the wilderness of cyberspace"); Michelle S. Simon & William Pentland, *Reliable Science: Overcoming Public Doubts in the Climate Change Debate*, 37 WM. & MARY ENVTL. L. & POL'Y REV. 219, 242 (2012) (discussing the International Panel on Climate Change's limited exception for grey literature); Zdravka Tzankova, *The Difficult Problem of Nonpoint Nutrient Pollution: Could the Endangered Species Act Offer Some Relief?*, 37 WM. & MARY ENVTL. L. & POL'Y REV. 709, 741 (2013) (noting "gray literature data, may not be sufficient to make a Section 9 case").

[8] Michael Lines, Are Legal Texts Grey Literature? Toward a Definition of Grey Literature That Invites the Preservation of Authentic and Complete Originals, GL11 (2010), *available at* https://dspace.library.uvic.ca/bitstream/handle/1828/3221/2010-01-GL11Lines-AreLegalTexts.pdf?sequence=1.
[9] *See* C.P. AUGER, INFORMATION SOURCES IN GREY LITERATURE VIII (3d ed. 1994) (noting that legal issues are not highlighted at all in this seminal work); Dominic J. Farace & Joachim Schöpfel, *Introduction*, *in* GREY LITERATURE IN LIBRARY AND INFORMATION STUDIES 6 (Dominic J. Farace & Joachim Schöpfel eds., 2010).; Joachim Schöpfel & Tomas A. Lipinski, *Legal Aspects of Grey Literature*, 8 GREY J. 137 (2012), *available at* http://hal.archives-ouvertes.fr/docs/00/90/50/90/PDF/Schopfel_and_Lipinski_Legal_Aspects_of_Grey_Literature_.pdf.
[10] INDONESIAN LAW 1949–1989: A BIBLIOGRAPHY OF FOREIGN-LANGUAGE MATERIALS WITH BRIEF COMMENTARIES ON THE LAW, at xxi (S. Pompe ed., 1992) (noting "[t]here is a lot of 'grey' legal literature, particularly in the areas of company investment and fiscal law.").
[11] *SLAW, Canada's Online Legal Magazine*, SLAW (2015), http://www.slaw.ca/.
[12] *See* Simon Fodden, *Slaw's Second Theme Week*, SLAW (Aug. 4, 2006), http://www.slaw.ca/2006/08/04/slaws-second-theme-week/.
[13] Kathryn Arbuckle, *Grey Lit in Libraries*, SLAW (Aug. 8, 2006), http://www.slaw.ca/2006/08/08/collecting-gl-in-libraries-introductions/; Neil Campbell, *Institutional Repositories*, SLAW (Aug. 8, 2006), http://www.slaw.ca/2006/08/08/institutional-repositories/; Simon Fodden, *The Friday Fillip*, SLAW (Aug. 11, 2006), http://www.slaw.ca/2006/08/11/the-friday-fillip-24/; Michael Lines, *Collecting GL in Libraries*, SLAW (Aug. 8, 2006), http://www.slaw.ca/2006/08/08/collecting-gl-in-libraries/; Michael Lines, *GL, Publishing, Authorship and Authority*, SLAW (Aug. 11, 2006), http://www.slaw.ca/2006/08/11/gl-publishing-authorship-and-authority/; Michael Lines, *Introducing Slaw's Theme Week on Grey Literature*, SLAW (Aug. 7, 2006), http://www.slaw.ca/2006/08/07/introducing-slaws-theme-week-on-grey-literature/; Nick Pengelley, *McLeans as Grey Literature*, SLAW (Aug. 8, 2006), http://www.slaw.ca/2006/08/08/mcleans-as-grey-literature/; Susan Salo, *Science and Technology GL*, SLAW (Aug. 9, 2006), http://www.slaw.ca/2006/08/09/science-and-technology-gl/; Michel-Adrien Sheppard, *Law Reform Reports as Grey Literature*, SLAW (Aug. 9, 2006), http://www.slaw.ca/2006/08/09/law-reform-reports-as-grey-literature/; Jim Suderman & Hannelore Dekeyser, *Grey Lit and Authenticity*, SLAW (Aug. 11, 2006), http://www.slaw.ca/2006/08/10/grey-lit-and-authenticity/; John Willinsky, *GL, Open Access, and Scholarly Publishing*, SLAW (Aug. 11, 2006), http://www.slaw.ca/2006/08/11/gl-open-access-and-scholarly-publishing/.
[14] Lines, *Introducing Slaw's Theme Week on Grey Literature*, *supra* note13.
[15] *Id.*
[16] *See Joachim Schöpfel, Towards a Prague Definition of Grey Literature,* 7 GREY J. 5, 5 (2011)
[17] *See* Claudia Marzi et al., *A Terminology Based Re-Definition of Grey Literature*, 7 GREY J. 19, 20 (2011).
[18] Types of documents included here would be anything that requires community participation in terms of regulation.
[19] JAMES E. BOBICK & G. LYNN BERARD, SCIENCE AND TECHNOLOGY RESOURCES: A GUIDE FOR INFORMATION PROFESSIONALS AND RESEARCHERS 137 (2011) (noting that patents are sometimes included in definitions of grey literature).
[20] *See* U.S. SUPREME COURT REP., LAWYERS' ED.; LANDMARK BRIEFS AND ARGUMENTS OF THE SUPREME COURT OF THE UNITED STATES.
[21] CONGRESS.GOV, https://www.congress.gov/ (last visited Aug. 23, 2015).
[22] FDSYS, http://www.gpo.gov/fdsys/ (last visited Aug. 23, 2015).
[23] Dagmar Schmidmaier, *Ask No Questions and You'll Be Told No Lies: Or How We Can Remove People's Fear of "Grey Literature,"* 36 LIBR. 98, 101 (1986).
[24] Stephanie Davidson, Interim Dir. of the L. Libr. & Assoc. Professor of Libr. Serv., Ill. Coll. of L., Sixth Annual Boulder Conference on Legal Information: Teaching & Scholarship (July 10–12, 2014, San Antonio, Texas) (paraphrasing conference statement).
[25] *About NTIS*, NTIS.GOV, (2015), http://www.ntis.gov/about/ ("The National Technical Information Service serves as the largest central resource for government-funded scientific, technical, engineering, and business related information available today. For more than 60 years NTIS has assured businesses, universities, and the public timely access to approximately 3 million publications covering over 350 subject areas."); *see also* Alex Brown, *"Let Me Google That for You"—Now a Congressional Bill*, NAT'L J., July 23, 2014, http://www.nationaljournal.com/tech/let-me-google-that-for-you-now-a-congressional-bill-20140723.
[26] *See* Sasha Skenderija, *Permanent Digital Legal Information: Disappearing URLs and Preservation of Digital Objects Cited in Court Decisions*, 37 INT'L J. LEGAL INFO. 316 (2009).

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Copyright Reform and the Library and Patron Use of Non-text or Mixed-Text Grey Literature: A Comparative Analysis of Approaches and Opportunities for Change *

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Abstract

What is the current state of use rights in the copyright law specific to libraries and related institutions regarding the use of non-text or mixed text grey literature? Are those exceptions sufficient? If not, what recommendations for change can be made?

This paper assesses the adequacy of existing use rights in the copyright law specific to libraries and related entities applicable to the collection, preservation, access, dissemination and use of grey literature in non-text or mixed text formats. The study is timely, the World Intellectual Property Organization Standing Committee on Copyright and Related Rights is reviewing world copyright laws and considering drafting an international protocol addressing use rights for libraries and archives. While previous studies have focused on copyright and grey literature or on copyright reform, an analysis that combines these lenses (grey literatures, non-text or mixed text formats and copyright review and reform) has not been undertaken. This analysis presents a content review of the copyright use provisions (known as "exceptions and limitations") from the copyright law of those countries represented by presentation participants (excluding poster participants) at GL-12 through GL-16. The specific focus is on a particular country's section of the copyright law that is dedicated, where extant, to libraries, archives, and related entities. The impact of the law on the collection, preservation, access, dissemination, and use of non-text works, such as images, sound recordings, audio visual works, etc., or on mixed-text works (i.e., multimedia) in grey literature collections of libraries and archives is discussed. The following factors, among others, will be applied in the analysis: qualification, preservation, replacement, reproduction, distribution, inter-library loan (including cross-border sharing), and digitization. The review will evaluate the shortcomings of the existing copyright law. Recommendations for change are offered to grey and policy advocates at the national and international legislative and policy-making venues to raise awareness of the shortcoming of existing copyright laws and offer direction for positive change regarding use of grey collections. Such change would be consistent the Articles 8 and 9 of the Pisa Declaration on Policy Development for Grey Literature relating to collection, access and use of grey literature.

The results will demonstrate the current copyright of many countries in the GL conference community are inadequate when applied to non-text or mixed-text sources. Recommendations indicate opportunities for change that grey literature proponents can use to influence policy makers, effect positive change, and ensure the future retention, access, and use of grey collections.

I. Introduction

This paper assesses the adequacy of existing use rights in the copyright law specific to libraries and related entities and applicable to the collection, preservation, access, dissemination, and use of grey literature in non-text or mixed text formats. The study is timely, as the World Intellectual Property Organization Standing Committee on Copyright and Related Rights is reviewing world copyright laws and considering drafting an international instrument addressing use rights for libraries and archives. Use rights such as these are referred to as "exceptions" and "limitations" on the exclusive rights of copyright holders.

Throughout this paper, the word "exception" is used to capture the concept of "exceptions and limitations," and the word "library" includes archives, museums, and other institutions as the case may be (for example, the copyright laws of some countries include museums and galleries). The copyright laws of many countries contain an exception that secures reproduction, dissemination, and other use rights for qualifying libraries. The dissemination right allows the further distribution of protected works,

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but seldom includes the rights of performance and transmission (*i.e.*, display). Often, rights of preservation and replacement are also included.

The review of world-wide copyright exceptions for libraries, however, revealed that some countries do not have any exceptions or that the existing provisions are inadequate. Professor Kenneth D. Crews observed that in 2008, twenty-one out of 149 countries surveyed had no copyright provision dedicated to library use rights.[1] The 2014 Crews Report showed that thirty-two out of 186 countries surveyed had no copyright provision for libraries.[2] There are many reasons for such discrepancy or variation: "Determining factors included legal and cultural traditions, social-economic factors, national IP strategy and policies."[3] This paper reviews a select number of copyright exceptions for libraries from various countries. Part II presents the problem analyzed herein and Part III describes our research methodology. Part IV provides an analysis of the data and Part V offers a variety of observations, assessments, and recommendations based thereon. Part VI concludes that the current copyright laws of many countries in the GL conference community are inadequate when applied to non-text or mixed-text works. Recommendations for change are forwarded to grey literature and policy advocates at national and international legislative to offer direction for positive change regarding use of grey collections.

II. Problem Statement

The authors inquire: What are the characteristics of the *use rights* (known as "exceptions" and "limitations") in the copyright law specific to libraries and related institutions regarding the use of non-text or mixed text grey literature? Are those *exceptions and limitations* sufficient? If not, what recommendations for change can be made?

The three basic elements of an exception and limitation provision are *preservation*, *replacement*, and *dissemination*. Such a provision "enables memory institutions to reproduce copyrighted works as part of their institutional responsibility in collecting and preserving their collections so that they are permanently accessible . . . it allows material to be archived in any format, and seeks to maintain the integrity of the public record for online resources, the medium of today, that disappear for different reasons everyday [*sic*]."[4] *Dissemination* can include the reproduction of materials for a patron or the delivery of materials to the patron of another library (*e.g.*, interlibrary loan). While a number of countries have secured basic rights of *preservation*, including replacement and dissemination, far less have provisions for document supply or interlibrary loan (28 countries according to the 2014 Crews Report). It is not clear, however, that the loan provisions allow for *cross-border transfers*, *i.e.*, the sharing of resources beyond the borders of the country where either the requesting patron/library or the fulfilling library is situated. While previous studies have focused specifically on copyright and grey literature[5] or generally on how changes in the copyright law affect libraries,[6] an analysis that combines these lenses (non-text or mixed text grey literature with copyright review and reform) has not been undertaken.

In order to focus existing copyright provisions and the need for reform, the authors examined communities of users and/or scholars of grey literature. The analysis presents a content review of the copyright use provisions from the copyright laws of those countries represented by presentation participants (excluding poster participants) at GL-12 through GL-16. The specific focus in on a particular country's section of the copyright law that is dedicated, where extant, to libraries. The impact of the law on the collection, preservation, access, dissemination, and use of *non-text works*, such as images, sound recordings, audio visual works, etc., or on *mixed text works* (*i.e.*, multi-media) in the grey literature collections of libraries and archives is discussed. The following factors, among others, will be applied in the analysis: qualification (of the entity), preservation, replacement, reproduction, distribution, inter-library loan (including cross-border sharing), and digitization. The review will evaluate the shortcomings of the existing copyright laws. The following section describes our research methodology.

III. Research Methodology

Sampling. For this paper, the selected sample of copyright laws represented the countries from the five previous Grey Literature conferences (GL-12 through GL-16). This sample initially consisted of twenty-three countries. If a country from the initial sample did not have a copyright law or its law was not available in English, that country was excluded from the final sample. If a country from the initial sample had a copyright law and its law was also available in English, that country was included in the final sample. Because this paper explores and analyzes mixed-text or non-text grey literature, we wanted not to compare the copyright laws of a random sample group of countries, but rather a self-selected sample of countries that are active in the grey literature community by their paper submissions at Grey Literature conferences.

In addition, two countries were added to the list: South Africa and the United Kingdom. When discussing possible copyright reform, these countries offer a good basis of comparison. South Africa's pending legislation represents the most sweeping copyright reform in terms of securing a wide range of use rights for libraries.[7] The United Kingdom also recently amended its copyright law relating to library and archive rights, including the so-called "Teflon" protections that prohibit contractual override of library use rights. The rights of *reproduction* for inter-library loan ("ILL"), which include "whole or part of a published work" and "one article . . . or reasonable proportion," and *replacement* cannot be overridden by a contract like a database subscription agreement or license: "To the extent that a term of a contract purports to prevent or restrict the doing of any act which, by virtue of this section, would not infringe copyright, that term is unenforceable."[8]

A second reason that the United Kingdom was included was that it ranked second behind the United States in a recent study measuring the correlation between library and other limitations and exceptions for users and a variety of economic indicators relevant to the knowledge economy.[9] The study found that a positive correlation existed between a flexible system of copyright exceptions and "higher rates of growth in value-added output throughout their economy."[10] The more robust the range of limitations and exceptions that existed, the more robust the knowledge economy and the production of information.[11] The United States received a top index score of 8.13, with the United Kingdom was close behind with a score of 7.19.[12] Hence, after the addition of South Africa and the United Kingdom, our sample resulted in analyzing copyright provisions from eighteen different countries.

Data Collection. Obtaining the text of the copyright laws from the eighteen countries in the final sample was a two-step process. First, the citation for each provision was found in *Study on Copyright Limitations and Exceptions for Libraries and Archives: Updated and Revised* ("2015 Crews Report") prepared by Kenneth D. Crews on behalf of the World Intellectual Property Organization ("WIPO").[13] With the citation to the specific library provision in hand, the WIPO Lex database was used to find the full text of the sample countries' copyright laws. Conversion from downloadable PDFs to searchable Word documents facilitated later analysis. If a country's copyright law was not available via WIPO Lex, the citation referenced in the 2015 Crews Report and government websites to find the laws online in either website, PDF, or Word document form. This information was catalogued in an Excel spreadsheet containing categories for country, source of copyright law, link to law, section for exceptions, and notes. After securing copies of the copyright laws, we pinpointed the sections pertaining to copyright exceptions and limitations for libraries and archives and created a separate, searchable Word document of just the text of the exceptions and limitations. The analysis was limited by the necessity of using translated versions of certain legal texts. This resulted in often peculiar phrasing that required assumptions to be made regarding the meaning or intent of a particular word or phrase. The following section addresses our methods of document analysis.

IV. Analysis

Categories of Use Rights. After collecting and organizing the data, we analyzed the eighteen different copyright provisions and placed their use rights into one of three categories: rudimentary, basic, and elaborate. *Rudimentary* use rights do not contain all three basic elements of use rights (preservation, replacement, and dissemination) or it focuses on some other singular aspect of use rights. Several countries fall into this category: Cameroon (official archives only); Greece (replacement and ILL); Norway (preservation and for patrons); and Slovenia (reproduction rights for a broad range of entities including museums and education or scientific establishments but limited to "internal use"). Countries with *basic* use rights and reproduction for patrons including ILL include Algeria, Czech Republic, Iceland, India, Japan, Poland, Slovakia, and South Africa. Countries with *elaborate* use rights, in terms of the length or number of sections of text or the range of rights, are Australia, Canada, Russia, South Africa

(which mirrors some of the U.S. copyright law), the United Kingdom, and the United States. Elaborate countries also, at a minimum, provide rights of preservation, replacement, and dissemination whereas *basic* countries supply those rights at maximum. As a summary of our analysis, see Appendix A, a chart of the exceptions and limitations with categories for country, library's rights under the copyright law, application to text and non-text works, and notes.

Word Cloud of Common Terms. In addition, Figure 1, a *word cloud*, reveals commonalities among the texts of the sample countries' copyright exceptions and limitations for libraries and archives. To create the word cloud, we copied and pasted the Word document of just the text of the exceptions and limitations sections of copyright laws pertaining to libraries and archives into Wordle, an open access word-cloud generator.

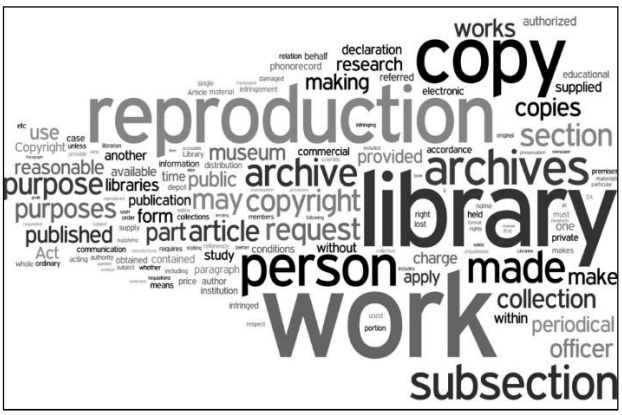

Figure 1. *Word cloud of common terms in use rights for libraries and archives*.

The largest words are those that appear most often; here, the most frequently recurring words are "library," "work," "reproduction," "copy," "person," "archive" and "archives," and "made." Such repletion of copyright-relevant words shows the common themes among the current exceptions for libraries and archives in the sample countries' copyright laws, such as the focus on reproduction and copying in libraries and archives. While it may be easy to forget about the "person," this word cloud reinforces the human element that connects libraries and archives, patrons, and laws, a connection not to be neglected when reexamining and refining copyright laws treatment of mixed-text or non-text grey literature.

Digitization and Reproduction of Works. Several other observations can be made. A number of countries allow the *digitization* of content for the purposes of preservation or replacement, but restrict *access* to the work in some fashion. The most common restriction is limiting access to in-house or on-premises use. An example is Australia's rules for copying for users:

If an article contained in a periodical publication, or a published work (other than an article contained in a periodical publication) is acquired, in electronic form, as part of a library or archives collection, the officer in charge of the library or archives may make it available online within the premises of the library or archives in such a manner that users cannot, by using any equipment supplied by the library or archives: (a) make an electronic reproduction of the article or work; or (b) communicate the article or work.[14]

Additionally, Australia provides for copying for preservation "to officers of the library or archives by making it available online to be accessed through the use of a computer terminal installed within the premises of the library or archives with the approval of the body administering the library or archives."[15]

The Czech Republic, Norway, and the United Kingdom all provide other examples of restricting access to in-house or on-premises use.[16] Poland appears to make a similar restriction: "to make the collection available for research or learning purposes through information technology system terminals (endings) located at the premises of those entities."[17] Russia does as well, indicating that "copies of works in electronic form may be solely provided for temporary gratuitous use at the premises of a library or archive, provided that it is impossible to create any more copies of the work in electronic

form."[18] Slovakia, while allowing a broad range of activities including many uses of grey literature ("educational purposes or scientific and research purposes"),[19] also requires access be made "exclusively on the premises of the library or the archive."[20] Slovenia's law is less explicit, but could be interpreted to impose a similar restriction (*i.e.*, "works from their own copies for internal use").[21] Even the United States contains such a restriction in both its preservation and replacement provisions: "[A]ny such copy or phonorecord that is reproduced in digital format is not otherwise distributed in that format and is not made available to the public in that format outside the premises of the library or archives."[22]

The impact on the use of non-text or mixed-text grey literature is clear: While a non-text work could be found in some *analog format* such as tape (audio or video), conversion of the content into a *digital format* triggers the in-house or on-premises restriction of several countries' copyright provisions. Moreover, because more and more works are born "digital," any reproduction thereof would naturally be digital as well as a library would not likely shift formats in the opposite direction, *i.e.*, from digital back to analog.

Digitization of Non-Text Works: Reproduction and Inter-Library Loan. Other copyright provisions address the *non-text nature of works* such musical works, sound recordings, images, and audio-visual works. Sometimes this treatment of non-text works is by default if the particular provision focuses on text-based works. One example is the Algerian law that uses words or phrases suggesting literary works alone are covered; library rights of reproduction are limited to an "article" or "written work . . . published in a collection of works, newspaper volumes or periodicals."[23] The text of the Australian statute has a similar focus on the article or work or a part thereof.[24] Yet another provision uses the broad phrasing "of a work" with rights of reproduction anticipating the digital more likely with new non-text works: "[T]he work from which the reproduction is made is in electronic form."[25] Canada allows the use of digital format for the delivery of inter-library loan ("ILL"), but does not allow retention in digital format.[26] Some countries specifically exclude non-text formats whether digital or not. For example, the Czech Republic specifically excludes audio or audio-visual works from ILL.[27] Likewise, the United States has similar provision in § 108(i) that applies to ILL or copying for patrons:

The rights of reproduction and distribution under this section *do not apply to a musical work, a pictorial, graphic or sculptural work, or a motion picture or other audiovisual work* other than an audiovisual work dealing with news, except that no such limitation shall apply with respect to rights granted by subsections (b), (c), and (h), or with respect to pictorial or graphic works published as illustrations, diagrams, or similar adjuncts to works of which copies are reproduced or distributed in accordance with subsections (d) and (e).[28]

India suggests a conversion from analog to digital, but not the right to preserve born-digital works, by allowing the storage of a work in digital format "for preservation if the library already possesses a non-digital copy of the work."[29] The National Diet Library of Japan can "record on a memory a work included in its library materials, to the extent deemed necessary, in the case where an electro-magnetic record . . . for the purpose of avoiding the destruction, the damage, of the stain of such original by the public . . . ."[30] This suggests that in Japan, preservation copies can be made in digital format and include images.

Other Memory Institutions. As discussed initially, the use of the word "library" or "libraries" includes an archive or archives, but several countries include other memory or knowledge institutions. A common addition is *museums*, as in Canada, Czech Republic, Norway, Slovenia ("Publicly accessible archives and libraries, museums and educational or scientific establishments"[31]), and the United Kingdom. The Czech Republic includes *galleries* as well as the United Kingdom by definition ("'Museum' includes a gallery"[32]). A number of countries consider *educational institutions*: Slovenia, Canada (in some provisions), the Czech Republic ("school, university, and other non-profit school-related and educational establishment"[33]), Norway, Poland, and Russia.

Reproduction Limited to Certain Purposes. A number of countries limit reproduction for users to certain purposes. Most include a theme of *research* or *private use*: Algeria ("educational, academic research, or personal purposes")[34]; Australia ("research or study")[35]; Canada ("research or private

study")[36], India ("research or private study")[37]; Japan ("own research study")[38]; Norway ("research or private study")[39]; Slovakia ("educational purposes or scientific and research purposes exclusively on the premises of the library or the archive")[40]; South Africa ("private study or the personal or private use")[41]; and the United Kingdom ("non-commercial purpose or private study").[42]

Commercial Availability. Finally, some reproduction rights are predicated on the absence of *commercial availability*, or require some sort of market search for a suitable replacement. Because most grey literature is not commercially available, this condition does not likely impact a library with grey literature in it collections or its patrons. For example, several provisions in the Australia statute condition reproduction rights on the inability for the library to obtain the item "within a reasonable time at an ordinary commercial price."[43] Greece also has the double criteria of availability and price: "The reproduction shall be permissible only if an additional copy cannot be obtained in the market promptly, and on reasonable terms."[44] Iceland, however, conditions the reproduction rights upon an availability standards alone (the work is unobtainable or "unavailable in the open market and from the publisher"[45]). The United States conditions its replacement right on the determination "that an unused replacement cannot be obtained at a fair price,"[46] and the right to copy a substantial or entire works for patrons or ILL upon whether "a copy or phonorecord of the copyrighted work cannot be obtained at a fair price."[47] As the South African statute is based on the U.S. statute, its replacement, copying, and ILL provisions contain identical phrasing.[48]

V. Results

SCCR Criteria. The WIPO Standing Committee on Copyright and Related Rights ("SCCR")[49] has identified eleven criteria ("SCCR Criteria") to protect a library's rights under a copyright law provision: (1) preservation, including replacement; (2) copying for patrons (*i.e.*, document delivery); (3) legal deposit; (4) lending or ILL; (5) parallel importation; (6) cross border; (7) orphan works; (8) limitation on liability; (9) Technological Protection Measures ("TPMs"); (10) contractual override; and (11) translation rights.[50]

Applying the SCCR Criteria to grey literature, legal deposit and translation rights may be eliminated because legal deposit relates to published works and, as noted above, most grey literature (at least in its initial creation) is *unpublished*. Translation rights for grey literature may be allowed under concepts of fair use or fair dealing if performed by an individual. Other SCCR Criteria are often addressed through other copyright law provisions. For example, *parallel importation* is a first sale or exhaustion concept in many countries;[51] likewise the issue of *orphan works* is often addressed through collective licensing or damage remission.[52] Limitations on library liability are often addressed outside the library provisions, such as in a damages provisions. The United States, however, includes an immunity provision in its library provision,[53] and lending or ILL includes the right of dissemination without restriction of geographic boundaries (*i.e.*, cross-border). The remaining SCCR Criteria of preservation (including replacement), copying for patrons, lending or ILL (including cross border), TPMs, and contractual override are relevant to uses of grey literature. The results discussed above are assessed in light of these remaining elements.

IFLA Proposal. As part the SCCR's focus on libraries and archives, IFLA issued a *Treaty Proposal on Copyright Limitations and Exceptions for Libraries and Archives* ("IFLA Proposal")[54] in accordance with the International Council on Archives, Electronic Information for Libraries, and Innovarte Corporation, a library NGO.[55] The Treaty Proposal lays out the key issues for libraries and archives and provides a suggested framework for promoting creativity with protecting the rights of authors and other copyright holders.[56] For purposes of this paper, the authors eliminated or combined certain elements into our discussion and inquired and whether a particular country's copyright laws addressed the issues; the results are in Appendix B. While their application to grey literature is not specified, the SCCR Criteria and the suggestions in the IFLA Proposal should apply to non-text works in addition to text-based works because libraries and archives preserve the audio and images in their collections in the same way.

Preservation. Based on analysis of the SCCR Criteria and IFLA Proposal, a basic requirement of any effective library copyright provision is the right to preserve both *text* and *non-text works*. *Preservation* is most often associated with *unpublished works*. In fact, five countries (*i.e.*, Canada, India, South Africa, United Kingdom, and United States) make the preservation right dependent on the status of the work

being unpublished. As most grey literature is unpublished, this right is paramount and should not depend upon the format of the work. For *published works*, a somewhat parallel right is *replacement*. A replacement provision allows a library to replace an item in its collection that is lost, damaged, or in obsolete format (*e.g.*, Slovakia). Typically, a replacement right of a published work depends on a check for market availability. Since most, if not all, grey literature is unpublished and/or not made available through the commercial marketplace, at least initially, it is unlikely that library reproduction and dissemination rights are impacted by exercise of the replacement right.

Reproduction. In addition, libraries can engage in *reproduction for individual patron use*. A common approach, discussed above, is to restrict the use to research or personal use. Considering various statutes suggests that these rights are directed toward *literary works* and not to non-text works (*e.g.*, recordings, images, or motion media). An extension of this right is *reproduction for a patron at another library*, or ILL. Given the global nature and community of scholars, such exchanges are often across international borders (where the law allows). Again, many statutes suggest that such exchanges are limited to text-based literary works or not allowed across borders.

Licensing. As Lipinski and Copeland have discussed, grey literature collections are available subject to a *licensing agreement*, and some of the terms may by contract limit the rights of libraries and users in the copyright law.[57] As more and more content becomes subject to a license agreement, whether *commercially* (such as a database subscription agreement) or *non-commercially* (through a Creative Commons or other End User License Agreement), such clauses will become increasingly important, ensuring that library collections are not rendered unusable by restrictive contractual terms and conditions.

Contractual Override. The revised statute of the United Kingdom and a proposed South African bill include a so-called "Teflon" clause that prevents any contractual provision from overriding use rights provided for in the library provision.[58] In other words, a contract (such as a database subscription agreement, i.e., a license) cannot offer more restrictive terms than those articulated in that statute without being null. The United Kingdom statute, for example, contains the following language in its interlibrary loan, replacement, and copying for patron provisions.: "To the extent that a term of a contract purports to prevent or restrict the doing of any act which, by virtue of this section, would not infringe copyright, that term is unenforceable."[59] This is an important provision found in only two statutes reviewed for this study and discussed above.

TPMs. The final SCCR Criteria relates to Technological Protection Measures ("TPMs"). As more and more content is available in digital format, including born digital works, the use of TPMs may increase in commercial settings to control access to or use of the work. According to the tabulated information in the 2015 Crews Report, 112 countries have some form of TPMs.[60] Over fifty of those countries offer some circumvention of TPMs, yet little more than half (twenty-nine) allow circumvention when the desired use is ultimately a lawful, non-infringing use. This result is inconsistent with the purpose of TPMs as a way to thwart the mass infringement of digital content. Moreover, the lack of uniform and universal ability by libraries to circumvent TPMs for lawful use can impede those libraries identified as having some form of library exemption. Some countries have regulatory, administrative, or other mechanisms (such as mediation) to authorize exceptions, yet these result in inconsistencies and additional costs and delays when libraries seek exemptions for what are ultimately lawful uses. A "TPM override" provision would allow a library to circumvent a TPM for lawful use.

Formatting Use Rights. The authors also recommend that library use rights should be format-neutral. This would be the simplest way of providing the inclusion of non-text material, including grey content, in the cluster of rights afforded to libraries.

VI. Conclusion

These results demonstrate that the current copyright laws of many countries in the GL conference community are inadequate when applied to non-text or mixed-text works. Recommendations based upon the modified list of SCCR Criteria and the IFLA Proposal indicate many opportunities for change. While the *preservation* of grey literature is well-established, the *digitization* of grey content is either not

allowed or limited to in-house or on-premises uses alone. While some mass digitization projects can fall under a concept of fair use,[61] few countries have or are proposing fair use. As a result, a robust library exception is needed.

Preservation and replacement of *all* works and *all* formats, including new and mixed media and born-digital works, should be allowed, subject to the work's non-commercial availability and restriction to particular uses (*e.g.*, personal, educational, or scholarly activities). Remote access to the digitized content should also be allowed, or, at the very least, users should be able to search and locate collections and use interlibrary loan to obtain use of the works. In addition, lawful use of works under the copyright law should not be restricted by TPMs or contractual provisions. These changes offer an array of rights consistent with Articles 8 and 9 of the *Pisa Declaration on Policy Development for Grey Literature Resources*, relating to the collection, access, and use of grey literature.[62]

References

Scholarly Articles

Chamberlain, K. (2011). "Lawfully made under this title": The implications of *Costco v. Omega* on the first sale doctrine and library lending. *Journal of Academic Librarianship*, 37(4), 291-298. Available at http://www.sciencedirect.com/science/article/pii/S009913331100070X.

Lipinski, T.A. and Copeland, A. (2013). Look before you license: The use of public sharing websites in building patron initiated public library repositories. *Preservation, Digital Technology, and Culture*, 42(3), pp. 174-198. Available at https://scholarworks.iupui.edu/bitstream/handle/1805/4574/lipinski-2013-look.pdf?sequence=1.

Lipinski, T.A. (2009). Green light for grey literature? Orphan works, web-archiving and other digitization initiatives: Recent developments in U.S. copyright law and policy. *The Grey Journal: International Journal on Grey Literature*, 5(1), 11-21. Available at http://www.moyak.com/papers/grey-literatire-digitization.pdf.

Lipinski, T.A. (2003a). The myth of technological neutrality in copyright and the rights of institutional users: Recent legal challenges to the information organization as mediator and the impact of the DMCA, WIPO, and TEACH. *Journal of the American Society for Information Science and Technology*, 54(9), 824-835. Available at http://dl.acm.org/citation.cfm?id=874019.

Lipinski, T.A. (2003b). The climate of distance education in the 21st century: Understanding and surviving the changes brought by the TEACH (Technology, Education, and Copyright Harmonization) Act of 2002. *Journal of Academic Librarianship*, 29(6), 362-374. Available at http://www.editlib.org/j/ISSN-0099-1333/v/29/n/6/.

Schöpfel, J. & Lipinski, T.A. (2012). Legal aspects of grey literature. *The Grey Journal: International Journal on Grey Literature*, 8(3), 137-153. Available at https://hal.inria.fr/file/index/docid/905090/filename/Schopfel_and_Lipinski_Legal_Aspects_of_Grey_Literature_.pdf.

Reports and Studies

Crews, K.D. (2015, June 14). *Study on Copyright Limitations and Exceptions for Libraries and Archives: Updated and Revised*. SCCR/30/3. Geneva, Switzerland: World Intellectual Property Organization. Available at http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=306216.

Crews, K.D. (2014, Nov. 5). *Study on Copyright Limitations and Exceptions for Libraries and Archives*. SCCR/29/3. Geneva, Switzerland: World Intellectual Property Organization. Available at http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=290457.

Electronic Information for Libraries, *Draft Law on Copyright: Including Novel Exceptions and Limitations for Libraries and Their Users* (2014, Work in Progress). Available at http://www.eifl.net/system/files/resources/201411/eifl_draft_law_2014.pdf.

Gibert, B. (2015). *The 2015 Intellectual Property and Economic Growth Index: Measuring the Impact of Exceptions and Limitation in Copyright Growth, Jobs and Prosperity* (revised May 2015). Brussels, Belgium: The Lisbon Council. Available at http://www.innovationeconomics.net/component/attachments/attachments.html?id=263&task=view.

GreyNet Grey Literature Network Services (2014, May 16). *Pisa Declaration on Policy Development for Grey Literature Resources*. Available at http://www.greynet.org/images/Pisa_Declaration,_May_2014.pdf.

International Federation of Library Associations (2013, Dec. 4). *Treaty Proposal on Copyright Limitations and Exceptions for Libraries and Archives*, Version 4.4. The Hague, Netherlands. Available at www.ifla.org/copyright-tlib.

U.S. Copyright Office (2015). *Orphan Works and Mass Digitization: A Report of the Register of Copyrights*. Washington, D.C.: U.S. Copyright Office. Available at http://www.copyright.gov/orphan/ (last visited Oct. 23, 2015).

World Intellectual Property Organization Standing Committee on Copyright and Related Rights (2014). *Consolidation of Proposed Texts Contained in Document SCCR/26/3*. Prepared by African Group, Brazil, Ecuador, India, and Uruguay, Twenty-ninth Session, Geneva, Switzerland (Dec. 8-12, 2014). Available at http://www.wipo.int/edocs/mdocs/copyright/en/sccr_29/sccr_29_4.pdf (last visited Oct. 23, 2015).

United States Case Law

Kirtsaeng v. John Wiley & Sons, Inc., 133 S. Ct. 1351 (2013).

International Copyright Laws

Algeria: Copyrights and Related Rights Act of Algeria, No. 03-05 (July 19, 2003), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=178342.

Australia: Copyright Law of Australia, No. 63 (June 27, 1968), as amended through No. 31 (May 27, 2014), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=336977.

Czech Republic: Act on Copyright and Rights Related to Copyright of the Czech Republic, No. 121/2000 (April 7, 2000), as amended through No. 216/2006 (May 22, 2006), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=137175.

Canada: Copyright Act of Canada, c. C-42 (1985), as amended through Jan. 2, 2015, consolidated as of Mar. 31, 2015, available at http://www.wipo.int/wipolex/en/text.jsp?file_id=366684.

India: Copyright Act of India, No. 14 (4 Jun. 1957), as amended through Act No. 49 (30 Dec. 1999), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=128098.

India: Copyright (Amendment) Act of India, No. 27 (June 7, 2012), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=304385 (last visited Oct. 23, 2015).

Japan: Copyright Act of Japan, Act No. 48 (May 6, 1970), as amended through Act No. 43 (June 27, 2012), available at http://www.cric.or.jp/english/clj/doc/20130819_July,2013_Copyright_Law_of_Japan.pdf.

Norway: Act Relating to Copyright in Literary, Scientific, and Artistic Works etc. of Norway, No. 2 (12 May 1961), as amended through 22 December 2006, available at http://www.wipo.int/wipolex/en/text.jsp?file_id=248181.

Poland: Copyright and Related Rights Act of Poland, No. 83 (Feb. 4, 1994), as amended through Alteration of the Law on Copyright and Neighboring Rights, No. 91 (Oct. 10, 2010), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=129378.

Russia: Civil Code of the Russian Federation, No 230-FZ (Dec. 18, 2006), as amended through Amendment No. 35-FZ (Mar. 12, 2014), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=345444.

Slovakia: Law of Copyright and Related Rights of Slovakia, No. 618/2003 (Dec. 4, 2003), as amended through No. 453/2008 (2008), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=189474.

Slovenia: Copyright and Related Rights Act of Slovenia, No. 21 (1995), as amended through No. 16 (Dec. 15, 2006), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=180840.

South Africa: Copyright Amendment Bill, No. 646 (July 27, 2015), available at http://blogs.sun.ac.za/iplaw/files/2015/08/gg39028.pdf.

Copyright Regulations of South Africa (1978), as amended through GN 1375 (1985), available at http://www.wipo.int/wipolex/en/text.jsp?file_id=130435.

United Kingdom: Copyright, Designs, and Patents Act of the United Kingdom, Chapter 48 (Nov. 15, 1988), as amended through Copyright and Rights in Performances (Research, Education, Libraries and Archives) Regulations 2014, Statutory Instrument 2014 No. 1372 (May 19, 2014), available at http://www.legislation.gov.uk/ukpga/1988/48/part/I/chapter/III/crossheading/libraries-and-archives.

United States: 17 U.S.C. § 108, Copyright Act of the United States, Pub. L. No. 94-553 (Oct. 23, 1976), as amended through Pub. L. No. 111-295 (Dec. 9, 2010), available at http://www.wipo.int/edocs/lexdocs/laws/en/us/us352en.pdf.

APPENDIX A. *Analysis of library exceptions and limitations in copyright laws of sample countries.*

Country	Rights	Application to text-based works	Application to non-text or mixed-text works	Comments
Algeria	"Library" and "document keeping center" (archive?) can reproduce "article" or "excerpt" from a "collection of works, newspaper volumes or periodicals." Art. 45.	In absence of collective license; "for educational, academic research, or personal purposes" if isolated and non-recurring. Art. 45.	"Library" and "document keeping center" (archive?) can reproduce in response to request from another library or document keeping center (ILL?), or for purposes of preservation or replacement if isolated and non-recurring.	Art. 45 applies to text-based on example provided. Art. 46 does not delineate; could argue this applies to any category of work. However, parallel subsection in U.S. law, for example, does not apply specifically to "musical work, a pictorial, graphic or sculptural work, or a motion picture or other audiovisual work." *See* 17 U.S.C. § 108(i).
Australia	Right of reproduction for "article or part of an article"; replacement copying allowed. Art. 50.	User request or ILL. Reproduction for "the whole, or of more than a reasonable portion" requires no commercial copy available; likely does not apply to most grey literature.	Subsec. (3) refers to "whole or part of a work" and (4) refers to "or of any other published work"; (7B)(b) "work from which the reproduction is made is in electronic form" suggests digital media is included.	Under Subsec. (7)(C), reproduction can be in electronic form but entire context of Arts. 49 and 50 appear to relate to literary works alone.
Cameroon	No specific library provision, but "Without prejudice to the author's right to an equitable remuneration, reproductions may be preserved in official archives."			Limited to copy made for official archive.
Canada	Preservation / replacement reproduction rights for unpublished works; reproduction rights for published works.	"Research or private study rights" for published works.	Reproduction right for "research or private study" of published works (does not apply to musical work). ILL allows use of digital copy for delivery.	Rights apply to "library, archive or museum" but in context apply to literary works: "article… periodical… newspaper or periodical."
Czech Republic	Archiving, conservation, replacement; work cannot be commercially available or subject to license.	Limited to "dedicated terminals located on its premises." Theses and dissertations limited for research or private study.	Works in audio or audiovisual format may be lent but without "possibility of making reproductions of works fixed in audio or audio visual formats."	Wide variety of entities: "library, archive, museum, gallery, school, university and other nonprofit school-related and educational establishment."

Greece	Rights to make "one additional copy" from collection of library or archive.	Right to reproduce or "transfer" (ILL).	No limitations on type of work if not commercially available	Not limited by text. Applies to any work ("of the work") but context suggests provision modeled on basic exception of replacement and ILL (usually limited to literary works).
Iceland	Rights of production for public ("enjoying support from public founds") in libraries and archives	Reproduction for ILL limited to works not commercially available. Replacement copying limited to "minor proportion of a work" and "parts of works."	Rights not limited by text; work must be in collection of library or archive.	No exclusions *per se*, but context suggests modeled after basic preservation, replacement, and ILL.
India	Replacement and preservation rights; ILL and copying for patron "for purposes of research or private study."	Unpublished literary, dramatic, or musical work. Digitization allowed through replacement provision ("in any medium by electronic means") if library owns non-digital copy.	Sec. 52(o) applies to "pamphlet, sheet of music, map, chart or plan," but other visual works noted. Preservation appears to support digitization: "in any medium by electronic means…if the library already possess a non-digital copy of the work."	Applies to library, museum, or other institution.
Japan	Basic rights of ILL and preservation.	Reproduction for patrons ("research study"), preservation, and out-of-print supply to another library.	Exception for National Diet Library "to record on a memory work" and make interactive transmission. Other libraries may make "a single copy of a part of that work" for patron research.	By definition, "library materials" limits use of non-text works: "books, documents and other materials held in the collections."
Norway	Reproduction rights for preservation ("conservation and safety").	Digital access allowed ("using terminals"), but must be on library premises and not commercially available.	Text does not works ("copies of works"), but subject to collective licensing.	Applies to archives, libraries, museums, and educational and research institutions.
Poland	Basic rights of reproduction and preservation.	Published ("disseminated works") for preservation ("maintain or protect") of works in collection and for patron copy.	Digital access "for research or learning purposes through information technology system terminals" restricted to premises.	Applies to libraries, archives, and schools. No limits in text, but context suggests basic preservation, copying for patron, and on-premises access.
Russia	Broad preservation and replacement rights.	Digital copies of published works ("put into the civil circulation") limited to premises. ILL and copying for patrons limited to articles; small-size works lawfully published in collections, newspapers, and other periodical prints; short extracts from other lawfully published written works (with or without illustrations). Similar right for educational organizations.	Reproduction "of copies of works on machine-readable media for whose use there are no required facilities" could represent digitization or print-disabled. State archives can preserve work on web ("works inserted on the Internet"); could include mixed-media or media-based works.	Public libraries and archives. Dissertation copies may be "electronic," but premise limitation applies. Could include images or other media. Attribution required.

Slovakia	Basic reproduction and preservation rights.	Translation of text suggests right includes anticipatory copy for "protection… against loss, destruction or damage…"		Rights limited to works in collection of library or archive.
Slovenia	Very broad rights.	Reproduction limited to non-commercial use and works from collection.	Digitization rights without restriction ("on any medium"). Would apply to born digital. Possible premise limitations: "for internal use."	Applies to "[p]ublicly accessible archives and libraries, museums and educational or scientific establishments."
South Africa	Preservation and security for unpublished works.	Replacement of published work does not contain premises liability. *See* Copyright Amendment Bill, No. 646 (27 July, 2015).	Limitation from U.S. law does not contain § 108(i), so ILL and copyright for patron could be of a mixed-media or media-based work. Private study or personal use limitation. Market test required for entire or substantial portion reproduction.	Text mirrors United States provision 17 U.S.C. § 108.
Switzerland	Basic rights of preservation.	No replacement; broad back-up right exists, but "the original or the copy must be stored in an archive not accessible to the general public and be marked as the archive copy."	No limitations; would apply to any work in listed entities; could include all media or mixed-media works.	Applies to "[p]ublic libraries, educational institutions, museums and archives accessible to the public."
United Kingdom	Reproduction for another library or replacement (market test required). Reproduction of published works includes ILL and copying for patrons (one article or "reasonable proportion of any other published works").	Reproduction made "available to the public" limited to "a dedicated terminal on its premises" suggest a general premises limitation. Reproduction for ILL ("whole or part of a published work" and "one article… or reasonable proportion") and replacement cannot be overridden by contract: "To the extent that a term of a contract purports to prevent or restrict the doing of any act which, by virtue of this section, would not infringe copyright, that term is unenforceable."	Rights for unpublished works, but not available where copyright owner has prohibited copying.	Applies to library, archive, museum, and educational establishments. Museum includes gallery. Reproduction of published and unpublished works subject to declaration for non-commercial research or private study.
United States	Reproduction for preservation and security of unpublished works; replacement of published work if not commercially available.	Reproduction for ILL and patrons restricted to private study, scholarship, or research.	Per § 108(i), exclusions for preservation, security, or replacement of musical, pictorial, graphic, or audio visual works apply, but cannot be made available outside premises.	Libraries and archives only; museums not included. ILL and copying for patrons limited to one copy for "private study, scholarship, or research."

APPENDIX B. *Application of select SCCR Criteria and IFLA Proposal to copyright laws of sample countries.*

Country	Library Lending	Reproduction	Preservation	Cross-Border	Contract Override	TPM Override
Algeria	X	X	X	?		
Australia	X	X	X	X		
Cameroon	X	X (archives)				
Canada	X	X	X	X		
Czech Republic	X	X	X			
Greece	X	X	X	X		
Iceland	X	X	X	X		
India	X	X	X	X		
Japan	X	X	X	X		
Norway	X	X	X			
Poland	X	X	X			
Russia	X	X	X	X		
Slovakia	X	X	X			
Slovenia	X	X	X			
South Africa	X	X	X	X	X	X
Switzerland	X	X	X			
U.K.	X	X	X	X	X	X
U.S.	X	X	X	X		

[1] *See* Kenneth D. Crews, *Study on Copyright Limitations and Exceptions for Libraries and Archives*, SCCR/17/2 (Aug. 26, 2008), *available at* http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=109192 (last visited Nov. 2, 2015).

[2] *See* Kenneth D. Crews, *Study on Copyright Limitations and Exceptions for Libraries and Archives*, SCCR/29/3 (Nov. 5, 2014), *available at* http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=290457 (last visited Nov. 2, 2015) [hereinafter "2014 Crews Report"]. The 2008 and 2014 reports were consolidated in Kenneth D. Crews, *Study on Copyright Limitations and Exceptions for Libraries and Archives: Updated and Revised*, SCCR/30/3 (Jun. 14, 2015), *available at* http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=306216) [hereinafter "2015 Crews Report"].

[3] Electronic Information for Libraries, *Draft Law on Copyright: Including Novel Exceptions and Limitations for Libraries and Their Users* (2014, Work in Progress), at 45, *available at* http://www.eifl.net/system/files/resources/201411/eifl_draft_law_2014.pdf (last visited Nov. 2, 2015) [hereinafter "EIFL Draft Law on Copyright"].

[4] EIFL Draft Law on Copyright at 31.

[5] *See, e.g.*, Tomas A. Lipinski, *Green Light for Grey Literature? Orphan Works, Web-Archiving and Other Digitization Initiatives – Recent Developments in U.S. Copyright Law and Policy*, GREY J.: INTERNAT'L J. GREY LIT. (Vol. 5, Iss. 1, 2009), *available at* http://www.moyak.com/papers/grey-literatire-digitization.pdf (last visited Nov. 2, 2015); Joachim Schöpfel and Tomas A. Lipinski, *Legal Aspects of Grey Literature*, GREY J.: INTERNAT'L J. GREY LIT. (Vol. 8, Iss. 3, 2012), *available at* https://hal.inria.fr/file/index/docid/905090/filename/Schopfel_and_Lipinski_Legal_Aspects_of_Grey_Literature_.pdf (last visited Nov. 2, 2015).

[6] *See, e.g.*, Tomas A. Lipinski, *The Climate of Distance Education in the 21st Century: Understanding and Surviving the Changes Brought by the TEACH (Technology, Education, and Copyright Harmonization) Act of 2002*, 29 J. ACAD. LIB'SHIP 362 (2003); Katherine A. Chamberlain, *"Lawfully Made under This Title": The Implications of* Costco v. Omega *and the First Sale Doctrine on Library Lending*, 37 J. ACAD. LIB'SHIP 291 (2011), *available at* http://www.sciencedirect.com/science/article/pii/S009913331100070X (last visited Nov. 2, 2015).

[7] *See* South Africa Copyright Amendment Bill, No. 646 (July 27, 2015), *available at* http://blogs.sun.ac.za/iplaw/files/2015/08/gg39028.pdf (last visited Nov. 2, 2015).

[8] *See* §§ 41(5) ("Copying by librarians: supply of single copies to other libraries"), 42(7) ("Copying by librarians, etc.: replacement copies of works"), and 42A(6) ("Copying by librarians: single copies of published works"), Copyright, Designs, and Patents Act of the United Kingdom, Chapter 48 (Nov. 15, 1988), *as amended* through Copyright and Rights in Performances (Research, Education, Libraries and Archives) Regulations 2014, Statutory Instrument 2014 No. 1372 (May 19, 2014), *available at* http://www.legislation.gov.uk/ukpga/1988/48/part/I/chapter/III/crossheading/libraries-and-archives (last visited Nov. 2, 2015).

[9] *See* Benjamin Gibert, *The 2015 Intellectual Property and Economic Growth Index: Measuring the Impact of Exceptions and Limitation in Copyright Growth, Jobs and Prosperity*, Lisbon Council (rev'd May 2015), *available at* http://www.innovationeconomics.net/component/attachments/attachments.html?id=263&task=view (last visited Nov. 2, 2015) [hereinafter "2015 Growth Index"].
[10] 2015 Growth Index at 3.
[11] *See* 2015 Growth Index at 2-4.
[12] 2015 Growth Index at 5.
[13] *See* 2015 Crews Report.
[14] § 49(5A), "Reproducing and communicating works by libraries and archives for users," Copyright Law of Australia, No. 63 (Jun. 27, 1968), *as amended* through No. 31 (May 27, 2014), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=336977 (last visited Nov. 2, 2015).
[15] § 51A(3), "Reproducing and communicating works for preservation and other purposes," Copyright Law of Australia, *supra* note 14.
[16] *See* § 37(1)(c), "Library License," Act on Copyright and Rights Related to Copyright of the Czech Republic, No. 121/2000 (Apr. 7, 2000), *as amended* through No. 216/2006 (May 22, 2006), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=137175 (last visited Nov. 2, 2015); §16, "Making copies in archives, libraries and museums, etc.," Act Relating to Copyright in Literary, Scientific, and Artistic Works etc. of Norway, No. 2 (12 May 1961), *as amended* through 22 Dec. 2006, *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=248181 (last visited Nov. 2, 2015); § 40B, "Libraries and educational establishments etc: making works available through dedicated terminals," Copyright, Designs, and Patents Act of the United Kingdom, *supra* note 8.
[17] § 28(3), Copyright and Related Rights Act of Poland, No. 83 (Feb. 4, 1994), *as amended* through Alteration of the Law on Copyright and Neighboring Rights, No. 91 (Oct. 10, 2010), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=129378 (last visited Nov. 2, 2015).
[18] Art. 1275(1), "Free Use of Works by Libraries, Archives and Educational Organisations," Civil Code of the Russian Federation, No 230-FZ (Dec. 18, 2006), *as amended* through Amendment No. 35-FZ (Mar. 12, 2014), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=345444 (last visited Nov. 2, 2015).
[19] § 31(1)(a), "Use of work by a library or an archive," Law of Copyright and Related Rights of Slovakia, No. 618/2003 (Dec. 4, 2003), *as amended* through No. 453/2008 (2008), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=189474 (last visited Nov. 2, 2015).
[20] § 31(1)(a), "Use of work by a library or an archive," Law of Copyright and Related Rights of Slovakia, *supra* note 19.
[21] Art. 50, Copyright and Related Rights Act of Slovenia, No. 21 (1995), *as amended* through No. 16 (Dec. 15, 2006), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=180840 (last visited Nov. 2, 2015).
[22] 17 U.S.C. § 108(b)(2), "Limitations on exclusive rights: Reproduction by libraries and archives," Copyright Act of the United States, Pub. L. No. 94-553 (Oct. 23, 1976), *as amended* through Pub. L. No. 111-295 (Dec. 9, 2010), *available at* http://www.wipo.int/edocs/lexdocs/laws/en/us/us352en.pdf (last visited Nov. 2, 2015).
[23] Art. 45, Copyrights and Related Rights Act of Algeria, No. 03-05 (July 19, 2003), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=178342 (last visited Nov. 2, 2015).
[24] *See*, *inter alia*, §§ 50(7), (7A), (7B), Copyright Law of Australia, *supra* note 14.
[25] § 50(7B)(b), "Reproducing and communicating works by libraries or archives for other libraries or archives," Copyright Law of Australia, *supra* note 14.
[26] *See* § 30.2(5.02), Copyright Act of Canada, c. C-42 (1985), *as amended* through Jan. 2, 2015, *consolidated* as of Mar. 31, 2015, *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=366684 (last visited Nov. 2, 2015).
[27] § 37(3), "Library License," Act on Copyright and Rights Related to Copyright of the Czech Republic, *supra* note 16.
[28] 17 U.S.C. § 108(i), "Limitations on exclusive rights: Reproduction by libraries and archives," Copyright Act of the United States, *supra* note 22.
[29] § 31(iii), Copyright (Amendment) Act of India, No. 27 (Jun. 7, 2012), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=304385 (last visited Nov. 2, 2015).
[30] Art. 31(1), "Reproduction, etc. in libraries, etc.," Copyright Act of Japan, Act No. 48 (May 6, 1970), *as amended* through Act No. 43 (Jun. 27, 2012), *available at* http://www.cric.or.jp/english/clj/doc/20130819_July,2013_Copyright_Law_of_Japan.pdf (last visited Nov. 2, 2015).
[31] Art. 50, Copyright and Related Rights Act of Slovenia, *supra* note 21.
[32] § 43A(3), "Sections 40A to 43: interpretation," Copyright, Designs, and Patents Act of the United Kingdom, *supra* note 8.
[33] Art. 37(1), "Library License," Act on Copyright and Rights Related to Copyright of the Czech Republic, *supra* note 16.
[34] Art. 45, Copyrights and Related Rights Act of Algeria, *supra* note 23.
[35] § 49(1)(b)(i), "Reproducing and communicating works by libraries and archives for users," Copyright Law of Australia, *supra* note 14.
[36] § 30.2(2), "Libraries, Archives and Museums," Copyright Act of Canada, *supra* note 26.
[37] § 52(1)(p), Copyright Act of India, No. 14 (4 Jun. 1957), *as amended* through Act No. 49 (30 Dec. 1999), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=128098 (last visited Nov. 2, 2015).
[38] Art. 31(1), "Reproduction, etc. in libraries, etc.," Copyright Act of Japan, *supra* note 30.
[39] § 16, "Making copies in archives, libraries and museums, etc.," Act Relating to Copyright in Literary, Scientific, and Artistic Works etc. of Norway, *supra* note 16.
[40] § 31(1)(a), "Use of work by a library or an archive," Law of Copyright and Related Rights of Slovakia, *supra* note 19.

[41] Copyright Regulations of South Africa (1978), *as amended* through GN 1375 (1985), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=130435 (last visited Nov. 2, 2015).
[42] § 32A(3)(c), "Copying by librarians: single copies of published works," Copyright, Designs, and Patents Act of the United Kingdom, *supra* note 8.
[43] § 49(5)(b), "Reproducing and communicating works by libraries and archives for users," Copyright Law of Australia, *supra* note 14.
[44] "Reproduction of Libraries and Archives," Law of Copyright, Related Rights, and Cultural Matters of Greece, No. 2121 (Mar. 4,1993), *as amended* through No. 4281 (2014), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=367777 (last visited Nov. 2, 2015).
[45] Art. 12, Copyright Act of Iceland, No. 73 (29 May 1972), *as amended* through No. 93 (21 Apr. 2010), *available at* http://www.wipo.int/wipolex/en/text.jsp?file_id=332081 (last visited Nov. 2, 2015).
[46] 17 U.S.C. § 108(c)(1), "Limitations on exclusive rights: Reproduction by libraries and archives," Copyright Act of the United States, *supra* note 22.
[47] 17 U.S.C. § 108(d), "Limitations on exclusive rights: Reproduction by libraries and archives," Copyright Act of the United States, *supra* note 22.
[48] *See* Copyright Regulations of South Africa, *supra* note 41.
[49] World Intellectual Property Organization Standing Committee on Copyright and Related Rights, *available at* http://www.wipo.int/policy/en/sccr/ (last visited Nov. 2, 2015).
[50] World Intellectual Property Organization Standing Committee on Copyright and Related Rights, *Consolidation of Proposed Texts Contained in Document SCCR/26/3*, prepared by African Group, Brazil, Ecuador, India, and Uruguay, Twenty-ninth Session, Geneva, Switzerland (Dec. 8-12, 2014), *available at* http://www.wipo.int/edocs/mdocs/copyright/en/sccr_29/sccr_29_4.pdf (last visited Nov. 2, 2015).
[51] *See, e.g.*, *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351 (2013).
[52] *See, e.g.*, U.S. Copyright Office, *Orphan Works and Mass Digitization: A Report of the Register of Copyrights* (Jun. 2015), *available at* http://www.copyright.gov/orphan/ (last visited Nov. 2, 2015).
[53] *See* 17 U.S.C. § 108(f)(1), "Limitations on exclusive rights: Reproduction by libraries and archives," Copyright Act of the United States, *supra* note 22.
[54] International Federation of Library Associations, *Treaty Proposal on Copyright Limitations and Exceptions for Libraries and Archives*, Version 4.4 (Dec. 6, 2013), *available at* www.ifla.org/copyright-tlib [hereinafter "IFLA Proposal"] (last visited Nov. 2, 2015).
[55] IFLA Proposal at 2.
[56] *See* IFLA Proposal at 4-6.
[57] *See* Tomas A. Lipinski and Andrea Copeland, *Look Before You License: The Use of Public Sharing Websites in Building Patron Initiated Public Library Repositories*, PRESERVATION, DIGITAL TECH. & CULTURE (Vol. 42, No. 3, Nov. 2013), *available at* https://scholarworks.iupui.edu/bitstream/handle/1805/4574/lipinski-2013-look.pdf?sequence=1 (last visited Nov. 2, 2015).
[58] *See* § 37, South Africa Copyright Amendment Bill, *supra* note 7; §§ 41(5) ("Copying by librarians: supply of single copies to other libraries"), 42(7) ("Copying by librarians, etc.: replacement copies of works"), and 42A(6) ("Copying by librarians: single copies of published works"), Copyright, Designs, and Patents Act of the United Kingdom, *supra* note 8.
[59] §§ 41(5) ("Copying by librarians: supply of single copies to other libraries"), 42(7) ("Copying by librarians, etc.: replacement copies of works"), and 42A(6) ("Copying by librarians: single copies of published works"), Copyright, Designs, and Patents Act of the United Kingdom, *supra* note 8.
[60] *See* 2015 Crews Report.
[61] *See Authors Guild, Inc. v. Google, Inc.*, Dkt. No. 13-4829-cv (2d Cir. 2015) ("If the library had created its own digital copy to enable its provision of fair use digital searches, the making of the digital copy would not have been infringement," *id.* at 44); *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87 (2d Cir. 2014) (holding that facilitating full-text search to identify specific page reference and providing access by users "with certified print disabilities" are fair uses).
[62] *See* GreyNet Grey Literature Network Services, *Pisa Declaration on Policy Development for Grey Literature Resources* at Arts. 8 and 9 (May 16, 2014), *available at* http://www.greynet.org/images/Pisa_Declaration,_May_2014.pdf (last visited Oct, 23, 2015).

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- Central Registry of Publication Activities
- Central Registry of Art Works and Performance
- Central Registry of Theses and Dissertations and Antiplagiarism system
- Central information portal for research, development and innovation - CIP RDI >>>
- Slovak Current Research Information System

SUPPORT OF TECHNOLOGY TRANSFER

- Technology Transfer Centre at SCSTI
- PATLIB centre

POPULARISATION OF SCIENCE AND TECHNOLOGY

- National Centre for Popularisation of Science and Technology in Society

IMPLEMENTATION OF PROJECTS

- National Information System Promoting Research and Development in Slovakia – Access to electronic information resources - NISPEZ
- Infrastructure for Research and Development - the Data Centre for Research and Development - DC VaV
- National Infrastructure for Supporting Technology Transfer in Slovakia - NITT SK
- Fostering Continuous Research and Technology Application - FORT
- Boosting innovation through capacity building and networking of science centres in the SEE region - SEE Science

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Library as Publisher: Convergence of New Forms and Roles of Textual and Non-Textual Grey Literature in Digital Scholarship*

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Abstract

Special Collections and University Archives typically constitute libraries', an organizations' or institutions' treasured assets. As libraries assume greater responsibilities for the curation and preservation of resources, they also become indispensable in issuing, publishing, releasing, and making original content accessible in digital formats, while the "born digital" content grows. Managing online content creation, in addition to handling traditional textual content shifts libraries into new roles based out of necessity and cost-constraints. With the dominance and reliance of electronic information now the status quo, the library's role as publisher has become increasingly important. Hosting and creating original content in partnership with other institutional networks harnesses the collaborative power of libraries by reducing operating expenses and increasing the availability of materials to any user with an Internet connection. Although it is often thought that more non-textual resources will tend to become increasingly grey, our experience indicates the contrary. Libraries strive to make such resources less grey than originally anticipated. The increased success in finding resources or content provides better identification and classification for sources that may not have been discovered initially with little to no metadata. The impact on library collections affirms the institutional mission of teaching, research and service by celebrating and honoring the memory of historical snapshots and experiences that would be otherwise forgotten or difficult to find or document. There are many challenges in this trend including scalability and sustainability, plus financial or business models that influence levels of output and innovation. This paper will highlight examples of the convergence of textual to non-textual content by showcasing different levels of library publishing and artifact models that celebrate and include a variety of library and organizational hosted published resources on different scales. The path of convergence is intertwined but blends new publishing potential, enhanced value and best practices with outputs that are defined more through textuality and new publishing models than by hues of grey.

Introduction and Background

Academic libraries are the sector with which we are most familiar and thus, this paper emphasizes that environment, but we acknowledge that such trends and development about "Library as Publisher" are taking place within all library communities and sectors. Libraries around the world are exploring how to handle and treat digital assets. There are several ways in which this is being demonstrated. By exploring and growing digital scholarship that has roots in the institution, it gives a different dimension to depending on commercial content that is often the research and creative output of its scholars, faculty, researchers and its students. The organizational culture of recent decades illustrates how Special Collections and University Archives typically constitute the treasured assets of libraries, organizations, or institutions, and is where rare books, manuscripts, and objects related to bibliographic resources and collections are found. These artifacts and collections have experienced a renaissance as many of these resources have become digitized and supplemented with a largesse of metadata to allow readers and users to access them remotely rather than be required to visit the holding library in person. This has constituted a major change in the research process.

Increasingly university presses have become aligned and affiliated with academic libraries and currently more university presses now share the organizational structure of libraries, with leadership, staffs and strategic planning synchronized between collections and new research outputs. Since most university presses carry non-profit status, and release books/monographs and journals and are an integral part of the research mission of a university, it has not gone unnoticed how great a challenge it is to remain fiscally solvent in these difficult economic times. The integration of publishing with libraries has created a very cohesive commitment to knowledge generation. Libraries are moving away from the warehousing of materials to information creation and that too is a new direction and way that libraries strive to be relevant in these changing dynamics of higher education and methods of reading and conducting research. Publishing and libraries is not a new relationship but in recent years is one that is an obvious outgrowth of both scholarly communications and the institutional repository movement that began after the launch of the Internet, the maturation of ePublishing and the waning of traditional grey literature as it became easier to find, identify and access.

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Library as Publisher

Library as Publisher – what does this mean? This question has been posed for over a decade and early work by the Association of Research Libraries (ARL) has captured it while its member libraries explored options for research library publishing services (Hahn). As libraries assume greater responsibilities for the curation and preservation of resources, they also become indispensable in issuing, publishing, releasing, and making original content accessible in digital formats. Managing online content creation, in addition to handling traditional textual content shifts libraries into new roles based out of necessity and cost-constraints. With the dominance and reliance of electronic information now the status quo, the library's role as publisher has become increasingly important. "This growth of library publishing and of collaborations between libraries and university presses signals a desire both to challenge and complement long established scholarly publishing practices."(Horava & Barker). This quote suggests goals libraries have for this new role that embrace peer review, value added services, Open Access and other related aspects of scholarly communications. Significant documentation of this trend was compiled in a final research report issued by SPARC and numerous libraries in 2012 (Mullins).

Much was learned from the Library Press Collaboration Survey conducted in late 2013 by the American Association of University Presses, Library Relations Committee in conjunction with research libraries and these findings include (http://www.aaupnet.org/images/stories/data/librarypresscollaboration_report_corrected.pdf):

1. Library publishing services are on the rise. 65% of respondents say library-publishing programs are an increasingly important service. 62% of all respondents (77% of library respondents and 34% of press respondents) to this question agree that publishing should be part of the library's mission. Presses must imagine a way of engaging with these and other emerging publishers on campus. (p.3)
2. Collaboration rather than duplication is recommended. 69% of respondents believe that library-publishing initiatives should complement press publishing programs, rather than reinventing (or duplicating) a service for formal peer-reviewed literature. (p. 3)
3. Recognize and discuss mission overlap. 95% of respondents see the need for presses and libraries to engage with each other about issues facing scholarly publishing beyond the usual topics of open access, fair use, and copyright. Common interests—such as how to best serve scholars—rather than areas of divergence, would be fruitful topics of discussion. (p.3)
4. Understand the scope of publishing activity on your campus. Respondents indicated some knowledge of many on-campus publishing operations, but a large percentage of respondents had no sense of number or scale. Recognize where these operations present opportunities for your press. (p. 3)
5. Look beyond the financial figures. Many libraries provide support to presses, but it is usually in-kind rather than money. While in only 11% of cases did the library provide cash support to a press, more than 53% of libraries provide other kinds of service ranging from digitization, metadata, and preservation services to office support and rent-free space (p. 3)

Today, "library as publisher" signals the best of scholarly publishing practices that increasingly promotes the open access or open source content that libraries and academics are moving forward as paramount to their work.

Some examples of these best practices from my own institution at the University of California include:

- eScholarship Repository (http://escholarship.org/)
- the UC Open Access Policy that went into effect October 23, 2015 (http://osc.universityofcalifornia.edu/open-access-policy/)
- the University of California Press launch of two OA initiatives 1) Luminos (books - http://www.luminosoa.org/) and 2) Collabra (a mega journals on the PLoS scale – each generously sponsored by initial funding from the Mellon Foundation (http://scholarlykitchen.sspnet.org/2015/01/21/university-of-california-press-introduces-new-open-access-publishing-programs/)
- creating digital scholarship units within libraries to promote library collections and resources, faculty scholarship, students' research (http://www.lib.uci.edu/dss/)

On a more global scale there are some very valuable tools that have become established resources to aid all the players in this expanding universe. The higher education enterprise with institutional members, established support and member driven organizations and the foundation/philanthropic arm that has generously supported many initiatives are all players. Some of the most recent additions to make their mark include:

- The Library Publishing Coalition – Launched in 2013-14 to promote the development of innovative, sustainable publishing services in academic and research libraries to support scholars as they create, advance, and disseminate knowledge. Now includes >60 institutional members. (http://www.librarypublishing.org/)
- Library Publishing Directory, 3rd ed., 2016 (http://www.librarypublishing.org/sites/librarypublishing.org/files/documents/Library_Publishing_Directory_2016.pdf)
- SPARC – under the aegis of the Association of Research Libraries it is the longest international alliance of academic and research libraries working to create a more open system of scholarly communication (http://www.sparc.arl.org/)
- Coalition of Networked Information (CNI) - dedicated to supporting the transformative promise of digital information technology for the advancement of scholarly communication and the enrichment of intellectual productivity (http://www.cni.org)
- Society of Scholarly Publishing (SSP) – increasingly connecting the dots between libraries as not only customers but as publishing partners of scholarly content (http://www.sspnet.org/)

Relationships to Grey Literature

There are many actions for Grey Literature in this hybrid publishing and collections arena. Libraries are increasingly learning the value of grey literature as it becomes more of a focus where libraries currently are engaged in to open up resources by digitizing content and rebirthing it with layers of metadata that offer new methods of finding, navigation and access.

This conference has hosted many presentations and discussions about definitions, levels and hues of grey. Earlier research that one or both of us has conducted reflects how Grey Literature is treated in Distance Education, eScience, ETDs, Social Media and Data Management to name a few domains and applications (Gelfand, Gelfand and Lin, Gelfand and Tsang). Current trends and experiences suggest that they are morphing into more traditional content that makes it less grey and more transparent to readers and users. This is accomplished by:

- Hosting and creating original content in partnership with other institutional networks to harnesses the collaborative power of libraries by reducing operating expenses and increasing the availability of materials to any user with an Internet connection.
- Although it is often thought that more non-textual resources will tend to become increasingly grey our experience indicates the contrary. Libraries strive to make such resources less grey than originally anticipated by opening up new opportunities and access points while more seriously promoting resources through websites, exhibitions, access in multiple places
- The increased success in finding resources or content provides better identification and classification for sources that may not have been discovered initially with little to no metadata.

Several implications suggest the importance to library collections:

- Libraries, regardless of largesse and budgets are clearly buying less – the expense of commercial content is not sustainable as library budgets remain stable if not declining. Libraries are challenging how they are "buying back" content that was produced by scholars paid to generate this new content. As committed as libraries are to resource sharing, they continue to explore ways to add content via demand driven and patron initiated actions, use document supply options and consider how to legally provide access in the digital age. The financial investment in electronic resources challenges how the acquisitions and licensing process intersects.
- The impact on library collections affirms the institutional mission of teaching, research and service by celebrating and honoring the memory of historical snapshots and experiences that would be otherwise forgotten or difficult to find or document.
- There are many challenges in this trend including scalability and sustainability, plus financial or business models that influence levels of output and innovation. Academic libraries around the globe are focusing on several trends that address the importance of collection significance. These include:
  - digital scholarship
  - innovations in technology
  - distance education models
  - student learning outcomes & assessment
  - globalization
  - partnering with funding agencies & new mandates
  - ability to license through Creative Commons

Examples that highlight the convergence of textual to non-textual content by showcasing different levels of library publishing and artifact models that celebrate and include new information products can be summarized by the following packaging or common authorship, all of which could be considered having hues of grey at an earlier stage of analysis:

- **National level collections** – We have explored how discovery is the conduit for success in some of these examples. The reason is that the success of online resources is dependent on how readers find, navigate and utilize resources. The increased success in finding resources or content provides better identification and classification for sources that may not have been discovered initially with little to no metadata. We are most familiar with the Library of Congress' (LC) American Memory Project of photography, memoirs, biography, and social media the online resource compiled by the LC National Digital Library Program. With the participation of other libraries and archives, the program provides a gateway to rich primary source materials relating to the history and culture of the United States. Currently containing more than five million historical items in coming years, the National Digital Library Program plans to digitize more of the Library's unique American history collections and make them freely available to teachers, students, and the general public over the Internet. Special collections to be digitized include the documents, films, manuscripts, photographs, and sound recordings that tell the American story as an excellent example but we want to explore discovery as the conduit for success in some of these examples. The reason is that the success of online resources is dependent on how readers find, navigate and utilize resources. The increased success in finding resources or content provides better identification and classification for sources that may not have been discovered initially with little to no metadata. (http://memory.loc.gov/ammem/index.html)
    - The National Library of Singapore (NLS) which recently created a masterplan for their collections to take into account the digital strategies to improve the experience of its patrons (Tang, 2015). The five capabilities noted in the strategies follow and we have coined them the "ables":
    - FindABLE - "I can discover NLS/NAS Content in NLB, as well as outside NLB, across format and languages."
    - ExpandABLE - "I can go further than my first hit and see a wider context from what I am searching for."
    - UsABLE - ""I can use the content because I can reproduce it, manipulate & repurpose."
    - DeliverABLE - "I can ask for content I want delivered to me in a platform or channel I desire."
    - PreserveABLE - "I can rest assured that everything in the National Collection that is precious will last beyond this generation."

Items such as audiovisual content can prove challenging as metadata needs to be added to improve the findability. The NLS will attempt to add metadata for these items such as extracting textual information from photographs and videos (i.e. building photographs and building names), image matching for photographs and videos (identifying shapes of objects), and voice to text technology for automatically dictate speeches that are in audio. In addition to the metadata, the NLS will create a new federated search, to be known as "One Search" to make findability easier for internal searches between their platforms, offering these features:

- digital content is currently spread over a number of different format portals from (NewspaperSG (for newspapers), BookSG (for books, periodicals, and text based materials), PictureSG (for photographs), MusicSG (for music), NORA (for arts personalities), Web Archive Singapore (for archived websites), to SingaporeMemory.SG (for personal memories))
- At this time, each microsite is currently resides in isolated silos that do not allow for easily search ability across platforms. (Tang 2015)

Implications of these issues:

1) The impact on library collections affirms the institutional mission of teaching, research and service by celebrating and honoring the memory of historical snapshots and experiences that would be otherwise forgotten or difficult to find or document.
2) There are many challenges in this trend including scalability and sustainability, plus financial or business models that influence levels of output and innovation.
3) The new "One Search" connects together via federating formats on a single platform reducing complexity and confusion for the user and increasing transparency, serendipity, and ease of use.

- **Large State-level research library digital collections**
  - **Online Archive of California** (http://www.oac.cdlib.org/) – a collaborative ongoing interdisciplinary archive about anything relevant to the State of California created by more than 200 organizations and hosted by the University of California
- **Community-based museum and library collections** that document important human history events such as genocide, catastrophic accounts of loss, displacement, internment, slavery, refugee and migration status with oral histories, ethnographies, genealogies. Most of these examples had their start with print content and eventually expanded with electronic resources and now include a wide variety of formats, media and information available online.
  - **Holocaust Resource Centers** in nearly every major city around the world – e.g. Yad Vashem (http://www.yadvashem.org/yv/en/holocaust/resource_center/index.asp)
  - **Armenian Genocide Collection** (https://www.facinghistory.org/for-educators/educator-resources/resource-collections/armenian-genocide-resource-collection/library-resources)
  - **Southeast Asian Refugee** experience documented with photos, oral histories, social media, in Southern California as immigrants from Laos, Cambodia and Vietnam have settled and formed enormous new communities (http://seaadoc.lib.uci.edu/)
  - **Genealogy resources** – provides tools for families, hobbyists, teachers, faith-based groups, ethnic and racial populations, and increasingly important in independent and public libraries (https://www.newberry.org/genealogy-and-local-history ; https://familysearch.org/)
- **Government documents collections** – Records of a government activity, movements, social awareness
  - **WikiLeaks** – Begun in 2006 in Iceland as an international, journalistic news organization to publish and disseminate secret and classified information and news leaks from anonymous sources many of which became front-page news items. The wide variety of video and news coverage released is significant and credited to its team headed by Julian Assange. Some of the content included news that had never previously been released including prisoners' files of those detained at Guantanomo Bay. As WikiLeaks expanded it collaborated with other news and media channels to release redacted content that occasionally was accused of errors and concerns arose about what impact some of this information could have on innocent persons. (https://www.wikileaks.org/index.en.html)
  - **Federation of American Scientists** – Congressional Research Service Reports – Archived US Congressional Research Service reports that cover a variety of subjects of interests from the US Congress (http://fas.org/sgp/crs/index.html)
- **Multimedia news archives** - Holdings of news reels, documentaries, life experiences and anniversaries from world events.
  - **EUscreen** – European portal that allows access for audiovisual heritage resources from the 20th and 21st Centuries. (http://www.euscreen.eu/)
  - **BBC Archives** – A news archive from the British Broadcasting Corporation that contains both video and audio content from past programming. (http://www.bbc.co.uk/informationandarchives/archivenews/)
  - **NPR Archives** – US based news radio archive from the National Public Radio broadcasts from years past. (http://www.npr.org/series/4564213/historical-archives)
- **Global born-digital collections -** there are many thoughtful, exciting products utilizing many combinations of software tools to describe, showcase and allow for personalization as one uses them today. Examples are plentiful in the digital humanities and applied sciences. Libraries are at the forefront of creating such resources as noted with the following example:
  - **International Digital Ephemera Project** - an initiative to digitize preserve and provide broad public access to print items, images, multimedia and social networking resources produced in the Middle East – (http://digital.library.ucla.edu/dep/)
  - **ACI Scholarly Blog Index** – a relatively new commercial product that indexes and accesses content found in blogs by distinguishing those that are trustworthy from those that can spread misinformation, reinforcing value of grey content. It provides academic researchers who are inclined to discuss their work, discoveries opinions in their own blogs or get covered in those of their colleagues or competitors. With inclusion of nearly 15,000 blogs this database is a growing source for information in non-traditional publications that incorporates social media and can be widely shared. (http://aci.info/aci-blog-index-content/)
  - **African Commemorative Fabrics** – a portal created at the University of Wisconsin Digital Library to host a collection of machine-made commemorative textiles from various African

countries. This collection provides researchers access to digitized fabrics that are printed with images and text documenting events and individuals of historical, political, religious, economic, educational, and sociological significance to African societies. Throughout the continent, fabric serves multiple functions in people's daily lives. It is used for clothing, shelter, storage, and packing material. The type of African fabric found in this collection also serves as a communication device. When used as a textual and visual document, the fabric becomes a vehicle to commemorate an event or to celebrate a person's life or achievement. One does not need to know how to read in order to understand the messages found in these textiles. In societies In this way, the fabric also serves to preserve historical narratives that are important to the community, and documents critical history regarding life, public health issues, lifecycle events, leadership successions and special celebrations. (https://uwdc.library.wisc.edu/collections/AfricanStudies/Fabrics/)

- **Internet archive** – Resource that provides a snapshot of a historical period on the Internet
  - **Internet Archive - Way-back Machine** – Founded in 1996 and located in San Francisco, the Archive has been receiving data donations from Alexa Internet and others. In late 1999, the organization started to grow to include more well-rounded collections. Now the Internet Archive includes: texts, audio, moving images, and software as well as archived web pages in our collections, and provides specialized services for adaptive reading and information access for the blind and other persons with disabilities. (https://archive.org/) (2015)
- **Data & Macroscopic Sciences** – With a growing emphasis on Big Data and data in general, how to manage data is a challenge most libraries are facing. Within the publishing sphere, authors and scholars are expected to make available their research data for repurposing and reuse especially if federal research funding supported the initial research. Data Management plans are increasingly important on the front end as a central component of a research proposal. The goal of librarians and publishers is to foster cleaner data for use by enhancing data with valuable information. There are numerous processes such as visualization, statistical analysis, graphical depictions, and different preferences that subject disciplines promote that focus on how data is described, stored, used and repurposed. Parking data in Data Sources, data questions, data credibility and the future of data are all concerns of managing and using data, large and small, empirical and real. What we try and avert is data malaise.
  - Tools that support and add value to data – an example of the program may include **DeepDive** (http://deepdive.stanford.edu/) which uses machine learning but is not algorithmic and "explores how next generation search and extraction systems can help with real-world use cases." Increasingly of value it already has applications in the following areas:
    - Human trafficking
    - TAC-KBP Challenge (Text Analysis Conference, Knowledge Base Population)
    - Wisci(-pedia)
    - Geology & Paleontology
    - Medical Genetics
    - Pharmacogenomics
  - **Software and Data Carpentry tools** – gaining lab skills for understanding and working more effectively with scientific and other forms of data
    - **LabArchives** – one of the fasted growing tools of the electronic lab archive movement allowing wet and dry labs to manage their research data by more easily creating, storing, and sharing their data both in instructional and professional settings as it stores Rich text data, tables, images, sketches, as well as annotations of images (http://www.labarchives.com/)

Conclusions

The path of convergence is intertwined but blends new publishing potential and best practices with outputs that are defined more through textuality and new publishing models than by hues of grey. The skepticism that was expressed in an opinion piece in *The Nation* in Spring 2014 about the harsh realities of university presses and scholarly publishing confirm that much of the system may be broken due to the shrinking buying power of academic libraries but we see more positive outcomes in these past 18 months (Sherman). Sometimes the problems in academe are more related to a "university in turmoil more than a library in distress" (Babb). Even though the experiences shared by Murzyn-Kupisz and Dzialek in their work apply to Malopolska, Poland, we concur that "a new outlook on museums and libraries and a new understanding of their social roles goes beyond their basic statutory functions or

their traditional roles as preservers, researchers and disseminators of knowledge on collected artifacts or books."

Okerson and Holtzman summarize the changing world that allows for more publishing success by libraries as due to:

- Digital technologies and ubiquitous access to them
- Cost reductions that lower publishing barriers
- The squeeze on library collections budgets
- A desire to reduce prices to libraries and "liberate" academic publishing
- A new vision of open access
- Increasingly complex challenges of balancing institutional priorities. (Okerson & Holtzman, pp. 4-6)

Publishing and creating new intellectual capital is increasingly the role and domain of libraries and this is clearly seen by the flurry of conferences taking place around the world on "Library as Publisher" by a variety of organizations (annual 2016 Library Publishing Forum (www.librarypublishing.org/events/lpforum16), the IFLA 2016 Satellite in Ann Arbor, MI, USA (http://2016.ifla.org/programme/satellite-meetings)) and the proliferation of supporting resources and guides issued by the Library Publishing Coalition (http://libguides.uky.edu/libpub) and the work of the American Association of University Presses in partnerships with other library and publishing organizations. Becoming a content strategist that bridges the world of libraries and publishing is the entrepreneurial spirit of the next generation of grey literature and its publishing partners.

Pundits, both optimists and skeptics have speculated that the library of 2100 will be compressed into a vision of libraries as collections or perhaps there will be 3 million libraries. These extreme answers to the question about the library of the future is dependent on calculations based on census predictions, current physical library buildings in the United State and doing the numbers by extrapolating. As Jim O'Donnell states, "we will see the consolidation of collections and a consolidation of the technical infrastructure of presenting those collections…and we will see the emergence of business models for paying for what we now think of as "publishing" that allow complete free and open access to the contents of this global library" (O'Donnell). We expect that the role of library as publisher will intensify as the OA movement grows and libraries expand their reach with increased capabilities and scope. As Okerson states, their new challenge will be how to market their outputs, so that the "tree does not fall unheard" (Okerson, ATG).

References

American Association of University Presses, Library Relations Committee (2014), Library Press Collaboration Project Report http://www.aaupnet.org/images/stories/data/librarypresscollaboration_report_corrected.pdf

Anderson, Rick. (2015). A quiet culture war in research libraries - and what it means for librarians, researchers and publishers. *Insights: The UKSG Journal*, *28*(2), 21-27. doi:10.1629/uksg.230

Babb, Meredith (2015). Challenges Facing University Presses. Interview with Meredith Babb by Baker & Taylor executive, posted on the Yankee Book Peddler/Gobi website.
http://www.gobi3.com/StaticContent/GOBIContent/YBP/Public/misc/Challenges_Facing_UPs.pdf

Bonn, Maria and Furlough, Mike, eds, (2015). *Getting the Word Out: Academic Libraries as Scholarly Publishers.* Chicago, IL: ACRL.

Gelfand, Julia and Tsang, Daniel (2014). Data: Is it Grey, Maligned or Malignant? Paper presented at the 16th International Conference on Grey Literature, Washington, DC, December 9, 2014. Published in *The Grey Journal* 11, # 1, 2015: 30-40.
http://escholarship.org/uc/item/80w006rz?query=gelfand

Gelfand, Julia and Lin, Anthony (2012). Research Life Cycle: Exploring Credibility of Metrics and Value in a New Era of eScholarship that Supports Grey Literature**,** paper presented at the 14th International Conference on Grey Literature," November 30, 2012, Rome, Italy. Published in *The Grey Journal* 9 (3) Fall 2013

Gelfand, Julia and Lin, Anthony (2011). Social Networking: Product or Process and What Shade of Grey? Paper presented at the 13th International Conference on Grey Literature, December 5, 2011, Washington, DC. GL13 Conference Proceedings, February 2012. Published in *The Grey Journal* 8 (1), Spring 2012: 14-27.

Gelfand, Julia, (2009). New Shades of Grey: The Emergence of E-Science, Scientific Data and Challenges for Research Libraries. Presentation at the 11th International Conference on Grey Literature, Washington, DC, December 12, 2009. Published in the Conference Proceedings, 2010.

Gelfand, Julia M., (2007). Updating Grey Literature as Distance Education Matures. Paper presented at the Ninth International Conference on Grey Literature, Antwerp, Belgium, December 11, 2007.

Gelfand, Julia M., "Grey Literature: Taxonomies and Structures for Collection Development," Paper presented at the Eighth International Grey Literature Conference, New Orleans, December 4, 2006. Published in *GL8, Conference Proceedings: Eighth International Conference on Grey Literature: Harnessing the Power of Grey*, 4-5 December 2006, compiled by D. J. Farace and J. Frantzen. Amsterdam: TextRelease, February 2007: CD-ROM. Also published in *The GreyJournal*, vol. 3 #1:7-16 Spring 2007 http://www.greynet.org/thegreyjournal.html)

Gelfand, Julia M., "Challenges for Collections in New Collaborative Teaching and Learning Environments: Does Grey Literature Fill a Void?" Paper presented at the Seventh International Grey Literature Conference, INIST, Nancy, France, December 5, 2005. Published in *GL7, Conference Proceedings: Seventh International Conference on Grey Literature, Open Access to Grey Resources* 5-6 December 2005, compiled by D.J. Farace and J. Frantzen. Amsterdam: TextRelease, January 2006:71-76.

Gelfand, Julia M., "What is New in Grey Literature: Everything from the Textbook Market to the Blogosphere," *The Grey Journal*, vol. 1 #3, Autumn 2005.

Gelfand, Julia M., "Knock, Knock, Has Grey Literature Found a Home in Institutional Repositories?" Paper presented at the Sixth International Grey Literature Conference, December 6, 2004, New York. Published in *GL6 Conference Proceedings: Sixth International Conference on Grey Literature: Work on Grey in Progress* 6-7, December 2004, compiled by D. J. Farace and J. Frantzen. Amsterdam: TextRelease, January 2005: 10-16. Also in *The Grey Journal*, vol. 1 #2 Summer 2005:61-66.

Hahn, Karla (2008). Research Library Publishing Services: New Options for University Publishing. Washington, DC. *Research on Institutional Repositories: Articles and Presentations.* Paper 37. http://digitalcommons.bepress.com/repository-research/37

Horava, Tony and Barker, Andrew (2015). Library/Press Collaboration: A Magical Mystery Tour. Presentation made at the Charleston Conference, November 5.

Internet Archive. (2015). Retrieved November 21, 2015, from https://archive.org/about/

McCormick, Monica (2015). Toward New Model Scholarly Publishing: Uniting the Skills of Publishers and Libraries. In Bonn and Furlough, eds., *Getting the Word Out: Academic Libraries as Scholarly Publishers.* Chicago, IL: ACRL, 57-82.

Mullins, J. L., Murray-Rust, C., Ogburn, J. L., Crow, R., Ivins, O., Mower, A., Nesdill, D., Newton, M. P., Speer, J., & Watkinson, C. 2012. *Library Publishing Services: Strategies for Success: Final Research Report*. Washington, DC: SPARC. http://docs.lib.purdue.edu/purduepress_ebooks/24/

Murzyn-Kupisz, Monika and Dizialek, Jaroslaw (2015). Libraries in and Museums as Breeding Ground of Social Capital and Creativity: Potential and Challenges in the Post-socialist Context, in *Creative Economies, Creative Communities: Rethinking Place, Policy and Practice,* edited by Saskia Warren and Phil Jones. Farnham, Surrey, UL: Ashgate: 160.

O'Donnell, Jim (2015). What Will Libraries be Like in 2100?: It's not so far away. *Slate*, November. http://www.slate.com/articles/technology/future_tense/2015/11/what_will_libraries_be_like_in_2100.html based on forum at the New America Foundation. Full video available (about 2 hours) at http://www.ustream.tv/recorded/77548793

Okerson, Ann (2015) Back Talk – I'm a Publisher Too! *Against the Grain (ATG)*, November: 94.

Okerson, Ann and Holtzman, Alex (2015). *The Once and Future Publishing Library*. CLIR Report 166, July. http://www.clir.org/pubs/reports/pub166.

Sherman, Scott (2014). University Presses Under Fire: How the Internet and slashed budgets have endangered one of higher education's most important institutions. The Nation, May 6. http://www.thenation.com/article/university-presses-under-fire/

Songolo, Emilie Ngo-Nguidjol (2015). Preserving African Commemorative Fabrics: Implications for Social Understanding, Public Health and Archival Stewardship. Presentation made as part of the Program in Public Health Fall 2015 Lecture Series, University of California, Irvine, November 23

https://doi.org/10.26069/greynet-2025-000.539-tgj

Academic blogging consequences for Open Science: a first insight into their potential impact *

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Abstract

Social media have been analysed in different studies and from different perspectives, and the findings show that they can constitute new forms of impact indicators of scientific activities, intended at large and not limited to the publication. Therefore, new forms of research evaluation are emerging as alternative to the traditional citation-based metrics. Initially based on web links or download numbers (webometrics) the new evaluation methods have evolved into alternative metrics, or "altmetrics", based on the set of activities covered by social media services.

In view of the above, the paper concentrates on academic blogging as a form of scholarly communication in the Open Science context, and on the disciplinary areas of the Humanities and Social Science as privileged domain to be investigated.

The OpenEdition initiative is analysed as a complete infrastructure for the digital resources for the Humanities and Social Sciences and as a concrete exemplification of quality filters applied to these (relatively) new media.

1. Introduction and background

1.1 On-going trends in the Scientific System

Pisa Declaration raises a number of policy issues about non-formal channels of scholarly communication, including "openness", a principle that permeates the Scientific System in three main areas:

- Knowledge dissemination – (Open Access);
- Knowledge creation - (Open Science), largely unexplored issue in the literature in the current EU vision.
- Research impact evaluation – (AltMetrics).

The first Open Access area, related to the free availability of research literature and data, is a mature subject matter, deeply studied in the literature and even transposed as obligation into the European research policies.

Therefore, in this paper the focus is on the two areas of Open Science and Altmetrics, rather than on (the indeed relevant) Open Access theme.

Open Science

Open Science is among the six pillars of the European Commission policy approach to Responsible Research and Innovation, an approach defined by the Observatory of Responsible Research and Innovation (RRI) as follows:

> *Responsible Research and Innovation means that societal actors work together during the whole research and innovation process in order to better align both the process and its outcomes, with the values, needs and expectations of European society. RRI is an ambitious challenge for the creation of a Research and Innovation policy driven by the needs of society and engaging all societal actors via inclusive participatory approaches.*[1]

Open Science is one of the thematic elements of RRI[2], and is conceived by the European Commission as follows:

> *Open science is about the way research is carried out, disseminated, deployed and transformed by digital tools, networks and media. Open science relies on the combined effects of technological development and cultural change towards collaboration and openness in research.*[3]

Altmetrics

Galligan and Dyas-Correia (2013) provides a number of definitions for Altmetrics in the literature and suggest the following overall view on Altmetrics:

> *[…] altmetrics examine the content of the social Web in order to provide either an alternative or enhancement to the use of journal impact factors and click-through rate analysis to measure the impact and value of scholarly work*[4].

* First published in the GL17 Conference Proceedings, February 2016.

These trends in the scientific system converge towards a model of science called Science 2.0, now known as Open Science, for which the European Commission launched the consultation *"Science in transition"* between July and September 2014. According to the background paper of the consultation *"Science in transition"*:

> *'Science 2.0' describes an on-going evolution in ways of doing and organising research. These changes are enabled by digital technologies, and they are driven by globalisation and growth of the scientific community as well as the need to address the grand challenges of our time. The changes impact the modus operandi of the entire research cycle, from the inception of research to its publication, as well as the way this cycle is organised*[5].

This definition is very effective for the purposes of this paper, as it corresponds to the perspective of analysis which will be conducted in the next paragraphs.

1.2 Academic Social Media

Academic Social Media constitute a quickly growing area of (relatively) new channels of Scholarly Communication, including different platforms:

- Social networking
- Blogging
- Micro-blogging
- Collaborative authoring tools for sharing and editing documents
- Social tagging and bookmarking
- Scheduling and meeting tools
- Conferencing
- Image or video sharing

This classification forms the basis of a survey[6] conducted in 2010 by CIBER - and published in 2011 - for an exploratory study on the use of social media tools by a set of 1,923 researchers. Among the results of the study is the distribution of the percentage use of the diverse categories of social media tools.

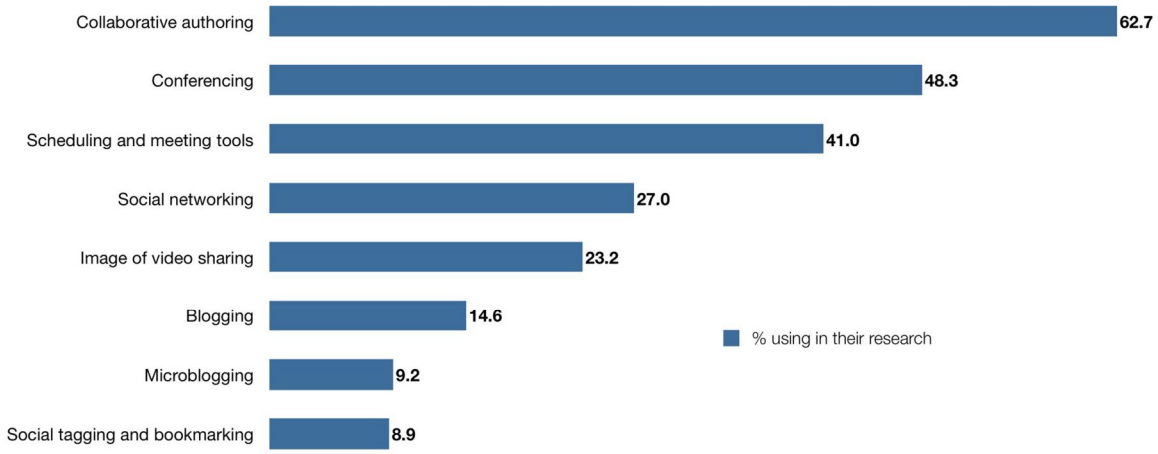

Figure 1 - Academic Social Media - active users (Source Ciber, 2010)

Figure 1 shows the Popularity of various types of social media in research, providing the percentages of active social media users for each category of tool.

Open Edition: Social Media in the Humanities and Social Sciences

The paper concentrates on academic contexts usually considered as resistant to technological innovation, namely the disciplinary areas of the Humanities and Social Science.

The OpenEdition system <http://www.openedition.org> will provide an exemplification in the case of the Humanities, in order to provide a first picture of the potential impact of these new "publication" channels, both for the Open Science context, and for research evaluation and scholarly reputation in academic contexts.

The system is supported by the CNRS, EHESS, Université d'Aix-Marseille, Université d'Avignon, the French Research Ministry and the Bibliothèque Scientifique Numérique and is a European initiative to promote the online publication and digital distribution of open access research in the humanities and social sciences, encompassing all disciplines.

OpenEdition offers the academic community four international-scale publication and information platforms in the Humanities and Social Sciences[7] (numeric data update as of January 2016 – in square brackets the data collected on October 2015).

Revues.org – 420 - [413] **Journals**: Revues.org <http://www.revues.org>: lauched in 1999, Revues.org distributes journals in all disciplines of the humanities and social sciences in fourteen languages, which represents over 100,000 open access articles (95% in full text).

OpenEdition Books – 2644 - [2538] **books** enables the distribution of book collections on open access. Opened in February 2013, the platform hosts 50 publishers in the humanities and university presses based in several European countries.

Hypotheses – 1426 - [1365] **academic blogs:** Hypotheses <http://hypotheses.org> is a directory of research blogs for the humanities and social sciences, in different European languages. French, English, German, Spanish and Portuguese researchers make intensive use of the platform to exchange and distribute information about their research results or the latest developments in their field.

Calenda -30628 - [29846] **events**: Calenda <http://calenda.org> is an announcement platform for the humanities and social sciences posting announcements for seminars, conferences, calls for contributions and employment opportunities. Calenda was launched in 2000.

The interest of this paper concentrates on Hypotheses, the platform of academic blogging in Open Edition, in order to provide some evidence about the use of blogs in the Humanities and their potential impact on research conduct and dissemination.

Academic blogs in Open Edition by subject categories

In Open Editions, inside the vast disciplinary domain of Arts & Humanities are distinguished the following research areas:

Arts & Humanities (535) [517]
Education (104) [98]
History & Archaeology (578) [552]
Library, Information & Communication sciences (154) [145]
Multidisciplinary (438) [436]
Political Science, Public Admin. & Development (127) [124]
Psychology (33) [32]
Public Health & Health Care Science (29) [29]
Social Work & Social Policy (57) [55]
Sociology & Anthropology (376) [363]
Language & Linguistics (85) [80]
Economics (42) [39]
Law (36) [34]
Literature (158) [149]
Management (21) [21]
Psychiatry (8) [7]

For each research area, the number in round brackets indicates its cardinality (i.e. the number of blogs belonging to the area) as of January 2016, while numbers in square brackets indicate the cardinality of the single disciplinary subdomain as of October 2015.

Academic blogs in Open Edition by types of blogs

Open Edition provides a categorisation corresponding - to a large extent - to the multiple activities that contribute to the production of new knowledge, particularly within an Open Science process life-cycle.

Research program blogs (317) [301]
Research blogs (234) [222]
Laboratory blogs (182) [178]
Seminar blogs (123) [118]
Thesis blogs (107) [99]
Monitoring blogs (64) [63]
Publication blogs (41) [44]
Event blogs (44) [44]
Non-specialist blogs (44) [42]
Debate blogs (39) [38]
Master's blogs (40) [36]
Methodology blogs (33) [31]
Library blogs (25) [25]
Field work blogs (27) [24]
Media blogs (8) [9]
Bibliography (1) [1]

It is merely a coarse grained description, nevertheless useful for the purposes of understanding how academic blogging can map into scholarly activities in a networked and open environment.

Mapping between blog types and Open Science activities

As already mentioned, in fact, Open Science has become a strategic priority in the European Commission research policy, where it is conceived as follows:

Open Science describes the ongoing transitions in the way research is performed, researchers collaborate, knowledge is shared, and science is organised. It is enabled by digital technologies, and driven by:

- *the enormous growth of data,*
- *the globalisation and enlargement of the scientific community to new actors (e.g. citizen science), and*
- *the need to address societal challenges*[8]

A recent (2015) report[9] by IPTS (Institute for Prospective Technological Studies of the European Commission) provides a conceptual framework for scholarly activities, identified and listed as follows:

Managing the research process:

- Identifying a researchable topic
- Planning a research project
- Producing research output collaboratively
- Releasing laboratory notebooks to the scholarly community
- Keeping up with new developments
- Getting help for solving topical problems
- Participating in open peer reviewing
- Monitoring one's impact

Disseminating research findings

- Disseminating research results, ideas and opinions informally via blogs

Lack of regulation and, mainly, standardisation in academic blogging does not facilitate and, above all, undermines a reliable determination of a grid of unique matches between the different types of blogs and the different scholarly activities. However, the lists of blog types and scholarly activities provided above could facilitate the understanding of the kind of support that these new media can offer and a first insight into their potential impact.

Academic blogging and scholarly impact

The traditional filters for scientific literature - the well-known processes of Peer review, Citation counting, and Impact factor of journals - are increasingly subject to serious critiques, enabling a set of new filters to enter the arena of Research Assessment. These filters can be distinguished into two classes:

Webometrics – quantitative techniques and tools for collecting data and calculating “indicators” like usage metadata (page views and downloads, Twitter counts, Facebook comments, science blog postings, bookmarkings and reference sharing numbers).

Altmetrics - evaluation methods of scholarly activities (not only publications) based on social media data that serve as alternatives to citation-based metrics.

The development of both these classes of tools, coupled with innovative forms of research results (beyond scientific literature), have given rise to two different dimensions of Scholarly impact:

- Research *impact*: evaluating research performance through webometrics is still in its infancy and still lacks of an established framework of evaluation.
- Scholar *reputation*: sort of “*de facto*” assessment (even self-assessment) through statistical evidence regarding the impact, usage, or influence of one’s own work.

Based on this distinction, detractors are used to claim that social media “serve as “technologies of narcissism”, more than “technologies of control”.

Open problems and concluding remarks

The whole set of Academic Social Media shows to have a great potential impact on most academic activities, nevertheless, a number of open problems still remains:

Here the most common barriers are listed:

- Authority and trust - lack of quality filtering mechanisms
- Unclear benefits
- Technology barriers (e.g. bandwidth)
- Uncertain moral rights – copyright protection
- Difficulties in citing non-traditional content
- Lack of time
- Lack of familiarity with social networking tools .

Despite these limits, a positive perception of academic social media is widely spread, and the fast growing of the Open Edition directory provides evidence of this recognition.
Social media are forms of free exchange of ideas, opinions, information, allowing communication and remote collaboration, and self-legitimizing and filter through a natural mechanism for the recognition of academic reputation.
Enabling technologies and financial constraints constitute major drivers for the ongoing move towards Open Science, where the "Openness" principle is moving from knowledge dissemination (Open Access) to the whole research cycle (Open Science).
Collaboration, transparency, globalisation, scientific reputation are the main keywords in this paradigm shift, and scholarly social media, and academic blogs in particular, constitute "de facto" means to achieve these goals. Nevertheless, academic social media can support a new approach in the assessment of the scholar reputation and visibility, but not yet in the evaluation of the impact of the research output.

Bibliography

BASILI C. (2015). *Open Science*. In: D. Archibugi et al. "The Contribution of the European Commission to Responsible Research and Innovation. A review of the Science and Society (FP6) and Science in Society (FP7) Programmes", CNR Edizioni, 125-153
CENTRE FOR INFORMATION BEHAVIOUR AND THE EVALUATION OF RESEARCH. (2010). *Social media and research workflow.* London, England: CIBER. Retreived from http://www.ucl.ac.uk/infostudies/research/ciber/social-media-report.pdf
CONOLE, G. (2007, 10 20). The nature of academic discourse. Accessed 17 03, 2015, on http://e4innovation.com/?p=45
EUROPEAN COMMISSION (2015). Research and Innovation. Science With And For Society. Policy. Open Science http://ec.europa.eu/research/swafs/index.cfm?pg=policy&lib=science accessed November 2015
GALLIGAN, F., DYAS-CORREIA, S. (2013). Altmetrics: Rethinking the way we measure. *Serials Review*, 39(1), 56-61
HERMAN, E - JAMALI, H.R. - NICHOLAS, D. - OSIMO, D. - PORCU, F - PUJOL, L.(2015). Analysis of Emerging Reputation and Funding Mechanisms in the Context of Open Science 2.0, IPTS, Luxembourg: Publications Office of the European Union, 2015
PISA DECLARATION On Policy Development for Grey Literature Resources (May 2014), http://greyguide.isti.cnr.it/
SHEMA H, BAR-ILAN J, THELWALL M (2012) Research Blogs and the Discussion of Scholarly Information. PLoS ONE 7(5): e35869. doi:10.1371/journal.pone.0035869
The Observatory of Responsible Research and Innovation (RRI) http://observatory-rri.info
VON SCHOMBERG, Rene (2013). "A vision of responsible innovation". In: R. Owen, M. Heintz and J Bessant (eds.) Responsible Innovation. London: John Wiley Available at: https://renevonschomberg.wordpress.com/implementing-responsible-research-and-innovation/
WELLER, K. (2015). Social media and altmetrics: an overview of current alternative approaches to measuring scholarly impact. In: Welpe, I. M.,WOLLERSHEIM, J., RINGELHAN, S., & OSTERLOH, M. (Eds). *Incentives and Performance*. Springer International Publishing. pp. 261-276

References

[1] The Observatory of Responsible Research and Innovation (RRI) http://observatory-rri.info
[2] https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation
[3] The Digital Agenda for Europe: Open Science https://ec.europa.eu/digital-agenda/en/open-science
[4] Galligan, F., Dyas-Correia, S. (2013). Altmetrics: Rethinking the way we measure. *Serials Review*, 39(1), 56-61.
[5] European Commission Directorate General for Research and Innovation (RTD) and DG Communications network, content and technology (CNECT) (2014) Science in transition background document, p. 1, http://ec.europa.eu/research/consultations/science-2.0/background.pdf
[6] *Social media and research workflow*, CIBER, University College London, Emerald Group Publishing Ltd, 14 December 2010 available at http://ciber-research.eu/download/20101111-social-media-report.pdf (accessed November 2015)
[7] The description of the platforms given below is a revised version of Open Edition online documents.
[8] EUROPEAN COMMISSION. Research and Innovation. Science With And For Society. Policy. Open Science http://ec.europa.eu/research/swafs/index.cfm?pg=policy&lib=science accessed November 2015
[9] HERMAN, E - JAMALI, H.R. - NICHOLAS, D. - OSIMO, D. - PORCU, F - PUJOL, L.(2015). Analysis of Emerging Reputation and Funding Mechanisms in the Context of Open Science 2.0, IPTS, Luxembourg: Publications Office of the European Union, 2015

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Share #GreyLit: Using Social Media to Communicate Grey Literature*

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Abstract

Grey literature, publications that are not produced commercially, is becoming a common form of literature included in the systematic review process and called upon to influence policy- and decision-making. A major obstacle to finding this literature is the lack of a systematic way in which to search for current grey literature. Searching organization websites, bibliographies, and Google are just some of the methods used to find grey literature resources. In this research study, we looked at how social media can be an effective resource disseminating and finding information on grey literature. We found that many researchers disseminate their findings through social media, but rarely do they look for resources using social media.

Introduction

There is discussion in the scholarly community regarding researchers getting their work noticed beyond journal publishing. Grey literature, publications that are not produced commercially, and social media can be key resources for researchers seeking to disseminate their work. Digital scholarship is also being tapped to increase the recognition that social media is a valid scholarly tool. According to Rinaldi (2014), Social media is a way that researchers network with other researchers and gain public visibility. In addition, non-profits use social media for information sharing, community building, and action (Thackery 2013). In this way, researchers need strategic methods to get their work the attention it deserves and to find effective ways to use social media.

Grey literature has historically been used in decision- and policy-making, especially within governmental agencies. Often grey literature is research published by think tanks or non-profits in order to provide evidence and support for a specific policy agenda. Government technical reports of program evaluations on government-funded projects help to shape future policies. Sometimes these reports can be hundreds of pages long and contain political jargon. Often times, these reports are published along with fact sheets or executive summaries that can be easier to understand and less time consuming to read. Think tanks or research centers will publish fact sheets or summaries of these larger reports to distribute among their networks. When publishing as grey literature it is essential to include a dissemination process whereby the right report gets into the right hands (MacDonald, 2015).

To understand the dissemination of grey literature in social media, last year we researched the use of Twitter among health and health policy think tanks. The resulting poster, *Think Tanks, Twitter, and Grey Literature* (Aloia, 2014), was presented at the 16th International GreyNet Conference in Washington, DC. It was found that there is a lot of skepticism among researchers in using Twitter or social media effectively, conversely, we also found that there was a significant amount of evidence on using Twitter or social media effectively. Twitter is used to communicate scientific evidence, keep up with research in a specific field, share ideas, and gain visibility. Building on our Twitter research and adding to the growing importance of grey literature to the health sciences, this study examines the use of social media to communicate grey literature.

Research Questions

1. How is social media used to communicate grey literature?
2. To what extent are subscribers of the Grey Literature Report sharing resources found on greylit.org?

Literature Review

The literature review is based on research collected from combing the grey literature and PubMed with articles and grey literature reports focused on social media and the dissemination of research. Criteria for inclusion included evidence of social media use as a communication tool for research or statistical information on general use.

* First published in the GL17 Conference Proceedings, February 2016.

Call for Grey Literature in Systematic Reviews

The health sciences are calling for grey literature to be included in the systematic review process and as part of evidence-based practice. The value of the reported findings that might not have the opportunity to be published in peer-reviewed journals or in a timely manner can be published in other ways. More and more researchers are finding it easier to publish their research online through an organization or through a repository system.

It is also being called upon as an area of research that needs to be disseminated and communicated effectively to maximize its reach. Recently, at the conference *Advancing the Science to Improve Population Health* held at the National Academies of Sciences (Sep 2015), a presentation on Population Health Research Agenda Survey Results stated that raising the profile of "grey literature" was something respondents wanted. The AcademyHealth's Translation and Dissemination Institute says that they are there to help "the field of health services research move its findings more effectively into policy and practice." In 2014, the Institute offered two webinars focusing on the use of Twitter in disseminating and translating evidence as a way for researchers to promote and share their work.

State of Social Media

According to Pew Research, social media use has consistently grown in popularity and is up 66% over the past 10 years (Perrin, 2015). The Pew Research Center began systematically tracking social media usage in 2005 of 100,000 adults in the United States. Over the past ten years, Facebook (71%) has consistently been the leader with the most users, Twitter had 23% and LinkedIn had 28%. The proportion of users using Twitter on a daily basis decreased from 46% in 2013, to 36% in 2014, but weekly usage went up 3%.

In contrast, the worldwide survey ***Digital, Social and Mobile in*** *2015* by We Are Social from 2015,found that there were 3 billion Internet users (a 22% increase from Jan 2014) in 2015 with over 2 billion on social media (a 12% increase from Jan 2014). Facebook is by far the most used with over 1.3 billion users. Google +, Skype and Instagram rank 7, 8, and 9 respectively. Twitter ranked 10 with 264M users and Tumblr ranked 11 on the list of 17 most used social media sites for January 2015. These numbers refer to the people who use social media, but how do organizations use it? We looked at two reports that follow corporate or nonprofit entities on social media and found that 78% of the Fortune 500 companies are using Twitter and 74% are using Facebook. (Barnes, 2015) This is in stark contrast to the general public's use of both Twitter and Facebook. Interestingly, blogging is down 10% from last year, only 21% have a corporate blog (Barnes, 2015). Go-to-Think Tank ranks the top 40 best think tanks who use media (print or electronic) and the top 60 for best use of Social Networks (McGann, 2015). Not surprisingly, Pew Research Center ranked #1 with the best use of media. The Pew reports are cited multiple times in the press and shared through social media. "Social media and news reports are also used by more than 50% of (GreyLit) producing organizations to find an audience for their work" (Lawrence, 2014).

Researchers' use of Social Media

Research on the use of social media in the health sciences fell under three producers: journal publishers, educators, and researchers. It was important to look at all three to make concrete recommendations since one producer may have more evidence than another. Journal publishers' research on using social media analyze its impact factor on paper downloads and sometimes "the paper with the best performance in social media is also the top downloaded paper" (Mula, 2015). Educators are looking for criteria on the best ways to use social media in scholarship (Sherbino, 2015). Researchers use social media to communicate with colleagues, follow experts and trending topics, and disseminate information or study results. Some researchers use social media to communicate directly with journalists to discuss their work (Chapman, 2015; Wilkinson, 2013).

The AcademyHealth report, *Health research and policy making in the social media sphere,* states that social media is a great way to disseminate information to the public and stakeholders whereby a dialog can be created between policy-makers, researchers and the public. Four factors for social media engagement are absorption (positive affectivity--personalized, how does it feel), self-expression and representation (how are you expressing yourself), empowerment (self-efficacy--are you getting likes and participating in online interactions), and interactivity (bridging ties vs. bonding ties). The authors point out that while there is an extreme amount of research on information-seeking behavior, there is a lack of research on health policy- and research-seeking behaviors. This type of research can help provide tools and evidence for researchers and organizations to effectively use social media to disseminate their works.

Amanda Lawrence's seminal work on the value on grey literature in public policy (Lawrence, 2014), which was presented at 16th International Grey Literature Conference, adds to the research on health policy- and research-seeking behaviors. It was found that those surveyed (Australian researchers and policymakers) used some form of grey literature in their work, but one of the major issues was access to relevant sources. Access to relevant sources is a common problem with grey literature. It is interesting to note that though 50% of respondents used social media to disseminate their work, only 22% thought it was an important source for finding new information and a whopping 75% used websites, colleagues, newsletters and alert services to find new information (Lawrence, 2014).

Grey Literature Report

The Grey Literature Report produced by the New York Academy of Medicine has been a leader in curating, preserving and providing access to high quality, cutting edge research in the health sciences for researchers, health practitioners, and policy makers in urban and public health. The GreyLit Report has 2000 active subscribers. Thirty-five percent of subscribers are librarians and 15% are researchers, working in Academic or Library settings.

Methods

This research study is guided by a user-centered information behavior methodology with a focus on website usability. An online survey of active users of the Grey Literature Report was used to capture data on use of social media to disseminate grey literature.

Data Collection

All subscribers (n=2000) were sent an email regarding participation in the research study with a link to the online survey. When users clicked the link, they were taken to a Google form to provide consent and complete the survey. The survey was available for submission for five weeks beginning in mid-October 2015. Two reminder emails were sent to subscribers on November 15 and December 15. The survey consisted of 15 closed and open-ended questions. In December 2015, the survey was shared through various social media channels and listservs.

Data Analysis

Data collected from the online survey was analyzed using descriptive statistics and qualitative data analysis. The main goal of the analysis was to understand the use of social media to disseminate grey literature among GreyLit users.

We had a 4% response rate or eighty-five respondents. The first half of the survey contained demography questions about our audience and their use of social media.

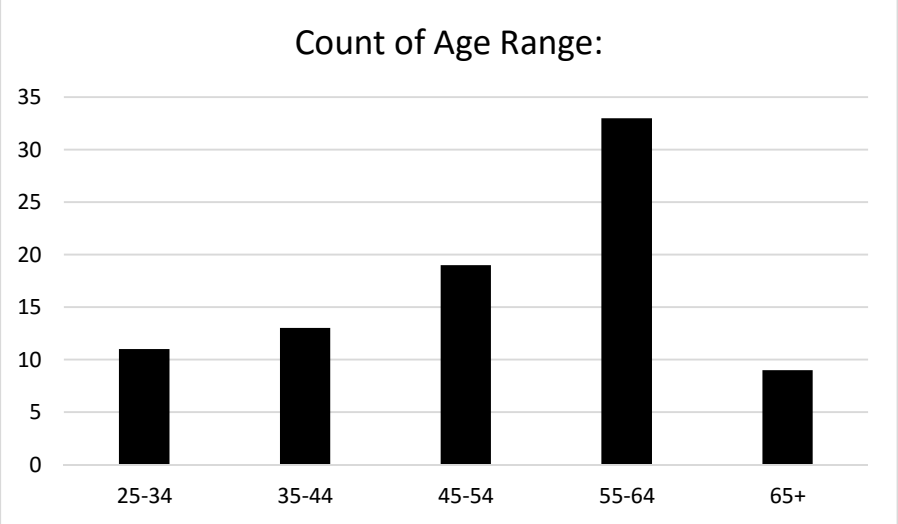

Figure 1: Age Range of Respondents

Forty-nine percent of our respondents identified as 55 or older and 23% as 45-54. Nationally, social media use has risen among all age groups, but particularly so for the 65+ from 2% in 2005 to 35% in 2015, a total of 86% of those 50 and older are using social media today. There were no respondents in the 18-24 age group, which is not consistent with the U.S. population in social media use. Ninety percent of social media users in the U.S. were 18-29 in the Pew study.

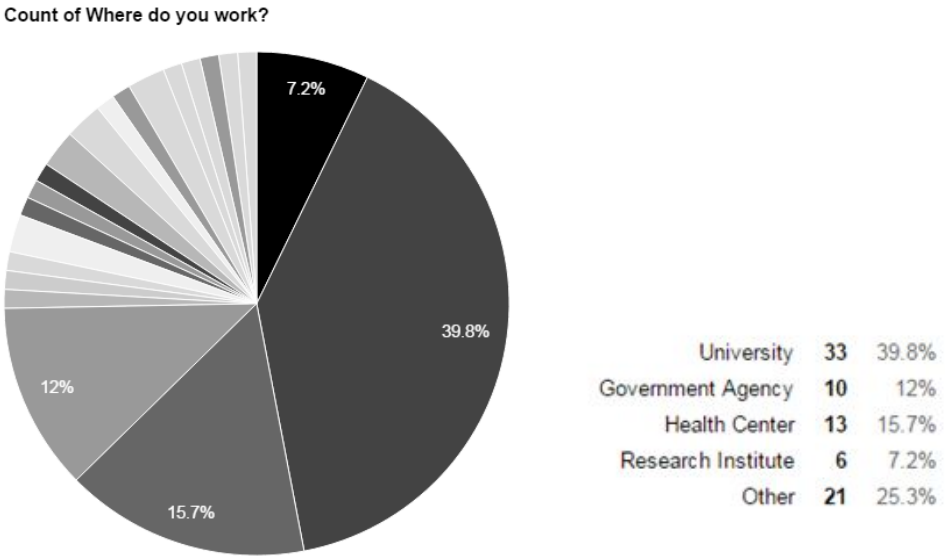

Figure 2: Employment

The majority of GreyLit respondents were librarians, working in a university setting. This coincides with the Pew study in that 76% of social media users were college graduates. (Perrin, 2015) Those with lower levels of education are less likely to be users of social media (Perrin, 2015).

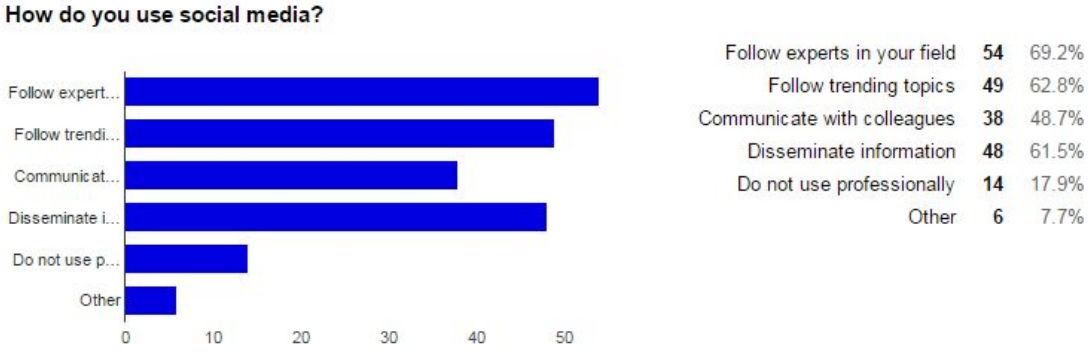

Figure 3: Use of Social Media

The three main reasons respondents used social media were to follow experts in the field, follow trending topics, and disseminate information.

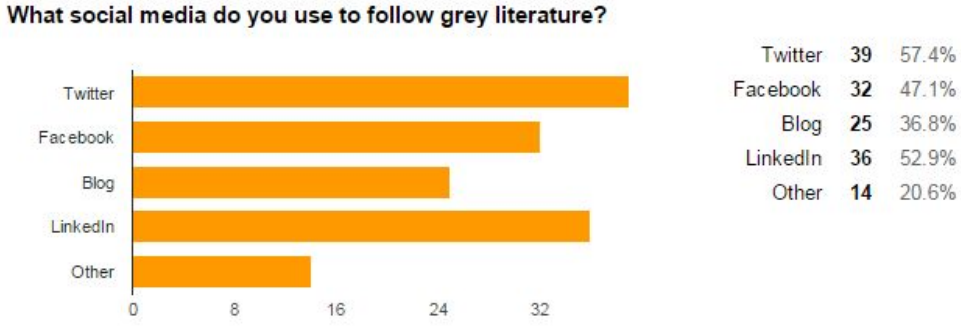

Figure 4: Social Media to find Grey Literature

A little more than half of respondents said they use Twitter or LinkedIn to follow grey literature, while over 61% said they disseminate information through social media.

The second half of the survey asked specific questions about the GreyLit Report and how users share the report.

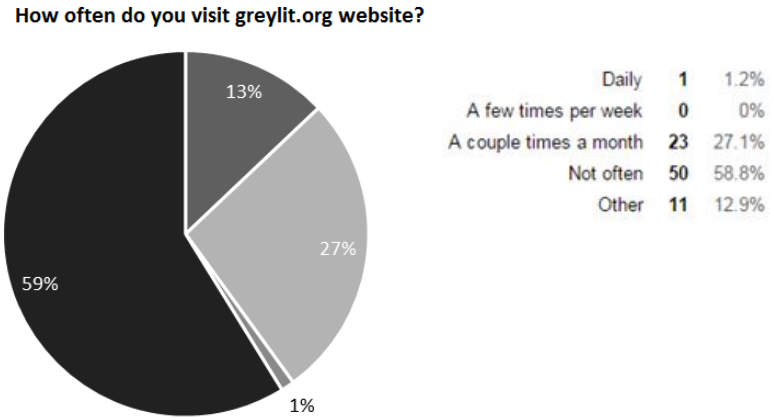

Figure 5: Visiting www.greylit.org

The www.greylit.org website is not visited often. Almost 60% of respondents reported that they do not visit the site often, while 27% said they visit a couple of times a month.

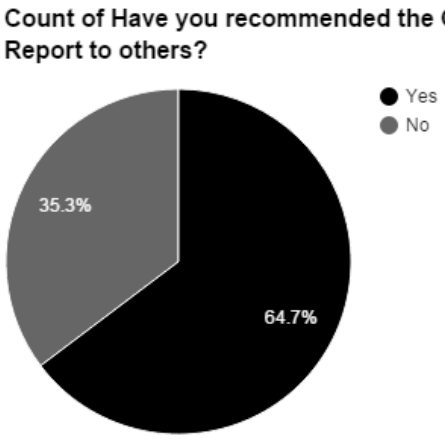

Figure 6: Recommend GreyLit Report

The majority of respondents (65%) indicated that they recommend our report to others, which can be evidence that they trust the Report.

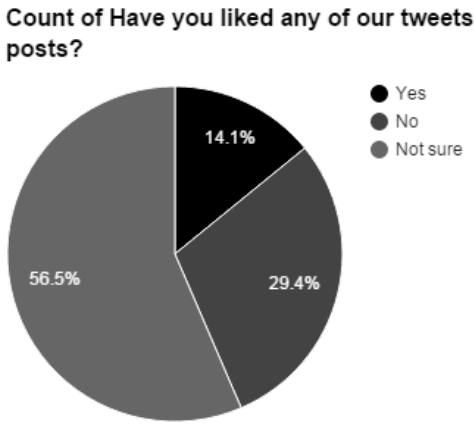

Figure 7: Like GreyLit Report Tweets

We also found that 57% were unsure whether they liked any of our tweets. This may seem odd but we do not have a direct social media channel. Our tweets are sent through @NYAMHistory or @NYAMNYC with #GreyLit. It is not unexpected that respondents weren't sure if they liked our tweets because having a single-issue focus social media presence generally have a higher following (Chapman, 2015) and trust.

Discussion

How is social media used to communicate grey literature?

While the majority of GreyLit users are older than the national average, they are highly educated and work in the research field which could mean that they are more savvy users of technology than their counterparts in other fields. The qualitative responses provided by the respondents were coded to represent the themes and topics of the research. The majority of respondents used Google or listservs and emails to find out about other grey literature. Responses to how users found grey literature included 30 email/newsletter/listserv, 34 website/search engine/RSS feed, 10 colleagues and 15 social media responses. Even though respondents indicated they followed grey literature on social media they tended to follow experts and trending topics more so. This does coincide with Lawrence's report that few of those surveyed used social media to find information (Lawrence 2014). This may be because there is no standard or evidence-base to using social media as an information source.

In order to engage users on social media, it is necessary to provide a "hook" to content that can inspire action. This can be done by framing a report or issue in the context of its social relevance to inspire users, be they journalists, researchers or policy makers, to take action. Having one topic of focus through social media channels is a good way to maintain a high following. Using social media with links to larger reports or studies will lead to increase of downloads of the report or study.

To what extent are subscribers of the Grey Literature Report sharing resources found on greylit.org?

Through this study we learned that few of our GreyLit subscribers are going to our website, but the majority are recommending the GreyLit Report to others. This suggests that the GreyLit Report is valued by our users even though the website may not be the first place our users go to access new grey literature. In addition, the research highlighted how our social media presence, Twitter in particular, may be improved to make it easy for our users to find grey literature.

Conclusion

A review of the literature found that the use of social media is becoming more and more a part of everyday life and work. There are many ways in which researchers are using social media in their daily work, from sharing their work with colleagues, directly contacting journalists, and communicating with their audience.

The literature review and the survey results both reflected the use of social media as a dissemination tool. Even though the literature review found that it was mostly used as a forum to exchange ideas, the importance of social media as a dissemination tool can still be warranted. What is not well understood is why users are not using social media to find information. Future research in this area will focus on learning why users are not using social media to find new grey literature, and exploring a social impact factor of downloaded reports and effects on public policy.

Bibliography

Allen HG, Stanton TR, Di Pietro, F, Moseley, GL. Social media release increases dissemination of original articles in the clinical pain sciences. *PLOS One*. 2013;8(7):e68914.

Barnes, NG, Lescault AM, Holmes, G. The 2015 Fortune 500 and Social Media: Instagram Gains, Blogs Lose. Dartmouth, MA: University of Massachusetts Dartmouth. 2015. Available at: http://www.umassd.edu/cmr/socialmediaresearch/2015fortune500andsocialmedia/

Chapman S, Freeman B. Who has Australia's most-followed Twitter accounts in health and medicine? *Public Health Res Pract*. 2015;25(3). doi:10.17061/phrp2531534.

Cosco TD. Medical journals, impact and social media: an ecological study of the Twittersphere. *CMAJ*. 2015 Dec 8;187(18):1353-7. doi: 10.1503/cmaj.150976.

Djuricich AM. Social media, evidence-based tweeting, and JCEHP. *J Contin Educ Health Prof*. 2014;34(4):202-204. doi:10.1002/chp.21250.

Duggan, M, Ellison NB, Lampe C, Lenhart, A, and Madden, M. *Social media update 2014*. 2015. Washington, DC; Pew Research Center.

Grande, D, et. al. translating research for health policy: researchers' perceptions and use of social media. *Health Affairs*. 2014;33(7):1278-1285.

Hays CA, Spiers JA, Paterson B. Opportunities and constraints in disseminating qualitative research in web 2.0 virtual environments. *Qual Health Res*. 2015;25(11):1576-1588. doi:10.1177/1049732315580556.

Kapp JM1, Hensel B2, Schnoring KT2. Is Twitter a forum for disseminating research to health policy makers? *Ann Epidemiol*. 2015 Dec;25(12):883-7. doi: 10.1016/j.annepidem.2015.09.002. Epub 2015 Sep 14.

Lawrence A, Houghton J, Thomas J, Weldon P. *Where is the evidence? Realising the value of grey literature for public policy and practice*. 2014. Melbourne, Australia: Swinburne Institute for Social Research. Available at: http://apo.org.au/files/Resource/where-is-the-evidence-grey-literature-strategies-nov-2014.pdf

McDonald BH. et al. How information in grey literature informs policy and decision-making: a perspective on the need to understand the processes. *The Grey Journal*. 2015;11(1): 7-16.

McGann JG. 2014 Global Go To Think Tank Index Report. Philadelphia, PA: 2015. Available at: http://repository.upenn.edu/cgi/viewcontent.cgi?article=1008&context=think_tanks

Mula M. The impact and dissemination of scientific research: from impact factor to social media. The Top 10 articles in Epilepsy & Behavior published in 2014. *Epilepsy Behav*. 2015;50:113-115. doi:10.1016/j.yebeh.2015.07.012.

Nagendran M, Dimick JB. Disseminating research findings: preparing for Generation Y. *JAMA Surg*. 2014;149(7):629-630. doi:10.1001/jamasurg.2013.5019.

Narayanaswami P, Gronseth G, Dubinsky R, et al. the impact of social media on dissemination and implementation of clinical practice guidelines: a longitudinal observational study. *J Med Internet Res*. 2015;17(8):e193. doi:10.2196/jmir.4414

Nisbet MC. *Rethinking the translation and dissemination paradigm: recommendations from science communication research for health services policy debates*. 2015. Washington, DC: AcademyHealth. Available at: http://www.academyhealth.org/files/FileDownloads/LessonsProjectScienceCommunication.pdf

Pei S, Muchnik L, Andrade JSJ, Zheng Z, Makse HA. Searching for superspreaders of information in real-world social media. *Sci Rep*. 2014;4:5547. doi:10.1038/srep05547.

Pereira I, Cunningham AM, Moreau K, Sherbino J, Jalali A. Thou shalt not tweet unprofessionally: an appreciative inquiry into the professional use of social media. *Postgrad Med J*. 2015;91(1080):561-564. doi:10.1136/postgradmedj-2015-133353.
Perrin A. *Social media usage: 2005-2015*. 2015. Washington, DC: Pew Research Center. Available at: http://www.pewinternet.org/2015/10/08/social-networking-usage-2005-2015/

Rinaldi A. Spinning the web of open science: Social networks for scientists and data sharing, together with open access, promise to change the way research is conducted and communicated. *EMBO Rep*. 2014;15(4):342-346. doi:10.1002/embr.201438659. http://embor.embopress.org/content/15/4/342.long

Sherbino J, Arora VM, Van Melle E, Rogers R, Frank JR, Holmboe ES. Criteria for social media-based scholarship in health professions education. Postgrad Med J. 2015;91(1080):551-555. doi:10.1136/postgradmedj-2015-133300.

Smith BG, Smith SB. *Engaging health: health research and policymaking in the social media sphere*. 2015. Washington, DC: AcademyHealth. Available at: http://www.academyhealth.org/files/FileDownloads/AH_Translation%20Engaging%20Health%20report%20v5.pdf

Thackeray R, Neiger BL, Burton SH, Thackeray CR. Analysis of the purpose of state health departments' tweets: information sharing, engagement, and action. J Med Internet Res. 2013;15(11):e255. doi:10.2196/jmir.3002.

Tunnecliff J, et al. The acceptability among health researchers and clinicians of social media to translate research evidence to clinical practice: mixed-methods survey and interview study. *J Med Internet Res*. 2015 May 20;17(5):e119. doi: 10.2196/jmir.4347..

Verhagen E, Bower C, Khan KM. How BJSM embraces the power of social media to disseminate research. *Br J Sports Med*. 2014;48(8):680-681. doi:10.1136/bjsports-2013-092780.

We Are Social. *Digital, social and mobile in 2015*. London:We Are Social. Available at: http://wearesocial.net/blog/2015/01/digital-social-mobile-worldwide-2015/

Wilkinson C, Weitkamp E. A case study in serendipity: environmental researchers' use of traditional and social media for dissemination. *PLoS One*. 2013;8(12):e84339. doi:10.1371/journal.pone.0084339

https://doi.org/10.26069/greynet-2025-000.539-tgj

Public sharing of medical advice using social media: An Analysis of Twitter *

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Abstract

Social media tools, such as Facebook®, Twitter™, blogs and online communities, are increasingly utilized for networking and to distribute information in medicine and public health. Participation in these media has increased sharply over the past decade. Six years ago, Twitter did not exist yet now an estimated 15% of the world population subscribes to Twitter. This has created a large-scale, complex, and unindexed publicly available data source. We sought to understand the richness and novelty of health-related Tweets by analyzing the characteristics of health information-focused tweets using automated and manual analysis. Utilizing the Twitter Search application programming interface (API) we retrieved two sets of English language tweets using keywords related to asthma (#asthma and asthma). Tweets were categorized by the assumed source (retweeted by a person, sent by organization, originated by an individual) and content (containing medication, symptoms, triggers, a combination, or none of these) using natural language processing. Regarding tweet source we assumed that tweets retweeted to a person (i.e., @username) were sent by an individual; those not retweeted that contained a URL were sent by an organization; and those tweets remaining were original content tweeted by an individual. Regarding content categorization, we used lexicons containing terms for asthma medication, symptoms, and five different types of asthma triggers (activities, air pollutants, allergens, environmental and irritants). In addition, we conducted content analysis using a combined text mining and manual approach. Applying association rule mining to the tweets, we generated an overview of the most frequency combination of terms presented as if-then rules. The manual, in-depth analysis evaluated a random sample of 200 tweets for originality, content, credibility and relevance. The costs associated with this project were time to process tweets. While over 500 million tweets are generated daily, the cost of this information distribution is shared among millions of Twitter subscribers. The analysis showed that the majority of tweets contain URLS and many are retweeted. The proportion of tweets containing personal, new content is small. The majority of tweets are sent by organizations, both commercial and noncommercial, and the content are broad facts and statements. Both medication and environmental triggers are common topics. The high diversity in topics and terminology combined with the small proportion of personal tweets should be taken into account when using Twitter as a resource for tracking and discovering health behaviors or problems in the population. The large proportion of tweets referring to external information may make this a very useful tool for accessing grey literature and using the tweets as descriptors. Further research is needed to create comprehensive vocabularies and methods to efficiently labels tweets.

Introduction

Social media tools are playing a greater and significant role in both clinical medicine and public health. Patients are using these tools to exchange information, advice and support; health care providers are distributing information, consulting with other providers, and interacting with patients through social media; numerous commercial vendors and professional organizations promote products and viewpoints using these tools; and public health authorities both disseminate and acquire information via social networks.[1] Many of these social media platforms also generate data that is made available to research and industry data users. For example, Twitter™, Facebook©, LinkedIn™ and Google+ each provide an application programming interface (API) to access this data with some restrictions. The popularity of social media can be illustrated by Twitter, in which an estimated 15% of the world population is subscribed (both active and inactive). [2] This popularity has created newly available large-scale data sources that are characterized by a high volume of data, high variety in data elements, high velocity of the data stream, and potential veracity issues (i.e., the objectivity and validity of the data content cannot be presumed).

Social media tools provide value and entertainment to their members and users, as well as new opportunities for consumers, industry, government and researchers to post and exchange information and gather feedback. For example, the Twitter account owned by the United States' National Institutes of Health (NIH) has sent several thousands of tweets (about 5,200 in October 2015) to its more than

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610,000 followers. Twitter is seen as the "zeitgeist" in numerous communities,[3] for example, providing a platform to discuss issues surrounding vaccines, as well as tweet specific drug information and side effects.[4] Participants can rapidly switch between the roles of content consumer/audience and content generator. Social media traffic is often ruled by the crowd and popularity may trump the truth[5]; as user-generated content increases its quality is questionable given the ease of online deception.[6]

Information distributed in social media platforms, such as wikis and social networking sites, Twitter, listserv archives, blogs, podcasts (audio or video), and other forms of electronic networked communication, are considered a new form of "grey literature". Traditionally, grey literature was an umbrella term used to describe materials such as government reports, working papers, and evaluations that were not indexed by major databases, controlled by commercial publishers, or peer reviewed. Variability in quality and limitations on availability are other characteristics associated with grey literature. Despite these features, grey literature is considered an important source of information for research as it is sometimes the only source of information for a research question.[7]

Twitter as Information Source

The motivations to participate in a social network such as Twitter may vary widely, although the primary intentions are to share information, engage socially, and communicate personal opinions and critiques. While not all followers of an individual, organization or topic on Twitter post tweets, social media is unlike other passive, communication mediums as the recipients of information can actively engage with the information. Commercial entities use Twitter to distribute news and updates on problems or policy. Non-commercial, government and NGO/non-profit organizations have adopted Twitter to similarly distribute information, alerts and updates. The variety of tweets is wide, ranging from tweeting personal comments on social issues, public health agencies issuing alerts and advisories, celebrities sharing personal information with their fans, the Red Cross tracking Twitter posts during hurricanes to gather information about where the greatest needs are, political leaders hold town hall gatherings with constituents, "citizen activists" discussing issues, and entities such as news agencies requesting comments and feedback using Twitter.[1]

Market researchers are now using Twitter to identify the demographic characteristics and audience segmentation related to products and commercial services, as well as to disseminate promotions and product information. Scientific research on Twitter is growing, along with the size of the data source, with the majority of research focusing on tweet quantity or numbers in relation to specific topics and their relationships with other information sources. For example, Ram et al [8] leveraged social media (Twitter and Google) and environmental sensor data to accurately predict the number of asthma-related emergency department visits with approximately 70% precision. While retrospective, another example is work conducted by Odlum and Yoon (2015)[9] mining tweets to inform public health education regarding Ebola. The researchers analyzed over 42,000 Ebola-related tweets posted in the early stage of the Ebola outbreak (between July 24-August 1, 2014) and found that nearly 1,500 tweets regarding Ebola were disseminated prior to official announcements from the Nigerian Ministry of Health, the World Health Organization and the Centers for Disease Control and Prevention. Other research using Twitter has considered content of tweets. For example, Harris et al (2014) coded the content of one month of #childhoodobesity tweets (n=1110) distributed in June 2013. Each tweeter was classified by type of user (individual, organization, etc), health focus, and sector (individual, government, for profit, etc). Each tweet was coded as original or retweeted (i.e., the forwarding of tweets received by one user to their own personal social network). The study reported and overall credible content in the tweets, suggesting a limited presence of government, media, and educational information sources and a need to focus the content of tweets on scientific evidence.[10] Another area of research on Twitter is consideration of hashtags in addition to counts and content. Hashtags in social media provide a folksonomy, or user-driven classification, that can be especially effective in placing boundaries around a health topic by providing a common self-organizing language that defines that topic. In addition to organizing content, hashtags can aid in building communities around a shared topic of interest.[11]

As a newcomer under the grey literature umbrella of materials, understanding how Twitter is related to other grey literature and information sources is a new endeavor. We report our investigation which takes a comprehensive meta-approach—including characteristics of source, content, and origin and utilizing natural language processing, text mining, and manual approaches—to evaluate the content of tweets and the website to which they refer to understand the richness and novelty of health-related Tweets.

Data Collection

We selected asthma as our health topic because it is a common chronic disease, affecting 8.4% of the U.S. population [12], affects all age groups, and varies in severity ranging from mild to fatal. We used the Twitter Search API (application programming interface), which allows programmatic access by specifying queries and a few additional parameters such as the language and geolocation. The (free) Twitter search API collects tweets approximately 7 days prior to the search date and retrieves a maximum of 100 tweets per query and 180 queries within a specific window (currently 15 minutes). Thus, one researcher can retrieve 18,000 tweets every 15 minutes. We used two queries: (a) a hash tag specific query including the term "#asthma "; (b) a broad query for tweets including the term "asthma". Both queries were submitted every two weeks to avoid overlap and duplicate tweets.

After retrieving the tweet data set (in JavaScript Object Notation (JSON) format), we processed the tweets using a system that combines in-house developed Java code in combination with existing resources provided by General Architecture for Text Engineering[13] (GATE) and its social media libraries.[14] GATE facilitates the creation of customized components for text processing such as our two Java Annotation Pattern Engines (JAPEs). The first JAPE aimed to recognize the tweet types and assign one of three labels: tweets that were retweeted at a person (started with RT @...) which is duplicated information, tweets containing URLs, and tweets without URLs that were personal comments (given no reference to additional information). The second JAPE aimed to recognize content and mapped words in the tweet's text or hashtags to small lexicons (i.e., gazetteers) created by a medical expert and containing commonly used terms for medications, symptoms and triggers of asthma (see Table 1). When matches were found, the tweet was assigned labels indicating the presence of these terms which allowed the tweets to be categorized by this content.

Type	Subtype	Nr Terms	Example Terms
Medication		104	Metaproterenol, Xolair, …
Symptoms		58	Chronic coughing, wheezing, …
Triggers	Activities	25	Exerting, smoking, …
	Air Pollutants	9	Diesel, ozone, …
	Allergens	28	Animal dander, mold, …
	Environmental / Occupational	31	Glues, adhesives, exhaust, …
	Irritants	17	Deodorant, fragrance, …

Table 1: Content of In-house Developed Gazetteers

Tweets were processed in the following steps:

- Tweet Tokenizer: to divide tweets into tokens.
- Hashtag Tokenizer: to split hashtags containing multiple words into their individual components, e.g., #healthcommunication is recognized as containing 'health' and 'communication'.
- Normaliser: to normalize text in tweets, e.g., abbreviations or slang are rewritten in proper English
- Tweet POStagger: to label each term with its Part-of-Speech (POS), e.g., noun, verb.
- JAPE Type Labeling (in-house): to label tweets containing a URL, retweets with a URL, or tweets without a URL.
- JAPE Content Labeling (in-house): to label a tweet as containing medication, symptoms, triggers, a combination of the three, or none at all.

Research Methodology

We conducted three sets of analyses to evaluate the tweets:

1. Frequency analyses provided an automated overview of tweets using type and content labels.
2. Descriptive data mining (association rule mining) was used to show relationships between individual concepts in tweets. Association rule mining is a well-known data mining technique used to discover interesting associations that are not yet common knowledge. The technique[15,16] combines conditional probabilities optimized for item sets. An item set is a set of elements that belong together, e.g. nouns in a tweet. While it does not aim to predict labels, association rule mining will find associations between items and present them as IF-THEN rules (e.g., air pollution → asthma attack). The rules are generated by the a priori algorithm which uses support to create frequent item sets and confidence to transform frequent item sets into rules. For a rule such as X → Y:
   - Support is defined as the percentage of item sets (tweets) that contain the elements X and Y
   - Confidence is defined as the conditional probability: support (X and Y) / support (X)

3. In-depth, manual analysis provided a detailed look at a random sample of tweets. Each tweet was scored along four axes which were created based upon manual review of a pilot sample of tweets. Our intent was to use sufficiently fine-tuned labels to support different definitions of grey literature either by collapsing categories or keeping them fine-grained. The axes are summarized in the Table 2. The first two axes, Tweet Origin and Breadth of Message Topic, focus on labeling the tweet text itself to reflect the information available with an incoming tweet as seen by a reader. The latter two axes, Referenced Item Credibility & Authority and Asthma Content Specificity, focus on labeling the content of sites referenced in the tweet.

A sample of 200 tweets was randomly selected for coding by the authors. Each was coded by two of the authors. A single choice was allowed for axes 1-3, and multiple selections were permitted for axis 4.

Axis	Level	Example
Axis 1. Tweet Origin	Person	
	organization-noncommercial	
	organization-commercial	
	Retweet	
	Unknown	
Axis 2. Breadth of Message Topic	Level 1: Personal Only	
	Level 2: Time and/or Location-limited Content	
	Level 3: General Fact Applied to a Specific Time or Location, but not population	
	Level 4: General Fact that can be Population-Specific	
Axis 3. Referenced Item Credibility & Authority	Personal	blogs, personal video, personal website, social networking sites (Facebook, PatientsLikeMe, CleanAirMoms)
	News	Newspapers, news services, magazines
	Commercial	Commercial YouTube videos, advertising, businesses
	Nongovernmental organization	WebMD, Universities
	Governmental organization	NIH, CDC, EPA, Local and State Public Health Agencies
	Professional Associations/Organizations	Medical professionals
	Specific professional care vendors	Individual doctors, hospitals describing available services
Axis 4. Asthma Content Specificity	Treatment	1) Medication: inhalers, drugs,2) Non- pharmacologic: keeping the house clean? mold deterrents? 3) Alternative/complementary: acupuncture, yoga, 4) Treatment/NOS: e.g., health system access
	Triggers	1) home & community: e.g., dogs, pets, 2) Environmental: e.g., air pollution, community violence, 3) occupational, 4) personal or behavioral : e.g., stress
	Other	1) Symptoms: e.g., wheezing …, 2) Personal health consequences: e.g., hospitalization, Dr. visit, missed school,…, 3) Personal Risk factors: e.g., smoking, exposure to triggers , other conditions/co-morbidities (hay fever, rhinitis), 4) Diagnostic tests: e.g., spirometry, 5) Support & Management, 6) Not Asthma Specific

Table 2: Axis Definitions

Results

Tweets were collected from June 2015 - July 2015 and included 16,427 and 72,000 tweets retrieved by Twitter in response to the two queries: #asthma and asthma. The query including the hashtag (#asthma) retrieved approximately 4,000 tweets every two weeks. Although the search API was used, which searches up to seven days back, the maximum allowed by the query (18,000) was not reached. In contrast, searching for "asthma" retrieved 18,000 tweets for each query. While more tweets might have been collected by querying over additional time windows, to ensure higher diversity (and fewer retweets of the same information) we limited our collection to one query every two weeks. Please see the appendix for a list of example tweets.

1. Frequency Analyses

Type Analysis

Figure 1 shows an overview of the results. For the specific tweets (#asthma), most contain a link to an outside source (59%) and retweets were the second most common source (29%). Only a small percentage (12%) of the tweets does not contain links to any outside information. In contrast, the broader query shows an almost equal distribution of tweets containing URLs (30%), retweets (33%), and the remaining group (37%).

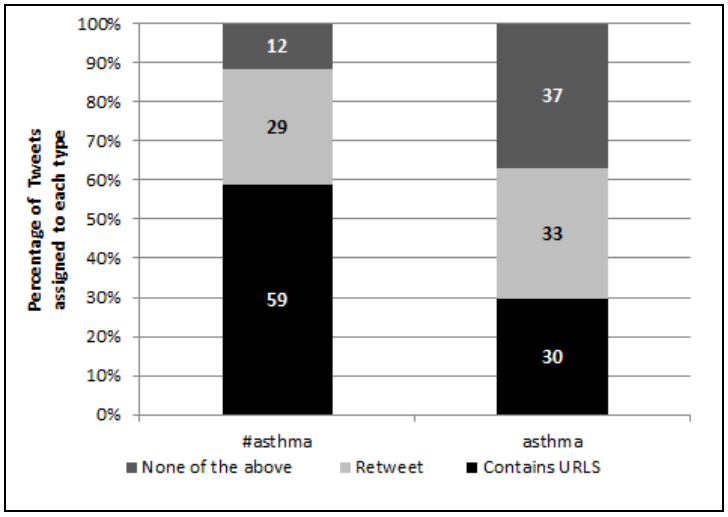

Figure 1: Percentage of Tweets by Source

Content Analysis

Figure 1 illustrates results of the content analysis, showing the proportion containing specific medication, symptoms or triggers. The number of tweets identified as containing this information was low (89% and 79% for #asthma and asthma), and most tweets contained more high level information regardless of the query: approximately 10% from the #asthma query and approximately 20% for the broader "asthma" query contains specific information. The more general asthma query contains more mentions of symptoms (12%).

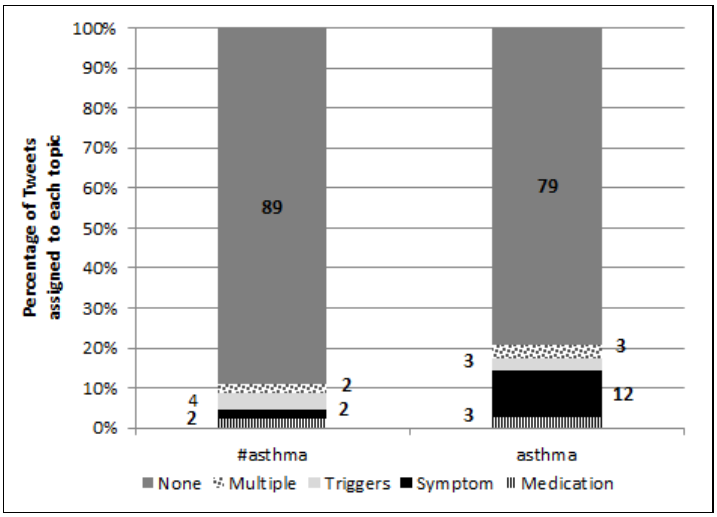

Figure 1: Percentage of Tweets by Content

2. Relationship Mining (Automated Content Analysis)

For both queries, there was very limited commonality of terms among tweets, and therefore the association mining algorithm was set to use a low support setting of 1% (i.e., generate all rules containing two or more items that appear together in >= 1% of the tweets (≥164 tweets for #asthma and≥ 720 'asthma'). We identified rules with calculated confidence ≥ 80%. We conducted the analysis for each query twice: using only nouns and once using all words in the text. For both, preliminary analyses showed the need for preprocessing and removal of proper nouns (e.g., Matt, Lopez, askdrnick, …), as well as pronouns (e.g., yall), common verbs (e.g, wanna gotta, shudnt), interjections (e.g., Okay, ugh, hey), references to time (e.g., yesterday, tomorrow), and numbers (e.g., ten, thousand).

Table 3 shows a sample of the association rules that were generated. Few rules were created using only nouns. There were no rules for the #asthma query generated from 753 unique nouns in the 16,427 tweets. There was one rule generated for the asthma query from the 610 unique nouns in 72,000 tweets.

Using the unrestricted term set generated many rules using the same settings (support ≥1%, confidence ≥ .80). For the #asthma query, 73 rules are generated based on 870 unique terms. The top rules reflect that when people tweeted about alert and symptoms in this set, they also include asthma. Tweets about air quality were also frequent.

Query & Terms	Unique, Stemmed Terms (N)	Antecedent	Consequent	Support (%)	Confidence (%)
#asthma					
Nouns Only	753	No rules found with ≥ 1% support			
All terms	870	73 rules found with ≥ 1% support			
		alert & symptom	asthma	5.5	100.0
		advic	asthma	5.5	100
		alert	asthma	5.8	99.5
		obes	asthma	1.5	99.4
		…	…	…	…
		copd	asthma	2.9	81.4
		qualiti & air	asthma	1.2	80.6
Asthma					
Nouns Only	610	1 rule found with ≥ 1% support			
		busi	attack	1.3	93.1
All terms	925	149 rules found with ≥ 1% support			
		mind & continu	busi	1.5	100
		….	…	…	…
		mind & busi & continu & attack	asthma	1.5	100
		….	…	…	…
		hogti & die	asthma	1.1	99.0
		…	…	…	…
		end & unsaf & prescrib	asthma	1.0	97.2
		…	…	…	…
		polic	hogti	1.1	81.1

Table 3: Overview of Top Association Rules

Some rules were created based on tweets reflecting periods of high social commentary on Twitter. They are of limited relevance to the medical topic asthma. For example, rules were generated for 'hogti' reflecting an incident where "*A Tennessee man with asthma died after being hogtied and placed face down on a stretcher by police following a Widespread PanicIosif Britton*".

3. Manual Content Analysis

To optimize the manual coding scheme and calibrate the coders, we first completed two rounds of pilot testing of 20 tweets. Results were shared and differences discussed. Then a random sample of 200 tweets from the #asthma set was manually coded by the authors independently. (GL coded all 200 and the other co-authors each coded 100). Thus, each item was coded by two individuals.

Axis 1: Tweet Origin

As shown in Figure 3, retweets were most common (approximately 35%) and easily identified by the symbol "RT". Some of the others allowed a straightforward classification (for example, "*bbcbreakfast: tens of thousands of people with #asthma in the uk are not getting the right medicines http://t.co/PxFJlLIQyK*" is easily recognized as a commercial organization). Others were not as direct but still classified into the same groups by the raters. For example, "*35 worst cities (and the worst state) for asthma and allergy sufferers http://t.co/RtOKo62lBA #asthma #allergys #usethermapureprecision env.*" was thought to originate from a commercial company according to both raters, while "*less ambitious #airpollution levels will result in more deaths and people suffering from respiratory symptoms http://t.co/3gINNd7fnL #asthma*" was considered most likely to be a personal tweet by both raters.

However, for many, the tweet content did not in itself support easily deciphering the source. Many tweets required speculation and can be argued to belong to a different group than the one assigned. For example, "*the baby food is organic; the shots are not http://t.co/zy7ftmebjs @assemblydems @assemblygop no #sb277 #vaccines #autism #asthmaj dub*"

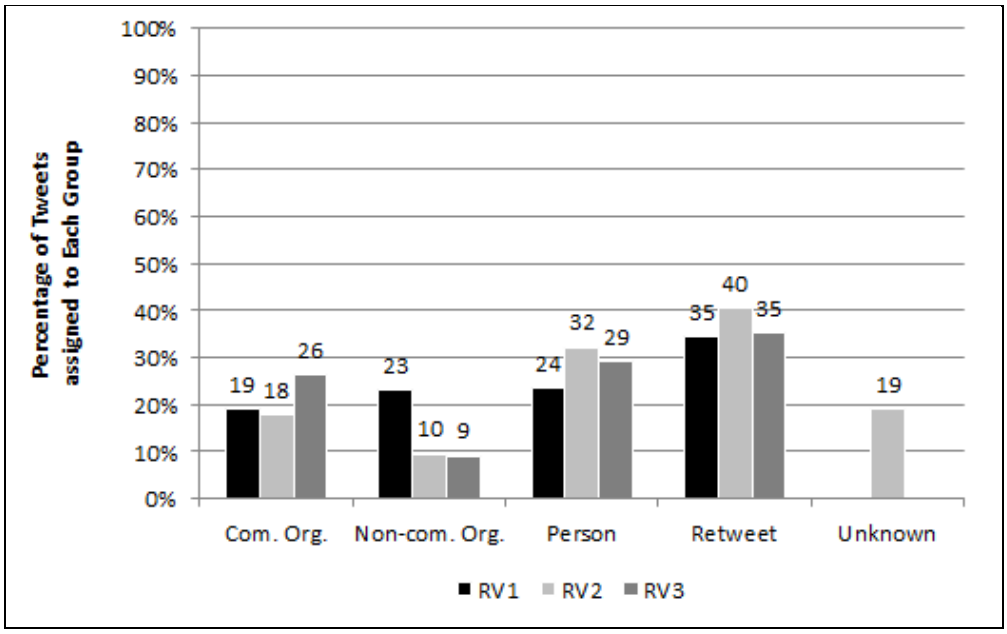

Figure 3: Original of Tweet

Axis 2: Breadth of Message Topic

Table 4 explains the coding scheme for axis 2, and Figure 4 shows results for the tweets categorized by breadth of the topic. Level 4 (broadly applicable) was most common. Level 2 and 3 were the least common. The three evaluators' labels differed most for level 1 (personal information). For many, classification was ambiguous.

Level	Example	Explanation
4	"asthma treatments fail older patients more often: study http://t.co/oiYXgyu1GC #asthma #geriatrics"	Applies to all asthma patients. Implies underlying mechanistic finding (e.g., effect of age)
3.	uk has one of highest rates of #asthma prevalence and mortality @asthmauk raising awareness http://t.co/lUDkNURcCw."	Of general interest to a broad group, but not universally
2.	rt @asthmaaus: very important reminder with all the colds and flu around #asthma https://t.co/xo5EGSl6vt asthma foundation sa"	Only applies to a limited time or specific place
1.	"stupid #asthma. i can't breathe. ??manilowese ?"	Describes the condition of only the tweeter at the moment

Table 4: Example Tweets for Breadth Levels

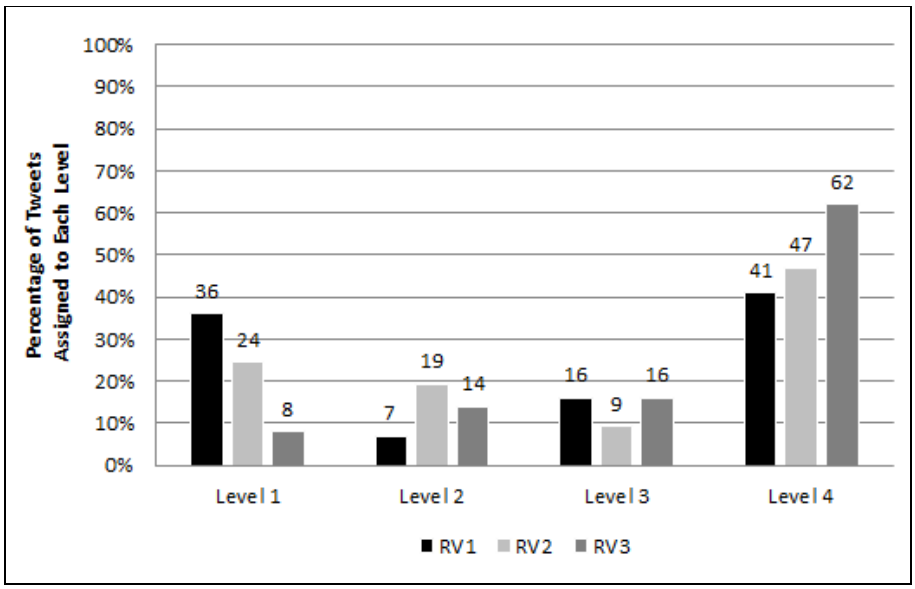

Figure 4: Breadth of Message Topic

Axis 3: Referenced Item Credibility and Authority

For this axis, we considered both the content of the tweet and the Internet page associated with the first URL in the tweet when available. Figure 5 summarizes estimated credibility. Personal and news items were predominant. Commercial organizations constituted 20-25%. Conversely, governmental and nongovernmental organizations contributed relatively few tweets.

There were several sources of ambiguity. In some cases, more than one type of authority was included (e.g., news combined with an organization). Furthermore, we limited the information to only reading the first page linked to the link, and some pages are not easily categorized. For example, "*how to prevent #asthma at your own #home http://t.co/s3HC0oQaNq weirdscience*" and the referenced page were seen as news and NGO. Others tweets require expert knowledge in assessing the source credibility. For example, in the tweet *"#Asthma Pittsburgh Lung Institute Grand Opening http://t.co/UVQ6CSrrWd #COPD*" both the tweet and the linked page appear as credible information from a respected research institute. However, the "Institute" is a commercial entity, and the proposed method of stem cell infusion is considered highly suspect as documented by editorials in a major United States medical journal. Thus, the tweet and the webpage may have been intentionally designed to masquerade as a respected scientific institution.

The largest group tweets was rated as having 'personal' credibility, such as for example "*i guess my lungs missed you... a lot. #asthmaproblems #asthma #seretide #inhaler #gsk https://t.co/8YHCtq7p1K the fluffiest mamon*"; the URL page shows an image of a metered dose inhaler. The smallest set contained tweets sent by professional individuals, such as for example "*stop #migraine with the classical buteyko method http://t.co/QPQVAwF7s7 #asthma #copd #chronic #illnesslearnbuteykoonlinenl*". Tweets with credibility level due an NGO, government and professional organizations were about equally prevalent (about 10% of the tweets).

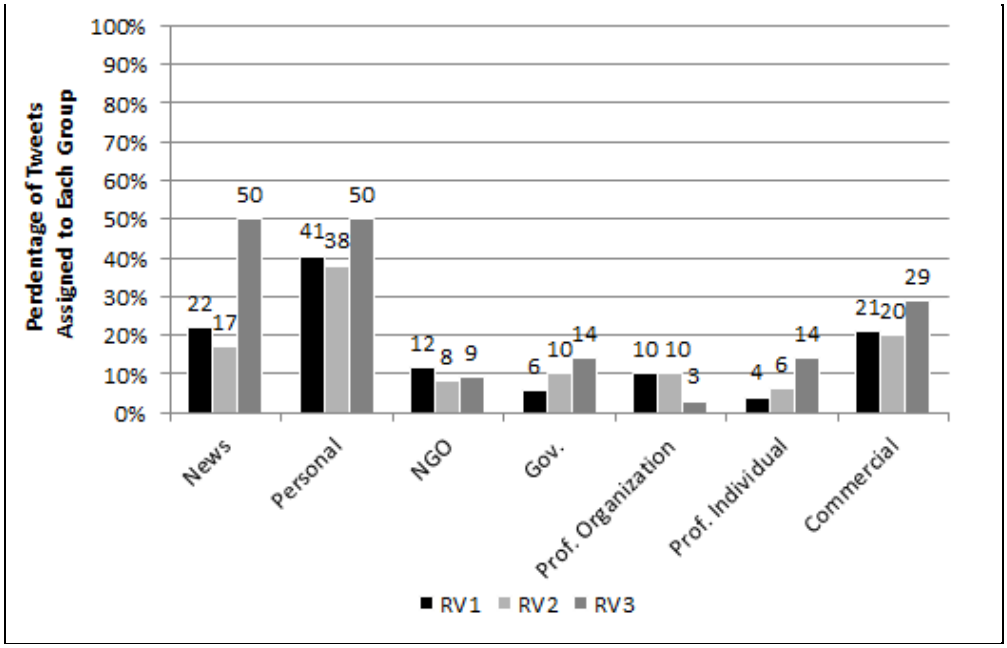

Figure 5: Referenced Item Credibility and Authority

Axis 4: Asthma Content Specificity

Assessment of the asthma related content is summarized in Figure 6. More than a single content item could be assigned to an individual tweet. The asthma related content was diverse. In addition to treatment items (medical, pharmacologic, and alternative), environmental and other triggers were frequently mentioned. For example, "*rt @s_rattigan: thank you rep @matmuratore for helping to spread the word about #asthma and cleaning products! @massdph http://t.co/lh1ei2n*" contains information about triggers (cleaning products) while "*q3 - #asthma is often being treated as an acute condition. do you think one annual assessment is enough or acceptable? #arnsarns*" discusses treatments.

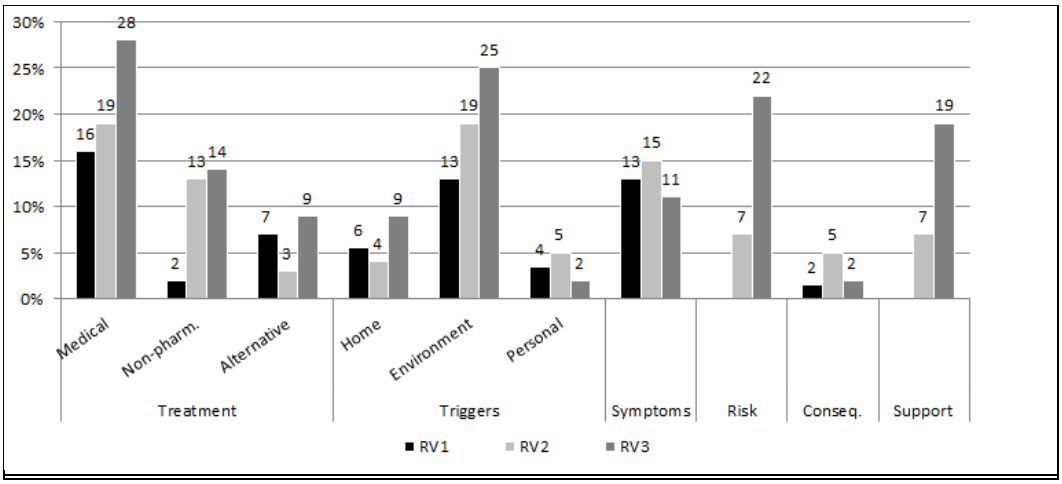

Figure 6: Content Specificity

Conclusion

Origins: The algorithm described herein appears to be a useful method to enhance the utility of public health monitoring of tweets. The automated and manual methods gave reasonably concordant results.

Use of media such as Twitter has been proposed as a public health monitor of population health status (e.g., to identify epidemics or geographic clusters). However, both the automated and manual assessments show that only a minority of tweets are generated by individuals. Therefore, to meaningfully reflect conditions of individuals, it may be advisable to restrict analyses to tweets operationally identified as not coming from organizational sources (commercial or governmental). Further empirical study is necessary to determine whether retweets should be considered useful or only those generated by individuals.

The majority of tweets originate from organizations with the Tweet reflecting some of the contents, e.g., a summary or title containing the main point of the linked information. Further study may show how the tweets may act as an indexing mechanism for the linked information.

Content analysis: The expert assessment of a random sample of the #asthma tweets demonstrates that the public has a wide range of concerns about asthma. Notably, they are concerned about prevention of episodes as demonstrated by the frequency of references to triggers and the influence of the environment on asthma.

The results of automated and manual content analyses were discordant (see figures 1 and 6). While automated content assessment identified medication and symptoms as the predominant elements, the expert manual assessment showed a more diverse content. This likely indicates that the range of terms for treatments and triggers is much greater than for asthma related symptoms. Automated analysis using association rules further demonstrated the wide range of topics and terminology used. The terms and topics of tweets were diverse, with limited overlap unless they were retweeted. Our study therefore suggests the need to create an extensive lexicon for triggers, treatments, and consequences. Such resources will be beneficial to automated tracking and analysis. Lexical analysis and expert annotation of a large number of tweets may provide an empirical basis for improving automated content interpretation in the future.

References

1. 2014;39(7):491-520. VCPT. Social media and health care professionals: benefits, risks, and best practices. Pharmacy & Therapeutics 2014;39:491-520.
2. Zun LS, Sadoun T, Downey L. English-language competency of self-declared English-speaking Hispanic patients using written tests of health literacy. Journal of the National Medical Association 2006;98:912-7.
3. Cheong M, Lee V. Integrating Web-based Intelligence Retrieval and Decision-making from the Twitter Trends Knowledge Base. In: 2nd ACM workshop on Social Web Search and Mining. Hong Kong, China: ACM; 2009.
4. Bian J, Topaloglu U, Yu F. Towards Large-scale Twitter Mining for Drug-related Adverse Events. In: International Workshop on Smart Health and Wellbeing (SHB 2012). Maui, Hawaii, USA; 2012:25-32.
5. Keen A. The Cult of the Amateur: Doubleday Currency; 2007.
6. Tsikerdekis M, Zeadally S. Online Deception in Social Media. Communications of the ACM 2014;57:72-80.
7. Lawrence A, Houghton J, Thomas J, Weldon P. Where is the evidence: realising the value of grey literature for public policy and practice. (Discussion Paper). In: Autralian Policy Online. Melbourne AUS: Swinburne Inst for Social Research; 2014.
8. Ram S, Zhang W, Williams M, Pengetnze Y, 2015;19(4):1216-23. Predicting Asthma-Related Emergency Department Visits Using Big Data. IEEE J Biomed Health Inform 2015;19:1216-23.

9. Odlum M, Yoon S. What can we learn about the Ebola outbreak from tweets? Am J Infect Control 2015;43:563-71.
10. Harris J, Moreland-Russell S, Tabak R, Ruhr L, Maier R. Communication about childhood obesity on Twitter. Am J Public Health 2014;104:e62-9.
11. Ferragina P, Piccinno F, Santoro R. On analyzing hashtags in Twitter. In: 9th Intl AAAI Conf Web Social Media (ICWSM 2015). Oxford England; 2015:110-9.
12. Moorman JE, Akinbami LJ, Bailey CM, et al. National surveillance of asthma: United States, 2001-2010. Vital Health Stat 3 2012:1-58.
13. Cunningham H, Tablan V, Roberts A, Bontcheva K. Getting More Out of Biomedical Documents with GATE's Full Lifecycle Open Source Text Analytics. PLoS Comput Biol 2013;9:e1002854.
14. Bontcheva K, Derczynski L, Funk A, Greenwood MA, Maynard D, the NAPo. TwitIE: An Open-Source Information Extraction Pipeline for Microblog Text. In: International Conference on Recent Advances in Natural Language Processing (RANLP 2013). Hissar, Bulgaria; 2013.
15. Agrawal R, Imielinski T, Swami A. Mining Association Rules between Sets of Items in Large Databases. In: ACM SIGMOD International Conference on Management of Data; 1993; 1993.
16. Agrawal R, Srikant R. Mining Sequential Patterns. In: Eleventh International Conference on Data Engineering; 1995: IEEE; 1995. p. 3-15.

Appendix

Tweet numbers 1-3 and 13-15 are tweets that are retweeted at a person. They are duplicates of other earlier tweets as is shown with tweet number five. Tweets 4-6 and 10-12 contain URLs and demonstrate how the reader is enticed to click on the link for further information. Finally, the remaining tweets 7-9 and 16-18 show tweets that are general more personal in nature.

Nr	Query	Type	Tweet Text
1	#asthma	Retweet@	RT @MyID_Research: Hello @luckytilldeathx I read your post. I would like to discuss more about #asthma #medicalresearch https://t.co/ndKp03 …Zimba
2	#asthma	Retweet@	RT @ShelleyWebbRN: Please RT! New #Asthma #ClinicalTrial available for those suffering from mild or moderate asthma: http://t.co/KnNq8XjZZtaudrey mcevoy
3	#asthma	Retweet@	RT @TheWiseAngel: I'm ready to receive miracles. #asthma #myastheniagravis #Chronicillness #ALS #Cancer$haun... ? @yusalife
4	#asthma	With URL	Reasons Why Soy Wax Is Better For Your Home http://t.co/4jy2Di7xA3#asthma #candles #soycandles #environment http://t.co/k5VDS4LelE Holly
5	#asthma	With URL	@RMEGY thanks for the post. I would like to discuss more about #asthma #medicalresearch https://t.co/ndKp03UQwX Matt Poulton
6	#asthma	With URL	Study Uncovers #Mechanism Responsible for #pollen -induced #Allergies #animalresearch #asthma http://t.co/VJep9XSBcC Raemdoncke
7	#asthma	Other	I'm ready to receive miracles. #asthma #myastheniagravis #Chronicillness #ALS #CancerJulie Ann
8	#asthma	Other	Exercise can trigger bronchoconstriction in both people with and without #asthma.No More Asthma
9	#asthma	Other	I think all of this #BlackCarbon #AirPollution is making my #Asthma worse! How do you feel?WE ACT Aethalometer
10	asthma	With URL	http://t.co/ZuTfv1cmaP symptoms of Asthma & alerts,as of July 24, 2015 at 03:17PM. #AsthmaExpat Inc
11	asthma	With URL	RT @jusa_life: #LetsClearTheAir Secondhand smoke exposure causes more than 202,000 asthma episodes each year. http://t.co/oKWDdLYyk4KT
12	asthma	With URL	RT @ViewFromTheHook: Coalition for Healthy Ports Blasts @EPA / @PANYNJ Absurd New Diesel Emissions Regulations http://t.co/JV9JzeYok7 #dies…CleanWaterAction NL
13	asthma	Retweet@	RT @AEA: Five Charts That Blow Apart EPA's Asthma Claims http://t.co/Qp6mBijNpf http://t.co/JOaGM88xbq Mary Jeff Dunlap
14	asthma	Retweet@	RT @YouStalkSam: Tulisa's gay best friend is meant to be her body guard lol? If I boxed him in his chest he would download asthma.
15	asthma	Retweet@	
16	asthma	Other	@spiceloft Hi there! We saw your post about asthma and would love to feature you on our Faces of Asthma page!Control A+
17	asthma	Other	pulling the muscles between your rips and having bad asthma is not a great combination #inpainruthie
18	asthma	Other	I AM BRINGING LIKE 6 INHALERS BC I DON'T DON'T TO HAVE AN ASTHMA ATTACK AND DIEFUCKING TODAY

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Eighteenth International Conference on Grey Literature

Leveraging Diversity in Grey Literature

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New York, NY USA
November 28-29, 2016

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Opening Session - *Welcome, Opening, and Keynote Addresses*

Welcome Address, *Danielle Aloia, Program Committee Chair, The New York Academy of Medicine, USA*

Opening Address, *Dr. Jo Boufford, President of The New York Academy of Medicine, USA*

Keynote Address, *Taryn L. Rucinski, U.S. Courts Library, New York, USA*

Moderator Day One – Meg Tulloch, FEDLINK; Library of Congress

Session 1 – Diversity in Publishing and Disseminating Grey Literature

Collecting, organizing, and preserving diverse publication sources for the good of one community archive: Legal challenges and recommendations
Andrea Copeland, Indiana University at Indianapolis and Tomas Lipinski, University of Wisconsin at Milwaukee, USA

The recent improvements on circulation of research results at the Japan Atomic Energy Agency
Satomi Inagaki, Misa Hayakawa, Naomi Ebisawa, Mayuki Gonda, Takashi Nozawa, and Keizo Itabashi, JAEA, Japan

Sexuality Leveraged Through Diversity: Recognizing LGBT+ Communities
Anthony Lin, Irvine Valley College Library and Julia M. Gelfand, University of California, Irvine Libraries, USA

Managing Diversity in the International Nuclear Information System
Dobrica Savić, Nuclear Information Section, International Atomic Energy Agency, Austria

Session 2 – Open Access and Shared Grey Resources

Looking for Information that is Not Easy to Find: An Inventory of LibGuides in Canadian Post-Secondary Institutions Devoted to Grey Literature
Marcus Vaska, Alberta Health Services and Rosvita Vaska, University of Calgary, Canada

The Problem of Acceding to Grey Literature in the Algerian University Research Laboratories in the Era of the Open Access Movement: A Survey Led at the University of Constantine
Azzedine Bouderbane, Nadjia Gamouh, Hadda Saouchi; Institute of Library Science, University Constantine 2, Algeria

Transition to Open Access and its implications on Grey Literature Resources
Snježana Ćirković, Austrian Academic Library Consortium, Austria

Survey of an influence of legislation on open data and grey literature
Petra Pejšová, National Library of Technology, Czech Republic

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On the afternoon of Day One, each person presenting a poster will have the opportunity to introduce their work in the Main Forum. The Poster Session and Sponsor Showcase will continue in the Presidents Gallery on the morning of Day Two, where the presenters will be able to meet with the conference delegates and participants in an informal setting.

A Tour of The New York Academy of Medicine is scheduled at the close of each day of the conference

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How is Grey Literature Used in Horizon Scanning Reports on Medical Devices?
Kelly Farrah and Monika Mierzwinski-Urban, Canadian Agency for Drugs and Technologies in Health, Canada

A terminological "journey" in the Grey Literature domain
Roberto Bartolini, Gabriella Pardelli, and Sara Goggi, ILC-CNR, and Silvia Giannini, Stefania Biagioni, ISTI-CNR, Italy

Altmetrics and Grey Literature: Perspectives and Challenges
Joachim Schöpfel, GERiiCO Laboratory, University of Lille and Hélène Prost, CNRS, associated member of GERiiCO Laboratory, France

Applying discourse analytical methods to deepen understanding of user needs in an a-synchronous information environment
Debbie L. Rabina and Research Team Members: Emily Drabinski and Laurin Paradise, Pratt Institute, School of Information, USA

Session 4 – Fueling Public Awareness to Grey Literature

The GreyLit Report: Understanding the Challenges of Finding Grey Literature
Robin Naughton and Danielle Aloia, The New York Academy of Medicine Library, USA

Debate about Scientific Popularization in Russian Public Sphere based on Grey Literature Material
Yuliya B. Balashova, Saint Petersburg State University, Russia

Introduction of a Social Network Service for National R&D Reports
YongJu Shin, Kiseok Choi, Cheol-Joo Chae, Kwnag-Nam Choi, KISTI, Korea

'Grey crossroads' in cultural heritage preservation and resource management
Luisa De Biagi, National Research Council of Italy, CNR Central Library and Roberto Puccinelli, Telecommunications and Informative Systems Office, CNR, Italy

Closing Session – Report Conference Moderators, Best Poster, Conference Handoff, Farewell

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DCMI, Dublin Core Metadata Initiative Home Page http://purl.oclc.org/metadata/dublin_core/

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