An Analysis of Current Grey Literature Document Typology

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Abstract

This analysis is based on the classification of the international systems GreyNet, (the Grey Literature Network Service), OpenSIGLE, (the System for Information on Grey Literature in Europe), and the Registry of Open Access Repositories (ROAR), as well as focusing on national schemata in the Czech Republic, namely ASEP (Register of Publication Activity of the AS CR), NRGL (National Repository of Grey Literature), and RIV (Information Register of R & D Results). During the analysis of the lists of document types, we have discovered that these typologies contain, besides "real" document types (reports, theses, etc.) other aspects, such as events (arrangement, organization), types of events (conferences, speeches), producers (universities, institutes), processes (translations, output), content (political documents, legal texts), location (domestic, foreign), and format (e-texts, numeric data). However, this approach is not systematic. Therefore, we have decided to create a classification scheme for document types only, and classify other aspects into various groups in order to define them more precisely. The scheme will be processed in a text version as well as schematically in mind maps.

We believe that identifying a specific typology for credible grey literature document types, particularly reports, conference proceedings, and government documents, will assist in the classification of grey literature in the fields of science, research, and education. On the other hand, grey literature also consists of various means of communication, such as telephone calls, meetings, e-mails, blogs, interviews, social networking tools, or discussions in Wiki. It is important to identify only credible document types and not use unverified information that may be unsuitable for scientific work.

The aim of this analysis is therefore to create, define, and implement a current credible grey literature document typology, in order to open discussions in the grey literature community, leading to a means of collecting GL from reputable events and producers rather than relying on social networking tools or Wiki contributions. While the later types of sources can assist researchers, scientists, and teachers with their information-seeking pursuits, documents of this nature need to be evaluated on a regular basis.

Keywords: analysis, classification, documents, gray/grey literature, systems, types, typology

Introduction: Defining Typology in the Grey Literature

"Improved access to and sharing of research information is the key to accelerating progress and breakthroughs in any field"

(Brian Hitson and Lorrie Johnson, 2009)

Indeed, continued and concentrated efforts in the pursuit of grey literature has caused a transparency and ability to share documents that only a few years ago would not have been deemed possible. Despite the wealth and variance of forms of grey literature (including multimedia) in institutional repositories, there appears to be a lack of systematically classifying these documents into a universal, standard typology. In fact, Beissel-Durrant (2004) states that the typologies currently in place in the social science literature "do not necessarily categorize research methods in a systematic way, using mutually exclusive categories and hierarchies that are not necessarily complete" (p.2). An exhaustive search is therefore required to eliminate bias, as the presence of bias could potentially undermine the research retrieved.

Traditional monikers assigned to grey literature have labeled this material as mainly consisting of primary sources, focusing on theses, reports, and government publications. This leads to two key characteristics of grey literature resources, namely their ubiquitous nature, and their difficulty in being properly identified (Schöpfel, 2006). While the history of grey literature may have supported this notion, the same does not necessarily hold true today; Hjorland (2006) claims that "each sphere in society has developed its own kinds of documents." Hence, conducting an analysis of current grey literature document typology and subsequently creating and implementing a quality control system to guarantee the credibility of grey literature becomes increasingly important.

The word *typology*, first introduced in the Merriam-Webster dictionary in 1845, has origins that date back to biblical times. Originally defined as "a doctrine …holding that things in Christian belief are prefigured or symbolized by things in the Old Testament", its current association refers to a "study of or analysis or classification based on types or categories" (Merriam-Webster, 2010). Although various

disciplines (i.e. anthropology, archaeology, psychology, and in particular linguistics), have a different notion of how typology fits in with their subject area, the idea of classification and organization is the same. This characteristic is significant when it comes to identifying the role that document typology plays in the realm of the grey literature.

Is typology for grey literature really irrelevant? Some researchers claim it just might be, particularly as the grey literature is moving closer to the white (Di Cesare, 2006). As the numerous document types in the *GreyNet* repository can attest to, grey literature truly does transcend boundaries and plays a role in more than merely science, research, and education. When categorizing the various types of grey literature into a single, universal typology, it seems plausible to see the wealth and versatility of grey literature sources as an information neighborhood, "an environment within which practical information seeking and orienteering information seeking, as well as both directed and undirected browsing, can take place." (Burnett, 2000) The representation of grey literature in numerous types and formats can indeed create the appearance of numerous aspects of grey literature that do not appear to hold a common purpose with each other, hence the need for a standard typology for this material to put everything in its place.

Aspects & Analysis of Grey Literature Typologies

In preparation for the analysis of a grey literature document and subsequently its typology, it is necessary to consider the purpose of the material being studied, the aspect of the grey material in question, and perhaps most importantly, "how are grey documents used?" (Schöpfel, 2009, p.7)

This paper, and subsequently the grey literature typology proposed, will focus on the following aspects: document type, event, producer, content, location, format, and periodicity. While theses, dissertations, reports, conference proceedings, working papers, and to a lesser extent, courseware, are considered fundamental types of grey literature (Schöpfel, 2009), other aspects or 'shades' of grey' must also be considered. The purpose of a document typology for grey literature adheres rather closely to

Beissel-Durrant's (2004) notion of prioritizing research methods, exemplifying the focus of the research, identifying needs for additional training or research, as well as appropriate classification methods.

Creating a Grey Literature Typology Classification System

We collected a total of 241 terms used to describe grey literature typologies; these terms have been categorized into one of six system typologies as follows:

- 133 terms from GreyNet

- 35 terms from NRGL

- 30 terms from ASEP

- 17 terms from OpenSIGLE

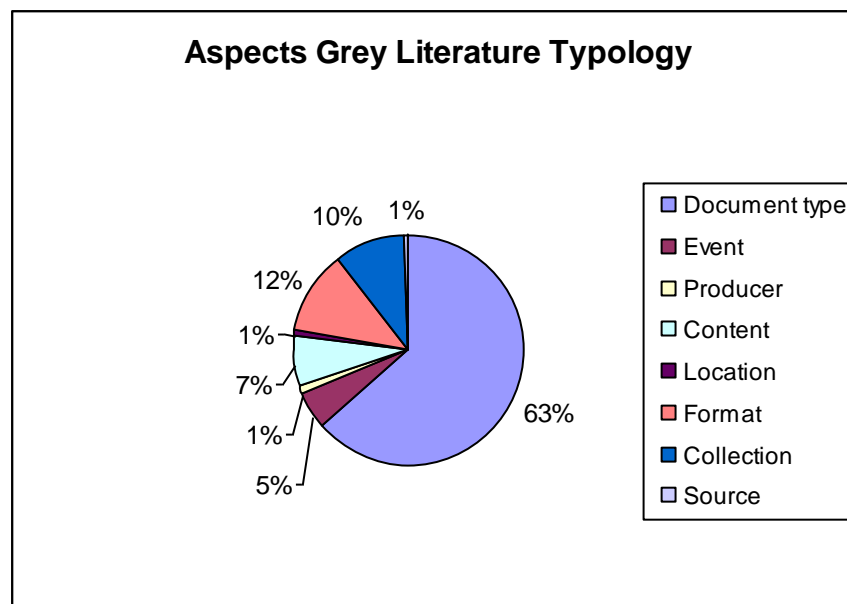- 14 terms from RIV

- 12 terms from ROAR

After removing duplicates, we obtained a final list of 193 original terms. While no single term was present in all six typologies, two terms, namely theses and research reports, appeared in five of the analyzed system typologies (theses in GreyNet, OpenSIGLE, ASEP, NGRL, ROAR and research reports in GreyNet, RIV, ASEP, NGRL, ROAR), while 28 terms occurred twice, and six terms materialized three times. It is interesting to note that four instances were observed where no common term was found among any of the system typologies studied.

Our examination of the various aspects in grey literature typologies ascertained 121 document types which we subsequently organized into 19 collections. For example, a collection labeled with the broader term **REPORT** is comprised of narrower term document types such as annual report, business report, bank report, and so on. The 19 collections identified as narrower term document types are listed in a mind map appearing at the end of this paper (Appendix 1).

In addition to document type, we have proposed six additional aspects of GL typologies in order to more succinctly classify the GL terms we analyzed. These include:

- **Format,** describing the type of presentation (e.g. electronic document, e-text, multimedia, and so on). − 23 terms

- **Content**, referring to the type of information in the document (e.g. computer program description, policy document, product data, and so on) − 14 terms

- **Event,** depicting the occasion on which the document was issued (e.g. conference, workshop, lecture) − 10 terms

- **Producer,** denoting the organization producing the document (e.g. legislation) − 2 terms

- **Location,** indicating the place where the document is situated (e.g. board) − 1 term

- **Source**, representing the source data for the document (e.g. survey) − 1 term

The graph below illustrates the occurrence of the 193 original terms used to describe grey literature amongst the proposed aspects in GL typologies that have been identified.
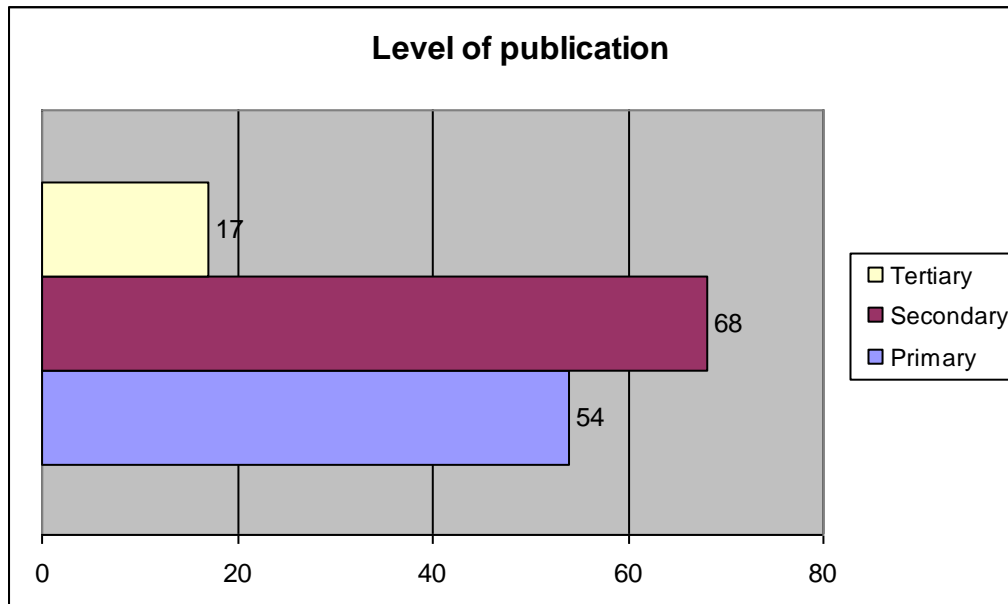

Aspects Grey Literature Typology

- Document type — 63%
- Event — 5%
- Producer — 1%
- Content — 7%
- Location — 1%
- Format — 12%
- Collection — 10%
- Source — 1%

Many of the analyzed terms contain more than one aspect, such as a project information document, (comprised of both and information and a project document), a computer program description, etc. We also identified 44 terms that expressed a similar meaning, requiring us to select preferable terms in order to maintain consistency amongst our classification scheme. For instance, *annual* was deemed the preferred term when describing a yearbook or other such yearly document, while *leaflet* was favored over flyer when classifying items of an advertising nature. However, some terms were difficult to analyze, due to lack of description or unknown reasons as to why they were introduced. This was particularly indicative of website reviews, where questions arose whether the material was a review of a website or rather a review presented on a website. We therefore require and look forward to comments and feedback from the grey literature community on these matters.

Distribution terms to broader (Collections) and narrower terms document types is a basis for creating a new and well-structured grey literature typology. The National Technical Library in Prague will prepare a first draft version that will be available for feedback from the grey literature community. After incorporating the comments received, a subsequent step will implement the aspects identified in the analysis as an optional description of the document types. These optional descriptions are necessary to precisely express the document type without having to constantly introduce new types of documents, thereby unduly expanding the typology of terms that are used only for specialized areas. This approach is necessary for creating a functional general grey literature typology.

In addition, we identified three levels of publication in our analysis, according to the Library of Congress specifications for identifying primary, secondary, and tertiary sources, and Hjorland's (2006) revised version of the UNISIST typology model used for classifying scientific and technical documents :

- 54 primary
- 68 secondary
- 17 tertiary

Level of publication

Tertiary: 17
Secondary: 68
Primary: 54

At this point, this data is being used solely for informative purposes; there are no plans to include levels of publication for creating the first version of a new grey literature typology.

Implementing a Quality Control System to Guarantee Credibility of Grey Literature

While the existence of any electronic media or non-traditional resource should be analyzed for its acceptance as a grey literature document, the adage of effective searching, whereby key websites and the Internet in general are consulted, needs to be considered as well (Giustini, 2010). Social media, blogs, phone, fax, e-mail; all of these forms of grey literature can greatly enhance the searching process. The recent H1N1 epidemic indicated the importance that common social networking sites, primarily Twitter, played in disseminating information in a timely, virtually instantaneous manner. While social networking tools or Wiki contributions should not be relied on exclusively, "the key is not to rule anything out, not even tweets" (Giustini, 2010).

Although the rapid "information-at-your-fingertips" approach is impressive, there is a danger of accepting unverifiable information as fact without further investigation. A case in point is an article that appeared in the United Kingdom's *Daily Mail* newspaper earlier this year (Rose, 2010). Climate change is

a global issue, with numerous organizations, such as the World Wildlife Fund (WWF) and the Intergovernmental Panel on Climate Change (IPCC) taking a firm stance and commitment to reducing our carbon footprint and preserving the environment for generations to come. In 2007, a report produced by the IPCC, which was subsequently awarded the Nobel Prize, claimed that the Himalayan glaciers would melt by 2035 (Rose, 2010). Despite repeated objections by some glacial experts as to the accuracy and authenticity of this report, the claim was not refuted until January 23, 2010, when Dr. Murai Lai, a scientist at IPCC, admitted that the statement was "included purely to put political pressure on world leaders." Further investigation revealed that no peer-reviewed scientific research had been carried out to support the Himalayan glacier melting assertion; "the 2035 melting date seems to have been plucked from thin air", and was due to an arithmetical error by the WWF. Unfortunately, this error not only damaged the reputation of the IPCC, it also questioned the quality and qualifications of those producing grey literature, particularly since this material is often not peer-reviewed.

Content contained within open access repositories still prefers theses and dissertations as key primary material. Other grey literature documents, such as conference papers, reports, even works in progress, are slowly buckling the trend; this is comforting, especially since Schöpfel (2009) reports in his study that "100% of the institutional archives give access to grey material." (p.15)

Lack of bibliographic control is the primary reason why grey literature can be difficult to locate; it must be easily retrievable in order to be useful. While most repositories, including GreyNet and OpenSIGLE, are making conscientious efforts to classify the material they store, there are others that still do not do so.

Despite the dissolving of EAGLE in 2005, and SIGLE's dormancy, some researchers believe that each association will classify its documents in-house, without adhering to any bibliographic standards. However, this may not necessarily be as troubling as originally thought: indeed the rapid expanse of the Internet has enabled increasing numbers of grey literature documents to be made available to the public for the first time, which puts additional pressure on cataloguing this material in a uniform matter.

Nevertheless, the Web has also created greater awareness that these types of material exist and can be retrieved. The trade-off between access and awareness is a never-ending challenge.

Evaluating Grey Literature Document Types

Presently, open access repositories of grey literature are maintained and/or funded by either an academic institution (typically a University), or by a pubic research association (Schöpfel, 2009). As the analysis of the following types of documents found in repositories will indicate, a majority of these storehouses of information centre on more than one domain, often playing a multidisciplinary role. Barely seven years old, the notion of Open Access, whereby scholarly output is freely available to the general public, has taken academia by storm. Focusing on institutional repositories and various policies regarding unrestricted access, "the GreyNet community intensified its research activities on the impact of the open access movement on the grey literature." (Schöpfel, 2009, p.4)

Numerous studies have been launched in an effort to determine why research is primarily disseminated via a report, thesis, or conference proceeding, despite the various types and formats that exist today. Schöpfel (2006) ponders this dilemma and provides his own reasons: "research results are often more detailed in reports, doctoral theses, and conference proceedings than in journals…they are distributed in these forms up to 12 or even 18 months before being published elsewhere. " (p. 68)

GreyNet

While the aim of this paper is to analyze, identify, and create a typology for credible types of grey literature, namely reports, conference proceedings, and government documents, the impact of virtual communities cannot be discounted. The notion of creating awareness is often commented upon in papers on grey literature, and social networking tools or Wiki collaborations certainly have a role to play in this pursuit. Announcements, one of the aspects categorized in the *GreyNet* repository is considered to be a common activity in online communication, with some even saying that these information updates

"play a significant role in the informational economics of the community" (Burnett, 2000). Information is not just given away; it becomes invaluable to the person seeking it.

Founded in 1992, The Grey Literature Network Service, or GreyNet as it is commonly called, is "dedicated to research, publication, open access, and education in the field of grey literature" (GreyNet, 2010). For nearly two decades, this organization has strived towards seeking, identifying and disseminating grey literature to as wide an audience as possible. Recent technological advances and increasing acceptance and adherence to the Open Access movement have strengthened the awareness of the importance of grey literature among several disciplines. GreyNet has certainly achieved a number of milestones in a relatively short period of time; its goal of facilitating "dialog and communication between persons and organizations in the field of grey literature" will undoubtedly grow exponentially in the coming years.

In 2004, GreyNet developed a GL Survey, whereby visitors to the site were invited to contribute to a list of document types that they felt best constituted grey literature, the purpose of which was to best describe the type of document it embodies. As a result, 133 different document types in grey literature have been identified.

OpenSIGLE

OpenSIGLE, the System for Information on Grey Literature, functions as a repository for the collection of scientific, technical, economic, and humanities documents produced across Europe.   The 13 member countries include Belgium, the Czech Republic, France, Germany, Hungary, Italy, Latvia, Luxembourg, Portugal, Russia, Slovakia, Spain, and the United Kingdom (OpenSIGLE, 2010).   The partnership between GreyNet and OpenSIGLE has ensured that preprints, PowerPoint presentations, abstracts, and biographical notes from previous international conferences on Grey Literature are included. OpenSIGLE is thus growing at a remarkable rate. This past year, "700 000 records of the unique European database on grey literature SIGLE migrated to an open access environment" (Giustini, 2010).

SIGLE, the predecessor to OpenSIGLE, assigned nearly 96% of its contents to one of three categories: reports, theses, and conferences. While this classification supports the traditional definition of grey literature along with the most common types of grey material, it can be problematic when creating, analyzing or defining a grey literature typology. For instance, there are several subcategories of reports, ranging from those produced by institutions to annual reports to logs generated by a specific activity. Further, Schöpfel (2006) argues that the theses and conference proceedings distinction fails to take into account unpublished manuscripts, newsletters, presentations, working papers, preprints, lecture notes, and even personal communications. These documents, regardless of the format they may be presented in, are all types of grey literature, and need to be distinguished as such.

Registry of Open Access Repositories (ROAR)

Founded in 2003, ROAR's key role is providing information concerning the growth and status of open access repositories around the world. Consisting primarily of dissertations and preprints/postprints of peer-reviewed articles, (Digital Library Federation, 2005) ROAR also contains documents in a wide-variety of formats, including multimedia archives. Offering the user an opportunity to present material to the Editorial Review committee for possible inclusion in the repository, ROAR is growing at an exponential rate; as of November 6, 2010, there are a total of 1988 items in the repository, organized into one of 9 repository types (Registry of Open Access Repositories, 2010).

National Repository of Grey Literature (NRGL)

In 2008, a four-year study, *The Digital Library for Grey Literature: Functional Model and Pilot Implementation,* the goal of which is to create a National Repository of Grey Literature (NRGL), was launched. The NRGL originated as an idea in 2005 due to the termination of SIGLE, which greatly affected the state of grey literature in the Czech Republic. Supported by the National Technical Library in Prague (NTK), this project's main goals are the systematic collection, long-term archiving and provision of access to specialized grey literature, especially with regards to research and development, civil service,

and education, as well as from the business sphere, marketing "open access" at the national level. To support this goal, the NTK created a network of partner organizations, a functional model, and a pilot application. In addition, on the basis of verified technology and methods defined under the project, recommendations and standards are created for other institutions electing to build their own digital grey literature repositories. These consist primarily of a recommended metadata format, exchangeable designs and templates, examples of licensing models and legal issues, resolved preservation, methodology, archiving, and the provision of access to digital data (National Repository of Grey Literature, 2010). Further details on this project can be found on the NRGL website, http://nrgl.techlib.cz.

Since the end of 2009, a NRGL central user interface has been available to search for grey literature in the Czech Republic. This NRGL central search interface offers a user-friendly system for searching data thanks to data visualization and dynamic contextual navigation. All institutions in the NRGL network are gradually integrated into this interface. At the end of November 2010 there were over 51 000 grey literature records. The interface is available at www.nusl.cz .

Information Register of R&D results (RIV)

RIV is part of the R&D Information System in the Czech Republic. Since 1993, RIV has collected information about the results of R & D long-term intentions and projects supported by different state and other public budgets.

The data available in RIV has been made possible by contributions from public sponsors, namely different ministries and other state offices with the responsibility for a state-run R&D long-term intention and/or R&D project, providing financial aid. This includes the Grant Agency of the Czech Republic, the Academy of Science of the Czech Republic, and local authorities (Research and Development Council, 2006).

RIV refers to the conveyance of data to an informational research system, experimental development, and innovation. According to a disclaimer or "law", the support of experimental development is provided only under the supposition of the truthful publication of pertinent data. As such, RIV contains information about all research results. Nevertheless, RIV does maintain its right to remove information about any results forwarded by experimental institutions, in the event that the data are incorrect, or otherwise deemed inadmissible. In addition, the general terms available for a description of data for RIV include: central evidence of activities, research activity, provider, receiver, other participants, proposal from a research organization, creator, etc.

Register of Publication Activity of the AS CR (ASEP)

The ASEP system is produced under the auspices of the Library of the Academy of Sciences of the Czech Republic. Together with RIV, types of publications are listed according to their form and incorporation. These include monographs, conference contributions, dissertations, electronic documents, conference volumes, temporary publications, articles in a professional periodical, prototypes, norms and rules, specialized maps, certified methods, software, chapters/sections of books, newspaper articles, patents, reviews, translations, workshops, exhibitions, research reports, and several others. The ASEP system contains bibliographical records concerning research results at institutes of the Academy of Sciences of the Czech Republic from 1985. The ASEP system publication records are also sent to the RIV database (Evidence publikací v AV ČR, 2010). The User interface of the ASEP system is available at www.lib.cas.cz/en/ASEP.

Concluding Thoughts & Future Directions

"Grey is global…grey is growing…grey is good." (Hitson, 2009). Without a doubt, grey literature is here to stay, with the border between grey and white becoming more and more transparent, in response to the increasing number of grey material being posted on the Web. As the above arguments suggest,

there is not one set rule of classifying and organizing the grey literature. The typology that has been suggested in this paper is merely one notion of how a typology for this type of material can be implemented; it is certainly not the only one. Nevertheless, subjecting a piece of grey literature that is neither a theses nor a conference paper or report to a 'miscellaneous' or 'other' distinction makes identifying and gathering grey literature that much more challenging.

Implementing a quality control system to guarantee the credibility of grey literature is of vital importance, despite the many challenges.

Following this analysis, we established an international Grey Literature Typology Working Group for creating a grey literature typology. The six-member group consists of experts in grey literature, ontological engineering, data modeling, and knowledge organization systems. The Google project platform CODE, a tool for collaborative development, was used for this study. Information about the activities of the working group as well as a link to the grey literature typology project can be found on both the Czech NRGL and GreyNet websites.

A key goal of defining and describing grey literature document types has already been partially addressed; the proposed grey literature typology discussed in this paper has been transformed into open standard machine-readable format as an open available web application, the details of which are available in *Publishing the Vocabulary of the Types of Grey Literature as Linked Data,* a poster presented at the GL12 conference. "The typology of grey literature will be a controlled vocabulary in RDF (Resource Description Framework) expressed as SKOS (Simple Knowledge Organization System) concept scheme. This description of the document types of grey literature has a loose structure with hierarchical relations. Each type will be provided with a definition and a prototype example of a document for which it can be used. By design, it is focused on the description of types. Other documents' attributes, such as content or format annotations, are excluded from the vocabulary." (Grey-literature-typology, 2010)

The first draft of a grey literature typology will be issued in January 2011. The online platform CODE, http://code.google.com/p/grey-literature-typology/, will be open for comments from the grey

literature community until the end of March 2011.   The Working Group will analyze and respond to comments regarding a clear and structured typology, and compile the materials for incorporation into a draft grey literature typology by the end of May 2011. This recommendation will be included in the first version of a grey literature typology in the SKOS concept scheme, to be published on June 30, 2011. The Development Cycle will be conducted bi-annually, and all versions will be issued via the Web as sustainable linked versions. Future plans and directions will involve the translation of the proposed typology into other languages.

Most in the grey literature community would undoubtedly agree that the use of this material varies in frequency among different disciplines; some subject areas make use of it on a daily basis, while others have not yet skimmed the surface.   Nevertheless, grey literature definitely holds a place in the information-seeking behavior of today's researchers, more so than it ever has before.   As the future of grey literature information seeking turns towards alternate formats such as multimedia and datasets, the fundamental purpose of grey literature remains the same: increasing awareness of the grey by opening the information doorway and providing unrestricted access to what lies beyond. As Schöpfel (2006) argues, "however diverse, these documents all have one point in common: they contain unique and significant…information that is often never published elsewhere."

References

Beissel-Durrant, G. (2004). *A typology of research methods within the social sciences: NCRM working paper.* Retrieved September 12, 2010 from http://www.ncrm.ac.uk/publications/documents/NCRMResearchMethodsTypology.pdf

Burnett, G. (2000). Information exchange in virtual communities: A typology. *Information Research*, *5*(4). Retrieved September 12, 2010 from http://informationr.net/ir/5-4/paper82.html

Di Cesare, R., and Ruggieri, R. (2006). *Evaluation of grey literature using bibliometric indicators: A methodological proposal.* Retrieved September 12, 2010 from https://darchive.mblwhoilibrary.org/bitstream/handle/1912/1322/proc06057.pdf?sequence=1

Digital Library Federation. (2005). *Review of resources.* Retrieved November 6, 2010 from http://www.diglib.org/pubs/dlf106/DLF106part3b.html

Evidence publikací v AV ČR: ASEP (2010). Retrieved November 10, 2010 from http://www.iach.cz/knav/databaze_cz.htm

Giustini, D. (2010). *Got app? Top mobile medicine sites 2010*. Retrieved September 12, 2010 from http://blogs.ubc.ca/dean/2010/04/got-app-top-mobile-medicine-sites-2010/

Grey-literature-typology (2010). *Vocabulary of the types of grey literature*. Retrieved November 20, 2010 from http://code.google.com/p/grey-literature-typology/

GreyNet: Grey Literature Network Service (2010). Retrieved September 12, 2010 from http://www.greynet.org/

Hitson, B.A., and Johnson, L.A. (2009). *WorldWideScience.org: Bringing light to grey*. Retrieved September 12, 2010 from http://opensigle.inist.fr/bitstream/10068/697997/2/GL10,_Hitson_and_Johnson,_Conference_Pre print.pdf

Hjorland, B. (2006). *Document typology*. Retrieved September 12, 2010 from http://www.iva.dk/bh/core%20concepts%20in%20lis/articles%20a-z/document_typology.htm

Library of the Academy of Sciences of the Czech Republic (2007). *ASEP – publication records.* Retrieved January 4, 2011 from http://www.lib.cas.cz/en/ASEP

National Repository of Grey Literature (2010). Retrieved November 9, 2010 from http://nrgl.techlib.cz/

OpenSIGLE: System for Information on Grey Literature in Europe (2010). Retrieved September 12, 2010 from http://opensigle.inist.fr/

Registry of Open Access Repositories, ROAR. (2010). Retrieved November 6, 2010 from http://roar.eprints.org/

Research and Development Council (2006). *RIV* : *Information Register of R&D Results*. Retrieved November 19, 2010 from http://www.vyzkum.cz/FrontClanek.aspx?idsekce=1028

Rose, D. (2010, January 24). Glacier scientist: I knew data hadn't been verified. *Daily Mail Online.*
    Retrieved November 6, 2010 from http://www.dailymail.co.uk/news/article-1245636/Glacier-
    scientists-says-knew-data-verified.html

Schöpfel, J. (2006). Observations on the future of grey literature. *The Grey Journal, 2*(2), 67-76.

Schöpfel, J., and Stock, C. (2009). Grey literature in French digital repositories: A survey. Retrieved
    September 12, 2010 from
    http://archivesic.ccsd.cnrs.fr/docs/00/37/92/32/PDF/GL10_Schöpfel_Stock_final.pdf

University of North Carolina, Wilmington: Randall Library (n.d.). *Identifying primary, secondary, and
    tertiary sources*. Retrieved December 31, 2010 from
    http://www.lib.auburn.edu/bi/typesofsources.htm

Appendix 1: Mind map of the 19 terms identified as narrower term document types in analysis