This paper provides a historic overview of the evolution during the last century of gray literature in the knowledge society. The first section presents some definitions of gray literature and the stages of its development from the beginning of the 20th century to the present. Some institutions that played a key role in the administration of this type of literature are then discussed, including the following initiatives in Latin America and the Caribbean: (1) BIREME (Health Sciences Information Center for Latin America and the Caribbean), an initiative run by the Pan-American Health Organization; (2) IBICT (Brazilian Institute for Information in Science and Technology), established during the 1950s under the National Research and Development Council by Ministry of Science and Technology; (3) INFLOAC (Regional Program for Strengthening Cooperation among Networks and National Information Systems for the Development of Latin America and the Caribbean), established in 1986 under a UNESCO resolution; and (4) INFOBILA (Latin American Librarianship Information Data Base), established in 1985 at the Librarianship Research University Center of the Universidad Nacional Autonoma de Mexico. (Contains 30 references.) (MES)
Abstract:

In this work the contribution of Grey Literature to Knowledge Society is demonstrated through a historic overview of its evolution in the last century. The first step is to present some definitions of Grey Literature and then the stages of its development from the beginning of the XX Century to current days. The work also mention some institutions that played a key role in the administration of this type of literature, not omitting some important institutions of Latin America and the Caribbean.

1. INTRODUCTION

Crouched over his table by candlelight, a medieval alchemist is writing a manuscript recounting his discoveries. His intention is merely to produce a written record of his work that he can use as a future reference or for someone else to learn about his research one day and continue his efforts. A thousand years later, a chemical engineer sits down one night at his computer and uses a word processor to note the results of his experiments, which he will then forward to a colleague for review. Despite the centuries between them, they are both driven by the same spirit: discovering universal truths, extending the knowledge of humankind and helping improve the life of their own and subsequent societies. The documents prepared by the two of them would be today rated as Grey Literature (although neither would be aware of this, the alchemist because this term was only coined hundreds of years after his time, and the
latter because he is a chemical engineer and consequently unfamiliar with terminology that lies more in the field of librarians). This is certainly an odd term, but it follows the European custom of using colors to name different types of documents. It was coined in the late XIX century [22] and became more widely accepted from the 1970s onward in the USA and Europe. In the countries of Latin America, particularly Brazil, it has only come into use far more recently, and is still not widely accepted.

This "literature" consists of documents produced in a somewhat informal manner that carry and store much of the knowledge of humankind. Analyzing its progress from the early years of the XX century through to our own day offers a good idea of its development and how it has contributed to the society in which we live. Unfortunately, constraints on time and space do not allow this analysis to be carried out in a very detailed manner, but I believe that an overview of its development will be sufficient for our purpose. As it progressed, Grey Literature prompted the appearance of countless institutions set up to file, control and distribute its output. I will mention those that seem most important to me in the course of this development process.

2. GREY LITERATURE: WHAT IS IT?

Before starting to examine the development of Grey Literature, we should examine how it is defined by different authors. There are some disputes over its borders, but differences of opinion on which documents may or may not be classified as Grey Literature are not really significant, as these definitions differ very little in their essence.

For Wood, this is "material that is not available through sale".[30]

For the "Interagency Gray Literature Working Group", as noted in the Gray Information Functional Plan dated January 18, 1995, "Gray literature is domestic or foreign ostensive matter that is usually available through specialized channels and that cannot enter the normal channels or publication and distribution systems, nor fall under bibliographic controls or acquisition schemes by book-sellers or subscription agents". [26]

For Currás "Grey Literature may be obtained publicly, as its content is not conventional and its publication is not firmly controlled, and it is not accessible through the normal distribution channels, which makes it hard to locate and obtain. Moreover, these are documents of many different types ranging from unrevised pre-prints through to documents with very concrete content".[7]

For Población, "Grey Literature documents are fleeting and transparent (not seen in publishers’ catalogs, bookshops, libraries, etc.) that are hard to locate but which in most cases contain relevant and important data".[22]

At the III International Conference on Grey Literature (GL’97) held in Luxemburg in 1977, Grey Literature was defined as "that which is produced at all levels of government, academia, business and industry in printed or electronic format, but which is not controlled by commercial publishers".[1] This definition includes electronic documents for the first time in the universe of Grey Literature.

It is obvious that the common trait running through these definitions is the fact that Grey Literature is neither produced by nor distributed through retail channels. This includes academic works, pre-prints (understood here as research records distributed among scientists prior to formal publication) [20], committees reports, commissions reports, technical reports, government reports, research reports, travel reports, conference papers, technical standards, dissertations, theses, non-commercial translations, market surveys, news bulletins, company documents, working documents, web sites, virtual discussions, data sets, and more.
e-mail and electronic simulations [2], memoranda, conference proceedings, technical specifications, bibliographies and maps [19], among others.

This list of documents is not exhaustive, quite naturally, but offers a good idea of the many different types of documents that may be included under the category of Grey Literature. Some of these documents were underlined in the above paragraph in order to draw attention to them, as they are newcomers included in the list after the advent of the Internet during the 1990s and in the GL'97 definition.

It should be noted here that as Grey Literature is not produced commercially, it might be believed that these documents are not trustworthy, as they have not gone through the necessary review processes as those imposed by technical and scientific magazines. This is a mistake, as many GL documents go through review processes that are even more stringent than those imposed by such magazines. For instance, academic works such as dissertations and theses are subject to stringent bench reviews before being accepted, as well as project reports and other similar documents.[3]

3. THE BEGINNING

The development of Grey Literature, reflected in the rising number of documents produced in an "informal" manner and the establishment of entities set up to handle their control and distribution, has kept pace with technological progress over the past century. Scientists eager to disclose their findings in a fast and informal manner have been the driving force behind this process.

At the initial stage, this development seems to have been connected to the Industrial Revolution, fueled largely by the progress of the aircraft industry. Dating back to the early XX century, this stage runs through World War II. It is important to note that the main documents of interest from this period are reports, which is why this class of documents was called "report literature" [17], as the term Grey Literature was only coined many years later, in the 1970s.

4. WORLD WAR II

During this War, tremendous efforts were made by the USA, the UK and Germany in particular to increase research activities in a broad range of fields of knowledge: nutrition, weapons, clothing, vehicles, all types of equipment (optical, electronic, etc.), aircraft, shipping, navigation and others. The demands of the War forced the results of these research projects to be disseminated rapidly to authorized people and centers interested in them. These pressures resulted in a sharp increase in the amount of Grey Literature documents produced and the appearance of entities responsible for disseminating and controlling them. A good example is the US Office of Scientific Research and Development (OSRD), set up in the USA in 1941 to disseminate research results and speed up their application in national defense projects.[4]

5. THE POST-WAR YEARS

a) 1945-1960

During the period after World War II, the appearance of new research institutions involved the progress of Grey Literature with added dynamism, reflected in the appearance of entities specializing in handling information and bibliographic controls. The purpose of these entities was to disseminate information both in-house and elsewhere, underpinning technology transfers.[17] Consequently, the US Office of Scientific Research and Development (OSRD) was replaced by the Publications Board in 1945, which published the first Bibliography of Scientific and Technical Research the following year.
During this period, the thriving nuclear industry boosted the output of Grey Literature. In 1946, the Atomic Energy Act established the Atomic Energy Commission as the successor to the Manhattan Project (which developed the atomic bomb) in order to manage and regulate the use of atomic power. Among its core programs was the declassification of data produced on atomic energy during World War II and the dissemination of documents. (The Energy Reorganization Act abolished the Atomic Energy Commission in October 1974, replaced by two other federal agencies).[3]

During the 1950s, the Space Race between the USA and the USSR served as a springboard for the expansion of Grey Literature. During this period, there was more obvious concern with the retrieval of information, cataloging, filing and information policies to be pursued. Many institutions were set up in several countries — particularly the USA and the UK — in order to handle bibliographic records and information. At this time, the Committee on Scientific and Technical Information (COSATI) was established in order to encourage and coordinate the dissemination of scientific and technical information. [17]

b) 1960-1970

During the 1960s, Grey Literature continued to develop steadily, with new tools for disseminating information, including microfilm and microfiche facilities. Faced with the exponential expansion of Grey Literature documents, the problem of retrieving information grew increasingly critical. This prompted the appearance of the first automatic systems for information retrieval.

During this decade the Lending Division of the British Library (later the Document Supply Center), began to play a leading role in the dissemination of Grey Literature, as it developed in Europe into the main collector and disseminator of reports produced by the US agencies. Later it also became the official depository of documents produced by the European Community.[17]

Countless studies appeared on this topic, including the famous Weinberg Report in 1963 entitled "Science, Government and Information: the Responsibility of the Technical Community and the Government for Transferring Information". Weinberg recommended that institutions be established to gather and disseminate information, highlighting the importance of Grey Literature as a way of disseminating knowledge and transferring technology.[28]

It was also during this decade that the Committee on Scientific and Technical Information (COSATI) appeared in the USA, under the Federal Council for Science and Technology, established in order to coordinate and disseminate technical and scientific information.

I believe that it would be timely here to draw attention to a curious fact. As we have seen so far, Grey Literature was fueled mainly by the physical sciences and technological progress. In fact, it was viewed askance by much of the human and social sciences, as their documents lacked the stamp of approval by highly respected scientific journals. However, it is interesting to note that some marginalized minority groups found their form of expression in Grey Literature. It was in fact through Grey Literature that these groups could disseminate their ideas and publicize them through propaganda. For instance, in her article "Grey literature is a feminist issue: women's knowledge and the Net", Danuzia Malina stressed that for women "... material that is not commercially published has always had an important role in feminism. It played a crucial part in communicating the experiences and ideas of women within a society where their voices and writings have been muffled".[18]
c) 1970-1980

The 1970s saw rising concern over the management of Grey Literature. Studies multiplied on many different aspects such as indexing and cataloging, dissemination and disclosure, data retrieval, etc. The keynote of these concerns was identifying and ensuring access to Grey Literature documents. The first conferences specializing in Grey Literature then began to appear. Particularly significant was the York Seminar held in December 1978 [1], which launched the cooperation between European libraries and documentation centers that was the forerunner of the SIGLE Data-Base, established at a later date. At this seminar, the term “Grey Literature” was officially acknowledged and accepted, coming into use by leading libraries and documentation centers in the USA and Europe.[17]

It is also during the 1970s that on-line databases specializing in Grey Literature began to appear, which were the first to be run on a commercial basis.[17]

In 1970, the US Publications Board became the National Technical Information Service (NTIS), launching the publication of the "Government Report Announcements" as a continuation of the "Bibliography of Scientific and Technical Research".[17] Under the Technology Administration of the Department of Commerce and with economic autonomy, the NTIS grew into the largest and most important US organization specializing in Grey Literature. It is now a leading force of scientific, technical, government, engineering and business information for hundreds of US agencies, offering access to over two million publications covering 350 fields of knowledge. Its mission is to underpin the economic growth of the USA and generate jobs by providing access to information that encourages innovation and discovery.[21]

d) 1980-1990

During the 1980s, the System for Information on Grey Literature in Europe (SIGLE) Database was set up, managed by the European Association for Grey Literature Exploitation (EAGLE), which is a consortium of legal libraries and documentation centers in Europe. The SIGLE multi-disciplinary database stores reports, dissertations and other Grey Literature documents produced in its member countries. Holding over 674,000 records, it can be accessed over the Internet, by CD or hard drive. Its documentation ranges from 1980 through to the present day, accepting from 55,000 new records each year, covering the following fields of knowledge: research and development, science and technology, and economics.[24]

e) 1990 ONWARDS

The 1990s saw the advent of the Internet, the spectacular worldwide communications network. Allied to the rapid spread of personal computers and the widespread dissemination of word processing programs, the Internet triggered explosive growth in Grey Literature. As already mentioned, electronic documents were included under Grey Literature, forming another area of concern for librarians. It was also the decade when international conferences on Grey Literature began to appear, held every alternate year from 1993 onwards.

The Internet met the needs of scientists and other experts to disseminate their knowledge rapidly and learn about studies and research projects underway elsewhere in the world. It also decreased significantly problems in locating and accessing documents. These facilities resulted in a sharp upsurge in the dissemination of knowledge and the possibility of transferring technology far more rapidly. It should be noted that the Internet is not merely a tool for disseminating and accessing documents, but in itself is
also a major producer of Grey Literature (the Bibliography of this paper lists some Grey Literature documents that are Web Sites). The Human Genome Project is one of the most spectacular examples of human collaboration through computers, the Internet and Grey Literature.[8]

Towards the end of the XX century and early in the current century, a new phenomenon began to appear. Grey Literature produced by NGOs in the developing countries covers a wide range of topics, including the environment, justice, feminism, indigenous problems, peace and politics, among many others. This Grey Literature is published in full over the Internet. The Zapatista Group in Mexico is one of the most active on the World Wide Web, where other groups are also starting to work towards telling the rest of the world about their ideas.[27]

6. ABOUT LATIN AMERICA AND THE CARIBBEAN

It was not possible to obtain data outlining the development stages of Grey Literature in Latin America and the Caribbean over time. However, the limited amount of data available indicates that it has also kept pace with scientific and technological development in this Region, or more specifically in each country, as development is not uniform for all countries in this Region. Many initiatives have been taken to gather and disseminate this Grey Literature at the level of international entities, as well as government, universities and companies, with a rising awareness of its importance as a factor spurring economic and social development.

Listed below as examples are just a few of these initiatives:

a) BIREME (Health Sciences Information Center for Latin America and the Caribbean) an initiative run by the Pan-American Health Organization (PAHO). This specialized center has been operating in Brazil since 1967, working closely with the Ministry of Health, the Ministry of Education, the São Paulo State Health Bureau and the São Paulo Federal University. Its mission is to foster the development of healthcare in the countries of Latin America and the Caribbean through promoting the use of scientific and technical information focused on healthcare. It also runs the Health Sciences Literature Data-Base for Latin America and the Caribbean (LILACS - Literatura Latino-americana e do Caribe em Ciências da Saúde), which records and disseminates health-sciences literature, published and available in Latin America and the Caribbean. It holds over 150,000 records of articles from periodicals in the healthcare field, in addition to dissertations, theses, books, proceedings of congresses and conferences, technical and scientific reports and government publications produced in the countries of Latin America and the Caribbean, covering information available since 1982. This database is open for access over the Internet on the BIREME website.[5]

The LILACS data-base also includes the following data-bases:

- DESASTRES (Information Center on Natural Disasters for Latin America and the Caribbean) which contains bibliographic information on preparations and dealing with natural calamities in Latin America and the Caribbean, Grey Literature and books;
- PAHO (Pan American Health Organization) which contains bibliographical references and summaries of the PAHO Library; new materials (conventional or not) and many other items of interest;
- REPIDISCA (Pan-American Information and Documentation Network for Sanitary Engineering and the Environment Sciences) bibliographical references from the literature on Sanitary Engineering and the Environment Sciences;
BBO (Brazilian Data-Base on Odontology) with documents published since 1966; dissertations, theses, books, leaflets, separata and periodical publications;

LEYES (Basic Legislation in the Healthcare Sector in Latin America and the Caribbean) contains bibliographical references on healthcare law in effect since 1978;

Ad SAUDE (Healthcare Services Administration) which is an experimental data-base with bibliography in the field of healthcare services administration, containing documents covering political, economic and social aspects, as well as documents related to the management, administration, organization and planning of healthcare systems;

ADOLEC (Adolescent Healthcare) pilot data-base of bibliographical references on adolescence taken from the LILACS data-base and MEDLINE;

SIDORH (Information and Documentation System for Human Resources in Healthcare) promotes and disseminates specialized bibliography on different aspects of human resources and related issues such as social participation, strategic planning, decentralization of healthcare systems and management of healthcare services;

MINCAP (Technical Heritage of INCAP) bibliographical references for works on nutrition by institutions in Central America and Panama (INCAP);

MEDCARIB (Caribbean Literature on the healthcare sciences) literature produced by the English-speaking Caribbean with references to books, theses, dissertations, technical reports, congress proceedings and journal articles from the XVIII century through until today. [16]

b) IBICT (Brazilian Institute for Information in Science and Technology) was established during the 1950s under the National Research and Development Council by the Ministry of Science and Technology, with the mission of fostering the development of the information sector through drafting policies, carrying out research projects and disseminating innovations that underpin the progress of science and endow Brazilian technology with a keener competitive edge. This Institute has many national and international agreements, including within the MERCOSUR (Southern Cone Common Market). It is coordinating a national data network project based on the Internet and called ANTARES, interconnecting over 200 institutions in Brazil over the Internet, including universities, the CNI (National Confederation of Industries) System, the SEBRAE (Micro and Small Business Support Service) as well as many other associations, research institutes and institutions providing information services. The Antares network covers 22 States providing information services. Its purpose is to identify, operate and offer access to databases (bibliographical and with the complete text) available on-line over the Internet, making information available in the field of science and technology to all States in Brazil.[10] The Brazilian Institute for Information in Science and Technology (IBICT) is implementing the Brazilian Digital Library Project, which is a gateway (portal) designed to integrate information services on scientific and technological output in Brazil.

c) INFOLAC (Regional Program for Strengthening Cooperation among Networks and National Information Systems for the Development of Latin America and the Caribbean) was established in 1986 under a Resolution issued by the XXIII General Conference of UNESCO. The Permanent Secretariat of INFOLAC functions out of the UNESCO Information and Information Technology Division for Latin America and the Caribbean in Caracas, Venezuela. Its members include: Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Santa Lucia, Trinidad & Tobago, Uruguay and Venezuela.
A forum for exchanging knowledge and experience in the information services area, INFOLAC is open to all types of public, private or professional institutions that are dedicated to providing information services in the Region. It is an inter-governmental forum open to all countries in Latin America and the Caribbean that belong to UNESCO, represented by the respective national information authorities. Its purpose is to run a forum for the discussion and development of ideas on information policies, technologies and services in order to foster sustainable development in Latin America and the Caribbean. It functions as a regional consultative entity for governments, UNESCO and other regional and international organizations in the information services field, integrating and developing the information sector in Latin America and the Caribbean, and promoting more effective regional and international cooperation in the information services area throughout the Region.[12]

Represented by the Brazilian Institute for Information in Science and Technology (IBICT), the Brazilian Government donated the software and methodology for the ANTARES Network to UNESCO, and offered to play a leading role in the process of implementing this system throughout the Region. This gave rise to the idea of the project that was submitted to the INFOLAC Committee for consideration at its regular meeting held in September 1988 in Panama, as well as at the INFOLAC Assembly held in March 1999 at Colima, Mexico, approved by the representatives of the 24 member States of UNESCO that also belong to INFOLAC.[13]

The objectives of the ANTARES network project are to: extend the presence of Latin American and Caribbean culture on the Internet; preserve and disseminate information production services over the Internet for libraries in the countries of Latin America and the Caribbean; establish a technical and methodological cooperation base among the countries in the Region for recording and disseminating information on endogenous Web Pages; foster and train human resources and new information technologies used within the context of this cooperation project; develop an effective search engine for information on all Web Pages in the independent system, regardless of their geographical location.[13]

d) INFOBILA (Latin American Librarianship Information Data Base) first appeared in the Library of the Librarianship Research University Center (CUIB) in 1985 at UNAM, prompted by the its researchers needs for easily-available specialized librarianship literature, together with information on archivology produced in and on Latin America. Right from the start, the CUIB Library accepted the task of setting up the Latin American Library Fund in order to offer access to documentary output in this Region and consequently become more aware of the problems and solutions of each country. The INFOBILA Project was presented during the II Colloquium on Library Automation held in Mexico City in 1986. However, its formal presentation to the professional field took place during the XVII Mexican Librarianship Meetings held this same year in the town of Puebla. This Project is financed by several institutions, including the International Federation of Library Associations and Institutions (IFLA) through the Section for Latin America and the Caribbean (LAC) and its Program for the Advancement of Librarianship (ALP), the National Council for Science and Technology (CONACyT) and the Organization of American States (OAS). Its purpose is to disseminate specialized literature in this field, as well as experiences, problems and solutions found by colleagues in other countries in the Region on the topics of librarianship, archives, information science and other related topics, found in the permanent collections of information units in the cooperating countries in Latin America and the Caribbean. Currently containing 11,686 records, the INFOBILA data-base also offers information on librarianship by Latin American authors who publish in their countries of origin or abroad, as well as by foreign authors who publish information on any country in Latin America and the Caribbean, or authors from this region or foreigners who work with translations, compilations, adaptations and collaborations on librarianship documents related to the Region.[11]
7. PROBLEMS WITH GREY LITERATURE

In order to make it clear that not everything is a bed of roses, it is important before concluding to place on record some of the difficulties that may be found in dealing with Grey Literature.

It is hard to find, identify and access, and frequently is unknown to precisely the people for whom it would be most important.[18]

In Latin America and the Caribbean, particularly in companies but also in other institutions, one of the main difficulties encountered by Grey Literature lies in “production” as our technical staff are not used to recording their expertise or discoveries. Significant discoveries are frequently made that are implemented in the respective institutions, but are not placed on record in a way that allows other sectors in the institution or even the country to benefit. This highlights two severe problems faced by librarians in companies and industries, in terms of convincing technical experts of the importance of recording their discoveries, as well as convincing companies to develop systems preserving their corporate know-how.[6]

8. CONCLUSION

Since ancient times, men and women from a wide variety of origins have recorded their discoveries on parchment, paper and other means, as well as their knowledge, expertise, know-how, intellectual concerns, anxieties and experiences. These documents frequently do not reach the public through normal or conventional channels of disclosure. However, this formidable permanent collection contains a fundamental portion of the knowledge of humankind, and is expanding every day at a spectacular pace thanks to modern communications media. However, this was long rated by many people as a secondary topic.

As I hope this paper has shown, Grey Literature is far from being a secondary topic, as many people once thought and some still believe. In fact, it is of vital importance in the economic and social development process of a country or a region, and this importance is becoming more widely acknowledged. In fact, it is just as important – if not more – than knowledge that is published commercially, as each supplements the other.

A strategic resource that is vital for economic and social development, information joins land, labor and capital as a core production factor. Grey Literature is a means of disseminating information, knowledge and expertise, providing support for research processes and offering information that is not found in more conventional sources, fostering the social and economic development of nations and moving steadily towards the Knowledge Society.

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