



City Research Online

City, University of London Institutional Repository

Citation: Moore, C. & Robinson, L. (2017). The Monty Hyams Archive: a new resource for the information history of the late 20th century. *Journal of Documentation*, 73(2), pp. 357-367. doi: 10.1108/jd-10-2016-0127

This is the accepted version of the paper.

This version of the publication may differ from the final published version.

Permanent repository link: <https://openaccess.city.ac.uk/id/eprint/15991/>

Link to published version: <https://doi.org/10.1108/jd-10-2016-0127>

Copyright: City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

Reuse: Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

The Monty Hyams Archive: a new resource for the information history of the late 20th century

**Caitlin Moore and Lyn Robinson
Centre for Information Science
City, University of London**

Abstract

Purpose

This paper reports a new resource for the study of the history of the development of information science and information services in the late twentieth century. The Monty Hyams Archives includes documents relating to the career of Montagu Hyams (1918-2013), the founder of Derwent Publications, and an innovator in patents information, chemical and pharmaceutical information, and online information access. The Archive is housed in the Department of Library and Information Science at City, University of London.

Approach

The origins and development of the archive are described, and its value examined by an initial analysis of the light it sheds on the development of Derwent's World Patent Index.

Findings

The newly-established Hyams Archive allows analysis of previously private and unseen documents, which reveal the fascinating and complex personalities, issues and negotiations which led to the establishment of some of the most significant information sources and access methods of the pre-Internet information environment.

Originality and value

The Monty Hyams archive is a new and unique resource for the study of the development of the scientific information environment in the last decades of the twentieth century.

Introduction

This paper gives an introduction to the Monty Hyams Archive, a newly available resource for the history of the information industry in the late twentieth century.

The archive includes the personal papers, and ancillary material of the late Montagu (Monty) Hyams (1918-2013), a leading British information scientist of the time, and an innovator in patents information and in online searching. The archive was created by the Hyams estate, particularly his sons Peter and Stephen Hyams, and presented to the Department of Library and Information Science at City, University of London. An initial analysis and organisation of the archive was carried out as a Masters dissertation project by one of us [CM]. This paper gives an outline of the contents of the archive, and an example of the value of material therein; a more detailed account is given by Moore (2015). Background information on Monty Hyams is given in Poynder (2000) and Hyams (2013), and in a website maintained by the Hyams estate at <http://www.montyhyams.info>.

Monty Hyams and Derwent Publications

In 1947, Monty Hyams was hired by the Pyrene Company as a research chemist and would later take on the role of Patents Manager. Working for the company, he made frequent trips to London to visit the British Patent Office where he would create abstracts for patents pertinent to chemical information. This resulted in the earliest product developed by Monty Hyams, the weekly bulletin 'British Chemical Patents Report' which began publication in 1948. Derwent Publications Ltd. (originally known as Derwent Information Service) began as a modest abstracting and indexing service. Initially operating out of Hyams' house, the name of which gave its name to the company, Derwent grew into a giant of patent information, also offering information services for pharmaceuticals (Bawden and Devon 1980) and for chemical reactions (Finch 1986).

Over several decades, Derwent maintained a central patents database, used to create a changing portfolio of specialist services, often with deep and specialised indexing; in particular, the various sections of their Central Patents Index, such as Farmdoc for pharmaceutical material, AgDoc for agriculture, and Plasdoc for plastics. All of these were later subsumed in Derwent's World Patents Index, the origins of which are discussed below.

The patent information services offered by Derwent Publications Ltd. were produced with the concept of patent families at their core. One of Monty Hyams' greatest achievements was as the first developer of patent families (Martinez, 2010, p.6). The European Patent Office (n.d.) defines a patent family as:

"a set of either patent applications or publications taken in multiple countries to protect a single invention by a common inventor(s) and then patented in more than one country. A first application is made in one country – the priority – and is then extended to other offices."

The first application described would usually be the 'basic' patent around which a patent family is formed. Subsequently, 'equivalents' are filed in various other countries by the same patentee.

Derwent's unique formation of Derwent patent families within the World Patents Index, qualify it as a creator of artificial patent families. WIPO defines an artificial patent family (World Intellectual Property Organization, 2013, p. 8.1.18) as:

“a patent family consisting of a collection of equivalent patent documents (i.e., documents relating to the same invention) published by different offices and at least some of which do not share a common originating application or applications (or where data relating to such a common originating application is not disclosed). The members of this type of family are determined only after intellectual investigation to have essentially the same disclosed content.”

The key term here is “intellectual investigation”. The focus on intellectual analysis and indexing of patent documents to identify the most significant aspects for subsequent retrieval was something which set Derwent apart from many of its competitors, from its beginnings.

There has been little published on the history of Derwent or its founder. Suhr (2004), Simmons (2004), and Lambert (2008) have all given particular mention to Derwent as part of the discussion of the history of patent information services, and snapshots of its activities have been given by *inter alia* Kaback (1977, 1980), Dixon and Oppenheim (1982), Oppenheim (1982), Marmor (1983), Hyams (1987) and Lynch and Downs (1991). Overall, little critical analysis has been done on Derwent’s history, and the development of its services in relation to information science history; the Hyams Archive should be a significant asset in promoting such analysis.

The Hyams archive

Definitions of archives are viewed by Williams (2014, pp.12-17) as falling into one of two categories: exclusive and inclusive. As the terms suggest, exclusive definitions provide a stringent set of criteria for the assurance of authenticity, reliability, and auditability of the information held within the documents. Alternatively, an inclusive archives definition (largely supported by professional organisations) places emphasis on the massive and varied collections of information and data accumulated by organisations according to their operational needs.

One of the classic definitions of an archive is derived from Jenkinson’s work *A Manual of Archive Administration*. In the text, he defines documents suitable for inclusion within an archive as such:

“A document which may be said to belong to the class of Archives is one which was drawn up or used in the course of an administrative or executive transaction (whether public or private) of which itself formed a part; and subsequently preserved in their own custody for their own information by the person or persons responsible for that transaction and their legitimate successors.” (Jenkinson, 1937, p.11)

This definitive exclusive definition shaped much of professional archival work for most of the early 20th century. The problem with this definition is the extreme stress placed upon

custodianship. Only documents which related directly to the individual or individuals concerned were considered for inclusion. While this definition might be applicable to much of the Monty Hyams Archive's contents, future additions to the collection would not be welcome as they would not directly related to Hyams' own formation and preservation of the documents.

Schellenberg (1956, p.14) also questions the applicability of Jenkinson's definition to modern archival documents as the construction of archives now involved the addition of relationally complex documents. Tracing the custodial history of documents prior to their inclusion in a modern archive can be difficult. Thus, Schelleberg proposes his own definition:

"Those records of any public or private institute which are adjudged worthy of permanent preservation for reference and research purposes and which have been deposited or have been selected for deposit in an archival institution."
(Schellenberg, 1956, p.16)

Schellenberg pronounces the line of custody as emphasised by Jenkinson to be less crucial to their rightful inclusion in a collection. Additionally, he expands the understanding that documents relating to the scope of an archive can be added based on their research potential and perhaps not by their direct links to the main creator of the archive's original contents.

Regarding international bodies, the International Council on Archives (ICA) (n.d.) proposes a brief but very comprehensive definition of archives which defined archives as a collection of documents made, received, and preserved by an organisation or individual. The Society of American Archivists (SAA) affords a definition encompassing the role and contents of this archive (Pearce-Moses, 2005, p.30), which is comparable to the aforementioned ICA explanation and was later incorporated into the ISO 16175-1:2010 standard:

"Materials created or received by a person, family, or organization, public or private, in the conduct of their affairs and preserved because of the enduring value contained in the information they contain or as evidence of the functions and responsibilities of their creator, especially those materials maintained using the principles of provenance, original order, and collective control; permanent records."

This inclusive and broad definition informs the concept of archives for a number of organisations including The National Archives (2013, p.1) in the UK, and has been adopted as that governing the understanding of the Hyams Archive. The noting of 'evidential material' in the definition opens the Archive to additions from organisations and individuals which were significant either to the life of Monty Hyams or to the history and operations at Derwent Publications Ltd.; indeed, a small amount of such material has already been added to the Archive, including materials generously sent by the Chemical Heritage Foundation. The archive as originally presented comprised 941 discrete items which could be described at item level, though many of these, such as reports of subscriber meetings, are composed of multiple individual documents.

There was little need for rearrangement of the materials of the archives as they were provided, by the Hyams estate, in a logical sequence, and hence meet the requirements for original order, as defined, for example, by the Society of American Archivists (Pearce-Moses, 2005, pp. 280-281), as following the organisation and arrangement imposed by the owner of the documents. The need therefore was for the examination and documentation of the archive contents, and for the creation and application of a coding system. This was carried out according to the second edition of the general International Standard for Archival Description (ISAD(G)) (International Council on Archives, 2000) the most frequently used archival standard in the UK as evidenced by The National Archive's *Framework of standards* (2012) and the Archives Hub (n.d). Most of the details required are clear. The uniquely identifying reference code is up to interpretation to some extent however. However, any reference code assigned should at the minimum possess the following information:

- the country code in accordance with the latest version of ISO 3166 Codes for the representation of names of countries;
- the repository code in accordance with the national repository code standard or other unique location identifier;
- a specific local reference code, control number, or other unique identifier.

With these guidelines in mind, the subsequent reference code was assigned to the Monty Hyams Archive as a whole: GB 2107 MYHS. GB is the country code for all archives housed in the UK. 2107 is the unique code given to the collections at City, University of London. MYHS is the distinctive code provided for The Monty Hyams Archive, employing the first and last letter of its namesake's forename and surname.

In the archives of City, University of London, within which it is intended that the archive will ultimately be stored, each collection is considered a subfond/series. For consistency, therefore, the Hyams Archive is considered a series and any sections within are considered subseries. The first number in any reference code denotes the subseries. The following are the subseries (along with their reference codes) which currently comprise the Archive:

- Correspondence as GB 2107 MYHS/1
- Subscriber Meeting Reports GB 2107 MYHS/2
- Talks and Brochures GB 2107 MYHS/3
- Instruction Manuals GB 2107 MYHS/4

Beyond the subseries number attached, any subsequent numbers (separated by a forward slash) indicate the file level. Any additional forward slashes and numbers are reference codes for item level descriptions. However, not all of the subseries listed required this level of reference code detail. For instance, all subseries other than correspondence have only two numbers attached.

The application of ISAD(G) guidelines for archival arrangement and description resulted in the creation of the following key information for each document:

- Reference code(s)
- Title
- Date(s)
- Level of description

- Extent and medium of the unit of description (quantity, bulk, or size)
- Name of creator(s)

These are the six most basic elements required in the standard. Due to the time limitations of the project and the relatively small number of documents in the archive, only these most vital elements were provided, despite the existence of over twenty additional description fields which can be included.

The subscriber meeting reports and instruction manuals, which hold within them a variety of documents bound inside the same volume, have only been included at their item level, but their individual components should be described at length in the description section. Conversely, the individual components could be considered items themselves and the bound volumes to be files. It would be very beneficial to create records for each of the reports and coding documents within each of the reports.

The descriptions were based, apart from examination of the documents themselves, on guidance notes provided by Peter and Stephen Hyams, on the limited journal literature describing Derwent's activities in detail, and on publications by Derwent and their partners dealing with specific projects; these helped, in particular, to clarify changes the patent information environment during the timeline of the Archive. Three interviews were also conducted to gain further information in the context of the Archive's documents: with Peter and Stephen Hyams, both of whom had worked with their father, and Stephen having worked at Derwent, and could provide professional as well as personal insights; and with Professor Charles Oppenheim, an expert in patents information who was Director of Research at Derwent between 1980 and 1984.

Examples of the coding and descriptions are shown in Table 1.

Although by no means complete, the analysis and documentation of the archive has already given an indication of the value of its contents, as exemplified below.

Insights from the archive

During the descriptive process, a variety of major themes stood out, with two being particularly prominent. The first is the documentation of the complex negotiations and planning leading up to the development of Derwent's World Patents Index. The second is the story of the changing technical and intellectual tools used for the storage and dissemination of Derwent patent information: index cards, punch cards, magnetic tape, microforms, online services, CD-ROMS, subject and substance classifications, and chemical fragment codes. In this paper, we outline the first of these, the WPI story; for fuller details of this, and for an account of other themes, see Moore (2015).

Development of the World Patents Index

The introduction of Derwent's World Patents Index (DWPI or WPI) marked a significant shift in patent information coverage for Derwent Publications Ltd. and access to patent information around the world. Material in the Hyams Archive sheds new light on its development. Through inspection of Hyams' autobiographical draft of the relations between himself and Bureaux Internationaux Réunis pour la Protection de la Propriété (BIRPI), later to

become the World Intellectual Property Organization (WIPO), the Institut International des Brevets (IIB), the Leasco Systems and Research Corporation, the International Patent Documentation Centre (INPADOC), and the Thomson Organisation, latterly the owners of Derwent, the complexities of the beginning of the service become apparent.

Correspondence within the Archive begins in 1965 with letters to and from Monty Hyams. The first attempts at developing a World Patents Index arise in the correspondence between Derwent Publications Limited, IIB, and BIRPI. In a memoir draft, Hyams (n.d., p.1), illustrates the importance of one committee, the Committee for International Corporation among Examining Patent Offices (ICIREPAT), in the formation of BIRPI interest in a world index of patents. ICIREPAT encouraged BIRPI to investigate possible interest in such an index, and this resulted in the distribution of a key pamphlet, the BIRPI/IIB "Plan for a 'World Patent Index'" published and distributed in late 1965 and early 1966. The purpose of the international service proposed would be: to identify all those which are based on the same priority, claimed under the Paris Convention; to indicate, in each case, when there is a reported change in the legal status (grant, cancellation, expiration, etc.); to identify all those which show the applicant, patentee, or inventor; to list those which relate to a given branch of technology; and to provide other information described in the brochure. (BIRPI and IIB, 1966, p.1)

Thus began the search for a company or institute which could advance the idea laid out. In addition to the purposes given, specific services were also noted as necessary to any World Patent Index: individual reports, current awareness service, and weekly reports (BIRPI and IIB, 1966, p.5-7). The copy of the brochure possessed by Monty Hyams is covered with his own notes, marking the importance of this publication to the creation of his own service as it is the first indication within the Archive of Hyams' interest in the development of a worldwide patent information service.

BIRPI subsequently published a progress report detailing the concerns of the international community to these proposals, with 1,134 responses from 24 countries. Intellectual property concerns also arose as it "[helped] industrial pirates to know, for any given invention, in which countries patent protection had not been sought, and whenever important patents had been abandoned or had lapsed." (Hyams, n.d. p. 2). However, these opinions did not deter Derwent's interest in the development of a World Patents Index.

In 1969, Derwent's involvement abruptly shifted to a possible cooperative agreement with Leasco for presentation to BIRPI. Archive folder GB 2107 MYHS/1/2 charts the 1969 interactions between BIRPI, Leasco Systems and Research Corporation, and Derwent. The revelation of Leasco's submission of a WPI proposal to BIRPI came through confidential correspondence between Derwent and Melvin B. Eagle, President of Leasco. Eagle signalled Leasco's intentions to include Derwent in a cooperative plan by Derwent and Leasco for a World Patents Index (Derwent Publications Ltd. and Leasco Systems and Research Corporation, 1969, p.3). Within this plan, and through Hyams' memoir, we find that Leasco was incapable of carrying out the more technical aspects of the development of a WPI, thus resulting in the cooperation efforts with Derwent. However, as noted by Hyams, much of this information was kept secret from BIRPI with Leasco requesting confidential negotiations between Derwent and their company. In a letter following Leasco's proposal, Hyams

expressed that the document seemed quite one-sided. He wrote, "my main concern appears to be that you wish to produce so many of the reports and journals in the United States, whereas we are well geared to do this ourselves more objectively over here, also I am still puzzled about the benefits which you or we would hope to derive from the BIRPI 'plan'." (Hyams, 1969a)

By August 1969, the correspondence shows Derwent's disinclination to cooperate with Leasco, and Derwent's intentions to submit their own proposal to BIRPI becomes apparent. A letter from Hyams to Arpad Bogsch, Deputy Director of BIRPI, on 20 August 1969 depicted Derwent's ability to set up a computer in Geneva for the establishment of a World Patents Index and the services it could provide (Hyams, 1969b, p.2). In conjunction with KODAK, Derwent is willing to produce microfilm reels and aperture cards with English abstracts along with complete patent specifications "of those countries in respect of which there is indication of sufficient interest." (Hyams, 1969b, p.2) Hyams (1969c) then confirmed in a letter to Bogsch on 12 September that Derwent had again entered into talks with Leasco and were prepared to offer a joint Derwent-Leasco offer to BIRPI for the formation of a World Patents Index. However, in a brief letter a few days later on 15 September, Hyams (1969d) revoked his aforementioned statement regarding a joint offer with Leasco. Hyams' position was prompted by the disinclination of Thomson, by then the owners of Derwent, to have any dealings with Robert Maxwell, at the time involved with Leasco (Hyams n.d.c.).

A letter on 29 October 1969 notes the decision by BIRPI to reject both Leasco and Derwent's proposals for a World Patents Index; perhaps not surprisingly, the letter states "many and such substantial changes of mind by Derwent" as the reason for the rejection of any proposal offered by the company (Bogsch, 1969). Derwent's true intent in this issue is revealed in a document by the company, charting the history of the World Patents Index, with the admission that "since we had only made our bid to keep Leasco out, there was no need to make a fresh bid and the matter was allowed to rest there." (Hyams, 1972, p.1).

Discussions surrounding the development of a World Patents Index resumed in November 1970 through the work of Edward Brenner, former US Commission of Patents who was now employed as a consultant (Hyams, n.d.). Hyams himself believed that Arpad Bogsch (who was now Deputy Director General of WIPO following BIRPI becoming WIPO in 1970) may have also had a hand in the renewed interest (Hyams, n.d.b).

A meeting was arranged with Arpad Bogsch in mid-November for WPI discussions to recommence. Within the Archive there exists a draft contract originally intended for an agreement between Leasco and BIRPI. Handwritten notes upon the cover state that the plan seems to have been used as a starting point for negotiations between Derwent and BIRPI. Additional notes and strikethroughs most likely from the meeting attendees (and perhaps Hyams himself) remove Leasco and insert Derwent throughout the document and make corrections and changes throughout the text. This document shows the confidential Derwent edits and progression in the contract, in particular regarding mutual obligations and development of the patent families concept.

Following the inclusion of the hand-edited Leasco-BIRPI draft contract, a more formal Derwent-BIRPI draft contract is enclosed with correspondence with Brenner (Derwent

Publications Ltd. and BIRPI, 1970). At the beginning of the document, the idea for the ‘World Patent Documentation Service’ is defined as follows:

“the production and dissemination of services involving information relating to Public Patent Documents, including without limitation, abstracts, bibliographical information, classification, microform, search systems, copies of Patent Documents, and the like which services are economically feasible at any particular point of time.”

Within this description, Derwent’s early vision for what a World Patents Index would look like is laid out. Subsequent papers in the Archive show further proposals and counter-proposals from Derwent and BIRPI/WIPO, and finally a new Derwent proposal, submitted in March 1971 through the advisement of Ed Brenner, a Derwent consultant. A February 1971 draft of the proposal includes the key addition of “Patent Data Base [sic]” to the proposal, defined as a system comprised of the following machine readable data acquired: kind of document; number of document; country publishing the document; application number; date of filing application; International Patent Classification, or in its absence a national classification; title of the invention; name(s) of the applicant(s); number(s) assigned to priority application(s); convention priority dates; priority countries. (Derwent Publications Ltd. and BIRPI/WIPO, 1971, p.4). The draft was then considered by the ‘Advisory Group on the Derwent Proposal’ in June 1971 following its establishment by WIPO. Responses and concerns by various national patent offices and international bodies were presented through documentation provided by the group, leading up to the official June meeting. The Archive illustrates much resistance to Derwent’s proposals was felt from various national patent offices, with proposals that an international body be given the task of establishing a World Patents Index as an alternative to that from a private firm. These issues were discussed at a meeting in Geneva to discuss the Patent Cooperation Treaty which had been approved on 19 June 1970. Here, Derwent offered a clearer representation of the service it planned to offer. It defined the following forms in which to offer the service: “copies of its updated master computer file; copies of updating magnetic tapes; lists as print-out, and as tape from which print-outs may be prepared and; replies to individual questions.” (WIPO, 1971, p.7).

According to a 1972 briefing to Thomson, Hyams believed the reluctance of the national patent offices to stem from the fear “that Derwent, as a private organisation might go bankrupt and therefore the service would come to an end.” (Hyams, 1972a, p.5) Hyams goes on to state the invalidity of this argument and the need to reach out to the patent offices. Archive folders GB 2107 MYHS/1/6 through GB 2107 MYHS/1/9 shows evidence of Hyams’ continued dedication to interacting with international bodies such as INPADOC and WIPO for cooperation purposes. Through a series of correspondence between INPADOC and Derwent from July through September 1972, Hyams’ efforts to interact with INPADOC are evident.

Derwent’s World Patents Index as it is known today was instituted in 1974. The answer as to how Derwent succeeded, while many other competitor proposals failed is suggested by materials in the Archive. The primary factor seems to be Derwent’s experience in providing effective patent information services; in particular, the Farmdoc system, with its specialised coverage and coding system for pharmaceutical patents, noted above.

The World Patents Index was described at length by Monty Hyams at the WIPO Moscow Symposium in 1974. Defining the service, Hyams (1974) said:

“A new service *World Patents Index* has provided since the beginning of the year computer-generated, photo-typeset weekly and quarterly indexes covering all published patents in 12 countries which, by the end of the year, will be extended to 24. Also as from the beginning of next year, World Patents Index would comprise of detailed abstracts with drawings as a follow-up to the indexes in IPC order.”

Manual searching of the printed World Patents Index was crucial to the initial launch of the service. The World Patents Index, as explained by Hyams was devised to be a compilation of weekly gazettes divided into the following four sections: P (General), Q (Mechanical), R (Electrical), and Ch (Chemical). Within each of the gazettes, six ‘sectional indexes’ would be incorporated: the Basic Patentee Index, the Equivalent Patentee Index, the Basic IPC Index, the Equivalent IPC Index, Patent Number Index, and the Priority Concordance. Initial World Patents Index computer retrieval could be conducted in a number of ways. Users could perform searches on their own computers or they could access Derwent’s file online through a California-based computer on the TYMSHARE network. Users would have terminal attached to their telephone for retrieval and printing of various information related to a specific patent such as equivalents, bibliographical information, and statistics.

Material relating to the development of the World Patents Index in the Hyams Archive presents information never before seen outside the organisations involved in the correspondence, and gives a clearer picture into both how this particular resource was developed, and more generally how the pre-Internet information world was formed.

Conclusions

That the Monty Hyams Archive is an important resource for the history of information science in the late twentieth century is shown by this initial study of the development of its patent information services. More detailed analysis, particularly focusing on subscriber meeting reports, will yield further insights. Other themes, particularly the development of information technologies for patent information and for chemical information, are also ripe for analysis.

The Monty Hyams Archive will continue to be developed, through addition of new materials, and through provision of wider access through digitisation. In the meantime, access for researchers to the printed archive materials may be obtained via the Department of Library and Information Science at City, University of London [contact Lyn Robinson at l.robinson@city.ac.uk].

Acknowledgements

We thank Peter Hyams, Stephen Hyams, and Charles Oppenheim for their generous assistance and advice.

References

- Bawden, D. and Devon,T.K. (1980) RINGDOC: the database of pharmaceutical literature, *Database*, 3(3), 29-39.
- BIRPI and IIB (1966) *Plan for "World Patent Index"*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/1/2. London: City, University of London.
- Bogsch, A. (1969) *Letter from Arpad Bogsch, Deputy Director of BIRPI, to Monty Hyams 29 October 1969*. [letter] The Monty Hyams Archive. GB 2107 MYHS/1/2/25. London: City, University of London.
- Derwent Publications Ltd. and BIRPI (1970) *Copy of draft contract between BIRPI and Derwent concerning World Patents Documentation Service*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/3/3. London: City, University of London.
- Derwent Publications Ltd. and BIRPI/WIPO (1971) *Draft of agreement between Derwent and WIPO/BIRPI*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/4/6. London: City, University of London.
- Derwent Publications Ltd. and Leasco Systems and Research Corporation (1969) *Preliminary Proposed Plan for Cooperation of Derwent and Leasco*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/2/4. London: City, University of London.
- Dixon, M.D. and Oppenheim, C. (1982) Recent developments in Derwent Publications' patent information services: a review with some predictions for the future, *World Patent Information*, 4(2), 60-65.
- European Patent Office, (n.d.) Patent families. European Patent Office. Available at: <https://www.epo.org/searching/essentials/patent-families.html> [Accessed 18 September 2016].
- Finch, A.F. (1986) The Chemical Reactions Documentation Service: ten years on, *Journal of Chemical Information and Computer Sciences*, 26(91), 17-22.
- Hyams, M. (n.d.) *Monty Hyams memoir draft*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/1/1. London: City, University of London.
- Hyams, M. (n.d.b) *Snippet of Monty Hyams memoir*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/3/1. London: City, University of London.
- Hyams, M. (n.d.c) *Relations with WIPO, 1965-70 (memoir extract)* Available at <http://montyhyams.info/Downloads/Relations%20with%20WIPO%201965-70.pdf> [Accessed 30 November 2016].

Hyams, M. (1969a) *Letter from Monty Hyams to Melvin B. Eagle, President of Leasco Information Products*, 7 May 1969. [letter] The Monty Hyams Archive. GB 2107 MYHS/1/2/5. London: City, University of London.

Hyams, M. (1969b) *Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI*, 20 August 1969. [letter] The Monty Hyams Archive. GB 2107 MYHS/1/2/7. London: City, University of London.

Hyams, M. (1969c) *Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI*, 12 September 1969. [letter] The Monty Hyams Archive. GB 2107 MYHS/1/2/11. London: City, University of London.

Hyams, M. (1969d) *Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI* 15 September 1969. [letter] The Monty Hyams Archive. GB 2107 MYHS/1/2/14. London: City, University of London.

Hyams, M. (1972) *World Patents Index: Outline and Past History of Present Position*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/3/2. London: City, University of London.

Hyams, M. (1974) *Printed version of 1974 lecture by Monty Hyams on Day 4 of Symposium held in Moscow by World Intellectual Property Organisation (WIPO)*. [document] The Monty Hyams Archive. GB 2107 MYHS/1/6/41. London: City, University of London.

Hyams, M. (1987) Information for chemists: a European viewpoint, *Aslib Proceedings*, 39(5), 169-181.

Hyams, P. (2013) Monty Hyams dies at 95. *Information Today*, 30(11), 11.

International Council on Archives, 2000. *ISAD(G): general international standard archival description*. Ottawa: International Council on Archives [pdf] Available at: [http://www.icacds.org.uk/eng/ISAD\(G\).pdf](http://www.icacds.org.uk/eng/ISAD(G).pdf), accessed 18 September 2016.

International Council on Archives, n.d. ICA Terminology Database: archives. [online] Available at: <http://www.ciscra.org/mat/mat/term/64>. Accessed 18 September 2016.

Jenkinson, H. (1937) *A manual of archive administration*. London: P. Lund, Humphries & Co. [e-book available at: <https://archive.org/details/manualofarchivea00iljenk>, accessed 18 September 2016].

Kaback, S.M. (1977) A user's experience with the Derwent patent files, *Journal of Chemical Information and Computer Sciences*, 17(3), 143-148.

Kaback, S.M. (1980) Chemical structure searching in Derwent's World Patent Index, *Journal of Chemical information and Computer Sciences*, 20(1), 1-6.

Lambert, N. (2008) Guest editorial. *World Patent Information*, 30(4), 275-276.

Lynch, M.F. and Downs, G.M. (1991) Chemical patent database systems, in Ash, J.E., Warr, W.A and Willett, P. (eds.) *Chemical Structure Systems*, Chichester: Ellis Horwood, pp. 126-153.

Marmor, A.C. (1983) What you don't know can hurt you. An inside view of Derwent - the technological information specialists, *American Patent Law Association Quarterly*, 11(1/2), 40-48.

Martinez, C., (2010) Insight into different types of patent families. *OECD Science, Technology and Industry Working Papers*, 2010/02. [pdf] Paris: OECD Publishing. Available at: <http://dx.doi.org/10.1787/5kml97dr6ptl-en> [Accessed 18 September 2016].

Moore, C. (2015) The Monty Hyams archive: a new resource in information science history, MSc dissertation, City University London.

Oppenheim, C. (1982) The past, present and future of the patents services of Derwent Publications Ltd., *Science and Technology Libraries*, 2(2), 23-32

Pearce-Moses, R. (2005) *A glossary of archival and records terminology*. [e-book] Chicago: Society of American Archivists. Available at: <http://files.archivists.org/pubs/free/SAA-Glossary-2005.pdf>. Accessed 18 September 2016.

Poynder, R. (2000) Monty Hyams: father of the patent family. *Information World Review*, issue 163, 48-49, available at <http://richardpoynder.co.uk/Monty%20Hyams.htm>, accessed 26 November 2016.

Schellenberg, T.R., 1956. *Modern archives: principles and techniques*. [pdf] Reprint 2003. Chicago: Society of American Archivists. Available at: <http://www.archivists.org/publications/epubs/ModernArchives-Schellenberg.pdf>. Accessed 18 September 2016.

Simmons, E.S. (2004) The online divide: a professional user's perspective on Derwent database development in the online era. *World Patent Information*, 26(1), 45-47.

Suhr, C. (2004) A change of paradigms: looking back to the pioneer years of patent information management (1960–1990). *World Patent Information* [e-journal] 26(1), 41-43.

The Archives Hub (n.d.) The archives hub [web site]. Available at: <http://archiveshub.ac.uk>, accessed 18 September 2016.

The National Archives (2012) *Framework of standards* [pdf]. Kew: The National Archives. Available at: <http://www.nationalarchives.gov.uk/documents/archives/framework-of-standards.pdf>, accessed 18 September 2016.

The National Archives (2013) *Archive service accreditation glossary*. [pdf] Kew: The National Archives. Available at: http://www.nationalarchives.gov.uk/documents/archives/archive-service-accreditation-glossary-june-2013_websites.pdf. Accessed 18 September 2016.

Williams, C. (2014) Records and archives: concepts, roles and definitions. In: C. Brown. 2014. *Archives and recordkeeping: Theory into practice*. London: Facet Publishing. pp.1-29.

WIPO (1971) *Two annexes with questionnaires posed by WIPO to Austria Patent Office, IIB, and Derwent in relation to the creation of a World Patent Documentation Service*.

[document] The Monty Hyams Archive. GB 2107 MYHS/1/5/12. London: City, University of London.

World Intellectual Property Organization (2013) Glossary of terms concerning industrial property information and documentation. [pdf] Geneva: WIPO. Available at: <http://www.wipo.int/export/sites/www/standards/en/pdf/08-01-01.pdf> [Accessed 18 September 2016].

Item	GB 2107 MYHS/1/2/5	Letter from Monty Hyams to Melvin B. Eagle	Monty Hyams	07 May 1969	1p.	Discusses Hyams' concerns regarding the production of publications primarily in the US when Derwent has the means to do so in the UK. Questions the benefits of following the BIRPI plan and the sufficiency of a new market from which Leasco and Derwent could profit.
Item	GB 2107 MYHS/1/2/6	Preliminary Proposed Plan for Cooperation of Derwent and Leasco	Leasco	02 May 1969	1p.	Marked for internal used by Derwent Publications Ltd. only.
Item	GB 2107 MYHS/1/2/7	Letter from Monty Hyams to Arpad Bogsch, Deputy Director of BIRPI	Monty Hyams	20 August 1969	2 pp.	With Appendix A and Appendix B attached; Application from Derwent Publications Ltd. to BIRPI for the creation of a World Patents Index (WPI); Appendix B is outline for the Central Patents Index (now known as the Chemical Patents Index) due to begin January 1970.; Implementation of the Central Patents Index, Derwent is prepared to modify it as needed and launch by January 1972 the World Patents Index
Item	GB 2107 MYHS/1/2/8	Letter from Monty Hyams to Arpad Bogsch, , Deputy Director of BIRPI, detailing GB 2107	Monty Hyams	20 August 1969	1p.	Possible cooperation with Kodak to produce microfilm reel and aperture cards in addition to abstracts in order to follow guidelines under the Patent Cooperation Treaty

		MYHS/1/2/5 contents				
Item	GB 2107 MYHS/1/2/9	Letter from G. Grant of the British Patent Office to Arpad Bogsch, , Deputy Director of BIRPI	G. Grant	21 August 1969	1p.	Encourages consideration of Hyams' last-minute proposal; Hyams has denied existence of cooperation agreements between Derwent and Leasco

Table 1