PROMOTION OF PRESERVATION AND CONSERVATION
IN GREEK LIBRARIES WITH SPECIAL REFERENCE
TO THE EDUCATION OF GREEK LIBRARIANS

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To George, Veta, Bourbon and unforgettable Irmaki
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ABSTRACT

This research concerns the promotion of preservation and conservation in Greek Libraries and the education of Greek librarians on preservation issues. Firstly the problems of the current situation are investigated. Based on a questionnaire survey, the factors which affect Greek library materials have been identified. To further substantiate the results of the questionnaire, a book collection survey was conducted. The study reveals the inadequate housing and environmental conditions of the library collections of the libraries surveyed which results from a lack of awareness concerning preventive preservation measures, lack of preservation programmes and limited conservation education, limited resources for conservation activities, the weak organisational structure and funding of Greek libraries in general. It concludes that unless the existing situation is reversed, collections will continue to deteriorate resulting in the loss of valuable components of the Greek cultural heritage.

The contents of possible preservation policy programmes and the problems of their implementation as such in the Greek library environment are described. To improve the situation the establishment of a National Preservation Committee is proposed which will aim at: a) the increase of awareness and education of both librarians and the general public through relevant courses, b) the promotion of the implementation of preservation policies, c) provision of information services,
d) promotion of communication and cooperation at local, national and international level and e) addressing national issues such as use of acid-free paper, translation and use of standards and guidelines, research projects, promotion of the creation of conservation and microfilming centres.

An improved syllabus for preservation education of library students in the existing library schools and the creation of a preservation administration course are proposed as means for future improvement of the present situation.
CONTENTS

Acknowledgements 1
Abstract 2
Contents 4
List of Tables 9
List of Graphic Presentations (Figures) 10
List of Appendices 12
List of Charts 13
List of Maps 13

PART A

Introduction 15
1. GREECE 27
1.1 Education 27
1.2 Environment 29
1.3 Economy 32
1.4 Paper Production 33
1.5 Book Production 37
1.6 Libraries 39
1.7 Library Education in Greece 59
1.8 Greek Librarians' Association 68
References 71

2. NATURE, STRUCTURE AND REASONS FOR THE DETERIORATION OF PRINTED MATERIAL. THEIR PRESERVATION AND CONSERVATION. 73
2.1 Introduction 73
2.2 Nature and Structure of Printed Material 74
2.3 Reasons for Deterioration 82
2.3.1 Internal Reasons 82
2.3.2 External Reasons 88
2.4 Preservation and Conservation 94
Reference 98

3. PRESERVATION AND CONSERVATION EDUCATION IN GREECE 100
3.1 Preservation Education 101
3.1.1 Technological Educational Institutions
Library School Departments. 101
3.1.2 University of the Ionian. Archive and
Library Studies Dept. 103
3.1.3 Libraries and Preservation Education 105
3.2 Conservation Education 105
3.2.1 Technological Educational Institution.
School of Graphic and Art Studies.
Department of Conservation of Antiquities
and Works of Art 106
3.2.2 Cultural Foundation of the National Bank 108
3.2.3 Conservation Workshop in Andros 110
3.2.4 Conservation School in Patmos 112
3.2.5 Hellenic Organisation of Small and Medium Sized Industries and Handicrafts 113
3.2.6 Private School of Conservation 114
References 116

4. IDENTIFICATION OF FACTORS AFFECTING THE GREEK LIBRARY MATERIALS. 117
4.1 Introduction 117
4.1.1 Type of Library Materials and Libraries 124
4.1.1.1 Type and Size of Printed Collections 125
4.1.2 Factors Affecting Greek Library Materials 127
4.1.2.1 Printed Material According to Publication Date 127
4.1.2.1.1 Publication Dates and Types of Libraries 127
4.1.2.2 Buildings Housing Greek Libraries 130
4.1.2.2.1 Construction Date of Surveyed Libraries 131
4.1.2.2.2 Purpose Built Constructions 132
4.1.2.2.3 Purpose Built Building According to Construction Date 134
4.1.2.2.4 Problems of Purpose Built Constructions 136
4.1.2.2.5 Problems of Non Purpose Built Constructions 136
4.1.2.3 Location of Libraries 137
4.1.2.3.1 Specific Area Location of the Libraries 138
4.1.2.4 Staff in Greek Libraries 139
4.1.2.4.1 Qualified and Unqualified staff 141
4.1.2.5 Hazards 143
4.1.2.5.1 Personal Evaluation of Potential Hazard to the Collections 143
4.1.2.5.2 Other Hazards Indicated by the Respondents 145
4.1.2.6 Bio-deterioration Factors 145
4.1.2.7 Disasters in Greece 146
References 147

5. BOOK COLLECTION SURVEY. 148
5.1 Introduction 148
5.2 Aristotelian University of Thessaloniki. Main Library 151
5.2.1 Publication Dates and Size of Collections 152
5.2.2 Places of Publication 153
5.2.3 Paper Condition 154
5.2.4 Paper Condition and Places of Publication 155
5.2.5 Mould and Pest Stains 156
5.2.6 Covering Material and Cover Condition 157
5.2.7 Other Comments 159
5.3 Public (dimotiki) Library of Thessaloniki 161
5.3.1 Results of the Survey. Closed Stacks 162
5.3.1.1 Publication Dates and Size of Collections 162
5.3.1.2 Places of Publication 163
5.3.1.3 Paper Condition 164
5.3.1.4 Paper Condition and Places of Publication 165
5.3.1.5 Mould and Pest Stains 166
5.3.1.6 Covering Material and Cover Condition 167
5.3.1.7 Other Comments 169
5.3.2 Results of the Survey. Open Stacks 170
5.3.2.1 Publication Dates, Places of Publication and Paper condition 170
5.3.2.2 Covering Material and Cover Condition 171
5.3.2.3 Other Comments 173
5.3.2.4 Total Results on the Paper Condition of the Public Library Survey 173
References 175

6. PRESERVATION AND CONSERVATION SITUATION IN GREEK LIBRARIES 176
6.1 Activities on Preservation and Conservation 176
6.2 Reasons Hindering Preservation and Conservation Activities 177
6.3 Current Preservation Activities 183
6.4 Conservation Situation 185
6.5 Conservation & Microfilming Dept. at the Greek National Library 188
References 190
Part A. Summary and Conclusion 191

PART B

7. PRESERVATION POLICY PROGRAMMES. THE PROBLEMS OF IMPLEMENTING THEM IN GREEK LIBRARIES 206
7.1 Preservation Policy Programmes 208
7.1.1 Evaluation of Preservation and Conservation Needs 208
7.1.2 Preventive Measures 210
7.1.2.1 Disaster and Security Plans 212
7.1.2.2 Staff and User Education 213
7.1.3 Collection Management and Development 214
7.1.4 Cooperation 215
7.1.5 Conservation Treatments and Procedures 216
7.1.5.1 Preservation of the Artefact. Conservation Treatments 218
7.1.5.2 Preservation of Intellectual Content. Substitution 222
7.2 Preservation Manager: Duties and Required Qualifications 225
7.3 Preservation Policy Programmes in Greek Libraries: the Problems 227
References 237

8. NATIONAL PRESERVATION COMMITTEE 239
8.1 Establishment, Aims, Priorities and Structure 240
8.1.1 Promotion and Increase of Awareness 246
8.1.2 Education 253
8.1.3 Promotion of Implementation of Preservation Policies 262
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1.4 Information and Consultancy Services</td>
<td>262</td>
</tr>
<tr>
<td>8.1.5 Communication/Cooperation</td>
<td>266</td>
</tr>
<tr>
<td>8.1.6 National Issues</td>
<td>268</td>
</tr>
<tr>
<td>8.1.7 Economics and Location of the National Preservation Committee</td>
<td>273</td>
</tr>
<tr>
<td>References</td>
<td>277</td>
</tr>
<tr>
<td>9. PRESERVATION POLICY PROGRAMMES FOR GREEK LIBRARIES. THEIR IMPLEMENTATION AND INTEGRATION</td>
<td>278</td>
</tr>
<tr>
<td>9.1 Preservation Policy Programmes for Greek Libraries</td>
<td>278</td>
</tr>
<tr>
<td>9.1.1 Evaluation of Preservation and Conservation Needs</td>
<td>278</td>
</tr>
<tr>
<td>9.1.2 Preventive Measures</td>
<td>282</td>
</tr>
<tr>
<td>9.1.3 Disaster and Security Plans</td>
<td>287</td>
</tr>
<tr>
<td>9.1.4 Staff and User Education</td>
<td>291</td>
</tr>
<tr>
<td>9.1.5 Collection Development and Management</td>
<td>292</td>
</tr>
<tr>
<td>9.1.6 Communication and Cooperation</td>
<td>293</td>
</tr>
<tr>
<td>9.1.7 Conservation Treatment in Greek Libraries</td>
<td>294</td>
</tr>
<tr>
<td>9.1.7.1 Conservation Service Options</td>
<td>294</td>
</tr>
<tr>
<td>9.1.7.2 Substitution Service Options</td>
<td>295</td>
</tr>
<tr>
<td>9.1.7.3 Considerations for Conservation and Substitution Services</td>
<td>296</td>
</tr>
<tr>
<td>9.2 Implementation and Integration of the Preservation Policy Programmes in Greek Libraries</td>
<td>301</td>
</tr>
<tr>
<td>9.2.1 Options for Planning the Preservation Programmes</td>
<td>301</td>
</tr>
<tr>
<td>9.3 Preservation Managers in Greek Libraries</td>
<td>308</td>
</tr>
<tr>
<td>9.4 Preservation’s Position in the Libraries’ Organisation</td>
<td>310</td>
</tr>
<tr>
<td>9.5 Integration of Preservation Programmes</td>
<td>312</td>
</tr>
<tr>
<td>References</td>
<td>315</td>
</tr>
<tr>
<td>10. CONSERVATION AND MICROFILMING CENTRES IN GREECE</td>
<td>317</td>
</tr>
<tr>
<td>10.1 Establishment of the Conservation and Microfilming Centres</td>
<td>318</td>
</tr>
<tr>
<td>10.2 Financial Support</td>
<td>319</td>
</tr>
<tr>
<td>10.3 Cooperation and Coordination of Conservation and Microfilming Centres</td>
<td>320</td>
</tr>
<tr>
<td>10.4 Considerations for Conservation and Microfilming Centres</td>
<td>320</td>
</tr>
<tr>
<td>10.5 Mass Conservation Treatment in Greece</td>
<td>325</td>
</tr>
<tr>
<td>10.5.1 Mass Conservation Assessment Group</td>
<td>326</td>
</tr>
<tr>
<td>References</td>
<td>327</td>
</tr>
</tbody>
</table>
11. PRESERVATION EDUCATION IN GREECE: A PROPOSAL

11.1 Preservation Education at the TEI Library School Departments

11.2 Preservation Education at the Archive and Library Dept. of the University of the Ionian

11.3 Post-graduate Course in Preservation Management

References

Part B. Summary
Recommendations
Appendices
Selected Bibliography
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Illiteracy in Greece</td>
<td>28</td>
</tr>
<tr>
<td>1.3</td>
<td>Structure of Gross Domestic Product</td>
<td>32</td>
</tr>
<tr>
<td>1.4.1</td>
<td>Total Papers and Boards</td>
<td>33</td>
</tr>
<tr>
<td>1.4.2</td>
<td>Total Graphic Papers and Boards</td>
<td>33</td>
</tr>
<tr>
<td>1.4.3</td>
<td>Mechanical Woodpulp for Paper and Board Manufacturing</td>
<td>33</td>
</tr>
<tr>
<td>1.4.4</td>
<td>Woodpulp for Paper and Board Manufacturing</td>
<td>33</td>
</tr>
<tr>
<td>1.4.5</td>
<td>Uncoated Printing, Writing Paper, Board</td>
<td>34</td>
</tr>
<tr>
<td>1.4.6</td>
<td>Coated Printing, Writing paper, Board</td>
<td>34</td>
</tr>
<tr>
<td>1.4.7</td>
<td>Other Print &amp; Writing Paper</td>
<td>34</td>
</tr>
<tr>
<td>1.4.8</td>
<td>pH of Imported Printing Paper</td>
<td>36</td>
</tr>
<tr>
<td>1.5.1</td>
<td>Book Production 1987-1991</td>
<td>37</td>
</tr>
<tr>
<td>1.5.2</td>
<td>Importation and Exportation of Books and Pamphlets: 1980, 1985,1990</td>
<td>38</td>
</tr>
<tr>
<td>1.6</td>
<td>Greek Libraries</td>
<td>39</td>
</tr>
<tr>
<td>1.6.1</td>
<td>Size of Collections at the Greek National Library</td>
<td>42</td>
</tr>
<tr>
<td>1.6.1.1</td>
<td>Acquisitions by the Greek National Library: 1986-89</td>
<td>43</td>
</tr>
<tr>
<td>1.6.1.2</td>
<td>Additions to the Greek National Library: 1987-89</td>
<td>43</td>
</tr>
<tr>
<td>1.6.1.3</td>
<td>Greek National Library: Staff and their Educational Level</td>
<td>45</td>
</tr>
<tr>
<td>1.6.1.4</td>
<td>Greek National Library: Staff Distribution According to Specialty</td>
<td>46</td>
</tr>
<tr>
<td>1.6.2</td>
<td>Greek Universities</td>
<td>49</td>
</tr>
<tr>
<td>1.6.2.1</td>
<td>Greek Colleges of University Level Standing</td>
<td>50</td>
</tr>
<tr>
<td>1.6.2.2</td>
<td>Greek University Libraries: Size of the Collections</td>
<td>51</td>
</tr>
<tr>
<td>2.1</td>
<td>pH Scale</td>
<td>85</td>
</tr>
<tr>
<td>3.1</td>
<td>Cultural Foundation of the National Bank: Paper and Fine Art Conservation</td>
<td>110</td>
</tr>
<tr>
<td>3.1.1</td>
<td>Cultural Foundation of the National Bank: Binding Graduates</td>
<td>110</td>
</tr>
<tr>
<td>4.1</td>
<td>Number and Type of Libraries Surveyed</td>
<td>121</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Type of Libraries and No. of Responses</td>
<td>122</td>
</tr>
<tr>
<td>4.2</td>
<td>Type of Library and Type of Material</td>
<td>124</td>
</tr>
<tr>
<td>4.3</td>
<td>Total Number of Staff According to Type of Library</td>
<td>140</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Greek Libraries: Qualified &amp; Unqualified Staff</td>
<td>142</td>
</tr>
<tr>
<td>Figure</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1.1</td>
<td>Greece. Average Seasonal Temperature 1987-1990</td>
<td>29</td>
</tr>
<tr>
<td>1.2</td>
<td>Greece. Average Seasonal R. Humidity 1987-1990</td>
<td>30</td>
</tr>
<tr>
<td>1.3</td>
<td>University of the Ionian. Archive &amp; Library Studies Dept. % Distribution of Core Subjects</td>
<td>66</td>
</tr>
<tr>
<td>1.4</td>
<td>University of the Ionian. Archive &amp; Library Studies Dept. % Distribution of Subjects</td>
<td>67</td>
</tr>
<tr>
<td>4.1</td>
<td>Greek Libraries. Printed Collections. Books</td>
<td>125</td>
</tr>
<tr>
<td>4.2</td>
<td>Greek Libraries. MSS Collections</td>
<td>126</td>
</tr>
<tr>
<td>4.3</td>
<td>Greek Libraries. Publication Dates of Holdings (books)</td>
<td>128</td>
</tr>
<tr>
<td>4.4</td>
<td>Greek Libraries. Date of Establishment</td>
<td>129</td>
</tr>
<tr>
<td>4.5</td>
<td>Greek Libraries. Publication Dates of Holdings by Type of Libraries</td>
<td>130</td>
</tr>
<tr>
<td>4.6</td>
<td>Greek Libraries. Construction Dates</td>
<td>132</td>
</tr>
<tr>
<td>4.7</td>
<td>Greek Libraries. Purpose Built Buildings</td>
<td>133</td>
</tr>
<tr>
<td>4.8</td>
<td>Greek Libraries. Purpose Built Buildings According to Type of Libraries</td>
<td>134</td>
</tr>
<tr>
<td>4.9</td>
<td>Greek Libraries. Purpose Built Buildings According to Construction Date</td>
<td>135</td>
</tr>
<tr>
<td>4.10</td>
<td>Greek Libraries. General Area Location</td>
<td>137</td>
</tr>
<tr>
<td>4.11</td>
<td>Greek Libraries. Total No. of Staff</td>
<td>139</td>
</tr>
<tr>
<td>4.12</td>
<td>Greek Libraries. Qualified and Unqualified Staff (1)</td>
<td>141</td>
</tr>
<tr>
<td>4.13</td>
<td>Greek Libraries. Qualified and Unqualified Staff (2)</td>
<td>142</td>
</tr>
<tr>
<td>4.14</td>
<td>Greek Libraries. Hazards' Evaluation</td>
<td>144</td>
</tr>
<tr>
<td>5.1</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Publication Dates &amp; Size of Collection</td>
<td>152</td>
</tr>
<tr>
<td>5.2</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Major Places of Publication</td>
<td>153</td>
</tr>
<tr>
<td>5.3</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Paper Condition</td>
<td>154</td>
</tr>
<tr>
<td>5.4</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Paper Condition &amp; Places of Publication</td>
<td>155</td>
</tr>
<tr>
<td>5.5</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Mould Stains</td>
<td>156</td>
</tr>
<tr>
<td>5.6</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Pest Stains</td>
<td>157</td>
</tr>
<tr>
<td>5.7</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Covering Material &amp; Publication Dates</td>
<td>158</td>
</tr>
<tr>
<td>5.8</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Cover Condition</td>
<td>158</td>
</tr>
<tr>
<td>5.9</td>
<td>Aristotelian University of Thessaloniki. Book Survey. Other Comments and Paper Condition</td>
<td>160</td>
</tr>
</tbody>
</table>
5.12 Public Library of Thessaloniki. Book Survey.
Closed Stacks. Paper Condition by Publication Date 164

Closed Stacks. Paper Condition by Places of Publication 165

Closed Stacks. Mould Stains 166

5.15 Public Library of Thessaloniki. Book Survey.
Closed Stacks. Pest Stains 167

5.16 Public Library of Thessaloniki. Book Survey.
Closed Stacks. Covering Material by Publication Date 168

5.17 Public Library of Thessaloniki. Book Survey.
Closed Stacks. Cover Condition 168

5.18 Public Library of Thessaloniki. Book Survey.
Closed Stacks. Other Comments by Paper Condition 169

Open Stacks. Publication Dates 170

5.20 Public Library of Thessaloniki. Book Survey.
Open Stacks. Paper Condition by Publication Date 171

5.21 Public Library of Thessaloniki. Book Survey.
Open Stacks. Covering Material 172

5.22 Public Library of Thessaloniki. Book Survey.
Open Stacks. Cover Condition 172

5.23 Public Library of Thessaloniki. Book Survey.
Open and Closed Stacks. Paper Condition by Publication Date 174

6.1 Greek Libraries. Preservation and Conservation Activities 176

6.2 Greek Libraries. Reasons Hindering PAC Activities 178

6.3 Greek Libraries. Staff by Users 180

6.4 Greek Libraries. Staff by Size of Collections 180

App. N.1 Greek Library Buildings. Future Plans 406
App. N.2 Greek Library Buildings. Future Plans by Type of Libraries 407
App. N.3 Greek Library Buildings. Future Plans: Indications 408
## LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Seasonal Temperature and Relative Humidity 1987-1990</td>
<td>365</td>
</tr>
<tr>
<td>B</td>
<td>Publishers' Questionnaire</td>
<td>370</td>
</tr>
<tr>
<td>C</td>
<td>Technological Educational Institution. Library School Curriculum</td>
<td>371</td>
</tr>
<tr>
<td>C2</td>
<td>KATEE Library School Curriculum 1977-1981</td>
<td>375</td>
</tr>
<tr>
<td>D</td>
<td>Recommended Bibliography for the Education of Preservation at the Archive and Library Studies Dept. of the University of the Ionian.</td>
<td>376</td>
</tr>
<tr>
<td>E</td>
<td>Questionnaire No. 1</td>
<td>378</td>
</tr>
<tr>
<td>E1</td>
<td>Questionnaire No. 2</td>
<td>380</td>
</tr>
<tr>
<td>F</td>
<td>Type and Size of A/V Collections in the Surveyed Libraries</td>
<td>383</td>
</tr>
<tr>
<td>G</td>
<td>Approximate Size of Collection According to Date-groups and Types of Libraries</td>
<td>385</td>
</tr>
<tr>
<td>H</td>
<td>Area Location with One Responding Library</td>
<td>387</td>
</tr>
<tr>
<td>I</td>
<td>University and Public Library Collection Condition Survey Form</td>
<td>388</td>
</tr>
<tr>
<td>I1</td>
<td>Explanatory Notes for Codes Used in the Survey Form</td>
<td>389</td>
</tr>
<tr>
<td>I2</td>
<td>Aristotelian University of Thessaloniki. Main Library. Publication Dates.</td>
<td>390</td>
</tr>
<tr>
<td>I3</td>
<td>Aristotelian University of Thessaloniki. Main Library. Places of Publication</td>
<td>391</td>
</tr>
<tr>
<td>I4</td>
<td>Aristotelian University of Thessaloniki. Main Library. Paper Condition</td>
<td>392</td>
</tr>
<tr>
<td>I5</td>
<td>Aristotelian University of Thessaloniki. Main Library. Mould Stains</td>
<td>393</td>
</tr>
<tr>
<td>I6</td>
<td>Aristotelian University of Thessaloniki. Main Library. Pest Stains</td>
<td>394</td>
</tr>
<tr>
<td>I7</td>
<td>Public Library of Thessaloniki (dimotiki). Closed Stacks. Publication Dates.</td>
<td>395</td>
</tr>
<tr>
<td>I8</td>
<td>Public Library of Thessaloniki (dimotiki). Closed Stacks. Places of Publication</td>
<td>395</td>
</tr>
<tr>
<td>I9</td>
<td>Public Library of Thessaloniki (dimotiki). Closed Stacks. Paper Condition</td>
<td>396</td>
</tr>
<tr>
<td>I10</td>
<td>Public Library of Thessaloniki (dimotiki). Closed Stacks. Mould Stains</td>
<td>397</td>
</tr>
<tr>
<td>I11</td>
<td>Public Library of Thessaloniki (dimotiki). Closed Stacks. Pest Stains</td>
<td>398</td>
</tr>
<tr>
<td>J</td>
<td>Model of Preservation Options</td>
<td>399</td>
</tr>
<tr>
<td>K</td>
<td>Public Library of Thessaloniki (dimotiki). Organisation Chart</td>
<td>400</td>
</tr>
<tr>
<td>L</td>
<td>Regions of Greece</td>
<td>401</td>
</tr>
<tr>
<td>M</td>
<td>Basic Selected List of Titles for Translation</td>
<td>402</td>
</tr>
<tr>
<td>N</td>
<td>Future Plans for Library Buildings</td>
<td>406</td>
</tr>
<tr>
<td>O</td>
<td>Specimen Layouts for Conservation and Microfilming Facilities. Conservation Facilities.</td>
<td>409</td>
</tr>
<tr>
<td>O1</td>
<td>Specimen Layouts for Conservation and Microfilming Facilities. Microfilming Facilities.</td>
<td>412</td>
</tr>
</tbody>
</table>
LIST OF CHARTS

Chart | Page
--- | ---
1.1 Greek National Library (GNL). Organisation Chart | 41
8.1 National Preservation Committee: Structure | 245
App. K Public Library of Thessaloniki (dimotiki) Organisation Chart | 400

LIST OF MAPS

Map | Page
--- | ---
4.1 Specific Area Location of the Libraries | 138
App. H Area Location with One Responding Library | 387
App. L Regions of Greece | 401
INTRODUCTION

Greece is a country which is known best for its ancient history and classical authors as for example Plato, Euripides, Sophocles. The great empire created under Alexander the Great, has through the centuries, been reduced to a small country on the Balkan Peninsula. People are reminded every four years of the origins of the Olympic games and of course there are the remains of that era especially the Parthenon in Athens, Phaestos in Crete, Delphi, Dion and Vergina in Macedonia which are now main tourist attractions. Their preservation and conservation have made it possible for them to stand where they were first erected and still be a "live" part of the Greek cultural heritage.

The state having recognised the historic and cultural value of both ancient remains and buildings which represent various periods from an architectural point of view has established bodies within ministries (Ministry of Cultural Affairs and Ministry of Environment, Planning and Public Works) the main concern of which is to keep them in the best possible condition. There are seven Advisory Committees around the country for the Preservation and Conservation of Classical and Historic buildings which either undertake the restoration of the buildings themselves or supervise works being undertaken by the owners of buildings which have been classified as "preservable".

Greek history however, is not only concerned with that period
and certainly not only these archaeological remains and architectural structures. Historical, social and political events and achievements in various fields have been recorded on paper and these too are part of the cultural heritage of the country and its people. Unlike the ancient remains these records which are equally or even more vulnerable have not been preserved as they ought to. They are kept in libraries and archives throughout the country in conditions which are far from the desirable or unacceptable. It is common knowledge amongst Greeks that rare manuscripts and books disappear from libraries and are found being sold in auctions. As most of the older and occasionally very rare material is not recorded it can not be proved that they came from a specific institution. Occasionally the buyer is the institution or establishment itself from where the item(s) disappeared. In many cases however, the bidder is an individual and possibly a foreign one and this of course means that the item is taken out of the country. The above example could well be attributed to loose security measures, an issue related to the preservation of library material.

During my employment at the Technological Educational Institution of the Thessaloniki Library School (1988/89 to 1990/91) I realised that preservation was absent from the curriculum. Bearing in mind incidents like the above and having visited libraries as part of other activities by the Library School and from discussions with colleagues from various libraries my impression that preservation was not part
of Greek libraries' operations was slowly strengthened. The preservation knowledge acquired during my library studies abroad and the image of the state of materials in the libraries visited led to the topic of this thesis.

The original thought that preservation and conservation were totally absent from the Greek libraries had to be established by facts and the reasons for their absence explained. To achieve that, my principal objective was to identify the main factors that have led to the deterioration of materials held in Greek libraries not only in terms of physical causes but also in terms of existing organisational, administrative and educational conditions; to discover whether any preservation and/or conservation activities were being employed, and to ascertain the librarians' own perceptions of their conservation needs and activities.

Although no research had been done in relation to the reasons of deterioration in Greek libraries the factors which affected material worldwide were undoubtedly affecting material in Greek library collections.

In order to establish that the globally known internal and external reasons that lead to the materials' deterioration were also a factor in Greek libraries certain relevant information had to be acquired. Therefore, the data collected and analysed related to the Greek climate and its effect on library collections in relation to the libraries' location, the nature of paper produced in Greece and the nature of
imported paper used by Greek publishers; the nature of library buildings and the condition of stock which was examined through sample condition surveys.

These findings enabling the establishment of the existence of the problem, other aspects had to be examined, the outcome of which would provide material for the illustration of the present preservation and conservation situation in Greek libraries. These aspects included: the librarians' awareness of the materials' deterioration; whether any actions were taken to reverse the situation; the reasons through which librarians justified the non-existence of preservation and conservation activities, the nature of the existing education for conservators and that of preservation education for librarians. To complete the intended illustration of the Greek libraries' situation in relation to preservation and conservation it seemed necessary that the professional structure and attitudes were presented and analysed.

Having collected data on the existing situation and attitudes, this is then analysed as the basis for making proposals for a wide range of actions that might be taken to improve the situation.

A total number of four surveys were conducted and as the medium for retrieving the required information the distribution of questionnaires to selected libraries was chosen. The first survey was conducted in order to identify: external factors which affect library materials (as for example the
location of the libraries in relation to atmospheric pollution, increased relative humidity levels, etc. the age of the building housing the collections in relation to security offered by the building itself and "internal" environment, etc. the original purpose of the building housing the collections and the problems faced, etc.); factors which were seen by Greek librarians as harmful to Greek library material and an indication of the existence of any activities in relation to their preservation and conservation (chapter four). This same questionnaire aimed at establishing information as to the number of staff employed in each library, the approximate annual number of users and approximate size of specific date groups relating to the publication dates of the material housed in the various types of libraries surveyed. This kind of data was required so as to explain and establish the differences among the various types of libraries in Greece from what is considered to be the norm in other countries.

The second questionnaire was directed to those libraries which had indicated that they were conducting preservation and conservation activities in order to further examine these (chapter six). This questionnaire aimed at extracting data related to preservation policy aspects, (as for example the existence of a disaster plan, the existence of users' guides for proper handling of the material, the existence and description of facilities, etc.).

The first two surveys mentioned above were those which were originally thought necessary for the required information.
During the process of analysing the data received, information related to the pH level of the paper produced and used in Greek publications seemed necessary. This third survey was addressed to the publishers and paper manufacturers both in Greece and abroad (chapter one).

My employment at the Library School of the Technological Educational Institution of Thessaloniki made possible the fourth survey which was concerned with the examination of the state of collections in two libraries in the northern part of Greece (chapter five).

The thesis comprises two parts. In part A (chapters one to six) the findings of the surveys conducted are presented and analysed along with other relevant information which would enable the reader to establish an idea not only of the preservation and conservation situation in Greek libraries but of the surrounding professional structure and attitudes as well.

The first chapter bearing the heading "Greece" comprises sections the content of which aims at introducing the reader to elements which are relevant to the subject of the thesis as for example the education currently offered, the general climate and environment of the country, its economy especially in relation to paper and book production and the pH level of paper produced and imported in Greece. In this chapter the types of libraries currently existing are presented and their
present situation in terms of personnel, administration and funding are described followed by a brief general account of the publics' relation to libraries.

The library education currently offered by the two Library Schools of the Technological Educational Institutions (TEI) is described followed by a portrayal of the newly established Archive and Library Studies Dept. at the University of the Ionian. The last section of this chapter illustrates the state of the Greek Librarians' Association.

The nature and structure of printed materials, the reasons for their deterioration and a brief introduction to their preservation and conservation are the content of the second chapter.

Prior to the presentation of the results of the main survey which was concerned with the factors affecting the Greek library materials, the nature of the existing preservation education for librarians and that of the education of conservators are presented in the third chapter. Regarding the librarians' preservation education, its present absence from the official TEI Library Schools curriculum is identified. Individual attempts to introduce students to preservation and conservation aspects regardless of the official absence mentioned earlier are also described in this chapter under "Technological Educational Institutions. Library School Departments" followed by the presentation of the preservation education to be offered by the Archive and
Library Studies Dept. at the University of the Ionian.

The fact that conservation itself is considered part of preservation and the fact that the state of the Greek conservators education had to be assessed for the needs of the thesis made it essential that the nature of their education be presented as part of this chapter. "Conservation Education" therefore, describes the variety of establishments and institutions offering this specific type of education.

The findings of the survey conducted in the selected libraries in relation to the factors affecting Greek library collections is the content of the fourth chapter.

Besides the information required as to the internal and external reasons of decay, data referring to the main types of material housed in Greek libraries emerged.

The presentation of the types of library materials in relation to the various types of surveyed libraries and the size of these collections is followed by the presentation and analysis of elements necessary for the establishment of the existence of the causes of deterioration. These elements comprise data related to publication date-groups of printed material, the condition of buildings housing library collections (date of construction, original purpose, problems related to both purpose and non-purpose built constructions), specific geographical location of libraries, indication of factors seen as hazardous by the librarians themselves, biodeterioration factors and disasters. Included in this chapter is information related to the qualified and unqualified number of staff.
employed in the surveyed libraries.

The sample book collection surveys conducted in the central library of the Aristotelian University of Thessaloniki and the Public library in the same area are analysed and presented in chapter five, whereas the librarians' own perceptions of their conservation needs and activities are presented and discussed in chapter six.

Part A ends with an inclusive summary of all chapters followed by the conclusions derived from the findings which support the initial hypothesis in connection with the absence of preservation and conservation activities in Greek libraries and the reasons which have resulted in this absence.

Bearing in mind the facts which have led to the situation described in Part A as well as the present and future possibilities for altering the preservation and conservation state in Greek libraries some possible solutions to the present problems have been proposed. These solutions are presented in Part B of the thesis.

Chapter seven presents and describes desirable preservation policy programmes, their content, and the reasons why the application of each one of them is required for prolonging the useful life of library materials. The problems of implementing such programmes in Greek libraries are identified and discussed.

In the eighth chapter the establishment of a body which will
undertake the task of altering the situation is proposed, a National Preservation Committee which would aim at promoting and increasing the awareness of librarians and that of the general public, the promotion of various aspects of education as for example educational material, the inclusion of preservation education in library schools curricula and the establishment of an additional conservation department. It would play an active role in the implementation of preservation policies in Greek libraries, provide information and consultancy services, and encourage communication and cooperation and promotion of other various issues of national interest.

Chapter nine suggests some possible ways for the preservation policy programmes to be applied by Greek libraries. Chapter seven having described the content (what) and the reasons (why) the preservation policy programmes should be applied, in this chapter the means (how) and options for their application are offered which would conform with the libraries' situation. Besides the suggestions offered for the programmes themselves, ways to implement and integrate them within the various library types are proposed.

The tenth chapter discusses the establishment of Conservation and Microfilming centres in Greece for the organised treatment of library materials. The future possibility of a mass conservation (deacidification) centre is also considered.
Chapter eleven is concerned with a proposal for preservation education in Greece. It proposes introductions and changes in the present curriculum of the TEI Library schools and the Archive and Library Studies Dept. of the University of the Ionian. The establishment of a course intended for preservation managers is also proposed as part of the latter. An overall summary of the chapters comprising Part B is followed by a synopsis of the recommendations proposed for future action which could be potentially useful in developing policy.

The readers, depending on their origin and professional background, reaching the end of this thesis will probably have different feelings about its content. Non-Greeks will probably think they have read these things before. The main objective of the thesis however, besides establishing the absence of preservation and conservation activities in Greek libraries and identifying the reasons which have contributed to their absence so far, was to present viable solutions for the Greek library and economic environment to overcome these problems based on human resources of Greek origin. It would have been easy to propose that experts from abroad could come and try and solve the problems identified. Experience however has showed that these are solutions with narrow success and for a limited period of time due to organisational and administrative differences as well as differences in the Greek working environment. Foreign interventions of any kind in national issues are faced with scepticism and almost always
with the fear of attempting to patronise Greek practices.

The solutions proposed therefore were suggested bearing in mind the peculiarities of the Greek organisational, administrative and working environment. The thesis has been written aiming at a Greek audience and especially the Greek authorities, institutions, associations and people concerned with the intention to persuade them that action should be taken if the written national heritage of the country is to be preserved.
CHAPTER ONE
GREECE

The modern Greek state, the "Hellenic Republic" is located on one of the three major European peninsulas that reaches southward into the Mediterranean Sea, with a total area of 131,944 sq.km. (50,944 sq. miles) and population 10,264,156[^1] almost one third of which is concentrated in the Athens region, the capital of the country.

Greece secured its independence from Turkey in 1830. After freedom from German occupation in the 2nd World War, there was a civil conflict. From April 1967 until July 1974 the country was ruled by a military junta. Greece was declared a republic in June 1973 and this was confirmed by a referendum in December 1974. A new republican constitution was introduced in June 1975. It has been a member of Unesco and the EC since 1946 and 1981 respectively.

1.1 EDUCATION

Greece offers a free educational system which is compulsory for the first level of education-primary (duration six years) and the first part of the second level of education (duration three years) and optional for the remainder.

The three educational levels are:

1. Primary starting at the age of five.

2. Secondary level of education
   2a. gymnasion duration three years
   2b. lykio duration three years

3. Third level of education
   — Technological Educational Institutions (TEI)
   — Universities (Anotata Ekpedeftika Idrymata) (AEI)

In spite of the free educational system offered in Greece, statistics reveal that the illiterate population for 1981 and 1990 was as follows:

<table>
<thead>
<tr>
<th>Table 1.1[^2]</th>
<th>Illiteracy in Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
</tr>
<tr>
<td>1981 Total Population</td>
<td>15+</td>
</tr>
<tr>
<td>1990 Estimates</td>
<td>15+</td>
</tr>
</tbody>
</table>

1.2 ENVIRONMENT
1.2.1 CLIMATE
The Greek climate is described as Mediterranean, that is a climate which is characterised by dry summers, wet and sometimes stormy winters.

Temperature and Relative Humidity The levels of temperature and relative humidity in Greece, are typical of its climate (Figures 1.1 and 1.2), with increased levels of temperature and low levels of relative humidity in the summer and low levels of temperature and high levels of relative humidity in the winter seasons. Seasonal levels of temperature and relative humidity appear at Appendix A.

![Greece Average Seasonal Temperature 1987-1990](image)

1.2.2 ENVIRONMENTAL POLLUTION

The problem of air-pollution in Greece appeared almost immediately after the 2nd World War. The main reasons are the high rate of industrialisation, the intense urbanisation and the high rate of economic growth. The principal sources of air pollution in Greece are considered to be vehicles, industry, power stations and central heating boilers. Nowadays, the main pollution problems are in the major cities - Athens, Kozani, Thessaloniki, Kavala, Patras, Volos, Iraklio: but other cities also have pollution problems. Although seven cities have been mentioned as "main pollution problems" data is usually only available for the Athens area and not until recently for the Thessaloniki area.
**Athens area** Monitoring the air pollution was started in 1973 by measuring SO$_2$ and smoke.

In 1984 an automatic monitoring system was installed, which consisted of six stations and which measured continuously SO$_2$, CO, NO$_2$ and O$_3$. From the analysis of the data received from these stations it was estimated that the smoke levels were tending to decline; the levels of photochemical pollution (NO$_2$ and O$_3$) had increased; the levels at periphery stations were increasing as well.

For the Athens area the primary pollutants (smoke, SO$_2$ and CO) are at a maximum during the winter months (November - April), while the secondary pollutants (NO$_2$ and O$_3$) are at a maximum during the summer months (May - October).

**Thessaloniki area** A report discussing the air pollution in the Thessaloniki area was published in 1988 and it concluded that primary pollutants (smoke, SO$_2$, CO) are at a maximum during the winter months. There were no statistics for NO$_2$ and O$_3$. Population concentration in big cities, leading to the increase of the pollution sources as they have been described previously will result in higher levels of pollution.

---


⁴ K. Nikolau, Air Pollution in Thessaloniki (Thessaloniki: Thessaloniki Organization, 1988) (in Greek)
1.3 ECONOMY

The Greek economy is a mixed one, with large agricultural and manufacturing sectors, each contributing 16% of gross domestic product. After a reduction in the importance of the agricultural sector in the 1960s, its relative share has been maintained in the 1970s and first half of the 1980s. Manufacturing developed rapidly in the 1980s, with clothing, textiles, petroleum products and iron and steel major exports. Shipping and tourism are important earners of foreign exchange.

Table 1.3

<table>
<thead>
<tr>
<th>Structure of Gross Domestic Product</th>
<th>% of total[^1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>22</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>15</td>
</tr>
<tr>
<td>Construction</td>
<td>6</td>
</tr>
<tr>
<td>Transport &amp; Communication</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>51</td>
</tr>
</tbody>
</table>

1.4 PAPER PRODUCTION

Greece, although a small country, according to the statistics[6] available has the following paper production:

Table 1.4.1

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>307,381</td>
<td>284,175</td>
<td>269,113</td>
<td>270,566</td>
<td>270,556</td>
</tr>
</tbody>
</table>

Table 1.4.2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>72,728</td>
<td>64,230</td>
<td>59,459</td>
<td>40,273</td>
<td>40,273</td>
</tr>
</tbody>
</table>

Table 1.4.3

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>19,154</td>
<td>20,759</td>
<td>15,291</td>
<td>18,218</td>
<td>20,648</td>
</tr>
</tbody>
</table>

Table 1.4.4

<table>
<thead>
<tr>
<th>Year</th>
<th>1984</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>18,218</td>
<td>20,648</td>
</tr>
</tbody>
</table>

---

The Statistical Yearbook published by Unesco [7] provides the following:

### Table 1.4.5

<table>
<thead>
<tr>
<th>Uncoated Printing, Writing Paper, Board (in tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>Production</td>
</tr>
</tbody>
</table>

### Table 1.4.6

<table>
<thead>
<tr>
<th>Coated Printing, Writing Paper, Board (in tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>Production</td>
</tr>
</tbody>
</table>

### Table 1.4.7

<table>
<thead>
<tr>
<th>Other Printing &amp; Writing Paper [8]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
</tr>
<tr>
<td>1970</td>
</tr>
<tr>
<td>1975</td>
</tr>
<tr>
<td>1980</td>
</tr>
<tr>
<td>1985</td>
</tr>
<tr>
<td>1990</td>
</tr>
</tbody>
</table>

---


8 Other printing & writing paper covers paper other than newsprint in roll or sheets, suitable for use in printing and writing. It does not cover articles manufactured from printing and writing paper, such as stationery, exercise books, registers etc. "Production, imports, exports, consumption" are given in metric tonnes. "Consumption per 1,000 inhabitants" is given in kilograms.
As one can see the imports since 1975 either equal the production or are more than half of it. This can be explained by two reasons; either the production is not sufficient for the market's needs, or the quality is not the one required.

According to the results of a questionnaire[9] (see Appendix B) distributed to the 83 most productive Greek publishers, it was revealed that only two Greek paper-making companies were actually supplying them with printing paper while they complemented their needs by importing paper from other countries such as Austria, Spain, Portugal, former Yugoslavia, Sweden, Norway, Finland, Italy, Germany, Brazil, Argentina and Israel, either independently or through other paper importers. There were indications by some of the publishers that they preferred not to use paper produced in Greece due to its poor quality and unreliable and problematic delivery.

The main importer indicated by the publishers is the "Newsprint Organisation" the activities of which include imports of printing paper besides newsprint. The Organisation has been active in imports since 1957 and it supplies around 70% of the country's needs in printing paper.

1.4.1 pH LEVEL

The level of acid in paper, one of the reasons which leads to its deterioration, (see page 84) is referred to as pH.

---

9 The survey was conducted in 1991 for the needs of the thesis.
**pH Level of Greek Paper-making Companies** The two Greek paper-making companies, identified by the Greek publishers, were contacted so as to identify the pH level of the paper manufactured. One of them responded and indicated that the level of pH was 6-6.5.

**pH Level of Imported Printing Paper** The names and addresses of a number of the paper companies which export printing paper to Greece were obtained and contact with them showed that the pH level of the paper they exported to Greece varied from 4.5 to 9. More explicitly:

<table>
<thead>
<tr>
<th>Name of country</th>
<th>pH level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>4.5 ± 0.5</td>
</tr>
<tr>
<td>Belgium</td>
<td>7</td>
</tr>
<tr>
<td>Portugal</td>
<td>9</td>
</tr>
<tr>
<td>Sweden</td>
<td>6</td>
</tr>
</tbody>
</table>

Due to the fact that Finland's production is totally alkaline[10] paper-making companies of that country were not contacted.

---

1.5 BOOK PRODUCTION

The lack of a Greek National Bibliography until recently makes the identification of the approximate size of book production in Greece rather difficult. The appearance of the Greek National Bibliography in 1990 covering the books deposited under the legal deposit law in the Greek National Library in 1989 may be the beginning of a solution to other problems in the librarianship profession. It is agreed however, that it can not be a reliable source as to the approximate number of the country's book production due to the very loose nature of the legal deposit law.

The Statistical Yearbooks published by Unesco provide information as to the book production in Greece only for the year of 1990 and this totals 3,255.[11] Another source is the annual cumulation of "ICHNEFTIS", a monthly guide to the books appearing in the Greek market. This guide is regarded as the most reliable source of information as to the book production in Greece and it is usually referred to by the Greek National Library, the Ministry of Education and that of Cultural Affairs. The book production for the 1987-1992 period was as follows:

Table 1.5.1

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Books</td>
<td>2,348</td>
<td>2,400</td>
<td>2,640</td>
<td>2,870</td>
<td>3,130</td>
<td>3,465</td>
</tr>
</tbody>
</table>

It should be noted that in the number of books presented in the above tables the following categories are not included: reprints, official and private publications, books distributed to the University students and generally books that are not found in bookshops. This could explain the difference between the information provided by Unesco and that of "ICHNEFTIS". As shown in the following table the needs of the country are complemented by imports.

Table 1.5.2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exports</td>
<td>Imports</td>
</tr>
<tr>
<td>1980</td>
<td>3.7</td>
<td>8.1</td>
</tr>
<tr>
<td>1985</td>
<td>3.0</td>
<td>5.7</td>
</tr>
<tr>
<td>1990</td>
<td>5.0</td>
<td>31.3</td>
</tr>
</tbody>
</table>

---

1.6 LIBRARIES

There is a number of sources which provide information as to the number of libraries in Greece the total numbers varying from source to source.

The Greek Ministry of Culture[14] provides statistics which indicate that the total number of libraries in Greece is 600. Another source of statistics[15] provides the following:

<table>
<thead>
<tr>
<th>Year</th>
<th>Type</th>
<th>Ad. Units</th>
<th>Serv. Points</th>
<th>No. of Volumes (000)</th>
<th>Annual Additions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>National</td>
<td>1</td>
<td>1</td>
<td>2,500</td>
<td>11,830</td>
</tr>
<tr>
<td>1986</td>
<td>Public[16]</td>
<td>615</td>
<td>615</td>
<td>8,296</td>
<td>213,784</td>
</tr>
<tr>
<td>1989</td>
<td>Non-specialised [17]</td>
<td>758</td>
<td>758</td>
<td>7,492</td>
<td>216,221</td>
</tr>
<tr>
<td>1984</td>
<td>Special[18]</td>
<td>100</td>
<td>884</td>
<td>2,363</td>
<td>52,489</td>
</tr>
</tbody>
</table>

The non-existence of any directory indicating the exact number of libraries presently functioning in Greece presents a problem to the researcher in any attempt to extract information required for any research.


16 Data relating to Public libraries include the National and Special libraries.

17 Non-specialised libraries of a learned character which are neither libraries of institutions of higher education nor national libraries, though they may fulfil the functions of a national library for a specific geographic area.

Irrespective of the numbers each source reveals, Greek libraries may be distinguished into: National, Academic, Public, Special/Research and Monastic.

It is worth noting here that the one type of libraries Greece lacks is the School libraries.\textsuperscript{[19]}

1.6.1 GREEK NATIONAL LIBRARY

The Greek National Library belongs to the Public sector and is under the control of the Greek Ministry of Education and Religion. Established in 1829, it was part of the National Museum at the Orphanage in Egina. In 1832 it was separated from the museum and functioned as a public library. It was transferred to Athens from Egina in 1834. In 1842 the Athens University library was established. The same year, this library was united with the public library and with a Royal decree in 1866 both libraries were united into one, the Greek National Library. The building which houses the library was built in 1903.

The main Law describing the library's administrative structure and organisation dates back to 1943. Although there have been some changes since then, the above mentioned law is still valid in its most basic elements with all the consequent results of an unmodified law in a progressing environment. In 1985 there was an unsuccessful attempt to modernise and update the 1943 law. The following chart illustrates the organisational structure of the GNL.

The Greek National Library since 1943 has been the deposit library -under the legal deposit law 880/1943- for Greek or foreign language publications, published in Greece. Unfortunately this law has been very loosely applied and it is only since 1988 when the ISBN and ISSN centres were established in the GNL that the results of the legal deposit system can be cross-checked with that of the above mentioned centres and used to identify part of the Greek book production. Until 

20 The present law governing the GNL does not include the Serials Office and the Conservation & Microfilming Section. They have been established and function as independent administrative units.
then the GNL could identify new publications only through the publishers' lists. According to results appearing in the "Feasibility Study for the Automation of the Greek National Library"[21] in 1988 the coverage of the Greek publications reached 48% due to introduction of the ISBN. It is thought that the Greek publications deposited under the legal deposit law represents around 75% of the whole book production in the country. Literary works i.e. novels, deposited in the GNL reach 99% which is thought to be some 30% of the total book production.

Size of collections There is no exact figure as to the size of the collections housed in the GNL. At the time of the above mentioned study the library's stock was estimated approximately as follows:

<table>
<thead>
<tr>
<th>Type of collection</th>
<th>No. of Titles</th>
<th>Annual Additions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monographs</td>
<td>1,000,000</td>
<td>10,000[22]</td>
</tr>
<tr>
<td>Periodicals</td>
<td>21,000</td>
<td>900</td>
</tr>
<tr>
<td>Newspapers</td>
<td>3,500</td>
<td>---</td>
</tr>
<tr>
<td>Reprints</td>
<td>100</td>
<td>---</td>
</tr>
<tr>
<td>MSS</td>
<td>4,000</td>
<td>---</td>
</tr>
<tr>
<td>Documents</td>
<td>200,000</td>
<td>---</td>
</tr>
<tr>
<td>Microfilms</td>
<td>5,000</td>
<td>---</td>
</tr>
</tbody>
</table>


[22] The number of annual additions seems overestimated and this is perhaps due to the multiple copies received.
Acquisitions  According to the same study acquisitions for the years 1986-1989 were as follows:

Table 1.6.1.1

<table>
<thead>
<tr>
<th>Year</th>
<th>Leg. Dep.</th>
<th>Purch.</th>
<th>Gifts</th>
<th>Not regist.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>5,036</td>
<td>252</td>
<td>2,952</td>
<td>----</td>
<td>8,240</td>
</tr>
<tr>
<td>1987</td>
<td>3,943</td>
<td>282</td>
<td>1,524</td>
<td>96</td>
<td>5,845</td>
</tr>
<tr>
<td>1988</td>
<td>4,222</td>
<td>1,106</td>
<td>1,492</td>
<td>600</td>
<td>7,420</td>
</tr>
<tr>
<td>1989[24]</td>
<td>3,700</td>
<td>363</td>
<td>1,854</td>
<td>294</td>
<td>6,211</td>
</tr>
</tbody>
</table>

Since for certain reasons not all acquisitions are catalogued and some are left in warehouses the only way to identify the real number of additions is through the cataloguing statistics, which show that:

Table 1.6.1.2

<table>
<thead>
<tr>
<th>Year</th>
<th>Leg. Dep.</th>
<th>Purchases</th>
<th>MSS</th>
<th>Gifts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>3,943</td>
<td>282</td>
<td>n.a.</td>
<td>n.a.</td>
<td>4,225</td>
</tr>
<tr>
<td>1988</td>
<td>4,222</td>
<td>947</td>
<td>115</td>
<td>100</td>
<td>5,384</td>
</tr>
</tbody>
</table>

Comparing this table with the one provided by the Statistical Yearbook of Unesco one can see that there is a considerable

23 Refers to books which have no accession number and it is not known when they were acquired or who donated them.

24 Approximate figures. The study was conducted a few months before the end of 1989.

25 see footnote 24.
difference in the annual addition section provided by Unesco and the one indicated by the Feasibility study report. A possible explanation could be that the GNL provided to Unesco the total number of acquisitions rather than real additions. In addition, there is a difference between the numbers provided by "ICHNEFTIS" (Table 1.5.1) at least for the year 1989 and the ones provided by the GNL as they are illustrated in Table 1.6.1.1.

For the previous years this could be justified by the fact that there were no statistics available within the GNL, but it can not be explained for the year 1989 since statistics were available.

**Staff** The Greek National Library has a staff of 94 persons of whom 29 are of a non-permanent status.
The two main categories of personnel are those of librarian and classifier. The following table illustrates the GNL’s staff according to their speciality and education level.

<table>
<thead>
<tr>
<th>Section</th>
<th>Post grad studies</th>
<th>BA grad</th>
<th>TEI grad</th>
<th>Secondary level educ</th>
<th>Tech Assist</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisitions</td>
<td>--</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>--</td>
<td>11</td>
</tr>
<tr>
<td>Cat/Clas Indexing</td>
<td>2</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>--</td>
<td>19</td>
</tr>
<tr>
<td>MSS</td>
<td>2</td>
<td>3</td>
<td>--</td>
<td>--</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Reading room</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Serials &amp; newspapers</td>
<td>--</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Microfilming</td>
<td>--</td>
<td>--</td>
<td>2</td>
<td>1</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>Conservation</td>
<td>--</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>--</td>
<td>7</td>
</tr>
<tr>
<td>Secretary</td>
<td>--</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>Finance Dept.</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>Assistants</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>23</td>
<td>21</td>
<td>32</td>
<td>18</td>
<td>94</td>
</tr>
<tr>
<td>Unit</td>
<td>Librarian</td>
<td>Classifier</td>
<td>MSS Curator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIV.</td>
<td>TEI</td>
<td>YWCA</td>
<td>UNIV.</td>
<td>TEI</td>
<td>Sec.</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>-</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Catalogs</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MSS</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>2(AEI)</td>
</tr>
<tr>
<td>Reading room (main)</td>
<td>1</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>Journals &amp; Newspaper</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Microfilming &amp; Conservation</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Secretary &amp; Finance</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>18</td>
</tr>
</tbody>
</table>

The low number of employees and their employment status can be explained by the fact that the law governing the GNL (dated 1943) is such that new positions can not be created. The 29 non-permanent staff are employed under the "indefinite time employment" scheme which may last for ever or for only a few years.

In addition to that as is shown in the last two tables and especially table 1.6.1.3 there are only 50 employees who have a tertiary level of education, of which 21 are graduates of the TEI library departments, and it is not unusual for those who have the desirable library qualifications to belong to the non-permanent staff.
**Products** The current Greek National Bibliography appeared in 1990, the first list of Greek Subject Headings in 1991 and the Greek Names Authority File in 1992. These products however, have not been circulated among the Greek libraries mainly due to the small number of copies produced, the inability so far to decide how these copies will be distributed and their price. It is worth noting here that the publication of the GNB has been suspended for administrative and financial reasons.

The problems the Greek National Library faces are administrative, financial and those relating to personnel, space and equipment.

**Administrative** Although the law governing the GNL allows free movement in relation to finance and administration the practice throughout the years has been that every minor detail was reported to the Ministry. The Advisory Committee, comprising members[^26] who do not necessarily have the desirable qualifications, interferes with the operation and function of the Library especially in issues such as organisation and automation.

**Financial** Although the budget of the GNL has been increased over the years it remains small and sometimes it is not totally used.

[^26]: The Advisory Committee comprises three members, a University professor (usually from the Humanities), a representative from the Arts and a representative from the archdiocese.
**Personnel** Although there has been an increase to the budget, the library is considered understaffed due to the present governing law which does not allow further recruitment.

**Space** The building is old and does not provide adequate accommodation for the preservation, circulation and use of the material. The lack of space also creates problems both to staff and users.

**Equipment** The equipment of the GNL is inadequate not only as far as automation is concerned but even to more trivial matters such as the lack of facilities for telephoning overseas.

All these problems cause delays and occasionally hamper developments necessary for an institution which is supposed to be the leader in the field.
1.6.2 ACADEMIC LIBRARIES

There are eleven Universities (multi-faculty) and five University level schools. Both types of institutions of the Anotata Ekpedeftika Idrimata (AEI) are of relatively recent origin.

Table 1.6.2

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1836</td>
<td>National Technical University of Athens</td>
</tr>
<tr>
<td>1837</td>
<td>National &amp; Capodistrian University of Athens</td>
</tr>
<tr>
<td>1925</td>
<td>Aristotelian University of Thessaloniki</td>
</tr>
<tr>
<td>1957</td>
<td>University of Macedonia [28]</td>
</tr>
<tr>
<td>1964</td>
<td>University of Patras</td>
</tr>
<tr>
<td>1964</td>
<td>University of Ioannina [29]</td>
</tr>
<tr>
<td>1973</td>
<td>&quot;Demokritos&quot; University of Thrace</td>
</tr>
<tr>
<td>1973</td>
<td>University of Crete</td>
</tr>
<tr>
<td>1977</td>
<td>Technical University of Crete[30]</td>
</tr>
<tr>
<td>1984</td>
<td>University of the Aegean[31]</td>
</tr>
<tr>
<td>1985</td>
<td>University of the Ionian</td>
</tr>
</tbody>
</table>

As shown in the table above the oldest Universities were founded in Athens and Thessaloniki. During the past 20 years, enthusiasm on the part of politicians to create more


[28] Founded as Graduate Industrial School of Thessaloniki. Name change in 1991.

[29] Founded as a branch of the Aristotelian University of Thessaloniki. Established as an independent University in 1970.


[31] Still in process of formation.
universities and other institutions of higher learning has led to the foundation of the above mentioned Universities. It should be noted, however, that not all the departments of these Universities function due to financial and staffing problems.[32]

University Level Colleges

The following table illustrates the year the University level colleges were established.

Table 1.6.2.1

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1836</td>
<td>Athens School of Fine Art</td>
</tr>
<tr>
<td>1920</td>
<td>Athens University of Economics and Business</td>
</tr>
<tr>
<td>1920</td>
<td>Athens Agricultural University</td>
</tr>
<tr>
<td>1930</td>
<td>&quot;Panteios&quot; University of Social and Political Sciences</td>
</tr>
<tr>
<td>1938</td>
<td>University of Pireaus</td>
</tr>
</tbody>
</table>

With the exception of the National & Capodistrian University of Athens which technically shares the facilities of the National Library but in reality does not have a central library, all libraries have central or faculty and departmental libraries. The number of departmental libraries varies since they might exist in name but not in reality.


The following table illustrates the size of collections in nine of the sixteen universities, since data for all of them is not available.

Table 1.6.2.2

<table>
<thead>
<tr>
<th>Library</th>
<th>Volumes[^1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aristotelian University of Thessaloniki</td>
<td>1,500,000</td>
</tr>
<tr>
<td>University of Ioannina</td>
<td>260,000</td>
</tr>
<tr>
<td>National Technical University of Athens</td>
<td>150,000</td>
</tr>
<tr>
<td>Dimokritos University of Thrace</td>
<td>131,900</td>
</tr>
<tr>
<td>University of Crete</td>
<td>125,000</td>
</tr>
<tr>
<td>Athens University of Economics &amp; Business</td>
<td>58,000</td>
</tr>
<tr>
<td>Technical University of Crete</td>
<td>20,000</td>
</tr>
<tr>
<td>Athens School of Fine Art</td>
<td>18,000</td>
</tr>
<tr>
<td>University of the Aegean</td>
<td>8,000</td>
</tr>
</tbody>
</table>

Also at the tertiary level of education are the Technological Educational Institutions which resemble the former British Polytechnics and were established in 1977. There are 11 TEI covering almost the whole geographical area of the country. These are in: Athens, Halkida, Heraklion (Crete), Kavala, Kozani, Larisa, Mesologi, Patras, Piraeus, Serres and Thessaloniki. These institutions provide as their name indicates mainly technological education. No source of information is available as to the number of libraries in these institutions and the size of their collections.

The personnel of these libraries is recruited on the basis of

joint approval by the Ministry of Education and the Ministry of Finance.
Each Academic and Technological Educational Institution establishment is a self governing body.

1.6.3 PUBLIC LIBRARIES
The modern public library movement dates from just after the Second World War. The Greek Public libraries encompass three basic types according to their legal status, administrative responsibility and target group. These are: dimosies, dimotikes and pedikes.
There are 40 dimosies including the Greek National Library which has already been described. They are each based upon a nomos, which is an administrative unit similar to the British county. They are financed through, and legally responsible to, the Department of Libraries within the Ministry of Education. Each library system prepares its annual budget, estimating in many cases its actual needs, and then requests this money from the Ministry. The Ministry then decides on an individual basis whether or not to fund the requested amount. This situation creates a major impediment to the progress of public libraries with the lack of adequate funding combined with the inequitable system of providing monies. Library personnel are public employees hired and paid by the Ministry. The number of people employed by each library system is restricted by law to 10, irrespective of the geographical area the library is to cover. It is the intention of the Ministry that there should be a library based in
each of the 52 nomoi which make up the whole country.

The dimotikes libraries are governed by library committees consisting of the mayor and community leaders of the municipality or the respective local authority. There is no legal obligation on the municipalities to provide these libraries with the obvious result that there is a variation as to the number of these libraries presently functioning. Funding for this type of library varies widely according to the availability of funds and the support of the mayor, local politicians and private donations. Personnel for these libraries are hired and paid by each respective dimos.

This funding variation is obviously reflected in the services provided by the dimotikes libraries. "The municipal (dimotiki) library of Thessaloniki, the second city of Greece with a population of more than one million, is probably the best developed municipal library. Currently the staff operates a central library and 14 branch libraries, [some of which are devoted solely to children], from within a directorate which also has responsibility for an art gallery and an orchestra."[35] This library is the exception rather than the norm which is described by Dewe[36].

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Later legislation did not provide for the qualification of library personnel in Public (both dimosies and dimotikes) libraries. As an effect the directors appointed were university graduates usually from the faculty of law or economics, and there were no stipulated educational requirements for other library employees. Although this situation has changed since 1991 and there are specific library educational requirements as to the qualifications of both directors and librarians, the vast majority of positions have been filled through the years with unqualified personnel, who under the latest law will have to reach the age of 65 to be replaced. Apart from this change, in 1991 the Minister of the Interior announced that 800 librarians would be employed in the Public libraries.\[37]\] Although this has not been realised yet, this move on the part of the government shows that they do recognise the need for a sufficient number of staff in the libraries.

The *pedikes* or children's libraries in rural areas were originally funded by the Ministry of Agriculture mainly due to the interest expressed by a former minister of agriculture\[^1\] The original intention for these libraries was to move the control over to the Ministry of Education. However, due to certain reasons on behalf of the Greek Ministry this has not yet been realised and since 1989 they have been totally funded by a French philhellene \[^38\]. These libraries are managed by the

\[^37\] *Makedonia* 20 May 1991. (Thessaloniki, Greece)

\[^38\] Anne Schlumberger in 1979 established the first library in Elefsina with the intention of creating a network of children's libraries in Greek rural areas.
Centre of the Child and the Adolescent Book which is under the authority of the General Secretary of New Generation.

Although there is a more or less finite number for the dimosies libraries, there is confusion as to the number of the dimotikes. The information provided by the Greek Ministry of Culture (see page 39) and that provided by Unesco (Public and Non Specialised) differs considerably (see page 39, Table 1.6). The only justification for the large number of these libraries reported can be the number of "communities"[39] existing, where each one is supposed to have a library; but this is far from the reality. According to another source the dimotikes libraries could be 400.[40]

1.6.4 SPECIAL/RESEARCH LIBRARIES

This type of library has emerged in the past fifteen years mainly due to the information needs of scientists. Some belong to public organisations and some to private corporations. Again the estimated number of Special libraries, the vast majority of which is concentrated in the Athens area, varies considerably amongst the sources available. The number of Special libraries provided by the directory of Special Libraries in the Athens region is 148[41]. Comparing this to

[39] "Community" is any geographical area with less than 10,000 registered inhabitants.


the number of Special libraries given by Unesco as shown at Table 1.6 one can see that there is a big difference in the information provided by these two sources. It should be noted here that each of the above mentioned libraries (148) represents one respective administrative unit.

1.6.5 MONASTIC LIBRARIES

Another type of libraries exists in the monasteries. Monastic libraries in Greece are difficult to identify due to the fact that such information is not available and consequently this hampers any attempt at identifying whether there are libraries in all of them and what the content of their collections is. Where these libraries exist, they are almost exclusively for and used by monks and with great difficulty by a handful of researchers [42]. The most famous monastic libraries are those located at Mount Athos. The "Holy Mountain" as is known to Greeks is located on the easternmost prong of the Halkidiki Peninsula in the Aegean Sea. Today Mount Athos is an autonomous state under the Greek Republic. For spiritual matters, Athos is responsible to the Patriarch of the Eastern Orthodox Church in Constantinople, Turkey. In matters of governance, a representative council from the monasteries rules. A governor, small police force, and a few administrators maintain the law and order according to Athos' constitu-

[42] The above information was provided by the librarian of the Theology Dept. of the Aristotelian University of Thessaloniki and a Theology professor from the same department.
tional charter on behalf of the Republic.[43] In reality however, the Republic has no authority whatsoever over Athos. Admission to the area (women have been forbidden since 885 A.D.) presupposes a permit from the Ministry of Macedonia and Thrace in Thessaloniki (for foreigners), and visits are limited to three nights. Guests are not permitted to spend more than one night in a single place. "Access to the libraries is granted only with permission of the Patriarch"[44] an extremely rare case. Although Shafer implies that the status is changing in Mount Athos as far as the accessibility to the material of libraries is concerned in fact the situation has radically changed since 1988 [45] and access is now almost impossible for outsiders.

In contrast to the situation described in relation to the libraries of Mt. Athos, a small number of important monastic libraries provide a more liberal accessibility to their collections. One such example is the St. John monastery, at the island of Patmos. (see pages 112-113)

**Greeks and Libraries** Greeks as a whole are not familiar with and therefore regular users of libraries.

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[43] This civil governor, appointed by the government is responsible for public order outside the monasteries.


[45] A new civil governor was appointed at that time replacing the one who died and who was the only governor who was professor of Theology. After his death the monasteries returned to their previous mysticism.
Public libraries do not meet the library and information needs of the population at large. Seen as a kind of research library for the studious reader there is often little in the way of popular material or information provision. The fact that in reality school libraries do not exist can be explained by the failure on the part of the state to recognise their need. The lack of the latter and the unfulfilled objectives of the former have created for the vast majority of Greeks a vacuum in their relation with libraries.

Furthermore, it was not unusual until recently for students to graduate from a higher education institution without ever visiting the library. This can be explained by the structure of the educational system, where students are required to study from one (very rarely two) textbooks which are distributed to them free of charge for every module every year. Fortunately, this situation is slowly changing. This new situation has emerged by the need for research and different educational attitudes by academics who have acquired degrees abroad.
1.7 LIBRARY EDUCATION IN GREECE

Library Education in Greece can be divided into the following four periods:

A. 1948-1960: during this period library education was covered mainly through seminars and workshops.

B. 1961-1976: this period included the establishment in 1961 and the operation of the library school of the Young Women's Christian Association (YWCA) in Athens, offering a one year course until its discontinuation in 1976[44]

C. 1977-1981: this period covered the establishment of the first state library school at KATEE (Centres of Higher Technical and Vocational Education) and the establishment in 1981 of a second state library school at KATEE in Thessaloniki.

D. 1983- present date. In 1983 the KATEE were changed into Technological Educational Institutions (TEI) as they are known today, retaining their educational purpose of Technical / Technological and Vocational Education.

1.7.1. TECHNOLOGICAL EDUCATIONAL INSTITUTIONS. SCHOOL OF ADMINISTRATION AND FINANCE. LIBRARY DEPARTMENT

The two Library departments (Athens and Thessaloniki) administratively belong to the School of Administration and Finance which comprise three other departments namely the

Accountancy, the Tourist Industry and the Marketing Departments.

*Curriculum* Both Library Departments share the same curriculum designed by the Institute of Technological Education [46a] and approved by the Ministry of Education and Religion. (see Appendix C).

Although changes in the curriculum should be introduced every two years according to the law provided by the Institute of Technological Education this has not happened so far mainly due to bureaucratic and administrative reasons. Changes are being discussed by the two departments but up to the end of 1992 they had not reached an agreement as to what the content of the proposed new curriculum should include. Amongst the changes discussed is the inclusion of one foreign language, preferably English, during the entrance examinations. This would solve the problem of the absence of relevant material in Greek.

*Staff* The staff of these departments is divided into permanent and non-permanent (temporary) staff.[47] This distinction refers to the employment status and is irrelevant to the professional and academic qualifications of the teachers. It should be noted here that this situation applies to all departments and schools of the TEI establishments and not only to the Library departments. At present at the

46a ITE is the body responsible for the TEI, and responsible for any change in their educational programmes.

47 Non-permanent (temporary) staff is hired for the exact duration of the academic year (September-July).
Library Dept of Thessaloniki, of the 40 members of the staff only five are of a permanent status, whereas at the corresponding department in Athens of the 19 members nine are of a permanent status.[48]

**Duration of Library Studies Programme**  The duration of the course extends to six semesters plus one semester practical work in any type of library or information centre, that is a total of three and a half years. In order to get their certificate (ptychion) students, individually or in groups depending on the subject, at the end of the course present a thesis to a committee of three lecturers of the same department.

**Admission requirements, number of students and attendance**

Entrance to library schools is achieved through annual entrance exams students have to sit for the Universities (AEI) and TEI institutions. According to the marks scored, and the preference expressed, students gain entrance to one of the departments of the AEI or TEI. Approximately 125 [49] new students gain entrance to each of the two Library departments, through this system each year and according to their total

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48 The difference in the number of staff at the two departments is due to the fact that at the Thessaloniki Dept. classes are divided into groups and consequently more staff is required. Another reason for the large number of non-permanent staff at the same department is that there are many members who are teaching only two or three hours per week.

49 The number varies according to the number of applicants who score the required minimum in the entrance examinations.
marks they are divided into two semesters; that is, the half who scored higher attend the "winter" semester (September-January) and the remaining the "spring" semester (February-July). In addition to that number, there are entrance examinations for University graduates who wish to attend the department and the number allowed is the equivalent of 12% of the 125 new students of each year. The number of the 125 new students each year does not correspond to that of graduates of these departments. Although the vast majority of them register, only a proportion attends the lectures and the student status and privileges are never lost if they re-register every semester. Students can attend either all or a number of the lectures assigned at each semester. For certain courses as for example classification or cataloguing or in fact any course offered in consecutive semesters, attendance at the next part presupposes a passing mark in the previous semester. Failure to pass one of the lessons means that the student can register for the next semester and attend the course he/she had failed again without any limitation or penalty. This, the fact that students can prolong their studies and consequently their student benefits literally indefinitely, occasionally results in graduating long after the required three and half years. This extension of studies is not however only the students' fault. As has been stated earlier, students have to submit a thesis by the time they have completed their practical attachment and only the permanent staff can supervise them. Each member of staff is allowed the supervision of only four theses at a time. As a
result, students have to wait for lecturers to be able to supervise them.

Another problem which both staff and students have to face is the non-existence of Greek publications relevant to the subject. As a result the lecturers provide the students with notes or play the role of translator for certain courses as for example indexing, classification, cataloguing. This lack of educational material in the Greek language prevents students from acquiring further knowledge on the subjects, keeping up to date on changes and hinders private studying.

Up to the end of 1992 the graduates from the Athens Library Department totalled 597 (230 of which graduated under the KATEE administration) and those from the Thessaloniki department totalled 342.

Since 1992/93 the Thessaloniki Library School in cooperation with the corresponding department of the University of Aberystwyth offers a Master's degree in Library Studies. This is a three year long distance course for librarians or administrators taught by lecturers from both departments. Ten to twelve participants are admitted after successful results in English and Library Science oriented exams. This scheme although it comes in contrast with the free educational system offered in Greece[50] does offer the opportunity to those who can not afford the expenses of living abroad to acquire another degree, broaden their knowledge and keep their present employment as well. The one disadvantage is that the degree

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50 Fees are paid to the University of Aberystwyth.

63
can not be recognised by the relevant authorities since a relevant course is not offered by Greek institutions.\(^{51}\) Permission for the scheme was granted from the TEI itself not the Ministry of Education.

As described earlier the tertiary level of education comprises the TEI and AEI. Unfortunately, and occasionally unjustifiably, in the Greek educational and social environment, the TEI represent the solution for those who have not scored high enough so as to be accepted at the University.

1.7.2 UNIVERSITY OF THE IONIAN. ARCHIVE AND LIBRARY STUDIES DEPARTMENT

Two studies\(^ {52}\) have been published related to the library education in Greece. Palmer recommended that two graduate schools of librarianship be established, one at the University of Thessaloniki and one "in Athens". According to Carnovsky, "Kirkegaard [in 1962] proposed a program aimed at developing librarians for special and large public libraries. It called for an independent institution in Athens, with a curriculum geared to the preparation of personnel at different levels".

\(^{51}\) The TEI department besides the lecturers provides the facilities. The degree is awarded from the University of Aberystwyth.

In 1985 the establishment of the University of the Ionian[^3] on the island of Corfu was announced and this announcement also referred to the establishment of the Archive and Library department which would offer the equivalent of the Bachelor degree. This move has been received with mixed reactions on the part of students, graduates and lecturers of the TEI Library departments with the main argument that the new school will only further demote the status of the existing library schools. Another strong argument is related to the location of the department since Corfu does not offer a considerable variety of most types of libraries and information centres and as an island, transportation can easily be affected by weather conditions. In spite of all the controversy and debate, the essential preparations for the functioning of the department have started and the first students will be admitted in September 1993.

As the name of the Department implies there will be two streams one for Archivists and one for Librarians. It is hoped that in the future the department will be able to offer a third stream for Museology[^4]

The duration of the studies will be eight semesters (four years).

The core subjects to be covered for those who choose Librarianship are: Librarianship, Archives, Palaeography,

[^3]: The University comprises four departments only. History Studies, Interpretation and Translation Studies, Music Studies and Library and Archive Studies.

[^4]: For the time being Museology will be offered as one of the core subjects for both streams.
Museology and General Knowledge parts of which are divided in optional and compulsory. (see Figures 1.3 - 1.4). The curriculum of the department aimed at librarians is presented at Appendix Cl.

**Figure 1.3**

**University of the Ionian Archive and Library Studies Dept.**

% Distribution of Core Subjects

- **Librarianship %** 33
- **Archives %** 21
- **Paleography %** 9
- **Museology %** 10
- **General Knowledge %** 28

A total of 35 students will be admitted for both directions each year.

It is generally believed that the TEI Library schools aim at producing graduates who will respond to the technical requirements of the profession. The University Department therefore aims at equipping its graduates with special University education, able to staff libraries (school, academic, special/research) information centres, archives and museums of the country. It aims especially to man administrative positions or positions which require special knowledge for the management of information and material.
1.8 GREEK LIBRARIANS' ASSOCIATION

The Greek Librarians' Association was established in 1969 and since May 1970 the GLA has been a member of the International Federation of Library Associations and Institutions (IFLA).[55]

Aim of the Association In general, according to the present charter of the GLA which has been valid since May 1990, its aims are the promotion and improvement of library and information science in Greece, the creation of the essential scientific and technical substructure for the proper functioning of libraries and information centres, the promotion of library education and professional interests of its members, the monitoring of all legislation relevant to all types of libraries, and the contributing to the cultural development of the country.[56]

In spite of the declaration of the aims of the GLA not many things have been achieved and its position and authority are not firmly rooted in the minds of the Ministry of Education and Religion. As an example it is worth noting here that in 1990 the Minister of Education and Religion replaced the representative of the GLA on the Advisory Committee of the Greek National Library with a representative of the church! This move can only be justified by ignorance on the part of


56 Greek Librarians' Association, Charter of the "Greek Librarians' Association" (Athens: Greek Librarians' Association, 1990) p. (in Greek)
Membership Over the years the membership requirements have developed so as to accommodate and protect professional librarians. According to the present charter members are accepted who "are graduates of Library or Information or Documentation Schools, irrespective of the level of education and country where the education in question has been acquired, as long as their degrees have been recognised by the relevant Greek authorities and the graduates are working or living in Greece."[57] At present the total number of members is approximately 700.

The GLA is totally funded by the members' annual subscription which is 4,000 drch. (approximately £12) [58] and the Ministry of Culture occasionally assists financially when a conference is to be organised. Another source of income is through the selling of certain publications as for example the Dewey Decimal Classification tables for Greek History and Greek Literature, publication of the conference papers, and the advertisements appearing in the library journal.

It should be noted here that the elected administration is comprised of full time librarians who do not take any kind of leave from their institution for the time they serve as members of the administration. As a result the time devoted to

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57 Greek Librarians' Association 1.

58 The equivalent of the English pound in May 1993 was approximately 330 drachmae.
the needs of the Association is limited to after work hours and with no extra financial rewards.

For more than twenty years the sole base of the Association has been in Athens. The decentralization proposed by the present charter allows for each geographical region to establish its own branch thus enabling the wider participation of professional librarians and the improvement of communication amongst them. The first regional branch was that of Macedonia, established in 1991 and based in Thessaloniki. Since then two more regional branches have been established one in Patras and one in Crete. The voluntary status of administration described earlier applies to all regional branches.

The journal published by the Association Vivliothikes ke Pliroforisi (Libraries and Information) ceased publication in 1987. It reappeared however in 1992 on a bimonthly basis and it is believed and hoped that its publication will continue and that it will provide the necessary platform for communication amongst Greek librarians. Again, the editing of the journal is done voluntarily by members of the Association. The Association in spite of its financial and administrative problems has organised seven conferences so far and has sponsored a number of seminars to meet the continuing education needs of the Greek librarians.
REFERENCES


CHAPTER TWO
NATURE, STRUCTURE AND REASONS FOR THE DETERIORATION OF PRINTED MATERIAL. THEIR PRESERVATION AND CONSERVATION

2.1 INTRODUCTION

Paper is the material which above all provides the record of man's historical background and intellectual development; thus it is one of the major types of material to be found in any library collection. The invention of paper is generally accredited to a Chinese eunuch, Ts'ai Lun, around 105 AD. By the 14th century a number of paper mills existed in Europe, particularly in Spain, Italy, France, and Germany. Gutenberg's invention of movable type in the mid 15th century and social and technological developments have led to the evolution of paper types and formats each designed to meet specific needs (e.g. books, maps, newspapers etc. and writing, printing, artistic etc. respectively). The developments, however, have also led to the deterioration of the quality of the product.

Research into the deterioration of modern papers dates back to 1829 and in 1898 an international conference was convened at St. Gallen by the Prefect of the Vatican Library to consider the deterioration of paper, especially that made from wood pulp. Experiments conducted by scientists such as Sutermeister in 1929 and Barrow in 1959 and the 1960s established the main reasons of deterioration and still serve
as the basis for much of the work in the field. Since then other scientists have added their own findings and results of experiments only to confirm this and add more reasons to show why paper and other elements that constitute a bound volume deteriorate.

The various reasons which lead to the paper degradation have been distinguished into two main categories: internal and external, which may act independently or in combination with each other to accelerate the process of deterioration.

Extending the life of paper documents is based on preservation and conservation activities.

2.2 NATURE AND STRUCTURE OF PRINTED MATERIAL

The shared characteristics of the printed or writing material are paper on which the text is printed and ink - the medium with which the text is made visible. For a bound volume whether a book or collection of periodical issues or newspapers bound so as to appear in a volume format, leather, cloth and paper are usually used as covering materials over the actual binding.

2.2.1 PAPER AND PAPER MAKING PROCESSES

Paper Paper consists of a compact, felted mat of criss-crossing fibres, these fibres adhering to one another where they are in close contact. The main chemical constituent of fibres is cellulose which is in loose chemical combination
with lignin, pectin, gums, resins and various colouring matters present in plants.

Before mechanization - which was the result of the Industrial Revolution - and the use of wood, cotton and linen were the main raw material, since paper was then made by hand from rags. Today paper is almost wholly made of certain types of wood, namely coniferous trees, such as spruce, fir or pine, which give what is known as "softwood", and deciduous trees (birch, eucalyptus, poplar, oak, sycamore) which give "hardwood". Softwood fibres tend to be longer and simpler in structure than hardwood fibres, a matter which is of great importance to the degree of deterioration of paper.

**Paper Making Processes** To make the fibres in wood usable for making paper the wood is first turned into pulp. The main pulping processes used today are the mechanical and the chemical processes. In the **mechanical pulping process** logs of wood having been stripped of their bark, are ground up in a purely mechanical process which involves no chemicals. In the **chemical pulping process** the wood is roughly chipped by a mechanical process, then the chips are heated under pressure with various chemicals in solution. The **difference** in the product from the two processes is that in the pulp produced by the mechanical process most of the ingredients of the original wood are left in the pulp and especially lignin which is an undesirable constituent of paper, rendering it weak and inclined to become brittle rapidly. While chemical pulping
produces a lower yield than that of the mechanical process, it results in stronger and longer lasting paper. This is explained by the longer, less mechanically damaged and consequently stronger fibres which are produced, and by the fact that in the chemical process the harmful lignin is largely dissolved.

The pulp then is beaten, formed into continuous sheets and dried. During these processes various materials are added such as bleach to produce white or cream papers, fillers (clay or chalk) to increase opacity, sizing to reduce the paper's ability to absorb liquid so that it can be printed or written on, and starch to increase length.

The four main properties required for paper that is to be printed are: strength, optical qualities (colour, brightness and opacity), smooth surface, and the right degree of absorption.

The mechanised processes described above are essentially the same for hand-made paper with the obvious difference that in the latter all the process are carried out by man; hand made paper is stronger due to the length of the fibres and the number and substance of additives.

The number of paper manufacturers and the economics involved, in addition to the existing variety in pulping processes and in additives and of course the many intended uses of the designed paper is the reason for the plethora of paper types found in the market and in the libraries.
2.2.2 PARCHMENT AND VELLUM

Parchment is principally known as a writing material. It is made from the ordinary skin of sheep or goat while vellum, a thinner, more delicate variety, is made from the finer skin of calf or kid and sometimes from the skin of stillborn or newborn calf or lamb.

The process of making a usable sheet of parchment or vellum consists of washing the skin, liming, unhairing, scraping, washing a second time, stretching on a frame, scraping a second time, paring down the inequalities in the skin, dusting with a sifted chalk, and rubbing with pumice. Both materials are of great strength and malleability.\[59\]

2.2.3 INK

Inks are fluids or pastes used for writing, printing and drawing with the help of techniques and instruments appropriate to each of these activities.

Based on their respective uses, inks may be classified as follows:

- **Writing inks**, used for manuscripts and typescripts
- **Printing inks**, used in printing processes
- **Lithographic inks**, used in art work.

The two basic materials used for making ink are the pigment

which is the dry powder that gives colour and the vehicle the primary responsibility of which is the adhesion of the printed image to the printing stock.

2.2.4 BINDING & BINDING MATERIALS

Bookbinding consists of two parts. That of binding which is the process of fastening together the printed sheets of a work or a periodical's or newspaper's issues as is in the case of bound volumes of periodicals or newspapers or even manuscripts, and enclosing them with a protective cover. Finishing, the other part of binding, comprises polishing of the leather in the case of leather bound volumes, lettering, and embellishing of a hand-bound book, processes which are done by the finisher. This last part is not common today in mass-production bindings.

Materials for binding include a wide variety of organic materials such as linen, cotton thread, starch paste, animal glue or resin adhesive; paper or cloth backbone linings; decorated, printed or coloured endsheets; bookboard or pasteboard covers; paper or Bristol spine strips; linen, cotton or synthetic bookcloths and buckrams; leather or vellum; decorated, marbled or laminated paper; and dyes, coloured stamping foils or gold leaf. Bookbinding materials have succumbed to the variations imposed by economic and technological changes. Consequently, synthetic polymers have largely replaced organic substances for the adhesives used in bookbinding.
**Binding Processes**

The binding process involves the following stages: folding of the printed matter, gathering, collating, addition of endpapers, sewing, gluing, gilding the edges, rounding and backing, ploughing, lining, fixing the boards, placing of the covering material (usually leather for the case of craft binding); at the last stage, which is the stage of finishing, the cover is being lettered and/or decorated if required.

The 19th century changes in paper production were followed by changes in the methods of binding, and new production line bindings were developed to meet mass production needs. These bindings were also much cheaper and faster than craft binding. As in paper manufacturing so in binding, the processes remain basically the same although now they are mechanised.

*The different types of binding* may be divided as follows:

-- craft binding (hand-bound volumes)
-- library binding
-- Production-line bookbinding:
   -- limp binding
      |  |- limp sewn binding
      |  |- limp unsewn binding or perfect binding
-- cased binding or publishers’s binding
-- saddle stitching or mechanical binding

The most common of the production-line bindings found in libraries today are the *cased bindings* and the *perfect bindings* the latter much favoured for mass-production
Library binding is a term used for the binding of periodicals or for the rebinding of damaged books and it is because of this that it does not belong to the category of mass-production bindings. It is usually requested by lending libraries and so it is named as such.

Differences among bindings The main difference between craft binding and case binding lies in the strength of the structure due to the techniques and materials used. Also, case binding is a mass-production process much favoured by the publishers for hardback books whereas the former is not.

2.2.5 COVERING MATERIALS
Traditionally, cloth or leather have been the two main covering materials used for hardbound books. These materials are still used for high-quality bindings but the materials mostly used nowadays are imitation cloths or plastic-coated papers.

Leather is made from animal skin in continuous membrane of fibrous tissue and by tanning after the hair and flesh are removed. Until the nineteenth century leather was the most usual covering material for books and the process for turning skin to leather was such that the end product was of high

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quality in terms of resistance to wear, water and flexibility and resistance to decay and acid. During the late 19th century, however, the demand for leather increased and shortcuts were introduced into the tanning processes which eliminated the protective or buffering salts. The resulting leathers quickly deteriorated because of sulphuric acid, which was either present in the skins as a result of the manufacturing processes or absorbed from polluted air.

**Parchment and Vellum** The skin is degreased and treated with lime, but it is not tanned. They are both extremely durable and may be the longest-lasting protective coverings available for binding. Today, however, they are not in general use mainly due to the cost of manufacture.

**Bookcloth** is a term used for all the fabric goods used for book covers. They are usually woven cotton fabrics and can be bleached and mercerized, dyed, filled with pigment colours gelatinised, starched, coated or impregnated with plastics, calendered and embossed. Starch filled book covers wear fairly well, but are extremely vulnerable to insects and moulds, and water on the covers can ruin them. Bookcloths come under various names which are related to their weave or finish rather than a different fibre composition. Thus "linen" often has a linen look; "buckram" is a heavier, stronger weight cloth. Amongst the variety of materials used for covering are imitation cloths, and plastic-coated papers.
2.3 REASONS FOR DETERIORATION

Barrow's experiments[61] as well as the experiments of other scientists have confirmed scientifically the reasons for the disintegration of library materials and more specifically of paper-based materials. There are many factors which affect the lifespan of elements of printed library materials. These factors are grouped into two broad categories, the internal and the external.

The internal reasons are associated with inherent vices. These refer to the chemical origins of self-destruction which are introduced during the processes of manufacturing.

The external reasons comprise many factors which are associated with a) the environment including light, temperature and humidity b) atmospheric pollution c) biodeterioration (biological hazards), d) disasters and e) abuse and mismanagement.

These deteriorating factors affect all elements of printed or writing materials either directly or indirectly as they will be described.

Stability, Durability, Permanence The terms used in relation to the lifespan of library materials in the relevant literature are stability, durability or strength and permanence, and it seems appropriate at this stage to explain briefly what

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each of them stands for.

**Stability** denotes the extent to which a given storage medium retains physical characteristics and chemical properties appropriate to its intended use.

**Durability** is the property of resisting deterioration by use. **Permanence** refers to the degree to which materials retain their original qualities during storage.

The quality of **durability** is built into a paper when it is made, that is, by choice of fibres, conditions of manufacture and the inclusion of additives which may enhance resistance to damage during use. **Permanence** is determined by the composition of the paper and by external conditions to which it is subjected during storage and use.

### 2.3.1 INTERNAL REASONS

The internal factors of decay are closely associated with the need for a greater production of paper and economic reasons on the part of paper manufacturers. As the demand for paper increased, forcing greater mechanization, processes and materials were introduced which resulted in much poorer quality paper. The introduction of an alum (potassium aluminium sulphate, that degrades to form sulphuric acid) as an agent to harden the gelatin sizing greatly diminished the useful life of paper. The invention and introduction of the Hollander beater speeded up the pulping processes but also resulted in short, rather than the more desirable long fibres. In 1774 chlorine was introduced to bleach coloured rags to a tone found acceptable for paper. Beginning in 1850, alum was
used in combination with rosin to precipitate this sizing material on the fibres. Rosin replaced gelatin as a more economical sizing agent because it could be added directly in the vat rather than applied after sheet formation. Alum also aided in the dispersal of plant fibres in the slurry.

2.3.1.1 ACIDITY IN PAPER

It has been determined by scientists that acidity is one of the primary causes of paper deterioration. Hey[62], lists five different ways in which acidity may arise in paper namely from carboxyl groups, from the partial or total hydrolysis of the alum, from papermakers' alum used in sizing, from sulphuric acid in iron-gall inks and from sulphur dioxide in the paper's environment.

Acidity causes the paper to lose its strength by hydrolysis of its cellulose molecules; the polymer chains gradually break down and the paper becomes weak, brittle, and stained, sometimes to the degree that text or images are obliterated, and the sheet disintegrates.

Expression of Acid in Paper The level of acid is referred to as pH. "pH is the negative logarithm of the hydrogen ion activity in an aqueous solution or the logarithm of the reciprocal of the hydrogen ion activity. Numerically expressed, pH 7 is neutral, lower numbers are acidic, higher

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numbers are alkaline."[^6] Since the scale is logarithmic, each numerical unit represents a 10-fold change in acidity or alkalinity. Thus, a pH of 5 is ten times more acidic than a pH of 6, and a pH of 4 is 100 times more acidic than a pH of 6.

Table 2.1

<table>
<thead>
<tr>
<th>pH Scale</th>
<th>Acidic</th>
<th>Basic/Alkaline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 1 2 3 4 5 6</td>
<td>8 9 10 11 12 13 14</td>
</tr>
</tbody>
</table>

Before mentioning the effects acid has on the other elements of a bound volume it seems appropriate at this stage to mention briefly the requirements of "permanent" paper.

2.3.1.2 ALKALINE "PERMANENT" PAPER AND STANDARDS

Tests and experiments have proved that the manufacture of alkaline or alkaline "permanent" paper reduces the acids that disintegrate paper, increasing its longevity.

"Permanent" paper is a paper stock that meets the proposed American National Standards Institute (ANSI) standard Z39.48-199X entitled "Permanence of paper for publications and documents in libraries and archives". This standard, now under review, will replace the previous standard Z39.48-1984 bearing

the title "Permanence of paper for printed library materials". "The ANSI standard states that the minimum pH should be 7.5 for uncoated papers and 7.0 for the core of coated papers, and that the quantity of lignin in the paper should be no more than one percent by weight. Both coated and uncoated papers should have a minimum alkaline reserve equivalent to two percent calcium carbonate, to counteract the acidity that will develop over time, due to both trace amounts of lignin remaining in the paper and air-borne pollutants."[64]

Meeting the ANSI standard allows the publisher to use the internationally-recognised permanent paper infinity symbol on the flyleaf of the publication. Although American, it is the standard internationally recognised as the one which should be met for the production of alkaline paper. Meanwhile the International Standards Organisation has prepared a draft standard the ISO_DIS 9706 - Information and documentation - Paper for documents - Requirements for permanence which will soon be published as an international standard.[65]

Effects of Acid on the Other Elements of a Bound Volume

Almost all elements of bound volumes are acidic to a greater or lesser extent. Ink has been indicated as a source of acidity. Acid is present in ink for two reasons: it helps secure ink limpidity and it causes the ink to penetrate the paper, thus binding together the constituent particles of both


ink and paper. The superabundance of acid, however, in the composition of inks makes it burn through the paper and ultimately destroy it. As a result the ink "bites" the paper to the point of piercing it, burning up whole lines and pages of text. Acid paste used to make book plates adhere will stain endsheets. Acid leather or bookcloth turn-ins will damage the edges of the book-paper. The introduction of sulphuric acid in the tanning process is the chief culprit of deterioration but vegetable tanning of leathers without the use of sulphuric acid does not solve the problem, they decay at only a slightly slower rate.

In the case of bookcloth coverings the acidic boards which the cloth covers and the acidic paper used for the endpapers and spine strips is the reason for weakness in many nineteenth and early twentieth century bindings.

Acid has the ability of migration, which means that it can be transferred from acidic material to items of less or no acidity, or to other elements of the bound volume. As a result the binding may deteriorate as acid will migrate from the endsheet or book cover to the title page and render it brittle and weak.

Another reason for paper deterioration is oxidation. This type of oxidation -metal induced oxidation of the paper will


reveal itself by local discoloration (e.g. foxing) which in severe cases can spread to affect the entire leaf. Oxidation is also the main reason of ink decay which leads to discoloration.

2.3.2 EXTERNAL REASONS

Other reasons for the decay of printed library materials are closely associated with the conditions of their storage. These conditions comprise the effects of light and darkness, temperature and humidity, atmospheric pollution, bio-deterioration (biological hazards), abuse and mismanagement, and disasters.

2.3.2.1 LIGHT AND DARKNESS

The cycle of day and night, as well as artificial control of light and darkness, has an effect on library materials. Visible light, either natural or artificial, bleaches writing ink, book covers, and the colours in prints and maps. Prolonged exposure to ultraviolet light causes paper to turn yellow, become brittle and lose its strength. Due to the resulting photosensitized oxidation paper becomes more vulnerable to other forms of deterioration.

Low wave length visible light and near-ultraviolet radiation are most damaging to paper and textiles. Daylight and fluorescent light are most destructive; incandescent light, least.
The effect of visible light (and near-ultraviolet radiation) on paper is aggravated by high temperature and relative humidity and by the presence of air pollutants. This degradation continues in the dark after the source of light damage has been eliminated.

2.3.2.2 TEMPERATURE AND RELATIVE HUMIDITY

Temperature is a measure of the intensity of heat energy. Relative humidity in terms of temperature is defined as "the amount of water vapor in a volume of air expressed as a percentage of the maximum amount that the air could hold at the same temperature" [68]

Temperature, when it appears in high levels speeds up chemical reactions. Cellulose deteriorates twice as rapidly for every increase of 10° F.

Relative humidity causes problems if it is either too high or too low. High humidity speeds up deteriorative chemical reactions. Under conditions of extremely high humidity, water-soluble inks can offset and coated papers can stick together. Low relative humidity causes materials to become dry and brittle. Paper that is dried out can break and crumble as it is handled and flexed, and covering materials on books (such as vellum) can shrink, causing boards to warp.

Under conditions of high humidity combined with high temperature, the failure of adhesives is accelerated, the growth of

mould and mildew is encouraged and the chances of insect infestation are increased.

**Fluctuations** in temperature and relative humidity can also impose unwelcome and non-uniform stresses on the paper and the structure of a book. Dimensions change, as moisture is taken up and lost, and it can take a long time (some weeks, perhaps) for a relatively "solid" structure like a book to reach uniform equilibrium with a new environment. The phenomenon of fluctuation will also cause bindings, especially those that are improperly supported on both sides, to warp because the covering material, adhesive and endsheet that sandwich the cover boards will absorb moisture at different rates and to different capacities.[69]

As with the other elements that undergo changes the constitution of inks is greatly affected by the atmospheric condition. The gradual evaporation of moisture especially in the case of iron and gall inks causes a change not only in colour (from black to brown) and appearance but in their chemical composition and constitution.

2.3.2.3 **ATMOSPHERIC POLLUTION**

Pollution includes any substance that may adversely affect our possessions or lives and it may be in the form of particulate solids, liquids, gases or vapours. The results of pollution may be structural breakdown of polymeric materials, that includes fibres, paper, sizes, adhesives, and plastics, or

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they may involve chemical transformations, for instance the corrosion of metals or the fading of dyes. Although Pascoe[70] provides a list of a large number of external and internal pollutants, those that are of major concern in library material's deterioration are the gaseous ones which include sulphur dioxide, nitrogen dioxide, and hydrogen sulphide, which are products of combustion and other chemical reactions. They are thus typical of industrial and urban areas where there are factories and high concentrations of automobiles.

Sulphur dioxide (SO₂) and nitrogen dioxide (NO₂) combined with water in the air form sulphuric and nitric acids respectively which have degradative effects on paper. Ozone (O₃), another gaseous pollutant, causes oxidation, which embrittles paper. It is a product of the combination of sunlight and nitrogen dioxide from automobile exhausts, and due to that is generally more a problem of urban areas. Another source of ozone, however, is electrostatic photocopying machines.

Dust, dirt and other solid particles can damage materials through abrasive actions. In the presence of moisture, dirt can cause permanent stains. Dirt and other solid particles also absorb acidic gaseous pollutants, which they then deposit on collection material.

Pollution is generally seen as a problem of the cities and

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industrial areas. The changing weather pattern however, and air inversions indicate that pollution is a potential threat to collections in all areas.

2.3.2.4 BIODETERIORATION (BIOLOGICAL HAZARDS)

The biological degradation of material of organic origin is another important cause of injury or decay to library materials. The biological agents harmful to library collections include mould or fungi, insects and rodents.

Excessive temperature or humidity (or fluctuations of the two), light or complete darkness are favourable conditions for the growing of fungi and moulds. In addition to these environmental conditions cellulose itself provides a satisfactory medium for mould growth. Fungi act as biological agents of deterioration to ingest organic materials and cause staining, weakening and decomposition. Their presence is usually an indication of an acid environment (i.e. acid paper) since they prefer such an environment for their development. The acid produced during their metabolic processes leads to foxing, a characteristic rusty-brown spotted discoloration of paper. Fungi invade the substances incorporated in the skins during tanning. Too much moisture in leather encourages mould growth, which changes the colours of dyed skins, then attacks the leather itself. Mildew, another small non parasitic fungi, in its advanced stages will cause leather to stain and discolour and degenerate into a rotten mass.

The most common and injurious insects to library materials
are: Silverfish, "Bookworms", Cockroaches, Psodics or Booklice, Carpet Beetles, Termites.
Other rodents harmful to library collections are:

**Mice**  Mouse damage to library materials usually results from their habit of chewing materials.

**Rats**  The kind of damage inflicted by mice can also be done by rats, but is encountered much less frequently.[71]

2.3.2.5 **DISASTERS**

Another external reason for deterioration of library materials is that of a disaster, which is an event whose timing is not only unexpected but whose consequences are seriously destructive.

Flood, fire and earthquake, are the types of disaster which most often may affect library materials. A factor closely related to disasters is the construction of the building housing the library collections and the protection they can offer to the collections they house. Vigilance and contingency plans are the best guards against damage by disasters.

2.3.2.6 **INFRINGEMENT OF SECURITY**

Arson, vandalism, theft and mutilation of library documents are the results of infringement of security. The results of

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arson are of course the same as those of fire, and vandalism usually leads to mutilation and theft.

2.3.2.7 ABUSE AND MISMANAGEMENT
Abuse either from users or from library staff, results in the same damage and loss of material. Careless or rough handling of brittle paper and fragile bindings, destructive photocopy practices, dropping of books, dogeared edges, disfiguring of texts with notations or marks, and spilling coffee or ash on material, handling material with dirty hands are the most common abuses encountered.
Mismanagement relates to housekeeping practices as well as processing, storage, and handling procedures that adversely affect the well-being of materials. Inappropriate conservation treatments carried out by unqualified personnel are also examples of mismanagement.

2.4 PRESERVATION AND CONSERVATION
In the relevant literature the terms Preservation and Conservation are the ones used in relation to the activities involved in extending the lifespan of library materials. Although over the years the definitions available have varied, the essential meaning has remained the same.
Dureau and Clements define Preservation as the activity which "includes all the managerial and financial considerations including storage and accommodation provisions, staffing
levels, policies, techniques and methods involved in preserving library and archive materials and the information contained in them" and Conservation as the activity which "denotes those specific policies and practices involved in protecting library and archive materials from deterioration, damage and decay, including the methods and techniques devised by technical staff".

Another term related to those already defined is Restoration. "Restoration denotes those techniques and judgements used by the technical staff engaged in the making good of library and archive materials damaged by time, use or other factors."[72] Preservation therefore, includes the preventive measures which will minimise the rate of deterioration.

Preventive Measures Briefly, these measures include monitoring and maintaining the environment at a satisfactory level with the use of special equipment such as air-conditioning, thermometers and hygrometers, so as to avoid excessive or very low levels of temperature and humidity, the results of which have already been described under "Reasons of Deterioration". The use of air-conditioning systems with special filters attached to them is just one method to filter and purify the air from the various pollutants. Photometers should be used to measure the amount of natural or artificial light falling

on items. In addition to that blinds on windows and filters on fluorescent lights should be used to reduce light and heat levels. **Housekeeping**, another preventive measure includes regular cleaning of the storage areas so as to reduce any dirt and remove dust and organic materials which attract fungi or animal pests. The **security** of collections against theft, vandalism, natural disaster or fire is of the utmost importance. To minimise the occurrence of any of the above, an alarm system should be installed, a system for monitoring and checking structural failures, and periodic testing of alarms and vigilance by staff at all times is required. The use of boxes, folders, envelopes etc. (phased preservation) specially manufactured from acid-free paper can also extend the life of items and protect the material from dirt and major variations in temperature and R.H. or keep loose papers together. Another method which can be employed is that of **substitution** of the original material by providing to the users the information in another format usually microfilm and thus protecting the original from further damage by handling. Amongst the Preventive measures included are **Training programmes** both for staff and users to increase awareness of the deterioration problems and to enable them to understand the vulnerability of the materials they are handling. Formal training programmes, simple rules and guidance should be available to all so as to eliminate abuse.

**Conservation** and **Restoration** terms which are usually interchangeable, require specialized skills both on theoretical and
practical aspects which are involved in maintaining the item in its original format and preventing further deterioration. "The entire scope of "restoration" ranges from the repair of a torn leaf, or removal of a simple stain to the complete rehabilitation of the material including at times, deacidification, alkaline buffering, resizing, filling in missing parts, resewing, replacement of endpapers and/or boards, recovering or restoration of the original covering material, and refinishing in a manner sympathetic to the time of the original binding of the publication."[73]

REFERENCES


Two different types of professionals are accorded the responsibility of performing successfully the activities of preservation and conservation: librarians and conservators/restorers.

Zappala states that "librarians are the persons responsible for the material entrusted to them; they can never delegate this responsibility to others; they must be familiar and be able to recognize the environmental conditions in which deterioration of materials takes place; they must know when it is necessary to take measures to improve the conservation conditions, to collaborate with a chemist or biologist, or to call a restorer"[74]

Librarians therefore, being the only ones always present in the library, are responsible for the preservation of the material housed in their libraries.

Conservators and restorers on the other hand are the professionals "who have at their disposal detailed technical information about the material and techniques of paper and bookmaking, the causes of deterioration or damage to the full range of library materials, the range of methods and materials that can be used in conservation treatment, and the implications of any treatment proposed. In addition, he/she is

74 A. Zappala, "Instruction in Book Restoration in the Graduate Course on Conservation of Cultural Property at the University of Udine, Udine, Italy," Restaurator 9(1)1988:29-30.
responsible for the treatment of individual objects. In his capacity as a highly-trained professional, he assesses the condition of a given item, determines what treatment is required to stabilize it chemically or strengthen it physically, or both, then carries that treatment to a conclusion so the item can serve its required function in the library for as long as necessary."[75]

The preservation and conservation education offered at present in Greece is as follows:

3.1 PRESERVATION EDUCATION

3.1.1 TECHNOLOGICAL EDUCATIONAL INSTITUTIONS. LIBRARY SCHOOL DEPARTMENTS

The change of the KATEE to TEI brought changes in the curriculum of the Library Schools. In 1983-84 the KATEE curriculum was changed to the existing one (see Appendices C and C2). The changes however, did not include any module in Preservation and Conservation, an issue of the 80s, meaning that librarians graduating from these departments had no knowledge of Preservation issues, with all the consequences that this might imply. The only closely related module with printed material is that entitled "Modern Book Production", (4hrs/w), which as its title implies and the framework offered by the Institute of Technological Education states, deals with the

"analysis of the processing of the production and distribution of modern printed material and methods of reproduction in small numbers".⁷⁶

Changes to the curriculum, however, do occur unofficially⁷⁷ when a member of the staff has the appropriate education on subjects not covered by it⁷⁸ and the staff council feels that applying them will be beneficial to the students. As a result of the above, for the academic years 1988-1991 period students at the Library Dept. in Thessaloniki were able to attend introductory lectures mostly on issues of preservation while reference was also made to conservation techniques.⁷⁹ The introductory lectures which were incorporated in the "Modern Book Production" module consisted of: the causes of deterioration (internal & external), preventative ways of slowing down deterioration (good housekeeping, storage, handling, etc), disaster planning, criteria for microfilming. Introduction to conservation methods and techniques: deacidification, mass deacidification, lamination, encapsulation (general information on their nature

⁷⁶ Special Service. Technological Educational Institutions, Technological Educational Institutions. 1 Year After (SSTEI: Athens, 1984) 134. (in Greek)

⁷⁷ Without the approval of the Institute of Technological Education.

⁷⁸ Changes are usually related to automation and computer courses.

⁷⁹ At that time I was recruited as non-permanent lecturer at the Library Dept. of Thessaloniki and I had already completed my MA degree in Preservation and Conservation at SLAIS, UCL.
and effect). Most of the subjects discussed were followed by presentations of video tapes. Due to the absence of relevant publications in Greek, notes were distributed to students.

At the library school in Athens according to statements by students, "Modern Book Production" is taught in accordance with the framework provided by the Institute of Technological Education as it has been described earlier and contains no discussion of conservation.

One of the changes discussed by both departments in relation to the entirety of the curriculum (see page 60) and upon which there was mutual agreement referred to the introduction of a Preservation and Conservation module. It has been suggested that the content of the proposed module would include methods and procedures of preventive preservation for printed and A/V collections, collection condition surveys and methods to evaluate the conservation techniques available. It would be part of the 5th semester's curriculum and it would total 3 hrs/w of which one would be theory and two practice.

3.1.2 UNIVERSITY OF THE IONIAN. ARCHIVE AND LIBRARY STUDIES DEPARTMENT

This newly established department at the University of the Ionian according to its curriculum offers a module entitled "Introduction to the Preservation of Cultural Heritage" in the 6th semester of the course. It will cover: introduction to the history and theory of conservation, reasons which lead to
the deterioration of objects, principles of preventive conservation, specialised conservation services, equipment required for a conservation workshop, documentation of conserved objects. This module is part of Museology, one of the core subjects to be taught to those directed to Librarian-ship. It will be taught on a 3 hrs/w basis and the required qualification for the lecturer is for him/her to be a qualified conservator, a graduate either from a Greek conservation school or from one abroad which is recognised by the Greek authorities. [80]

The only conservation school recognised by the Greek authorities is that of the TEI in Athens (see page 106). It therefore appears that the lecturer will be a conservator rather than a preservation administrator, who could be a more appropriate professional for this position. Another question which must be raised is what percentage of the course will be dedicated to library material (printed and non-printed) and what to those exclusively found in museums (fabric, wood, metals, etc.)

The recommended bibliography (see Appendix D) for this course although including basic material[81], is rather limited to bibliographical sources and the most recent publication is dated 1985. Bearing in mind that the course will be taught in 1995 the most recent recommended publication will by that

80 Introduction to the Organisation and Function of the Archive and Library Studies Department of the University of the Ionian (Athens: n.p., 1991)

81 See for example Cunha, Darling and Swartzburg at Appendix D.

104
time be ten years old. It is worth noting that no General Information Programme (PGI) publications are included and there is no mention of relevant journals to which the University's or Department's library will subscribe.

3.1.3 LIBRARIES AND PRESERVATION EDUCATION

One of the responsibilities of the libraries is to provide for the further education of their personnel through training programmes. Short training courses on preservation were offered in 1987 and 1988 by the Greek National Bank Education Foundation (see Conservation Education). Some municipalities since then have organised seminars where amongst other issues (usually automation) they have attempted to cover issues on preservation and conservation. The lack of appropriate educators however has hampered the efforts.

3.2 CONSERVATION EDUCATION

The courses available in Greece for the education of conservators vary from state funded courses as in the case of the Technological Educational Institution (Dept. of Conservation of Antiquities and Works of Art), and courses offered by the Hellenic Organization of Small and Medium Sized Industries and Handicrafts (EOMMEX), to courses offered by certain Organizations and Institutions which are usually co-funded by the EC and the Greek government, and finally to a single private school.
3.2.1 TECHNOLOGICAL EDUCATIONAL INSTITUTION. SCHOOL OF GRAPHIC AND ART STUDIES. DEPARTMENT OF CONSERVATION OF ANTIQUITIES AND WORKS OF ART

The Department of Conservation of Antiquities and Works of Art was established in 1985.

The course offered is a seven semester course plus one semester practical work. During the first semester the students attend lectures which cover mainly archaeological topics.\footnote{History of civilizations, archaeology and history of art of the eastern mediterranean, basics of chemistry and physics, techniques of excavating and first aid in excavation, impression and erection, free drawing, general introduction to colours and photography, technology and techniques of construction, biology and foreign languages.}

From the second semester onwards the students are divided into two groups according to their interests in conservation. Group A is involved with stones, ceramics, metallic objects, glass, organic material and mosaics. Group B is involved with wood, woodwork, paintings, mosaics, paper, books and canvas.

It is during this semester that students visit conservation workshops and observe conservation processes.

Although the paper conservation methods are introduced in the second semester for this particular group (Group B) it is really in the fourth semester that students have lectures on the history of books and paper, the techniques of book manufacturing, agents which cause internal deterioration to its manufacturing material, evaluation of deterioration, recovery of damages and paper conservation, manufacturing of parchment, which totals 12 hours per week (six hours lectures and 6 hours workshops).
In the fifth semester students have lectures on the manufacturing of mechanically made paper and the problems of its conservation, the evolution of writing, the material and methods of conserving drawing paper and printed paper printed and drawn with various techniques, 12 hours per week (six hours lectures and 6 hours workshops).

In the sixth semester students come across problems of deteriorated manuscripts and deteriorated printed books where they have to try and solve the problems and present them in front of an audience of other students and their lecturers.

Apart from the lectures they attend for the particular group they have chosen there is a series of compulsory lectures for both groups, in which Methodology and Aesthetics, and Environmental conditions are included.[83]

It is evident from the curriculum however, that more emphasis is given to archaeological conservation. The graduates of the above mentioned department totalled 49 by the end of 1992. Due to lack of statistics it has been impossible to identify the number of students following each group.

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83 Lectures compulsory to all students: History of civilization, Archaeology and history of Art of Eastern Mediterranean, Introduction to chemistry, Introduction to physics, Digging techniques and first aid treatment for digging, Drawing-sketching (impression) and reconstruction, Free drawing, Colours, Photography, Technology and Technical constructions, Biology, Methodology and aesthetics, Environmental conditions, Physical, chemical and radiochemical techniques, Plasticity, Art history, Sculpture copy, Museology, Computer - input data, Post-graduate seminar (oral presentation specific conservation subjects).
3.2.2. CULTURAL FOUNDATION OF THE NATIONAL BANK

The foundation was established in 1966 by the Greek National Bank in Athens and since then it has contributed to Greek Culture with publications on the Greek civilization and culture and financial support to various educational programmes. In 1987 under the auspices of the Foundation a two day seminar was organised in Athens (26-27 November) on Preservation and Conservation which aimed at the librarians’ and archivists’ education on the subject. The same seminar was repeated in Thessaloniki in 1988 (13-14 May).

In March 1986 the Conservation Unit was established as part of the Historic and Palaeographic Archives of the foundation. At the Conservation Unit of the foundation the staff microfilms and conserves codices and printed material which belong to it, and under arrangement it undertakes to conserve codices and early printed material from other libraries.

In 1988 a contract was signed between the Foundation and the EC for the establishment of a conservation unit for education. The programme was finally co-financed by the Greek National Documentation Centre and the EC and it was to be part of EC’s target 4 which aimed at educating the unemployed under the age of 25.

As a prerequisite to register in this programme, besides the employment and age status some knowledge of conservation and bookbinding was required. As a result of this prerequisite the students educated were from the Dept. of Conservation of Antiquities and Works of Art of the TEI in Athens, and from the Hellenic Organization of Small and Medium Sized Indus-

108
tries and Handicrafts which offers courses in bookbinding or persons who had been educated on the job in various bookbind­ing workshops. At the end of the course the students received a certificate of attendance but in order to receive that certificate they had to present some conserved material or show the offer of a job to a relevant post.

The programme was initiated in 1989 and lasted for 12 months with 25 hours lectures per week. It proved successful and was repeated in both 1990 and 1991.

The syllabus, a total of 1300 hours, was 60% theory and 40% practical work. The course covered the following aspects:

--Historic evolution of the book, means of writing and Palaeography (theory)
--Pathology of library and archive material --printed material-- (theory)
--Prognosis of damage and first aid treatment in libraries and archives (theory and practice)
--Conservation treatment of library and archive material (practical)
--Principles of preservation and conservation of printed material (theory and practice)

In 1990 the need for a programme on binding was realised and a unit was established to cater for the needs of binding the conserved material and the restoration of bindings.

The outcome of the Foundation's efforts so far was to hire some of its graduates and for others to find jobs in various Museums.
### Table 3.1

<table>
<thead>
<tr>
<th>Cultural Foundation of the National Bank: Paper and Fine Art Conservation Graduates</th>
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<tbody>
<tr>
<td><strong>Year</strong></td>
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<td><strong>Students</strong></td>
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### Table 3.1.1

<table>
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<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td><strong>Students</strong></td>
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</table>

#### 3.2.3. CONSERVATION WORKSHOP IN ANDROS

On the island of Andros since 1989 a conservation workshop has been established aiming at educating the unemployed under the age of 25, but mainly focused at educating youngsters of the island of Andros without needing to leave their home. The ultimate goal is to enable them to find a job later on the island.

The educational programme for the year 1989 was co-financed by the EC (55%) and by the Greek General Secretary of New Generation (45%). For the year 1990 the EC provided 65% and the Prefectural Commission of Public Education of Cyclades 35%. The 1989 programme took place from 26th May until 26th November whereas the 1990 one ran from 10th September until 14 December. It was hoped that the 1991 programme would be extended to six months. For 1989 and 1990 12 students respectively for each year attended the course all of whom had
the required qualifications (permanent residents of Andros and unemployed) and were graduates of the secondary level of education.

Out of the total of 350 hours (14 weeks) 86 were theory and 264 practical work conserving books from the public library of Andros. Lectures were on Book Conservation, Restoration and Conservation of Early Bindings and Gilding by conservators and bookbinders who travelled from Athens to the island. The programme was successful since 3 students were granted scholarships from the Greek Ministry of Culture and were able to attend lectures and practical sessions in Turin, Italy and two other students went to the island of Patmos and attended workshops and lectures by French conservators in programmes organised by the Monastery of St. John in Patmos.

Maintaining the already existing workshop as an educational area for training, a new conservation unit was planned to be built in 1992, aiming to be self-financing by conserving and restoring material from the island of Andros (principally library and archival material from the monasteries) and under arrangement material sent from the mainland or other islands in Greece by libraries or individuals. The unit was to be equipped with microfilming apparatus and it is hoped that it will be able to conserve any type of printed material, including leather bound volumes.

It will be staffed by four conservators, most probably graduates of the island's conservation programmes.
3.2.4. CONSERVATION SCHOOL IN PATMOS

On the island of Patmos, the most northerly of the islands of the Dodecanese group, the conservation workshop is of a different nature.

The whole effort is a collaboration between the monastery of St. John which was founded in 1088 on the island of Patmos and two European Conservation Institutions namely the Interregional Centre of Book Conservation in Arles, France and the Conservation School in Aosta, Italy and is mainly funded by the EC. The principal objective of this cooperative effort is to conserve the monastery's manuscripts. This openness on the part of this particular monastery comes in contrast to the closeness and mysticism described in other monastic libraries as for example the ones at Mt. Athos (see pages 56-57).

The programme was to last for four years (1990-1993) and to function during the months of May to September.

Apart from the monks who will benefit from the operation of that conservation workshop[^4] the students who participate in the educational programme at the Monastery's workshop are selected according to their knowledge and practical experience, graduates of the Conservation of Antiquities and Works of Art Dept. of TEI, the bookbinding school of EOMMEX, and students who have already attended the paper conservation workshop at Andros. At the end of the course they will receive a certificate of attendance.

[^4]: A further special programme will aim at the education of the monastery's librarians.

112
The 1991 programme included: bindings’ conservation, paper and manuscript conservation, leather binding conservation, construction of preservation boxes, parchment conservation, parchment MSS conservation, filing, classification and storage of MSS, preventive conservation, mass conservation, byzantine and French bookbinding, history of writing and of books, microfilming, compilation of conservation cards.

According to the programme, the 1992 graduates were from: the Conservation School of Aosta, from the Maitrice des Sciences Techniques (Sorbonne), from the Institut Français de la Restauration des Oeuvres d’Art (Paris) and the educational programmes of Arles, France. These students must have been awarded a grant from their own countries.

In the monastery there already exists a microfilming workshop where microfilms are developed and reproduced, for the monastery’s collection.

3.2.5. Hellenic Organization of Small and Medium Sized Industries and Handicrafts

This organization established the bookbinding workshop in 1985. The duration of the course lasts two years. In order to be admitted the students should be under 30 years old and preferably unemployed so as to ensure total commitment to this course. Candidates are admitted after successful interview. The course normally begins with about 20-25 students and usually 5 of them graduate the course. The course comprises 8-10 hours theory i.e. lectures on bookbinding and 6 hours per
week practical work. The students attend lectures on French Bookbinding Techniques, Colour, sketching and drawing, History and Aesthetics of Bookbinding and Bookbinding equipment. The emphasis given on this course is to Artistic Bindings rather than conventional binding.

3.2.6. PRIVATE SCHOOL OF CONSERVATION

A private school [85] in Athens offers a course on Fine Art Conservation. This is a three year course from October until May. In order to register, students, who are graduates of the secondary level of education, have to sit exams and be interviewed.

Each year is divided into two four month semesters. Lectures vary from 12 - 23 hours per week.

At the beginning of the third year students attend 40 hours in which paper conservation is taught. This module comprises lectures which deal with: Introduction to paper history, Manuscripts, Engraving, Printing, Cleaning of paper: mechanical - chemical, Bleaching, Deacidification, Filing of paper, Passe-partout, Material suitable for exhibitions and preservation of paper made objects.

During the three years, lectures include: Fine Art history, Colours, Chemistry, Photography, documentation, Preventive Conservation, Environmental conditions, Exhibitions, Storage, Conservation of woodwork, paintings, Ceramic Conservation, 

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85 This college functions as a free educational enterprise and does not have to comply with any educational programme imposed by the Ministry of Education.

114
Mosaic conservation. These subjects are taught by seven lecturers three of whom are Fine Art conservators, one Art Historian, one Photographer, one Chemist and one Painter. A certificate is awarded after a successful attendance at the course.
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CHAPTER FOUR

IDENTIFICATION OF FACTORS AFFECTING THE GREEK LIBRARY MATERIALS.

4.1 INTRODUCTION

The lack of any source providing information as to the specific factors - as have been described previously - which affect the lifespan of library materials in relation to the Greek environment led to the decision to institute a survey which aimed at identifying and examining the operations of these specific factors in the Greek context.

The main objectives of the survey were to identify:

a) the types of material held in Greek libraries and the size of collections where statistics existed (excluding periodicals & newspapers, see page 120)

b) the publication dates of the libraries' holdings as far as printed material were concerned.

c) the geographical location of the libraries

d) the dates of establishment of the libraries, the dates of construction of buildings where materials were housed and the purpose for which the buildings were constructed

e) the number of qualified and unqualified staff

f) the main hazards considered as dangerous to the collections by the librarians themselves.

g) the existence of any preservation policies in Greek libraries and if not

h) the reasons that could justify their absence.

117
**Method of Data Collection**  As the method to survey the selected libraries and obtain the required information, the questionnaire was chosen due to the number of libraries which were to be surveyed and due to the fact that they were scattered in every part of Greece.

**Period of the Survey**  To avoid the October and November Public holidays the Christmas and New Year's holidays in Greece and the post office's backlog, the survey was conducted in January 1990 although the questionnaire had been designed in July 1989.

During this period the addresses of the libraries to be surveyed were identified, the questionnaire was translated into Greek, distributed to a few librarians for comments and after minor corrections it was posted to the selected libraries accompanied by an introductory letter indicating the reason for the survey, its importance, pointing out the need for their collaboration and explaining what the terms preservation and conservation stood for, using the terminology provided by Dureau and Clements.[86] A period of 30 days was offered for returning the questionnaire in the stamped envelope provided. Two weeks after the 30 days a reminder (with the same questionnaire and a stamped envelope) was posted to the libraries which had not returned the questionnaire by that time. A period of three weeks was offered for the returning of the reminder.

Structure of the Questionnaires The self-completed questionnaires were designed based on closed and open-ended questions. (see Appendix E).

The first nine questions of the first questionnaire aimed at surveying information which would relate in general to factors which affect library collections and the remaining two questions were for information as to the existence of preservation policies and comments referring to preservation and conservation.

Types of Libraries and their Identification The libraries to be surveyed were the National Library of Greece, the Public libraries (dimotikes & dimosies), and Academic and Special libraries. As main sources for the identification of Greek libraries the following were used: a list providing names of the 40 Public (dimosies) libraries, a list providing names and addresses of 160 Public (dimotikes) libraries, a list providing the addresses of the Academic and TEI central libraries (where these existed for both types of Institutions) [87], the Guide to the Special Libraries of Attica, a list of Special libraries of Thessaloniki from the Greek Productivity Centre of Thessaloniki. All the lists with the exception of the Guide were obtained from the Library Department of the T.E.I of Thessaloniki.

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87 All lists were produced by the Ministry of Education in 1989.
**Exclusions and Parameters**  Monastic libraries were excluded from the survey. The reasons which led to their exclusion were mainly related to the difficulties faced in obtaining information as to their location and the fact that information as to their content is not made easily available to the public.

The information required as to the type of printed material excluded periodicals and newspapers. The reason behind this limitation was based on two basic factors: a) the fact that paper used in books is of a better quality than that used in journals and newspapers; if therefore it was proven that the conditions were unacceptable for books, then the same could apply for materials made of inferior paper and b) from personal experience and information acquired from colleagues it was evident that the recording of journals and newspapers is not always consistent and librarians (especially from Public libraries) are reluctant to provide such information.

**Sampling**  For the Public libraries all the dimosies were included but from the dimotikes only those which were located in the capitals of their geographical region.\(^8\) For the Special libraries located in the Athens and Thessaloniki areas the method of sampling used was based on the size of their collection; libraries with a collection of 5,000 volumes and over were chosen for the purposes of the survey. All the

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\(^8\) The *dimosies* and the *dimotikes* are presented as one type, "Public", because it was believed that what was of importance was the state of their collections and not the way in which they were governed or financed.
central Academic libraries \cite{footnote:academic} were included and where these did not exist the libraries in the respective faculties of the Academic institutions were included.

**Responses** The total number of libraries to which the questionnaire was posted was 164. More specifically these were:

<table>
<thead>
<tr>
<th>Number and Type of Libraries Surveyed</th>
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<tbody>
<tr>
<td>National</td>
</tr>
<tr>
<td>Academic</td>
</tr>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Special</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
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**Valid and Invalid Responses** A total of 101 (61.6\%) questionnaires were returned, six (6\%) of which were considered invalid. The 95 (94\%) valid questionnaires were provided by the following types of libraries:

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\footnote{In the Academic libraries the libraries of the Technological Educational Institutions were included since both types of institutions belong to the tertiary level of education.}
Table 4.1.1

<table>
<thead>
<tr>
<th>Type of Library</th>
<th>No. of Responses</th>
</tr>
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<tbody>
<tr>
<td>National</td>
<td>1</td>
</tr>
<tr>
<td>Academic</td>
<td>19</td>
</tr>
<tr>
<td>Special</td>
<td>25</td>
</tr>
<tr>
<td>Public</td>
<td>50</td>
</tr>
</tbody>
</table>

The six invalid questionnaires were returned without being completed and therefore they were not included in the analysis of the collected data:
These were:

-- One University library which returned the questionnaire with a note that "they do not answer questions to individuals!",

-- one special library which no longer functioned, but which was listed in the directories as a functioning one.

-- one from a public-dimotiki which wrote that they were unable to complete the questionnaire because at that moment they were transferring the collection to another building and they had no time.

-- three from public-dimotiki libraries with notes saying that the library was not functioning and there was not any person appointed as librarian to provide any answer.

Analysis of the Data and Presentation of the Results  For the analysis of the data the SPSS/PC+ statistical package was used. The results are illustrated in graphic presentations.
Problems Besides the problem of identifying the number and the addresses of libraries presently functioning in Greece the other problems encountered were related to the inability on the part of some libraries to provide information as to the size of their collection and information on the publication dates of their printed material, which is probably due to the lack of any statistics held by them.

The fact that many libraries did not respond at all to the questionnaires can be justified by the fact that questionnaires are often not welcomed by librarians, especially if there are questions on estimating the size of their collection or questions which can only be answered if statistics exist.
4.1.1 TYPE OF LIBRARY MATERIALS AND LIBRARIES

From the survey it was revealed that the holdings of the Greek libraries comprised both printed and A/V material. The size of the A/V collections compared to that of the printed ones according to the results of the survey was rather small. For this reason the results relating to the A/V collections are not included in the main body of the analysis of the data collected; information concerning their size, related to types of libraries is available at Appendix F.

The following table illustrates a general view of the various types of material and the respective types of libraries which have indicated them as part of their collections.

<table>
<thead>
<tr>
<th>Type of Material</th>
<th>National</th>
<th>Academic</th>
<th>Special</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Books</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Maps</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>MSS</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>A/V Material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound-recordings (discs)</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Audio-tapes</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Photographs</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Microfilms</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Microfiche</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Slides</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Video-tapes</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>
This predominance of printed material can be justified by the low cost involved in purchasing them compared to the cost of A/V material, and the equipment required to retrieve the necessary information from the latter.

4.1.1.1 TYPE AND SIZE OF PRINTED COLLECTIONS

According to the results, the size of the printed collections in the surveyed Greek libraries varied from around 5,000 to 2,600,000 volumes. Of the 95 libraries, 93 (98%) provided information for this particular question.

It is evident from the results that the majority of the libraries, 67 (72.1%), house collections which lie in the size range from 5,000 to 800,000 (Figure 4.1). There were two notable exceptions (2.2%) with collections of over 2,000,000 volumes.
A very small number of libraries indicated that maps and manuscripts were part of their collection; the size of the map collection at the one library which included them in its collection was around 8,000 items. The size of the MSS collections (Figure 4.2) held in five libraries (5.3%) ranged from 500 to 3,000 items.\[^{90}\]

---

\[^{90}\] The Greek National Library did not indicate the size of the number of its MSS collection. It held however 4,000 MSS by 1990. [see National Library of Greece, table 1.6.1]. This information is included in Figure 4.2.
4.1.2 FACTORS AFFECTING GREEK LIBRARY MATERIALS

The quality of paper used in publications, the state of the buildings which house the collections, their geographical location, bio-deterioration and disasters are all factors which affect library materials. These and individual responses provided by the librarians concerning other factors which affect Greek library material are identified and discussed in this part.

4.1.2.1 PRINTED MATERIAL ACCORDING TO PUBLICATION DATE

It is generally accepted that paper manufactured after the 1850s deteriorates faster than that manufactured in earlier days. An element which may determine the state of the paper is the publication date.

This information was provided by the surveyed libraries and related to material published before and up to 1850, and for the following groups of dates namely 1851-1900, 1901-1950 and 1951-1989. Since the survey was conducted at the beginning of 1990 this date was not included.

4.1.2.1.1 PUBLICATION DATES AND TYPES OF LIBRARIES

All types of libraries indicated that they held material corresponding to the given date-groups.\[91\]

As expected the corresponding number of libraries to each date group differed showing an increase especially for publications

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91 It is worth noting that the National Library of Greece was unable to provide any information concerning this particular question. This can perhaps be explained by the large size of the collection and the fact that it is not yet automated.
dated from 1951 onwards (Figure 4.3).

This can be justified by historical, social and political reasons which affected the development and growth of libraries in Greece. The majority of libraries, 58 (67.4%), were established in the 1950s onwards when Greece was trying to recover from the catastrophic invasion of the Germans and other internal political and economic turmoil (Figure 4.4).
Dewe\[92\] had stated that "the Greek Public Library has largely been seen as a kind of research library for the studious and serious reader rather than serving the library and information needs of the population at large. Book collections may contain much that is old and possibly rare." Figure 4.5 illustrates and justifies the above quotation. Approximate size of collections in each date-group in relation to the types of libraries is provided in Appendix G. The explanation of this situation lies in the fact that private collectors donate their valuable collections not to research institutions, but usually to their village's small libraries.

---

### Greek Libraries
Publication Dates of Holdings by Type of Libraries

<table>
<thead>
<tr>
<th>Type of Library</th>
<th>...-1850</th>
<th>1851-1900</th>
<th>1901-1950</th>
<th>1951-1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Special</td>
<td>11</td>
<td>13</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Public</td>
<td>16</td>
<td>16</td>
<td>17</td>
<td>28</td>
</tr>
</tbody>
</table>

**Figure 4.5**

### 4.1.2.2.1 BUILDINGS HOUSING GREEK LIBRARIES

The state of buildings that house library collections can affect the material in many ways. The level of protection they offer is closely related to their satisfactory construction, the date the buildings were constructed and their intended use. Some of the dangers encountered by both old and new constructions are cracks to the actual structure due to physical and natural reasons (e.g., drought or earthquakes); faulty wiring and badly maintained water pipes. External replacement of these faulty mechanisms is a factor in causing damage to the material as is for example bio-deterioration, or the most common of the disasters, fire and/or flood. The
overall state of the building will determine the possibilities and possible occurrences of infringement of security. Also, non-purpose built buildings or badly designed ones almost always present a problem of space. Crammed shelves may not have the immediate effect a fire or flood would have on the collection but they certainly add to their deterioration. What is of concern here is whether the material can be protected in case of disasters or from the daily external reasons of deterioration for example bio-deterioration, disasters, infringement of security, etc.

4.1.2.2.2 CONSTRUCTION DATE OF SURVEYED LIBRARIES

90 (94.7%) out of the 95 libraries indicated the date the building that housed their collection was built. The majority of libraries, 73 (81.3%), were housed in buildings built in the twentieth century, 14 (15.4%) were housed in buildings which were built in the 19th century, two (2.2%) were housed in mid 18th to 19th century buildings and one was housed in a building of the 15th century. 27 (30%) of the buildings were constructed in the past 20 years and 63 (70%) are of even more recent date (Figure 4.6).
4.1.2.2.3 PURPOSE BUILT CONSTRUCTIONS

In an attempt to identify whether the building was originally constructed to house library materials and function accordingly as a library, and for that matter be able to secure its contents the following results were available after analyzing the data.

93 (97.9%) of the total valid responses provided answers for this particular question. 40 (43%) responded positively, meaning that the building was originally built to house library collection and the remaining 53 (57%) provided a negative answer (Figure 4.7).
In relation to the type of library the results of the survey showed that Academic and Public are the ones which showed a greater negative percentage 77.8% and 54.9% respectively whereas Special libraries provided a negative response of 45.8% (Figure 4.8).
4.1.2.2.4 PURPOSE BUILT BUILDING ACCORDING TO CONSTRUCTION DATE

Relating the results provided for the date of construction of the buildings to the responses given as to whether these were purpose-built showed that buildings dated back to the late 19th century were purpose-built but those built in the middle of 20th century onwards were not meant originally to house library collections. 39 (43.3%) answered that the building was purpose-built and 51 (56.7%) provided a negative answer[33] (Figure 4.9).

33 The total number of those who responded as to whether the building was purpose-built totals 93 in contrast with the total number of those who provided the construction dates of the building which is 90. The two additional answers appearing in the "purpose built" question indicates that they were unable to provide a date but were able to judge whether the building was meeting its needs as a library.
Bearing in mind the establishment dates of the Greek libraries one can assume that collections were housed depending on the availability of existing buildings without realizing at the time the consequences of the collection's expansion.
4.1.2.2.5 PROBLEMS OF PURPOSE BUILT CONSTRUCTIONS

Although the percentage is small it is worth noting that problems have been indicated by three (7.7%) of the 39 who stated that the building was purpose built for library. One has stated that there was occasional flooding from the lavatories or from rain, another stated that the space was insufficient thus causing damage to the material and a third one indicated that there was a space problem and that the existing arrangement did not enable proper functioning of the library, an issue which is taken into consideration here as far as the protection and security of the material is concerned.

4.1.2.2.6 PROBLEMS OF NON PURPOSE BUILT CONSTRUCTIONS

The problems which were noted by those libraries who stated that their building was not originally intended for library use were mostly associated with the inadequacy of space. Of the 51 which indicated that the building in which the library was housed was not purpose built, 37 (72.5%) specified the problems they faced. These related to insufficient space, old age of the buildings, poor air-conditioning and excessive humidity due to badly maintained water pipes especially in cases where the materials were stocked in the basement.
4.1.2.3 LOCATION OF LIBRARIES

It is important to distinguish the libraries according to the area in which they are located since climatic conditions (temperature and R.H.) and air-pollution are of utmost importance in the preservation of library materials. It is obvious that there is a variation in these climatic conditions from north to south and from the mainland to the islands. The results of the survey showed that the majority of the libraries were located on the mainland, that is 76 libraries, and only 19 were located on the islands (Figure 4.10).
4.1.2.3.1 SPECIFIC AREA LOCATION OF THE LIBRARIES

Of the 76 libraries located on the mainland 27 (28.4%) were located in Athens and 13 (13.7%) in Thessaloniki. (Map 4.1) A map illustrating the areas with one responding library is provided in Appendix H.

Concentration of smoke, $SO_2$, CO, $NO_2$, $O_3$ and $NO_2$ characteristics of urban and industrialised areas, as Athens and Thessaloniki are, are harmful to library collections. Consequently, library collections in these two areas are more susceptible to deterioration than those located in other less polluted areas.

Map 4.1

1=Athens (27 libr.), 2=Thessaloniki (13 libr.), 3=Crete (7 libr.), 4=Ioannina (3 libr.), (Nos. 5-6 2 libr. each) 5=Karditsa, 6=Kavala, 7=Kefalonia, 8=Kozani, 9=Serres.
4.1.2.4 STAFF IN GREEK LIBRARIES

The libraries surveyed were asked to provide the total number of their staff and to distinguish between their qualified and unqualified personnel. 91.6% provided information for this particular question and the majority of them (71.3%) indicated that their staff ranged from 1-5, whereas 20.7% had a staff in the range of 6-10 (Figure 4.11)

![Greek Libraries Total No. of Staff](image)
The following table illustrates the number of staff according to type of library. It shows that in the range of 1-5 the majority of libraries with that range of staff are the Public ones (58%) followed by the Special (24.2%) and the Academic (17.7%).

Table 4.3

<table>
<thead>
<tr>
<th>Type of Library</th>
<th>Public</th>
<th>Academic</th>
<th>Special</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>36</td>
<td>11</td>
<td>15</td>
<td>62</td>
</tr>
<tr>
<td>6-10</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>11-15</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>16-20</td>
<td>1</td>
<td>--</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21-25</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>26-30</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>41-45</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>66-70</td>
<td>1[&quot;*&quot;&quot;]</td>
<td>--</td>
<td>--</td>
<td>1</td>
</tr>
</tbody>
</table>

["*"] Greek National Library
4.1.2.4.1 QUALIFIED AND UNQUALIFIED STAFF

The population staffing Greek libraries is a mixture of both qualified and unqualified personnel. 34.5% of the surveyed libraries indicated that none of the population staffing their libraries was qualified, meaning being a graduate of a library either in Greece or abroad (Figure 4.12). 65.5% indicated that their personnel comprised both qualified and unqualified staff; of those, 15.8% stated that all their staff were qualified librarians (Figure 4.13).
This situation can be further substantiated by data provided by Unesco[^5]

**Table 4.3.1**

<table>
<thead>
<tr>
<th>Greek Libraries: Qualified and Unqualified Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Public (1986)[^6]</td>
</tr>
<tr>
<td>Special (1984)[^7]</td>
</tr>
</tbody>
</table>


[^6]: Data relating to Public libraries include the National and Special libraries.

4.1.2.5 HAZARDS
Apart from the information collected and illustrated so far (publication dates, condition of buildings, location of libraries, qualified and unqualified staff) the personal evaluation of potential hazards to the collections was examined.

4.1.2.5.1 PERSONAL EVALUATION OF POTENTIAL HAZARDS TO THE COLLECTION
There were four options provided to the librarians as hazards to the collection in order to evaluate which they thought endangered most their collections.

The options provided to them were lending, users, photocopying, and environment (air-pollution, humidity, temperature, dust etc.). They were also asked to specify any other reason they thought was harmful to their collection. The libraries evaluated the proposed hazards as follows: Lending first, users second, environment third, and photocopying fourth (Figure 4.14).
Lending and users have been indicated as the major hazards to the collections. This implies that user abuse of the material is experienced, an attitude which can be explained by the lack of education the users have had as to the handling of the material they borrow. Another factor to which this abuse of library material could be attributed is the fact that Greece lacks school libraries[^98] and potential users of public and academic libraries have never before been accustomed to such an environment and consequently to acceptable handling of material.

4.1.2.5.2 OTHER HAZARDS INDICATED BY THE RESPONDENTS

The last part of this question offered the opportunity to the respondents to indicate any other reasons they thought harmful to their material. What they indicated were specific environmental hazards (excessive humidity and dust), hazards related to users’ attitudes (losses, tearing, pen and pencil markings), lack of space and inappropriate shelves, biodeterioration hazards (pests) and the postal services meaning that materials were lost and/or damaged during shipment.

4.1.2.6 BIO-DETERIORATION FACTORS

The growth of mould and fungi is encouraged by climatic conditions like those of the Greek environment (temperature and humidity) and bio-deterioration was indicated by some libraries as hazard to their collection. The state of the buildings, the problems (floodings, excessive humidity etc.) indicated by some libraries are all indications that the material is left unprotected for micro-organisms to thrive.

Silverfish, Bookworms (cigarette beetle, drugstone beetle, white-marked spider, brown spider beetle), Cockroaches, Psodics or Booklice, Carpet Beetles (cabinet beetle), clothes moths (brown house moth) and Termites are the types of insects most often found in a Greek environment.\textsuperscript{99}

Mice and rats, pests not uncommon in Greece, have also been

\textsuperscript{99} Annales de l’Institut Phytopathologique Benaki New Series vol. 5 (1) 1964; vol. 11 (2) 1975.
indicated as hazards by the librarians.

### 4.1.2.7 DISASTERS IN GREECE

Greece is a country which occasionally experiences earthquakes. Experience, in the Greek environment at least, has shown that older buildings are capable of withstanding them better than more recently built ones. Although other types of disasters have occurred in Greek libraries, these are rarely reported even by the media as in the case of fire in a special library in Athens where the fire was caused due to faulty wiring. Exceptions to this rule are disasters (fires) occurring at the libraries of Mt. Athos (a type of library which has been excluded from this survey). This exception is due to the fact that materials housed in these libraries and monasteries are invaluable.
REFERENCES

Annales de l'Institut Phytopathologique Benaki. New Series. 5 (1) 1964; 11 (2) 1975.


5.1 INTRODUCTION

For the needs of the thesis and in order to further evaluate the state of the library collections in Greek libraries, a book condition survey was undertaken in two libraries in the Northern part of Greece, the main library of the Aristotelian University of Thessaloniki and the Public (dimotiki) library in the same area.

Period of the Survey  The survey at the University library took place during the period of February-June 1990 and the one at the Public library during October-December 1990.

Methodology  For the compilation of the survey form, the codification used by Buchanan and Coleman [100] was borrowed. A team of 15 members, 14 of which were second semester students from the Library Department of the Technological Educational Institution of Thessaloniki, undertook the survey.[101]


101 I was the 15th member and supervisor of the team. At that time I was working at the Library Dept. of the TEI, Thessaloniki and one of the subjects I was assigned to teach was "Modern Book Production".
After explaining the purpose of the survey each member was given a survey form and the relevant explanatory notes for the codes used in the form. (see Appendix I,II)

**Sampling**

*A. Aristotelian University of Thessaloniki*  For the 16th and 17th century books which had been placed in the first basement a sample was taken every nine volumes. For the rest, representing later publications, which were in the second basement a sample was taken from the shelves every 49 volumes.

*B. Public Library of Thessaloniki (dimotiki)* The same survey form and method of sampling (a sample every 49 volumes) was used for the Public library.

**Data Analysis** The data collected from both surveys was analyzed using the SPSS/PC+ statistical package.

**Problems** Due to the time restriction of the availability of the storage areas (see below under Aristotelian University of Thessaloniki, Main library) and due to the restricted availability of the members of the team, the survey was conducted once a week from 8:00 a.m. to 1:00 p.m. during the months mentioned above which is the Spring semester in the educational calendar. Another drawback was that not all the members of the team were allowed in the closed stack area for security reasons, and thus half of them were able to participate only
every other week. In addition, during the Easter holidays (two weeks) few of the team were available. For the survey at the Public library the problems encountered were that of the time restriction again, where the team was allowed into the stack areas only between 2:00 - 4:00 p.m. and the availability of the members of the team limited to one day per week. The lack of previous practical experience on the part of the supervisor and the lack of both theoretical and practical previous experience of the rest of the team which undertook these two surveys should also be added.

*Presentation of the Results* With the exception of the results relating to the open stack collection of the Public library, dates are given in centuries rather than decades and are illustrated in graphic presentations referred to as figures. Dates according to decades for all the tables can be found at Appendix I2-I11. In addition, all publication places identified can be found in the same Appendix.

102 As the survey was conducted in hours which did not interfere with the students timetable the other half was free to do as they pleased.
5.2. ARISTOTELIAN UNIVERSITY OF THESSALONIKI. MAIN LIBRARY

The University's library was established in 1927 and the building housing its collections was purpose built in 1974. The collection housed at the Main library of the Aristotelian University of Thessaloniki is estimated by its director to number around 2,000,000 volumes. The volumes are kept in closed stacks. Materials can be borrowed for 15 days by students and for a month by faculty and staff. The library is open from 7:30 a.m. to 3:00 p.m., Monday through Friday. Study areas, but not library materials, are available to students from 3:30 p.m. to 8:30 p.m.

Although purpose-built, as mentioned earlier the building presents problems, since there is occasional flooding from the water pipes which run through one side of the storage area. The storage area is located in the first and second basements and there is a system installed by which it is possible to monitor the environment (levels of temperature and R.H.) but it has never functioned due to a mechanical problem. In the basement there is also a mechanical conveyor by which books can be transported to the reading area which has not been in use for the past five years due to a mechanical problem, so books are put on trolleys and then into elevators. Unfortunately the area is not cleaned very often and as a result there is a considerable amount of dust covering the books.

Results of the Survey A total number of 1193 (0.06%) books were surveyed and the analysis of the data showed the following:

151
5.2.2 PLACES OF PUBLICATION

The analysis of the data showed that the majority of the books surveyed came mainly from three countries, that is Germany, Greece and France (Figure 5.2). A total number of 30 countries appeared most of which were represented by only one volume. (see Appendix I3)
5.2.1 PUBLICATION DATES AND SIZE OF COLLECTIONS

The books surveyed were published in the 16th, 17th, 18th, 19th and 20th centuries.

Of the 1,193, 1,098 (92%) had a publication date, the remaining 95 (8%) lacked a publication date either because of a missing title page or because the page contained no date.

The books examined present a descending order, that is the majority (48.4%) were published during the 20th century, 33.1% were published in the 19th century. The number of books examined belonging to the 18th, 17th and 16th centuries represented 7.6%, 2.6% and 0.3% respectively of the total number of books surveyed (Figure 5.1).

For dates of publication according to decades see Appendix I2.
5.2.3 PAPER CONDITION

The paper condition of the books surveyed revealed that those which could be characterised as "good" or "0" represented 30.9%, "moderate" or "1" represented 52.6%, whereas those characterised as "poor" or "2" represented 16.4%. (Figure 5.3). Paper condition according to date of publication in decades is illustrated at Appendix I4.

---

Aristotelian University of Thessaloniki Book Survey
Paper Condition by Publication Date

<table>
<thead>
<tr>
<th>No. of books</th>
<th>19th c</th>
<th>20th c</th>
<th>no date</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>0</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>moderate</td>
<td>3</td>
<td>22</td>
<td>74</td>
</tr>
<tr>
<td>poor</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 5.3

---

As shown at Appendix I1 there are three grades of condition assigned to the two categories (paper and cover condition). Each grade is assigned a number reflecting that grade:

0, good condition; needs no attention
1, moderate condition; evidence of deterioration; needs some attention
2, poor condition; rapid deterioration, needs immediate attention, should not be used
5.2.4 PAPER CONDITION AND PLACES OF PUBLICATION

A correlation of the data relating to the paper condition and that of places of publication showed that of the books published in Greece 39% can be characterised as "good", 43.3% as "moderate" and 17.7% as "poor". Of those published in Germany, 27% can be characterised as "good", 59% as "moderate" and 14% as "poor". Of the books published in France 18% can be characterised as "good", 61% as "moderate" and 21% as "poor" (Figure 5.4).

Aristotelian University of Thessaloniki
Book Survey
Paper Condition by Places of Publication

<table>
<thead>
<tr>
<th>Places of publication</th>
<th>Paper condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>good</td>
</tr>
<tr>
<td>Greece</td>
<td>200</td>
</tr>
<tr>
<td>France</td>
<td>100</td>
</tr>
<tr>
<td>Germany</td>
<td>50</td>
</tr>
</tbody>
</table>

Figure 5.4
5.2.5 MOULD AND PEST STAINS

The majority of the books surveyed did not present any mould stains. It is interesting to note however, that 183 books (66%) of those which had signs of mildew were published in the 19th century and they represent 46.3% of that century's surveyed books (Figure 5.5). Besides mould stains, pest stains were identified in the surveyed books. The results, however, showed that only a small proportion of them (6.1%) was damaged by pests (Figure 5.6). For the results according to decades see Appendix I5-6.
Aristotelian University of Thessaloniki
Book Survey
Pest Stains by Publication Date

Figure 5.6

5.2.6 COVERING MATERIAL AND COVER CONDITION [104]

The materials used for covers included leather 15.5%, of which parchment was 9.4%, paper 37.7%, cloth of which linen was 32.9% and buckram 13.6% and a small percentage had wooden boards 0.3% (Figure 5.7). The cover condition of the majority of the books examined, 58.3%, can be characterised as "good", 36.2% as "moderate" and 5.6% as "poor" (Figure 5.8).

104 see footnote 103
Aristotelian University of Thessaloniki
Book Survey
Covering Material by Publication Date

<table>
<thead>
<tr>
<th>Dates of publication</th>
<th>16th c</th>
<th>17th c</th>
<th>18th c</th>
<th>19th c</th>
<th>20th c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of material</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Leather</td>
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<td>□</td>
<td>□</td>
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</tr>
<tr>
<td>Paper</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Linen</td>
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<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Buckram</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Wooden boards</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Parchment</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Figure 5.7

Aristotelian University of Thessaloniki
Book Survey
Cover Condition

<table>
<thead>
<tr>
<th>Cover condition</th>
<th>good</th>
<th>moderate</th>
<th>poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of books</td>
<td>800</td>
<td>700</td>
<td>600</td>
</tr>
</tbody>
</table>

Figure 5.8
5.2.7 OTHER COMMENTS

The last section of the survey form was to be filled in with any remarks or notes about the condition of the books which were not covered by the other parts of the same form. These comments were: 1) deformed shape of book due to bad storage, 2) yellow pages, 3) yellow margins, 4) expanded text block due to humidity, 5) pencil writings & underlinings, 6) ink acidity has damaged a significant number of pages, 7) stained pages and 8) considerable pest damage.

Cross relating this type of data with the "paper condition" one revealed that: of those whose paper had been characterised as "good", 22 (6%) had deformed shape due to bad storage; of those characterised as "moderate" 21 (3.4%) had deformed shape due to bad storage; 72 (11.5%) had yellow pages, 30 (4.8%) were yellow around the margins, 97 (15.5%) had expanded textblock due to humidity, 11 (1.8%) had pencil writings and underlines, 21 (3.4%) had a significant number of pages damaged due to ink acidity, 19 (3%) had stained pages and 4 (0.7%) presented considerable pest damage (Figure 5.9)
Aristotelian University of Thessaloniki
Book Survey
Other Comments by Paper Condition

Paper condition

Good
Moderate
Poor

0 20 40 60 80 100 120
<-- No. of books -->

Comments

1) deformed shape of book due to bad storage,
2) yellow pages,
3) yellow margins,
4) expanded text block due to humidity,
5) pencil writings & underlinings,
6) ink acidity has damaged a significant number of pages,
7) stained pages,
8) considerable pest damage.

Figure 5.9
5.3 PUBLIC LIBRARY OF THESSALONIKI (DIMOTIKI)

The Public library of Thessaloniki (dimotiki) was founded in 1938 and is housed rather inadequately on the upper floor of the YMCA building, built in 1934, in the centre of the city. The building was not originally intended to house a library. This particular library has two types of collections. One which is the largest, (around 15,000 volumes) is in closed stacks, and material is not borrowed, so it could be characterised as a reference collection. The second collection which is smaller in size (around 3,500 volumes) is accessible to the users for browsing and material can be borrowed.

The closed stack collection covers a variety of subjects but the emphasis is on Greek literature and history. The open stack collection covers mainly Greek modern literature and foreign literature translated into Greek. Due to this fact there is an overlapping of titles (Greek literature mainly from the period 1970-1990) in the two collections.

The books purchased for the closed stacks are usually bound as soon as they reach the library, whereas those for the open stacks are covered with transparent adhesive plastic. The library is open to the public from 8:00 a.m. to 2:00 p.m. and from 4:00 p.m. to 8:00 p.m. Monday to Friday. The library suffers from lack of space since both collections are growing simultaneously and there is no way of controlling the temperature and R.H. levels.
5.3.1 RESULTS OF THE SURVEY. CLOSED STACKS

A total number of 485 (3.3%) books were surveyed in the closed stack collection of the library.

5.3.1.1 PUBLICATION DATES AND SIZE OF COLLECTION

The books surveyed covered both 19th (7.2%) and 20th century (78.1%) books (Figure 5.10). For the results according to decades see Appendix I7.
5.3.1.2 PLACES OF PUBLICATION

11 countries (see Appendix I8) were identified as places of publication. The two countries with the largest number of publications were Greece 78.4% and France 6.2% (Figure 5.11).
5.3.1.3 PAPER CONDITION [105]

The paper condition of the surveyed books can be characterized as "good" since the majority of them belong to category "0". It is worth noting however, that most of the books dated from the 19th century (62.9%) belong to category "2" which denotes that their condition is "poor" (Figure 5.12). For decades see Appendix I9.

![Public Library of Thessaloniki Book Survey. Closed Stacks Paper Condition by Publication Date](image-url)

<table>
<thead>
<tr>
<th></th>
<th>19th</th>
<th>20th</th>
<th>no date</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>3</td>
<td>275</td>
<td>51</td>
</tr>
<tr>
<td>moderate</td>
<td>10</td>
<td>70</td>
<td>13</td>
</tr>
<tr>
<td>poor</td>
<td>22</td>
<td>34</td>
<td>7</td>
</tr>
</tbody>
</table>

Paper condition
- good
- moderate
- poor

Figure 5.12

[105] see footnote 103
5.3.1.4 PAPER CONDITION AND PLACES OF PUBLICATION

The correlation of the data relating to paper condition and that of places of publication showed that of the books published in Greece 73.5% can be characterised as "good", 17.5% as "moderate" and 9% as "poor". Of the books published in France 23.3% can be characterised as "good", 30% as "moderate" and 46.7% as "poor" (Figure 5.13).
5.3.1.5 MOULD AND PEST STAINS

The vast majority (90.3%) of the surveyed books did not have mould stains and the same (97%) applies for the indication of pest stains (Figures 5.14 & 5.15). For decades see Appendix I10-11.

---

**Public Library of Thessaloniki**

**Book Survey. Closed Stacks**

**Mould Stains by Publication Date**

<table>
<thead>
<tr>
<th></th>
<th>19th c.</th>
<th>20th c.</th>
<th>no date</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>16</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>no</td>
<td>19</td>
<td>349</td>
<td>70</td>
</tr>
</tbody>
</table>

Figure 5.14
5.3.1.6 COVERING MATERIAL AND COVER CONDITION

Of the books published in the 20th century 6.9% had buckram as covering material, 67.5% linen and 25.6% paper. Of those published in the 19th century 5.7% had buckram, 57.1% linen and 37.2% paper (Figure 5.16). The condition of the cover for the majority 88.1% of the books examined can be characterised as "good" whereas 8.9% as "moderate" and 3.1% as "poor" (Figure 5.17).
Public Library of Thessaloniki
Book Survey. Closed Stacks
Covering Material by Publication Date

<table>
<thead>
<tr>
<th>Publication Date</th>
<th>Type of Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>19th c.</td>
<td>Buckram, Cloth, Paper</td>
</tr>
<tr>
<td>20th c.</td>
<td>Buckram, Cloth, Paper</td>
</tr>
</tbody>
</table>

Figure 5.16

Public Library of Thessaloniki
Book Survey. Closed Stacks
Cover Condition

<table>
<thead>
<tr>
<th>Cover Condition</th>
<th>No. of Books</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>500</td>
</tr>
<tr>
<td>moderate</td>
<td>400</td>
</tr>
<tr>
<td>poor</td>
<td>300</td>
</tr>
</tbody>
</table>

Figure 5.17
5.3.1.7 OTHER COMMENTS

As in the survey of the University library, this section was used for comments which were not covered in the survey form. The comments were: 1) discoloured/faded spines due to sun, 2) yellowish outer margins, 3) yellow paper. Correlating this type of data with the "paper condition" one revealed that of those which had been characterised as "good" 26 (7.9%) had discoloured/faded spines due to the sun and 19 (5.8%) had yellowish outer margins. Of those labelled as "moderate" 11 (11.8%) had discoloured/faded spine due to the sun and 15 (16.2%) had yellow paper (Figure 5.18).

![Public Library of Thessaloniki Book Survey. Closed Stacks Other Comments by Paper Condition](image)

Figure 5.18
5.3.2 RESULTS OF THE SURVEY. OPEN STACKS

A total number of 42 (1.2%) books was examined from this collection.

5.3.2.1 PUBLICATION DATES, PLACES OF PUBLICATION AND PAPER CONDITION

The results showed that all books examined were of the 20th century and especially from the 1970s onwards (Figure 5.19). All of them had been published in Greece. Their paper condition can be interpreted as "good" since all but one belong to category "0" (Figure 5.20).

None of the books surveyed had mould or pest stains.
5.3.2.2 COVERING MATERIAL AND COVER CONDITION

Two types of covering material had been identified in the books examined. The majority of them 95.2% had paper whereas 4.8% buckram (Figure 5.21). The cover condition as a whole can be characterised as "good" (Figure 5.22).
Public Library of Thessaloniki
Book Survey. Open Stacks
Covering Material

No. of books

<table>
<thead>
<tr>
<th>No. of books</th>
<th>Type of material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buckram</td>
</tr>
<tr>
<td></td>
<td>Paper</td>
</tr>
</tbody>
</table>

Figure 5.21

Public Library of Thessaloniki
Book Survey. Open Stacks
Cover Condition

No. of books

<table>
<thead>
<tr>
<th>No. of books</th>
<th>Cover condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>moderate</td>
</tr>
</tbody>
</table>

Figure 5.22

172
5.3.2.3 OTHER COMMENTS

For the books housed in the open stack collection the comments noted -- especially for books which had been categorised as "0" (good) -- included remarks such as yellow margins, pen writings and underlinings but such incidents have been identified on one or two books per comment category. It should be mentioned that all books housed in the open stack collection are covered with adhesive transparent plastic as a protective measure.

5.3.2.4 TOTAL RESULTS ON THE PAPER CONDITION OF THE PUBLIC LIBRARY SURVEY

To have a better overview of the condition of the collections of the Public library the results of both open and closed stacks have been added. Of the total 527 books examined, 370 (70.2%) can be characterised as "good", 94 (17.8%) as "moderate" and 63 (12%) as "poor" (Figure 5.23).
Public Library of Thessaloniki
Book Survey. Open & Closed Stacks
Paper Condition by Publication Date

<table>
<thead>
<tr>
<th></th>
<th>19th</th>
<th>20th</th>
<th>no date</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>3</td>
<td>312</td>
<td>55</td>
</tr>
<tr>
<td>moderate</td>
<td>10</td>
<td>71</td>
<td>13</td>
</tr>
<tr>
<td>poor</td>
<td>22</td>
<td>34</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 5.23
REFERENCES

CHAPTER SIX

PRESERVATION AND CONSERVATION SITUATION IN GREEK LIBRARIES

6.1 ACTIVITIES ON PRESERVATION AND CONSERVATION

To identify the preservation and conservation situation, the libraries surveyed by the questionnaire were asked to provide information as to whether there were any activities relating to the issues in question in their institutions or organisations (Questionnaire 1 nos. 10-11)

60.7% of the libraries surveyed stated that there was no activity either on preservation or on conservation (Figure 6.1).
6.2. REASONS HINDERING PRESERVATION OR CONSERVATION ACTIVITIES

Those who responded negatively, were further asked to indicate from the reasons provided, those they believed lay behind the non-existence of Preservation and/or Conservation activities in their institutions.

The options offered to them included lack of expertise, the cost such operations involve, the insufficient number of staff and whether they believed that preserving their material was not sufficiently important. They were also asked to add any other reason they thought relevant.

The results showed that the majority (59.2%), thought that the most important reason for not having any activity on preservation and conservation was the insufficient number of staff. As second reason was ranked the lack of expertise (46.3%), as third the cost involved in such activities (27.8%) and as last was ranked the option stating that it was not important to them, so there was no need to get involved in such activities (13%). None indicated any other reason besides the ones proposed to them which is probably an indication that they had not really thought about it! (Figure 6.2)
6.2.1 SHORTAGE OF STAFF

A correlation of the results concerning: a) the number of users per year and the number of staff (Figure 6.3), b) the size of collections and the number of staff (Figure 6.4) and c) the number of staff employed in the surveyed libraries (Figure 4.11) showed that in many cases the "shortage of staff" could be justified as the main reason for not having any preservation and/or conservation activities. As revealed by these correlations the number of staff employed varies considerably in relation to the number of users and that of size of collections and this is due to the fact that although
collections grow and the number of users increases, the number of staff usually remains the same as is the case with the Public (dimosies) libraries (see page 52)

The Greek library profession until recently lacked "tools" which would help librarians in the other operations necessary for the functioning of the libraries. The Greek National Bibliography, the Greek Subject Headings and the Greek Names Authority File, "tools" that would have facilitated their work, as already indicated, have appeared recently, but have not been distributed to the vast majority of libraries. (see page 47 Products) Furthermore there are no book trade tools comparable to those in the U.K. and the U.S.A., which could be used as the source of even basic bibliographic details. In addition to that, there is no tradition of formal library cooperation and for that matter co-operative classification schemes, which would make it feasible to share the task of record creation amongst a group of libraries. As a result all cataloguing takes place locally with the obvious duplication of effort, for this particular operation.

The vast majority of Greek libraries have no automated systems for various operations as for example circulation, and those created by individual libraries are not compatible.[106]

---

Greek Libraries
Staff by Users

No. of users p.a.

<table>
<thead>
<tr>
<th>Size of collections</th>
<th>No. of libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-1,000</td>
<td>1-5</td>
</tr>
<tr>
<td>1,001-3,000</td>
<td>6-10</td>
</tr>
<tr>
<td>3,001-5,000</td>
<td>11-15</td>
</tr>
<tr>
<td>5,001-7,000</td>
<td>16-20</td>
</tr>
<tr>
<td>7,001-9,000</td>
<td>21-25</td>
</tr>
<tr>
<td>9,001-11,000</td>
<td>41-45</td>
</tr>
<tr>
<td>11,001-13,000</td>
<td>66-70</td>
</tr>
<tr>
<td>13,001-15,000</td>
<td></td>
</tr>
<tr>
<td>15,001-17,000</td>
<td></td>
</tr>
<tr>
<td>17,001-19,000</td>
<td></td>
</tr>
<tr>
<td>19,001-20,000</td>
<td></td>
</tr>
<tr>
<td>20,001-30,000</td>
<td></td>
</tr>
<tr>
<td>30,001-40,000</td>
<td></td>
</tr>
<tr>
<td>40,001-50,000</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6.3

Greek Libraries
Staff by Size of Collections

Size of collections

<table>
<thead>
<tr>
<th>Size of collections</th>
<th>No. of libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>...-5,000</td>
<td>1-5</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>6-10</td>
</tr>
<tr>
<td>10,001-20,000</td>
<td>11-15</td>
</tr>
<tr>
<td>20,001-40,000</td>
<td>16-20</td>
</tr>
<tr>
<td>40,001-60,000</td>
<td>21-25</td>
</tr>
<tr>
<td>60,001-80,000</td>
<td>41-45</td>
</tr>
<tr>
<td>80,001-100,000</td>
<td>66-70</td>
</tr>
<tr>
<td>120,001-140,000</td>
<td></td>
</tr>
<tr>
<td>140,001-160,000</td>
<td></td>
</tr>
<tr>
<td>160,001-180,000</td>
<td></td>
</tr>
<tr>
<td>180,001-200,000</td>
<td></td>
</tr>
<tr>
<td>2,000,001-2,300,000</td>
<td></td>
</tr>
<tr>
<td>2,300,001-2,600,000</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6.4

180
6.2.2 LACK OF EXPERTISE

The second option, that of lack of expertise, could have been interpreted in two ways: lack of librarians' knowledge of preservation issues or lack of expertise due to the lack of conservators. Examining first the librarians' lack of knowledge of preservation issues this can, up to a certain extent be explained by the results shown in Figures 4.12 and 4.13 and by the fact that preservation education is not offered by the library schools.

The fact however, that unqualified personnel are employed does not totally explain the lack of expertise on preservation issues as much as in other library operations.

Lack of expertise due to the lack of conservators can again be explained by the small number of graduates from the TEI Department of Conservation of Antiquities and Works of Art.

6.2.3 COST OF PRESERVATION ACTIVITY

This option was ranked third by the surveyed libraries. Since there was no distinction between the two activities (preservation and conservation) one might be led to the conclusion that the respondents were referring to the actual conservation treatment of the material. This being true, leads however to the question of what was the reason for ranking it third.

If they were actually referring to the preservation activities this reveals that they are unaware of the difference between the cost of the two activities.

Undoubtedly preservation and conservation are costly activi-
ities. However, the preventive measures briefly described earlier require far fewer funds than conservation treatments. Whatever the reasoning, the issue of the librarians’ lack of awareness as to what is involved in these two activities is highlighted.

6.2.4 NOT IMPORTANT TO US / NO NEED

There is a number of reasons as to why this option had been chosen; either the libraries house new material and believe that they do not need to be preserved, or that the same material is housed in other libraries who can be responsible for such activities. The main problem which arises choosing this option is related to the awareness as to why material should be preserved and conserved. New material will inevitably deteriorate, if preventive measures are not implemented. The fact that there is no way, as yet, to compare each library’s acquisitions so as to establish a cooperative scheme in conserving items, the fact that the legal deposit law is as loose as it is and the lack of any union catalogues does not justify the belief that someone else will embark on these schemes.
6.3 CURRENT PRESERVATION ACTIVITIES

The Preservation activities of the surveyed libraries were provided for in the last part of the questionnaire, the "further comment" section. Comments as a total were received from 61% out of the 95 surveyed libraries. A big proportion of them, 46.6%, represented those who had provided a positive answer as to the existence of preservation and conservation activities taking place in their libraries.

The description of the preservation activities varied from binding to microfilming of parts of the collection (newspapers which was out of the scope of the survey), to the use of acid-free boxes, and fumigation to occasional dusting. More explicitly the descriptions provided were:

--by 17 who stated that they try to bind damaged books, periodicals and newspapers.

--by two who indicated that they already used acid-free boxes for the older material existing in their collection and another furthermore indicated that they used acid-free boxes for reprints.

--by one who stated that in their library thermohygrographs were installed and in use.

--by two who indicated that they fumigated occasionally,

--by one that camphor was used, but no other treatment, to combat the insects.

--by two who stated that the collections were occasionally dusted and by another one that the books were occasional-

\[107\] The last two types of material were excluded from the survey. They are however included here just to show that some activities do take place.
— by one who stated that they microfilmed old newspapers
— by one who stated that all the material in their collection were being preserved and conserved
— by one who stated that the conservation unit had functioned for the past 16 years.
— by one who said that conservation was being done by the staff without indicating anything further.

The rest of the comments received were usually a description of the specific problem of the individual library but almost all of them added comments which referred to the lack of resources, lack of expertise, the inexperience of the staff, the absence or inadequacy of organization, administration and management and the lack of resources. Some were honest enough to refer to "amateur efforts by the staff".

It is interesting to note here that there were some comments which can only by explained by ignorance and be accepted as "excuses" for the issues in question. These included comments such as for example that there was no regulation for preservation and conservation in the library so they did nothing; that when the books deteriorated they bought the titles again; that the collection was new so there was no problem of deterioration; that the collection was solely used

108 This is the "Benaki" special library which is almost exclusively funded by the founder's trust and all the personnel are qualified.

109 Greek National Library.
by members of the organisation so they were not destroyed (1), that they had good physical air-conditioning and so books were protected and that they conserved the damaged books using common adhesive tape.

6.4 CONSERVATION SITUATION

Assuming that the existence of preservation and conservation activities presupposes a preservation policy a second questionnaire (see Appendix D1) was sent intended to examine the elements of these policies. More explicitly:

a) the existence of a disaster plan
b) the education and training of the staff in relation to preservation and conservation activities
c) the existence or not of guidelines for the proper use of material referring specifically to the users
d) the existence or not of conservation facilities and their description
e) annual budget on preservation and conservation activities
f) means to control the environmental conditions
g) means of preservation other than repair (microforms, photocopying, etc.)
h) links with International Organisations, subscriptions to relevant journals and finally
i) an evaluation of what was needed in Greece in relation to preservation and conservation of library collections.

This questionnaire was sent in April 1990 to the 35 libraries which had stated that they had preservation and conservation
activities. Again a period of 30 days was offered for completion after which they were to return it in the stamped envelope provided. After that period a reminder was sent to those libraries which failed to return the questionnaire.

Only 13 libraries (37.0%) responded to this second questionnaire and the vast majority of the questions were not answered. This can be interpreted in two ways: either that they did not have preservation and/or conservation programmes in their libraries or that they did not bother to answer a second questionnaire on the same subject, believing that the first one was sufficient. The fact that 22 libraries did not respond at all may be justified by the same explanations as well.

The results of this second questionnaire, illustrated the poor state of conservation activities in Greek libraries. No library had a written regulation for preservation and/or conservation nor a written disaster plan. Five libraries indicated that one member of their staff was responsible for the identification of material needing conservation but none had a minor repair workshop for in-house minor restoration. In none of the respondent libraries did any member of the staff have preservation or conservation education. Only one library indicated in house educational programmes on preservation but the description of it indicated that it was a seminar offered by the Greek Ministry of Education some time ago. Three libraries indicated that they gave written instructions
to their users as to the handling of the material, but the copies of those supplied proved that only one actually offered relevant information, the rest were just introductions to the libraries, working hours etc.

No library had an in-house bindery, nor a conservation workshop. Humidity, dust, temperature, light and pests were the hazards they thought most dangerous to their collections. Although four indicated that they had air-conditioning facilities only two provided the levels of temperature and humidity which were in accordance with the levels required for preventative reasons. As a means of preserving the collection's items only two indicated that they microfilmed them, and four that they photocopied whatever was deteriorating. One library (located on an island) indicated that it had its own microfilming facilities. Two other libraries indicated that the materials in need were being microfilmed either by the GNL or by the Greek National Bank Educational Foundation. All seven which had indicated that they contacted specialists when in need for restoration indicated book binders as those consulted.

All libraries recognised the need for conservation education in Greece and the establishment of technical schools for conservators; they also agreed with the need for the establishment of an information centre for conservation, special publications in Greek, organised seminars and catalogues of conservation materials with suppliers in Greece. An exception to all the above was one library which indicated
that their printed materials were conserved at the conservation unit of the Museum the library is part of; it was this one library that indicated subscriptions to three International conservation journals and liaison with an International Organisation (ICOM) for any query they wished to have answered.

6.5 CONSERVATION AND MICROFILMING DEPT. AT THE GREEK NATIONAL LIBRARY [110]

The workshop, housed in a building far away from the National Library, was established 16 years ago and its main responsibility is to conserve old or deteriorated material of its parent library. The personnel employed in the conservation workshop total seven persons, the director, a qualified conservator, who has studied abroad (Italy and France), two graduates of the TEI Conservation Dept. and four graduates of the secondary level of education. The existing microfilming facilities, housed in the same building as the conservation workshop, are used for the microfilming of the GNL's manuscript collection and especially the archives of the 1821 Greek revolution against the Turks and occasionally material from other libraries. The personnel of the microfilming section total three, two of which are TEI graduates (Photography Dept.) and one graduate of the secondary level education.

It is worth noting here that the conservators experience difficulties in obtaining material necessary for the restoration due to financial restrictions and the fact that not all materials are readily available from the suppliers. Again due to financial restrictions, the Department does not subscribe to any journal relevant to the subject and attendance at conferences and meetings is restricted to those taking place in Greece. Attendance at International conferences and meetings is personally financed.
REFERENCES


PART A
SUMMARY AND CONCLUSION

GENERAL OVERVIEW OF LIBRARIES AND LIBRARY ENVIRONMENT IN GREECE

The types of libraries currently existing in Greece comprise National, Academic, Special/Research, Public and Monastic. Although there are exceptions, the vast majority of libraries, irrespective of the type they belong to, present a state which is far from the desirable one, in terms of personnel, finances, administrative and organisational structure which has a direct effect to the services they are providing to their users.

The situation at the Greek National Library is rather disappointing. The administrative, financial, personnel, space and equipment problems do not allow the GNL to fulfil the functions attributed to libraries of this status. As a result it has not acquired the role of leader of the field. The Public libraries present a peculiarity in terms of the types of libraries which comprise them (dimosies, dimotikes and pedikes). The common characteristics of these libraries, where they exist, have been identified as being understaffed, underfinanced and disorganised. The number of staff in the dimosies is finite (10 persons maximum) and their financial prosperity depends on the arbitrary decisions made by the Ministry of Education. The dimotikes depend on the prosperity and good will of the local authority and occasional private
donations.

Academic, Special/Research libraries do not present many differences from the pattern described above. In terms of employing personnel the University libraries depend on the authorization of both the Ministry of Education and the Ministry of Finance in order to employ staff. The Special libraries if they belong in the Public sector also depend on the authorization of their governing body and that of the Ministry of Finance. If they belong to the private sector they depend on the organisation's or institution's finances. Due to the fact that school libraries have not been developed and due to the existing educational system Greeks have been distanced from using libraries. Fortunately this situation is slowly changing especially in relation to the Academic and Research libraries due to the fact that teaching methods are changing and more research is undertaken.

The recently established Library Departments at the Technological Educational Institutions provide the library education in Greece today. In spite of the problems created by the peculiarities in relation to the lecturers' recruitment and the lack of educational material in Greek, almost every aspect of the required knowledge is provided for to the future librarians.

Hopefully the newly established Archive and Library Studies Department at the University of the Ionian will produce graduates who will be able to bring about the desired changes to the field of Librarianship and Information in the country.
Finally, the Greek Librarians' Association, has not fulfilled its aims. Its weak position in the field may well have resulted from its organisational and administrative structure. The fact that the opinions and ideas expressed are not taken into consideration can be explained by the fact that changes in establishments are not always welcomed especially when personal interests are involved. One such example is the persisting exclusion of the Association's representative on the Greek National Library's Advisory Committee.

**TYPES OF LIBRARIES AND THEIR COLLECTIONS**

A number of points were established by the first survey which are related to the types of material held in the libraries and the type of library which most commonly houses old and rare material.

Greek library collections are to a great extent based on traditional types of material - printed - rather than the more modern and technologically advanced ones. This predominance of printed material can be justified by the low cost involved in purchasing them compared to the cost of A/V material and the equipment required to retrieve the necessary information.

It is Public libraries that house older and occasionally rare material in their collections rather than Academic libraries as is the norm in other countries. This has been justified by the fact that private collectors donate their valuable
collections not to Academic or Research institutions, but to their village's small libraries. This and the fact that Public libraries, as the vast majority of libraries in Greece, are underfinanced, disorganised, understaffed etc. from a preservation point of view, endangers the well being of these items.

FACTORS AFFECTING GREEK LIBRARY COLLECTIONS

The factors which affect library material are generally categorised as internal and external. The internal reasons are associated with inherent vices which refer to the chemical origins of self-destruction, and the external are associated with the environment (temperature, relative humidity, light), the atmospheric pollution, bio-deterioration, disasters and abuse and mismanagement.

It is generally accepted that paper manufactured from the 1850s onwards deteriorates faster than that of earlier days. The basic characteristic of this paper is its acidity. Publication dates and the relative size of the collections provided by the surveyed libraries showed that the majority of their holdings were published from 1851 onwards which immediately implies that their paper is acidic. This can be also justified by three facts which were investigated in relation to the level of acid in paper used for Greek publications: a) the inadequate Greek paper production
is supplemented by imports from a number of countries, b) contact established with the Greek paper manufacturers revealed that the paper produced belongs to the acidic category, c) most of the paper imported by Greek printers is of an acidic nature. However, one should not overlook the fact that production of alkaline paper is a recent development in the field of paper preservation and the vast majority of printed material produced so far is acidic.

The environment (temperature, relative humidity and air-pollution) is one of the external reasons of deterioration of library material. Greece is generally characterised as a mediterranean country and its climate bears all the characteristics of this geographical region with low levels of temperature and high relative humidity during the winter season and the reverse during the summer period. This is a factor which affects all library material in Greece irrespective of the library’s location in the country. There are areas however, which are greatly affected by air-pollution. The high rate of industrialization and the intense urbanisation created an acute problem of environmental pollution which is mostly evident in the two big cities, Athens and Thessaloniki, while the rest of the big cities slowly but steadily follow the same pattern. 40% of the libraries surveyed are located in the two big cities and their material is affected both by the country’s climate and the air-pollution. The 20% which is located on the islands may
not be affected by air-pollution, but in these areas the problem of moisture is more acute than in the mainland.

The construction quality and the intended use of the building which houses library collections is vital to the protection these structures can offer in relation to the "internal" environment, the storage space, and disaster (fire, flood, etc.) or theft prevention. It is not unusual for library collections to be housed in old buildings which were not intended for libraries. 30% of the libraries surveyed housed their collections in buildings constructed in the past 20 years, whereas 70% were in buildings constructed at much earlier dates. The vast majority of the libraries (61%) were established from the 1950s onwards a period in which Greece was trying to recover from economic disaster amongst other things. A reasonable explanation is that libraries were established and housed in pre-existing buildings which were not intended for libraries. This assumption is justified by the fact that 57% of the surveyed libraries stated that the building was not purpose built.

In relation to the three aspects of protection mentioned above the main problems experienced were: humidity caused by poorly maintained water-pipes in both purpose and non purpose built constructions and space for those housed in non purpose built buildings. Humidity encourages the growth of certain biological hazards which already exist in the environment and crammed shelves due to lack of space cause material to de-
form, and deteriorate in other ways. As far as disasters are concerned (especially flood and fire) a few incidents have been recorded and one can not exclude the possibility of their future reoccurrence especially due to the fact of poorly maintained water-pipes.

From the situation described one can assume that library buildings in Greece do not offer the required protection.

Abuse is another external reason of deterioration. Both users and staff abuse library materials through careless handling and destructive procedures during photocopying to mention one. Lending and users were the factors mainly indicated by the surveyed libraries as affecting their collections. Although it is difficult to distinguish the two one can assume that lending refers to the whole process of issuing, returning of books (bookdrops) and shelving. Users on the other hand, abuse books by inappropriate handling and general mistreatment of the item. These two factors can be explained by the lack of education both of staff and users. Library schools do not offer any relevant education and therefore users do not receive any from the librarians.

An issue which is closely related with the "internal" environment is that of bio-deterioration. Humidity, which has been mentioned by the surveyed libraries as one of their problems, is a favourable condition for fungi and mould growth. Poorly maintained stack areas which are not properly cleaned and collections which are not regularly dusted are
areas and material where the existence of biological hazards is encouraged. A few such incidents (pests) have been noted by the surveyed libraries.

BOOK COLLECTION SURVEY

The state of printed material in the Greek library environment was sampled by a book collection survey in two libraries (the main library of the Aristotelian University of Thessaloniki and the Public Library of Thessaloniki).

The overall condition of the examined books was characterised as "moderate" i.e. that there is evidence of deterioration and there is need of some attention for the University library collection and as "good" i.e. good condition, needing no attention for the Public library.

More explicitly:

Aristotelian University of Thessaloniki

a) although the majority of the books had been published during the 19th and 20th centuries --periods in which the demand for paper had led to its deteriorating quality -- these were kept in closed areas away from the deteriorating effects of light.

b) books are not heavily borrowed by users -- and thus not damaged -- due to the educational system under which independent research is not required by students but only the use of textbooks which are distributed to them each academic year. Although levels of temperature and R.H. were not quoted during
the survey, the storage conditions as they have been described are alarming, and the disintegrating capabilities of the inherent vices will undoubtedly become more evident in a few years time. These two points can be further justified by the remarks made in the "other comments" section, where one can see that the condition of 72 books (56 of which published during the 20th century) although characterised as "moderate", seemed to have not just "slight yellowing of the paper" but yellow paper. These books were allotted to the above mentioned category since all the other elements belonged to this category. In addition to that, 97 books (67 of which were published during the 19th century) appeared to have an expanded text block and/or a considerable number of "wavy" pages due to humidity. Although the percentages are small (72=11.5% of the total 628 have been characterised as "moderate" and 97=15.5% of the same total) if proper steps are not taken they will increase, encouraged especially by the humidity and damp conditions which were present at the time of the survey as well as the temperature levels.

Public Library of Thessaloniki (dimotiki)
This collection in general and as a whole according to the results of the survey is characterised as "good" that is there are in good condition and they need no attention. The majority of the books were published in the 20th century and especially during 1951-1990. Taking into consideration the fact that the closed stack's
collection is affected by the sunlight through the windows and the temperature levels especially during the summer this collection is bound to disintegrate in some years time. The closed stack's collection does not suffer any great misuse by the users since no material is borrowable.

As far as the open stack's collection is concerned, the vast majority of the books surveyed are of the 20th century and especially from the last three decades (1970-1990) and as the results showed their paper condition can be characterised as "good". In addition, to that there was no indication of any misuse apart from the expected one considering the fact that they are paperbacks. The effects of the inherent vices, however, are bound to appear in some years time.

An issue which should be considered by the administration of the Public library for both its collections is the lack of space, and as a consequence the damage inflicted upon the books in the very near future.

The characterisation of the collections that is, that one (University) needs some attention and the other (Public) needs no attention should not reassure the library staff and administration of either libraries.

Bearing in mind the conditions of storage and that of the environment (especially air-pollution) which is constantly increasing and the publication dates it will not be surprising if in a few years time the results of another survey characterised them as poor, needing immediate attention.
PRESERVATION AND CONSERVATION ACTIVITIES

Having identified and established the factors which affect Greek library collections from the first survey and the state of book collections from the second survey what remained to be identified was the existence or not of Preservation and Conservation activities. Chapter six referred to this particular issue.

Information as to the existence of Preservation and Conservation activities was obtained partly from the first questionnaire distributed to the libraries and partly from a second questionnaire which was totally concerned with the actual activities on Preservation and Conservation.

60.7% of the libraries surveyed indicated that there was no Preservation or Conservation activity in their libraries. The main reason for the absence of these activities was attributed to the "shortage of staff" experienced by the Greek libraries. Besides being understaffed, the vast majority of the personnel is unqualified. To further add to the problem Greek librarians lack any "tools" essential for other library operations such as cataloguing, classifying, indexing, etc. Those bibliographical aids produced by the Greek National Library have not been distributed. There are no cooperative schemes of any kind which would avoid duplication of effort. Considering all these demands on librarian's time then the reason for not having preservation and conservation activities can be explained up to a certain extent.
The other reasons through which the surveyed libraries justified the non-existence of preservation and conservation activities referred to the "costs these activities involve" and that such activities were "not needed for their collections".

Undoubtedly these two activities are costly. Implementation of preventive measures however, reduces the need for conservation which is the most expensive of the two. The last reason can only be justified by lack of awareness and misguidance.

In spite of the majority of negative answers received, there were a few from which it can be assumed that there are at least some libraries which have come to realise the problems of deterioration and some preservation activities are already being implemented. There was no indication however of communication or co-operation amongst them to solve their common problems, a very unfortunate and common aspect in all library activities in Greece. The lack of these issues appeared on local, national and international levels. On the local and national level this lack has emerged from the fact that it is not widely known where certain facilities exist. This is justified by the fact that although an island near the north part of Greece had microfilming equipment it was shown that no library in the wider region co-operated with this one, nor there was any indication of knowledge of the existence of these facilities. Instead facilities in the Athens area were used (those at the Microfilming Dept. of the National Library). On the international level this is explained by the fact that
only one library had established contact with an international organisation to acquire relevant information.

The state of the conservation activities revealed was even more disappointing. The fact that only two or three libraries are engaged in some conservation activities is very discouraging.

PRESERVATION EDUCATION

Another indication of the non-existence of preservation and conservation activities was that of the "lack of expertise". This was the second reason indicated by the libraries surveyed and is closely related to the education of both librarians and conservators.

As has been illustrated in the third chapter the preservation education in the two library departments of the TEI is almost totally absent.

The new Archive and Library Studies Dept. at the University of the Ionian could make an important change. However it is felt that a professional conservator rather than a librarian is not the appropriate professional to teach this module. The percentage of the lectures attributed to library and museum materials should be revised.

The absence of Preservation education explains the lack of expertise previously mentioned. It is also the most basic
reason for the absence of preservation activities in Greek libraries, rather than merely the shortage of staff. Again it is the main reason which explains why librarians have identified lending and users as principal hazards to the collections. Users lack the appropriate education, because librarians themselves lack it and so have not been able to transfer it to users.

**CONSERVATION EDUCATION**

Relating the lack of expertise to the conservators education, this may be explained by the fact that most of the Conservation Educational Programmes were established after the mid 1980s. The variety of conservation programmes offered at present shows that not all of them are in a position to continue their programmes (Conservation School in Patmos) or that they are not in a position to offer the required education to everyone wishing to taking it up (Conservation workshop in Andros). In addition to that it seems that the education offered is mostly practical rather than scientific. Furthermore, one can not rely on programmes which could be discontinued at any time or are of a finite period and which can alter their programme if they wish. The only programme offered and for which changes can be implemented is the one offered by the Technological Educational Institution which as a state governed and funded establishment does not run the risks of private establishments.
In conclusion:

--The state of Greek libraries can be characterised as underdeveloped. The lack of professional education and the limited size of the staff of individual libraries remain constraining factors on the development of library services in the country. The weak position of the Greek Librarians' Association has not improved the situation.

--The reasons which affect the condition of Greek library collections have been identified and established as internal (inherent vices—especially acid) and external (environmental, construction of buildings, abuse, biological hazards).

The state of the collections surveyed as a whole could be characterised as "moderate", needing some attention.

--The Preservation and Conservation activities are almost absent. The education offered to the librarians presents a vacuum in relation to preservation and that of the conservators is limited.

Lack of awareness, ignorance and lack of guidance resulting from the educational void are the origins of the present Preservation and Conservation situation in Greek libraries.
CHAPTER SEVEN
PRESERVATION POLICY PROGRAMMES.
THE PROBLEMS OF IMPLEMENTING THEM IN GREEK LIBRARIES

In order to meet the objectives of the various aspects which contribute to the successful operation of any library a policy relevant to each of the individual operational and functional aspects is established.

A policy defines the framework within which an activity occurs, describes basic ground rules, defines a method of operation and describes what is done without giving details of how it is done.

Preservation as one of the facets of library management requires its own policy in order to meet its objectives which Dureau and Clements[111] have defined as: "a) to preserve the intellectual content of the information recorded by transfer to other media and or b) to preserve the original physical form of library and archive material in as intact and useable a form as possible."

The purpose of a preservation policy is to provide a statement of library preservation intentions and responsibilities, to provide directions to staff, to define organisational roles and responsibilities, to form the basis of communication with

those outside the library.

The functions that can be attributed to a preservation policy comprise: a) development and application of preservation procedures (housekeeping, disaster response etc.), b) treatment of damaged material (minor repair, conservation, substitution, restoration) and c) provision of information about preserved items and preservation intentions.

A preservation policy statement is a document incorporating a set of programmes to be applied so as to prolong the useful life of library materials. It is a statement of management intent and to be effective it should be under constant review according to changes in the level of resources or the objectives of the organisation. This revision and updating will ensure that it remains realistic and appropriate.

The variety of organisational structures, financial resources even among libraries of the same type, individual institutions' aims, objectives and users' needs, value of individual items comprising the various collections, etc. all make it rare that a preservation policy designed by one institution will be identical to and suit the needs of another. Each institution therefore, should design its own policy reflecting its own needs, aims and objectives. For this purpose, the relevant literature provides guidelines for designing a preservation policy.[112]

7.1 PRESERVATION POLICY PROGRAMMES

The basic objective of each one of the programmes to be described is to improve access to collections, make collections last as long as possible or as required, and provide special care to selected items. These programmes include:

— Evaluation of preservation and conservation needs
— Preventive measures
— Disaster and security plans
— Staff and user education
— Collection management and development
— Cooperation
— Conservation treatments

7.1.1 EVALUATION OF PRESERVATION AND CONSERVATION NEEDS

Any library before embarking on a preservation / conservation programme should evaluate its preservation needs so as to have factual information and design accordingly a preservation policy programme that will suit its needs. This evaluation will probably require three surveys, namely collection, environment and building condition surveys.

**Preliminary Condition Surveys: Objectives** The results of these preliminary condition surveys will provide factual information on the collection's deterioration condition (if any), the levels of temperature and relative humidity as well as those of light and air-pollution, the construction characteristics and limitations (if any) of the building.
The collection survey, based on a sample of the total collection, should be conducted in order to assess the needs of an institution by establishing the degree of acid contamination and brittleness of paper within its paper based collection and the type and amount of physical damage to individual items. In addition, data should be obtained for two fundamental questions: a) how many different kinds of physical problems exist within the collections, and what they are and b) what percentage of the materials in particular groups exhibit the two or three most significant problems. Through the results of this particular survey priorities may be established for material which needs to be conserved or restored.

The environmental survey will comprise a building, reading and storage areas survey so as to enable the identification of the environmental conditions (temperature, humidity, light and air-pollution levels) under which materials are stored. A survey of this kind should also include information as to: the location of the building, the regional climate, the heating, ventilating and air conditioning system, heat sources, humidity/moisture conditions, light, housekeeping procedures, support structures (shelving, book returns etc.)

The survey of the building will enable the establishment to assess the level of protection it can offer both to staff and material from potential hazards such as fire, flood, earthquake and infringement of security.

In addition to the above mentioned surveys, information should
be gathered in relation to the book delivery system, the procedures involved from the time items arrive in the library till the time they are bibliographically processed and shelved, the practices followed when material are loaned either for exhibition or to users through interlibrary loan systems and the photocopying procedures; is photocopying done by the staff or individually by the users? is everything allowed to be photocopied? is the equipment used suitable for photocopying?

The relevant literature provides useful guidelines and procedures\(^{113}\) to be followed by every institution for the evaluation of its preservation needs.

### 7.1.2 PREVENTIVE MEASURES

Having all the factual information, the preventive measures which will minimise the rate of deterioration can be applied. These measures include monitoring and stabilization of the environment (temperature, relative humidity, light, air-pollution), housekeeping routines, protective measures, drawing up a disaster plan and training programmes for staff and users.

**Monitoring the Environment** One of the most effective ways of preserving and preventing deterioration of library materials is to control environmental factors such as temperature and relative humidity, excessive light and air-pollution.

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These factors should be monitored so that their levels are maintained within limits appropriate for each geographical area so as to minimise damage, and avoid fluctuations.

**Housekeeping** Equally important is effective housekeeping. Regular cleaning reduces deterioration of materials in libraries by reducing dust which causes mechanical damage and acid deterioration, and by reducing the nutrients available for biological pests. Good housekeeping aims at two goals: apart from the obvious which is to maintain the collection clean, the second aim is to monitor the condition of the collections on an ongoing basis.

A less direct effect of a good housekeeping programme is the creation of a positive impression to the users reducing the chances of their upsetting its orderliness.

**Protective Measures** This programme of the preservation policy is concerned with the protection of the items, by means of binding, use of protective boxes and envelopes. The nature of the originals, the sort of use they receive and the costs involved are the factors which will determine the specific type of protection.

**Exhibitions and Loans** Libraries deciding to exhibit material from their collection should cater for their protection during the exhibition period. This protection should provide for the security of the exhibit, its mounting and physical display and
the climatic environment within the display cases. When materials are loaned for consultation purposes it should be ensured that they will be protected against excessive wear and damage in transit.

7.1.2.1 DISASTER AND SECURITY PLANS

A disaster is an adverse or unfortunate event, a sudden misfortune or calamity. The most common types of disaster are fire, flood and in certain geographical areas earthquakes. A disaster plan comprising four parts namely prevention, response, reaction and recovery, has the following general objectives:

a) to lessen the potential for loss by anticipating the possibilities and appropriately reducing them whenever possible, b) to assure that agencies, both public and private, who will be called in during an emergency understand the nature of the library's collections and its priorities, c) to establish normal conditions after a disaster promptly and efficiently, d) to lessen the chances of recurrence by taking advantage of experience gained, e) to assure that adequate orientation and training have been given to the staff and that this training is updated on a regular basis, f) to assure frequent inspection by appropriate agencies to prevent changed conditions from having a deleterious effect upon the safety of the building.[114]

Other aspects of disaster are theft and vandalism. Library buildings should be so designed as to minimise unauthorised access through doors, windows, mechanical services ducting, sewers etc. thus preventing thefts or attempts of vandalism.

7.1.2.2 STAFF AND USER EDUCATION

Education and training of both staff and users is essential to alter practices that lead to the deterioration of library materials. An education and training programme of this kind comprises three aspects: a) the importance of careful handling of items in library collections, b) the need to teach users of libraries to have respect for the collections and c) the need for librarians to learn respect for the materials in their care as an essential part of their professional education.

_Education of Library Staff_ "The possession of knowledge about preservation is purely and simply a matter of being an adequately trained member of the library's staff."[115]

Since use of library materials is the key reason for the existence of libraries, librarians have a duty to make sure that library materials in their custody are handled as carefully as possible in order to prolong their life. An effective element of users' education programme for preservation is the example set by the library staff; it follows that

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all employees of the library must have some knowledge of preservation principles and of acceptable storage and careful handling of the materials in their care. This knowledge may be acquired in two ways: by training library staff, usually in-house; and by educating them usually at the schools of library and information studies.

*User Education* Although material may be destroyed while inappropriately stored, more damage is likely to occur while in use either in the library or out on loan. It is essential therefore to educate users on proper handling procedures and respect for library materials thus eliminating damage from mishandling and mutilation.

### 7.1.3 COLLECTION MANAGEMENT AND DEVELOPMENT

Feather[116] states that "Preservation makes sense only when it is seen as part of the cycle of acquisition, use and disposal". Collection management embraces collection development and amongst other operations the relegation and disposal of out-of-date material, as well as the physical care of the collections.

In most libraries the process of collection development begins to be shaped by the acquisition policy. Each library selects according to a perceived function of its purpose, to meet the needs of its users. There are times, however, when this

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perceived function is confused and the result is shelves overcrowded with obsolete material. Libraries cannot afford not to be selective in what they retain if they are to establish planned conservation programmes for the material which they ought to retain. It is essential therefore that libraries have a collection development policy and that collections are evaluated so as to establish success or failure in meeting the institution’s needs. This process of collection evaluation is crucial to all the subsidiary policies deriving from the collection development policy: weeding, storage, and conservation. Ideally the retention policy over many areas of acquisition ought to be laid down in conjunction with the acquisition policy, and with a realistic appreciation of the wear, tear and vulnerability to theft or mutilation of the most heavily used parts of the collection.

The collection development policy should define those materials which should be kept indefinitely and specify a projected life for others. The preservation policy should ensure that items retain their usefulness for the duration of their retention.

7.1.4 COOPERATION

The advantages of co-operation have been recognised by all institutions worldwide which have been involved in preservation and conservation schemes. Five different types of preservation cooperative services are feasible, all of which can
have a local/regional and national application[117]: information, consultation and surveying, cost-sharing, coordination, and treatment.

Information cooperation can be achieved through newsletters and directories, consultation and surveying activities provide the services of experienced surveyors to assess the preservation requirements of a library, cost sharing may include cooperative purchase of expensive equipment or indenting of conservation materials to provide discounts available to bulk purchasers, coordination activities may include preservation microfilming programmes and bibliographical control providing centralised training courses, or co-ordinating library staff who have salvage experience to respond to disasters and treatment cooperatives by sharing facilities.

7.1.5 CONSERVATION TREATMENTS AND PROCEDURES

Not all material needs to be or should be conserved. Libraries should base their decisions for conservation of items in their collections on the answers to the following questions: does the item need preservation attention; is it possible to replace the item; and does it need to be retained in its original form and if not which format is the best? These questions address three issues: selection for preservation, replacement, and type of conservation technique.

Selection for Preservation  The four main aspects to be considered in a preservation selection policy are: the physical condition of the item; how heavily it is used; its rarity; and its economic, aesthetic, historical or other value. These considerations can also be applied to whole collections or groups of items, as well as to individual items. Selection for preservation is a cooperative effort based on the opinions of the conservator or preservation librarian, the subject librarian (in the case of academic libraries), the staff involved with collection development and collection management and even in some instances users of collections, for example scholars who might have a more detailed knowledge of a part of a collection.

Replacement  Having decided that the item needs to be preserved prior to any commitment on conservation treatment it should be ascertained whether a replacement copy is available in a format acceptable to the library, that is a second-hand copy or microform. Locating replacements requires thorough searching routines in the out-of-print, reprint and micropublishing market place.

Type of Conservation Technique  The decision on preserving an item or items requires another one to be made which is related as to whether to preserve the artefact itself or its intellectual content. This decision should be based on the item's evidential value, aesthetic value, importance in the printing history of significant titles, age, scarcity, finan-
cial value, physical format/features of interest and exhibit value[118]. A useful chart illustrating preservation options for material according to their value and use is provided by Clements [119] (see Appendix J)

7.1.5.1 PRESERVATION OF ARTEFACT. CONSERVATION TREATMENTS
Deciding to preserve the item in its original format the conservation treatment options should be considered and the final decision should be based on whether the desired treatment or combination of treatments is technically and economically feasible. The conservation treatments vary from minor repairs to bindings and tears in paper and commercial rebinding to full conservation treatment consisting of various methods of deacidification, strengthening of the paper, encapsulation or conservation binding; adding a protective enclosure, such as a phase box; or polyester encapsulation for single sheets.

Minor repairs encompass tightening the hinges of a case-bound book, replacement of torn endsheets, placement of new bookcloth spine mounted on the original spine, recasing using the original cover, lining the spine of an original cover, reattaching loose sections, placement of new cover, etc.


Maintenance procedures include pamphlet binding, paperback reinforcement, pressboard reinforcement of paperbacks, mending the paper either with Japanese paper and starch paste or with heat-set tissue.

Encapsulation  Single sheet items can be encapsulated between sheets of chemically inert transparent plastic such as Mylar. This method is usually used for fragile items or where heavy use is expected. Items enclosed in this manner can be handled and can easily be removed from the encapsulation should this be required. Sealing can be done either by using double-sided adhesive tape, by sewing, or more expensively, by using an ultrasonic welder.

Another method employed by conservators is Leaf casting which is a mechanical method of mending paper documents by filling in voids and damaged areas with compatible paper. For this process a leaf casting machine is used to deposit fibres evenly.

Deacidification / Mass-deacidification Deacidification is a chemical treatment in which acids are neutralised, thereby significantly slowing or halting the deterioration process. A number of techniques have been developed which include aqueous, spirit and vapour phase deacidification. The latter having proven hazardous to health is not recommended any longer. When this treatment involves hundreds or even thousands of items at once rather than individual sheets or
documents, this process is referred to as mass deacidification.

Deacidification of individual sheets or documents, normally involves the paper sheet being washed and soaked in an alkaline solution, when it is known as aqueous deacidification.

The aim of mass deacidification is to neutralize the acid in paper in books and documents and add an alkaline content to the paper to leave it with a buffer to withstand future acid attack. A number of processes have been developed for mass deacidification as for example the DEZ which continues to be investigated by the Library of Congress, the Wei T’o which is being investigated by the National Library of Canada and the Bibliothèque Nationale, France.

Deacidification or mass deacidification is not the panacea for the acid paper problem. It does not return the paper in an already deteriorated book to its original condition and as Harris states "deacidifying a brittle book leaves you with a brittle book"[120]

It has been suggested\[^{121}\] that the best way of using mass deacidification will probably be preventive, to treat new acquisitions of paper-based items before they are added to the library's collection, rather than items already present in the collections. The decision about when to use mass deacidification is closely linked with other preservation processes and their effects. If, for example, permanent paper is more frequently used, fewer new acquisitions will require mass deacidification; if all or most new acquisitions are routinely treated in a mass deacidification process, there is still the need to cope with the deteriorating items already in the collection by using microfilming and other methods.

**Bulk Paper Strengthening**  With the growing realization that deacidification by itself is not enough, recent research has been directed towards finding a way to strengthen the paper in addition to neutralizing the acid and introducing an alkaline buffer. One such example is the British Library which recognised that the existing mass deacidification processes did not address the question of strengthening paper. It has funded research at the University of Surrey to develop a technique to strengthen paper. During this process books are placed in a container from which air is removed by purging it with nitrogen. A gaseous acrylic

\[^{121}\text{R. Harvey, Preservation in Australian and New Zealand Libraries: Principles, Strategies and Practices for Librarians (Wagga Wagga: Centre for Information Studies, Charles Sturt University, 1990) 208.}\]
monomer mixture (ethyl acrylate with methyl acrylate) is added
to impregnate the books which are then irradiated with gamma
rays, converting the monomers into polymers, and residual
monomers are removed and the books aired. The resulting
polymers add strength to the cellulose fibres, increasing the
fold endurance by a factor of between five and ten.
Again this technique is not yet available commercially.

7.1.5.2 PRESERVATION OF INTELLECTUAL CONTENT. SUBSTITUTION
The conservation treatments described above are related to
conserving the item in its original format for specific
reasons. Deciding to preserve the intellectual content
involves transferring this content from its present medium to
another one, in another format.

*Issues for consideration* Before this transfer takes place
however, there are a number of issues that should be con­
sidered. Roper[122] categorises these issues in four groups
which include a) the purpose of the conversion to another
format, b) the needs of the users, c) technical issues related
to the new format and d) the cost involved. Having considered
these issues then the format of the new medium should be
decided.

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[122] M. Roper, "Policy for Format Conversion: Choosing a
Format," In: M.A. Smith, ed. *Preservation of Library
vol.1. 59-67.

222
Selection of Format  A number of media and different formats (microforms, optical digital data discs, videodiscs, compact discs) have been developed through the years, which can be used for the preservation of the intellectual content of items.

The most widely used format for preservation copying is the microform. Microforms can be produced or purchased in either 35mm or 16mm roll forms. Another format is the microfiche which is the preferred format in commercial publishing.

Types of Microfilm  There are currently three types of microfilm available, silver-gelatin, diazo and vesicular. Only silver-gelatin film which has been carefully processed to the appropriate standards should be used for archival master negatives which will be retained for long periods of time. However, it is important that it be carefully stored and handled, as it is susceptible to damage from fungi, water and mechanical abrasion. Working copies can be silver-gelatin, but diazo and vesicular have advantages where durability in day-to-day use is more important than archival life. Both diazo and vesicular film are less expensive and more scratch-resistant than silver-gelatin.

Advantages and Disadvantages of Microfilm  Some of the advantages of microfilms besides the low cost required for their production include space saving, especially for serials, they are easy and cheap to be copied once a master has been produced, paper copies of part or all of them can be readily
produced if microfilm or microfiche reader-printers are provided, the equipment required to access microforms are simple optical devices. Less desirable features of microforms include the users’ unwillingness to use them, the cost involved in purchasing readers and reader-printers, the fact that their format restricts their use in the library only, the need for strict adherence to standards for their production, storage and handling which might be prove expensive and difficult to maintain.

*Digital Conversion* is the latest computer technology applied for reformatting whereby scanning "the printed images are captured in the standard electronic form of bits (a sequence of numerals 0 and 1) for storage on magnetic or optical media."\(^{[123]}\) This process is still being experimented with by a number of research institutions in the U.S.A as well as in the British Library.

Another option for the preservation of the intellectual content is *photocopying* the deteriorated material on acid-free paper.

The effective planning of the programmes described is attributed to the preservation manager.

7.2 PRESERVATION MANAGER: DUTIES AND REQUIRED QUALIFICATIONS

The preservation manager is the person who will plan, organise and implement all aspects of a preservation programme in a given institution. Morrow, describes the duties of this manager as follows:[124]

"1. Coordinates disaster prevention activities, drafts the disaster preparedness plan and serves as the disaster salvage team leader.
2. Arranges for the monitoring of the library's environment including temperature, humidity, light exposure and atmospheric pollution.
3. Organises the information preservation program including bibliographic searching for replacements and reformatting of deteriorated/vulnerable originals.
4. Develops specifications for contract binding, mass deacidification and preservation microfilming, and directs the preparation materials.
5. Acts as preservation liaison/advocate with other department heads, bibliographers and departmental librarians.
6. Organises collection surveys, as appropriate, to determine preservation and conservation priorities.
7. Develops preservation training and consciousness-raising programs for staff and patrons.
8. Specifies maintenance schedules for equipment such as magnetic tape players, microfilm readers and film projectors. Monitors storage and shelving conditions and

makes recommendations.

9. Develops in-house physical treatment activities appropriate to the collection and directs codification of treatment standards and specifications.

10. Directs preservation and conservation supervisory personnel and fosters effective working relationships and staff development within the department.

11. Renews and evaluates the preservation program in the light of new technology and changing needs.

12. Maintains contact with preservation agencies and organisations, and cooperates, as appropriate, with other libraries and state, regional and national programs.

13. Determines the overall physical arrangement of the department and prepares a budget and an annual report."

She further describes the qualifications required for this position as: "Demonstrated competence in administration and management. Ability to communicate and be persuasive. In-depth knowledge of preservation issues and concerns, technological and managerial solutions to preservation problems, and current directions in the preservation and conservation fields. Graduate degree in librarianship and additional advanced training / experience in library preservation and conservation".
7.3 PRESERVATION POLICY PROGRAMMES IN GREEK LIBRARIES: THE PROBLEMS

In order for libraries to be able to design, implement and incorporate such programmes and relate these to other library operations, it is essential that the necessity of preservation should be realised.

The results of the survey conducted in Greek libraries revealed that librarians and administrators have not fully realised this necessity. This lack of realisation can be explained by a number of issues such as lack of awareness, lack of education, absence of relevant preservation publications, lack of expertise and facilities, collection development policies, administration and organisational structure and lack of initiative, all of which are more or less interdependent.

7.3.1 LACK OF AWARENESS

The results of the survey revealed that the vast majority of librarians and administrators are not aware of the fact that materials do deteriorate in their collections and of the reasons that cause their deterioration. The major hazard identified by respondents to the survey was attributed to lending which is related to the users (see page 144). Use however, is just one aspect of materials' deterioration and it can not be considered as the sole reason for their decay. The fact that from the options suggested lending and users were ranked highest, the comments provided (as for example that materials are used by a specific group) indicate not only lack of
awareness but ignorance as well, the latter being related to education.

7.3.2 LACK OF EDUCATION

The lack of education explains the lack of awareness and vice versa. As has been described under "Preservation Education" (see pages 101-103) Greek librarians do not receive any education on Preservation under the present curriculum and once employed, they do not receive any further education under the continuing education programmes which libraries are supposed to organise and run for the reason that such programmes either concentrate on technological advances (automation) or they do not take place at all either due to financial and administrative reasons or due to indifference concerning progress in librarianship as a whole.

Due to this lack of education librarians and administrators are not aware of the whole range of reasons that cause the collections' deterioration and thus the collections' decline is attributed to the users. Lack of education on the part of librarians directly corresponds to the lack of users' education. Users' education depends on librarians' education and when the later receives none the former can not acquire it either. To be educated, however, either through a formal (organised course) or informal situation (self-education) it is essential to have access to publications relevant to the subject. As lack of awareness and ignorance are related to the lack of education so is the latter to the absence of publications.
7.3.3 **ABSENCE OF RELEVANT PUBLICATIONS**

Publications are a prerequisite for the support of any kind of education and of course the same applies for preservation and conservation education as well. Even if librarians or administrators became aware of the reasons that cause deterioration they would not be able to educate themselves further on various aspects of preventive preservation due to the absence of relevant publications in the Greek language.

The lack of a retrospective Greek National Bibliography and the absence of book trade tools makes it difficult to identify the existence of any relevant to the subject material, and the 1990 bibliography covering material published in 1989 does not include anything on the subjects in question. What is known to exist is one publication[125] of the Greek National Bank Educational Foundation covering very briefly the nature and the reasons for deterioration of books and manuscripts and basic preventive measures, and three articles in a literary journal[126] covering the same issues in a very technical way.

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Through a Union Catalogue\(^{127}\), the international library and information science journals to which Greek libraries subscribe were identified. None of the 15 titles \(^{128}\) is totally dedicated to preservation and/or conservation aspects, and some are not relevant to librarianship (e.g. British Book News) but they do occasionally publish relevant articles covering certain aspects of the activities in question. Since not all libraries are included it does not cover the libraries at the Technological Educational Institutions where two departments (Conservation Dept. in Athens and Library Studies in Thessaloniki) subscribe to *Restaurator* which is an International Journal for the Preservation of Library and Archival Material.

It remains however uncertain that librarians besides the ones working in the libraries that subscribe to them are aware of their content. This problem could well be attributed to lack of communication, the language barrier and even to the nonexistence of interlibrary loans. Sporadic articles however, in journals which occasionally illustrate individual aspects of preservation without any kind of textbook introducing the

\(^{127}\) Union Catalogue of Periodicals at the Greek Scientific Libraries (Athens: General Secretary of Research and Technology, 1989) (in Greek). The catalogue includes holdings from 48 libraries: 11 Hospital, 21 University, and 16 Special/Research libraries.


230
issues of Preservation and Conservation as a whole, can very often cause confusion and could be deceptive.

7.3.4 LACK OF EXPERTISE AND FACILITIES
To be able to conserve material with the methods described earlier special knowledge is required which can be obtained by conservation education. As can be deduced however from the "Conservation Education" section, Greece lacks conservation expertise both in quantity and quality. From the courses described only the conservation department at the Technological Educational Institution seems to provide an adequate education. This department however, established only in the mid 1980s, has not yet produced an adequate number of paper conservators (see page 107). In addition to that the insufficient quantity of equipment and the organisational structure (insufficient number of teachers) of the above mentioned department hinders its proper functioning.

A logical explanation would have been to attribute the lack of facilities to financial reasons only. In this case however, it is both the lack of awareness for their necessity in relation to conservation as well as the financial reasons which have hindered the realisation of any organised conservation programmes of library materials.

7.3.5 LACK OF BIBLIOGRAPHICAL AND OTHER INFORMATION SOURCES
Under "Preservation and Conservation Treatments" a section has been devoted to "Replacement" where it is described that certain bibliographical aids should be consulted for purposes
of identification regarding the existence of materials that need to be conserved. Such bibliographic aids however, do not exist in Greece as far as Greek publications are concerned since there are no commercial micropublishers in the country. In addition to that, other sources of information which are absent from the Greek library and conservation environment are directories listing the location of conservators or the location of suppliers of conservation treatment material.

7.3.6 COLLECTION DEVELOPMENT POLICIES IN GREEK LIBRARIES

Greek libraries lack fundamental aspects of other operational procedures which are of utmost importance to the preservation of the collection, as for example, collection development policies. Any preservation programme should revolve around the building of the library's collection and any decision making regarding preservation must be linked to the library's collection-building objectives. A forthcoming article[137] illustrates the collection development situation in one type of Greek libraries. The author states "Greek librarians do not discuss the matter of systematic book selection. Phrases like "building the collection" of a library or "managing the collection" are unknown to most librarians". The same article clearly describes the selection process in academic libraries which is usually the responsibility of the respective faculty members, a responsibility "they do not like to share". Library members are excluded from committees which decide on

the allocation of money for the material. Evaluation of the collection and weeding are two procedures which are not undertaken by the majority of this type of libraries and from a preservation point of view this can only result in crammed shelves with the damaging effects such a situation can lead to.

This being the situation in Academic libraries, in Public libraries (of both types) the acquisition list has to be approved by the respective local authority, which has little or no knowledge of the actual needs of the libraries' users.

7.3.7 ADMINISTRATION IN GREEK LIBRARIES

Greek libraries have suffered the consequences of mismanagement for a long time. Library administrators in Greek public libraries until 1991 did not need to have any qualification related to management. As a result, the majority of them are graduates of law, philosophy, economics or other faculties of Greek universities without any further professional training. This is a trend which applies in all types of libraries. For example: the director of the Public (dimotiki) library in Thessaloniki is a graduate of chemistry and philosophy; the director of the central library of the Aristotelian University of Thessaloniki is a law and French literature graduate without any knowledge of library administration. In addition the director of the Greek National Library who is appointed directly by the Ministry of Education is a Greek literature graduate with a doctorate on Byzantine studies. Effectively, these people, although they have the
title of library administrators, are not qualified librarians and lack skills in planning and library administration. It is not unusual for them to interfere with certain library functions as for example cataloguing, by imposing their personal views. Furthermore as far as the dimotikes libraries are concerned since "there is no legal obligation on the municipalities to provide these libraries with the obvious result that there is considerable variation in the quality of the services offered by different municipal libraries"[130] it is obvious that one can not hope to find library administrators even like the ones described above. The people appointed so far to such positions are people already employed by the municipality who had previously worked in other departments. As a consequence of the poor administration the organisational structure is presented with problems in addition to understaffed libraries and unqualified personnel.

7.3.8 ORGANISATIONAL STRUCTURE IN GREEK LIBRARIES

The organisational structure in libraries varies according to the type and the services provided. It is however, doubtful whether the majority of Greek libraries have organisational charts, compartmentalising their operations/functions. This reservation is mainly due to the fact that the service provided varies considerably [especially for public - dimotikes-

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libraries] from area to area: this is justified both from experience and articles in the relevant literature.\[^{131}\]

Having said that however, there are libraries which are excluded from this generalization. Such an example is the public library of Thessaloniki, the organisational chart of which appears at Appendix K.

7.3.9 LACK OF INITIATIVE

Although the results of the survey relating to the conservation situation in the Greek libraries showed its poor state, (see "Conservation Situation" pages 185-188) there were two exceptions, namely one special library and the Greek National Library, where conservation treatment was being applied for material belonging to their collections. One would expect that the professionals working in these libraries and especially those in the Greek National Library would acknowledge the fact that if material deteriorates in their collection the same is bound to happen to other libraries as well. Throughout the time that the conservation workshop has been established however and materials from the GNL's collection have been conserved and restored, the professionals have never questioned what problems other libraries face and how their colleagues cope with them. There was no initiative from the

GNL or indeed from any other institution, organisation or professional aware of the problem to provide or suggest any solution to the preservation problem. Furthermore, the Greek Library Association with all its problems as has earlier been described in the past years undertook the task of organising conferences (especially in automation) but has never included any session on conservation or preservation of library materials.

For those few who are aware of the problem one can only explain this lack of initiative as arising from indifference and lack of motivation.

Finally, the lack of preservation education at an advanced level combined with managerial qualifications and experience has resulted in the total absence of preservation managers.
REFERENCES


Korombili, S. "Collection Development and Interlibrary Loan in Greek Academic Libraries." (forthcoming)


Union Catalogue of Periodicals in the Greek Scientific Libraries. Athens: General Secretary of Research and Technology, 1989. (in Greek)
CHAPTER EIGHT

NATIONAL PRESERVATION COMMITTEE

International literature published mainly in North America and Western Europe provides methods and solutions for the implementation of preservation policy programmes in order to deal with the problems of deterioration in library collections. These methods however, are difficult to apply in the Greek library environment, mainly due to the problems described in the previous chapter.

Examining for example one of the methods proposed for increasing the awareness of and educating the staff, the in-house training method, there are several reasons why this method cannot be implemented in Greek libraries as yet; these reasons are the absence of publications in Greek, the lack of familiarity with the self-education process in general and the non existence of a body which would coordinate such methods and efforts.

To address these problems in a Greek environment, which is diverse in opportunities such as access to information and facilities as well as financial resources where only some urban areas are favoured, the establishment of a National Preservation Committee is proposed.
8.1 ESTABLISHMENT, AIMS, PRIORITIES AND STRUCTURE

To persuade the government, or any other independent organisation of the necessity and importance of establishing such a committee it would be necessary to provide factual information as to the preservation situation in the Greek libraries. This kind of information could derive from a report similar to Ratcliffe's report on the situation in British libraries [132] and/or from some sample collection condition surveys which would provide evidence as to the existence of deterioration problems of library materials in Greece.

It is believed that the results of the surveys conducted and presented in the first part of this thesis provide adequate information as to the Preservation and Conservation situation in Greek libraries and that the collection condition surveys give sufficient evidence of the materials' deterioration. Besides this independent investigation, however, other options which would only further establish the results of the above mentioned surveys include:

-- the commissioning of the investigation by the National Research Institution.

-- the administration of the Greek National Library to commission a survey similar to that of Ratcliffe as it has already done with the Feasibility Study for the auto-

mation of the GNL;
-- the investigation to be a joint project by the two Library Schools of the TEI establishments;

Establishment of the National Preservation Committee  There are four options for the establishment of the proposed committee:
a) to be established under the auspices of the Greek National Library as is the National Preservation Office under the auspices of the British Library
b) to be part of an independent organisation
c) to be part of the Ministry of Cultural Affairs
d) to be a joint venture by the Ministry of Education and the Ministry of Cultural Affairs above, under the auspices of the GNL.

Of the four options the most appropriate would be for the Committee to be established under the auspices of the GNL, as this institution already exists and "part of the role of a national library is to give professional leadership as well as to be a repository for national collections."[13] The last option should not be disregarded as it could ease the financial burden (see "Economics" page 273). Whichever is the parent body, the committee should be administratively independent and be able to accept independent financial support from individuals, institutions or organisations if such a possibility ever occurs.

Aims of the National Preservation Committee The purpose and aims of the NPC should be to promote and further heighten awareness of preservation amongst professionals, play an active role in education of both librarians and the general public, assist in the promotion of relevant publications in Greek, function as a centre for dissemination of information through the collected literature, promote communication and cooperation on local, regional, national and international levels, encourage the use of standards, encourage research projects, promote the creation of conservation centres. In spite of the fact that the primary concern is libraries, librarians and professionals dealing with preservation and conservation the services offered by the NPC should not exclude individuals wishing to acquire information for preserving and conserving material in their possession.
NATIONAL PRESERVATION COMMITTEE

AIMS

Promotion and increase of awareness
-- librarians
-- general public

Education
-- production of preservation education material
-- short course/workshops in preservation administration
-- training of members of staff
-- education of librarians
-- conservation education

Promotion of implementation of preservation policies

Information and consultancy services
-- production and publication of: bibliographies -- selective dissemination of information
-- production and publication of directories of suppliers, facilities, conservators, binderies
-- provision of information on courses, seminars, etc.
-- consultancy services

Communication / Cooperation
-- promotion of national, international meetings /conferences

National issues
-- use of acid-free paper
-- standards, guidelines
-- research projects
-- grants
-- compilation of a register of microfilmed material
-- promotion of the creation of conservation and microfilming centres
-- promotion of the creation of a national microform repository

Priorities Although all aims are equally important in creating a preservation consciousness and the means to
effectively implement preservation policy programmes priority should be given a) to the increase of awareness and education of recruited librarians, especially those of the Public libraries due to their importance as "research" libraries b) to the promotion of relevant publications and c) the promotion of implementation of the preservation policy programmes.[134]

Structure In order for the NPC to achieve its aims a number of professionals should be recruited. It is therefore essential that the committee advertise its activities and make them known so as to be appropriately supported by the professionals in the relevant fields. Those recruited will form "external support groups" which will contribute towards the realisation of the proposed priorities and especially the first two. The two groups comprising the "External Support Groups" are discussed and their composition and objectives described under "Promotion and Increase of Awareness" (see page 246) and "production of preservation education material" (see page 253) respectively. A board of specialists should be formed which will provide guidance and consult with the NPC's administration on various issues, as for example, education and assist the NPC in realising the third priority and the remaining aims and objectives. This board could be staffed by members of the two previously mentioned external support groups, and a representative of the Greek Librarian's Association. A provision should be made that when and where

[134] The description and discussion of the three priorities follow the order of the aims as these appear in page 243 and they are not discussed separately.
necessary outside specialists could participate.

Having the support and cooperation of the above mentioned groups and board it is proposed that the NPC be staffed by one full time professional who will represent the Committee where and when necessary, two administrative assistants and one or two secretaries.

Chart 8.1

<table>
<thead>
<tr>
<th>National Preservation Committee: Structure</th>
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<tbody>
<tr>
<td><strong>Parent Body</strong></td>
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<tr>
<td>National Preservation Committee</td>
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<tr>
<td><strong>Administration</strong></td>
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<tr>
<td>(Director)</td>
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<tr>
<td>External Support Groups</td>
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<tr>
<td>Administrative Assistants</td>
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<tr>
<td>(2 persons)</td>
</tr>
<tr>
<td>Secretaries</td>
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<tr>
<td>(1 or 2 persons)</td>
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<tr>
<td>External Support Groups</td>
</tr>
<tr>
<td>Increase of awareness group</td>
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<tr>
<td>Promotion of Publications group</td>
</tr>
</tbody>
</table>
8.1.1 PROMOTION AND INCREASE OF AWARENESS

---library staff

Methodology To address the issue of increasing awareness and educating the librarians two methods are proposed. One is to initiate a cycle of short seminars which will aim at introducing the reasons for deterioration, offering preventive measures and educating the librarians. The second method is distribution of informative leaflets to all libraries, explaining briefly and in simple terms the reasons of deterioration and methods to prevent it.

Short Seminars: Group Composition and Objective The group assigned to this objective should comprise five to six members and it should include librarians, lecturers from the TEI conservation department, conservators from other institutions and binders. Through their knowledge and experience, these professionals will present preservation and conservation, each one from their own angle, thus covering the whole issue. It is important that all these "specialities" are represented so that the participants realise their close relation to the actual preservation. Librarians would explain why preservation is part of the everyday routine of the library's operation, conservators can explain in simple terms why and how materials deteriorate and how this can be averted and binders illustrate the structure of the printed material and what is achieved through different binding methods and techniques. The objective of this group would be to increase the awareness of Greek librarians and administrators and
educate the already employed personnel of the libraries.

It is recommended that the courses are offered as close as possible to the actual location of the libraries. It would prove more economical for the group to travel rather than a large number of participants. For this reason, the "increase of awareness group" should visit the 10 regions [135] (see also Appendix L) of the country in order to accomplish their task spending a maximum of five to six days for each region. For regions of more than four nomoi and depending on the number of participants, a repetition of the course should be arranged so as to cater for all those wishing to attend the seminars. It would be advisable that the group visit each region, for example every month, so that the whole country could be covered in approximately 12 to 15 months.

Participants Although it would be ideal to introduce all librarians and other members of staff to these seminars an attempt like this would mean a rather extended period of time and greater financial expenditure. Libraries therefore, should appoint up to three members of the staff to attend, representing the main groups employed (professional librarians, junior staff, etc.) The selection will depend mainly on the interest that individuals may show and secondly on the total number employed in each library. The director of the respective library or a member of the administration should

135 Aegean islands, Central Greece and Evvoia, Crete, Ipiros, Greater Athens, Ionian islands, Macedonia, Peloponnese, Thessalia, Thrace.
accompany the group. For those librarians attending, the responsibility would then be to transfer, as best as they can, to all of their colleagues, the subject and content of these seminars. As it is generally accepted that preservation is not a matter for specialists but the concern and responsibility of all staff and users of a library it is the staff that should educate the latter. Another positive outcome of the librarians' attendance would be the creation of "experts" who may in the future be assigned with the responsibility of administering the preservation policy programmes of their libraries.

The seminars should be advertised in such a way as to stimulate representation from every library irrespective of size and type. This whole scheme presupposes adequate organisation awareness in advance of the number of functioning libraries to be contacted and the number of people to attend so as to cater for the necessary space and facilities required.

**Content of Seminars** "The effective administration of a preservation programme depends upon the joint efforts of library management, junior staff and technicians."[136]

If the efforts are to be effective however, a basis of knowledge is required which to a certain level should be common to both library administration and junior staff. For this reason the content of the seminars should be structured

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248
in such a way that the needs of all groups are met. Sessions that all groups should attend will cover: introduction to the nature and structure of library materials, including the various binding methods; the reasons which lead to the materials' deterioration; preventive measures such as environmental control (levels of temperature and relative humidity, light), housekeeping practices, appropriate ways of handling, transferring material from one area to the other, proper shelving and photocopying, proper exhibition and loan procedures. The role of the preservation manager should be outlined so that the importance of its existence is understood.

"The role of the [preservation] manager is essentially in the determination of policy supervision, a role which requires a knowledge of the preservation field, without implying any need to acquire technical knowledge."

The sessions that library managers/administrators should further attend will aim at justifying the fact that preservation is a cornerstone of library management and that it should be included in their future managerial plans. Preservation policy programmes such as those earlier described should be introduced and ways of implementation in their libraries should be offered. It should be stressed that any library wishing to create a preservation-conscious culture needs a preservation manager or a senior member of staff who after acquiring the necessary knowledge will play the role of

\[137\] Feather, 83.
preservation manager. His/her duties, responsibilities and position in the overall management of the library should be emphasised and explained.

To participants from Public libraries the importance of their collections as research material should be emphasised and therefore the urgency and need of preserving them in the best possible ways should be stressed.

Presentation It is recommended that the presentation of the seminars' content be supplemented by visual examples of deteriorated material, proper handling procedures etc. Swartzburg\(^{138}\) offers a list of audiovisual aids on Preservation and others are available from the National Preservation Office in London. A selection of these aids (videotapes and films) could be subtitled or dubbed and used during these introductory seminars. Selection or even production of slides covering certain aspects, for example bad photocopy practices would eliminate the cost and effort of subtitling in Greek. Any of the chosen A/V format to be presented could be accompanied with written material such as for example leaflets with the essential do's and don'ts.

Distribution of Literature The second method is that of distributing informative leaflets to all libraries, explaining briefly and in simple terms the reasons for deterioration and

methods to prevent it and also pointing out whose responsi­bility it is to minimise the reasons that cause this deteriora­tion and ideally identifying where help and further advice can be obtained. The relevant literature provides ample examples of the above mentioned leaflets which could be adapted for the Greek librarians.

The advantage of the first option, that of the seminars, is that there is person to person contact, professionals can answer questions, it is made obvious that there is genuine concern about the problem, whereas distribution of leaflets is rather impersonal. In addition making contact with librarians located in almost every part of the country shows that there is interest for every library and not only for those situated in big urban areas. The ideal situation would be to distribute the leaflets mentioned in advance of the seminars taking place or to distribute them while the seminars progress so as to have something already printed and informa­tive about the subject. Both methods should be the responsibility of the same group.

Future Attempts A proportion of the recruited librarians would have the opportunity to attend the seminars previously described. The effort however, should not stop there but continue, in order to further increase awareness in the library community as a whole and thus stimulate action. Librarians who were not able to attend the seminars or were not recruited and are interested in preservation should not be neglected or denied the opportunity. Regular introductory
courses raising awareness could be organised on a local or regional level so as to cater for their needs and interests. Such courses could either be requested by the libraries or proposed by the Committee. These "future attempts" could be combined with the "training of members of staff" described later under "Education".

--general public
It has been indicated earlier that Greeks are not familiar with the fact that library collections deteriorate and this was justified by the fact that they do not visit libraries often and therefore do not make use of the collections mainly due to the educational system.

Historic buildings or archaeological remains, as for example the Acropolis, which are components of the national heritage have received much publicity and attention and efforts have been made to prevent them from further deterioration. In contrast to this publicity and attention, the importance and deterioration of library collections, also components of the national heritage, has never reached the public's attention. This can be explained by the fact that this deterioration problem has never been publicized. Furthermore, there can not be any attempt to compare the effort, the publication or the finance involved in preserving and conserving the historical buildings or the archaeological remains to those for library collections since there is no evidence that any attempt has ever been made at least on the part of the state.
The public however, should become aware of the library collections' decay and this is one of the responsibilities of the National Preservation Committee. There are a number of ways this can be achieved and all media should be used. Short films could be produced sponsored either by the state or by private enterprises and broadcast through the national TV channels. The municipal and local TV channels should not be excluded from this attempt as well as the private ones which have already contributed to other social and cultural aspects. Newspapers, non professional journals and magazines should also be approached for the same reason. A preservation awareness week could be another solution where seminars could be organised and the public be invited to take part.

8.1.2 EDUCATION

--production of preservation education material

Cunha[139] states that "...there is nothing mysterious about conservation planning and management. It is essentially common sense and intelligent use of the abundant information available in the now voluminous literature on the subject." Any attempt to introduce the preservation issues either as part of an increase of awareness, or education without any relevant material for further consultation or reading, will only result in an incomplete attempt whose importance will fade. It is therefore essential that publications exist which

will provide further information, answers to various questions, illustrate experiences of other libraries, etc.

It has already been shown that Greece lacks the kind of publications which address the deterioration issues and offer solutions.

Importing standard textbooks is one viable solution. The language barrier however, limits their access to those with a reasonable knowledge of a foreign language, in this case English. The same problem of a language barrier emerges with the acquisition of relevant journals or newsletters. [140]

**Promotion of Publications Group: Objective** The proposed group should comprise professionals who will cover all the aspects necessary and relevant to preservation, that is librarians, lecturers of librarianship, conservators and publishers. The total number of this group need not be more than one representative of each of these professions. Its main objective would be to **promote the necessity for publications in the Greek language.**

Two methods are proposed for the development of publications in Greek. One is **translation** which seems to be a reasonable solution and which will enable those who lack the knowledge of a foreign language, to have access to material relevant to preservation. The second method is to **encourage writings by**

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254
Methodology The group assigned to this aim, should promote the idea of translating from the ever increasing international literature addressing Preservation and Conservation. It should approach publishers and promote the idea of publications covering this subject. This group should have the authority if necessary to commission translations from professionals who have been educated abroad and are therefore familiar with the terminology and the subject as a whole, and/or to commission staff from the Library Schools for the same reason. Promoting the necessity for publications could also encourage professionals to choose the free market, translating and publishing the relevant material through one of the numerous publishers existing in Greece, or proposing translation and publication to the administration of their institution.

Translations need not be solely of textbooks, but they could take the form of anthologies including various articles covering preservation issues. A basic selected list of core titles for translation is presented at Appendix M. The list is not limited to publications exclusively for librarians but includes those for the general public as well [141].

In addition to that, the group should promote the idea of the compilation of a dictionary, approved by the Greek Standard's Organisation, covering preservation and conservation termi-

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141 See for example Baynes-Cope at Appendix M.
ology. This type of publication would be extremely helpful to both translators and librarians with an average knowledge of a foreign language.

The second method is to promote the idea that Greeks should produce their own works in their own language. It is quite certain that such attempts would be particularly welcomed by librarians and administrators since these authors would be closer to Greek experience. Against the possible argument that such publications are rather specialised and have a limited audience, the counter argument is that the same applies to any specialised publication dealing for example with chemistry, medicine etc.

Greeks could learn from other countries which share the same language problem as for example Hungary, where the Conservation department of the National Library in Budapest translates a number of articles from preservation and conservation journals and distributes them to libraries. The National Library of Greece at present is not able to undertake a project such as the one mentioned above mainly due to lack of staff and, so far, lack of initiative. An effort similar to the one described above could be initiated by the Library Schools, or the Greek Librarians’ Association could establish a translation section comprising librarians/lecturers who already have a relevant knowledge on the subject and these translations could be then made available to those libraries or librarians interested. This whole scheme could again be promoted by the publication promotion group.
What has been discussed so far has been related to printed materials. The advantages of the A/V media however, should not be ignored and the effort to promote either their import and subtitling or dubbing or even production of similar material by Greek companies should not be overlooked. A viable solution would be the cooperation with the Photography department of the TEI in Athens where students as part of their course are taught how to produce a videotape. A competition could be organised and the best of those produced, used as material for the promotion of preservation in libraries. Possible topics could be proper handling and shelving, disaster control planning etc. The A/V material, which should not be limited to videotapes but include also slides and films, could be used also for the education of users during the preservation awareness week mentioned earlier. Furthermore, bookmarks carrying messages for the care of the books could also be produced and distributed to users through libraries.

The A/V material being productions of the National Preservation Committee could either be sold or rented to anyone interested. As it would be rather expensive for all libraries to acquire these media they could be obtained by the relevant dimoi who are legally responsible for the libraries in their region and who could distribute them or arrange showings. It is essential that more than one medium is available since not all libraries have the appropriate equipment. Some of this material could be used for the "Future attempts"
described earlier and the "Training of members of staff" described on page 259.

--short course/workshops in preservation management

Since preservation is a managerial aspect, short courses and workshops could be organised for the administrators and senior librarians. During these courses various issues of preservation policy as for example "Acquisition and Preservation" could be introduced and discussed at a more advanced level. In this way a continuity is created (the first stage being an introduction by the increase of awareness group) and opinions could be discussed in depth. As part of the short course, workshops could be offered where the participants would have the chance to design preservation policies according to their own needs. A similar programme to the one proposed is being undertaken at present in the United States by the Society of American Archivists whereby "participants will learn how to assess their collections' preservation needs, develop priorities based on feasible solutions, and develop action plans with a timetable for preserving collections within their institutions. By the end of the program, institutions will have developed and implemented many of the policies and procedures which will serve as the foundation for a functional program."[142]

The committee should establish communication, and even cooperate, with other institutions which are already active in such

programmes, as for example the one above mentioned, to obtain further suggestions and recommendations.

As part of the above mentioned courses a "hands-on" workshop of two weeks or even of longer duration is recommended after the completion of which, through the experience acquired, the preservation managers would be in a position quickly to ascertain what can be done more cost effectively in an in-house book repair facility, and what must be done by a trained conservator. In addition, knowing just how labour intensive a job is, and how much specialised equipment will be needed to perform even the most basic rebinding, they could assess cost estimates from conservators for such work more reliably, as well as assess realistically what should be done by a conservator and what should not. By doing the job themselves, they would easily and rather quickly discern which tasks were difficult and required training and experience, and which tasks were boring and would cause a drop-off in efficiency and productivity. This information would prove invaluable in evaluating tasks as to their difficulty and repetition level, enabling a preservation manager to organise the work in a way that contains enough variety to keep the employee interested and productive.

--training of members of staff (junior librarians and technical staff)

This could take the form of continuing education programmes so as to ensure that up to date information is disseminated and applied training is provided for the work place. In
addition the committee could offer regional workshops where librarians could be trained in in-house procedures such as basic care and handling, housekeeping and environmental control, book binding standards and specifications, storage of non-book materials, hands-on workshops for minor repairs, construction of phase boxes, etc. Guidelines for such training courses are offered by Clements and Thomas[143]

—education of librarians
It is essential that future librarians are taught the basics of preservation and conservation in library schools a course which is currently absent from the curriculum. The Committee should approach the relevant bodies namely the Library schools and through the Institute of Technological Education[144] the Ministry of Education and persuade them of the necessity of incorporating preservation in the curriculum.

—conservation education
Preservation education in relation to librarians is only one aspect of the preservation concept. Greece, however, lacks conservation expertise as well. From the existing courses described earlier under "Conservation Education" (see page 105), the one to which attention should be drawn is the course


144 see footnote 46a p.60
offered by the Technological Educational Institution. This is because, being a state funded department established by the Ministry of Education, it does not have a finite time of existence as does the course offered at the island of Patmos. For example, it does not depend on the discretion of its parent organisation as does the course offered by the National Bank Educational Foundation, and does not run the risks of a private establishment as does the private school of conservation. The above mentioned department could be improved with better facilities and reorganisation so as to produce conservators who will be able to deal with present and future programmes. In addition, a second department should be established in the northern part of Greece where other Technological Educational Institutions exist so as to increase the number of graduates.

One aspect of conservation is reprography. This subject does not appear in the curriculum of any relevant course described so far.

Being an essential part of conservation it is suggested that a relevant module should be introduced. The options for the introduction and implementation of the reprography course include its addition to the already existing curriculum of the Conservation or Photography Dept. of the TEI. Another viable solution could be the introduction of training courses within the proposed Microfilming Centre (see chapter 10).
Crespo [145] provides an outline of subjects, of a theoretical and practical nature, that a reprography course especially aimed at technicians should include.

8.1.3 PROMOTION OF IMPLEMENTATION OF PRESERVATION POLICIES
The committee should emphasize the need for every library irrespective of size and type, to design and implement its own preservation policy according to its own aims, objectives and user needs. It should stress that no library can rely on others to preserve its own material and each library has an equal share in this responsibility. It should influence and encourage libraries in creating preservation manager positions and where necessary intervene with the appropriate authority (municipality, ministry, organisation, etc.) to emphasize the need for these posts. Special effort should be made for the implementation of these policies to Public libraries, and their respective authorities should be convinced of their necessity.

8.1.4 INFORMATION AND CONSULTANCY SERVICES
Access to information is essential in every profession. One of the aims of the National Preservation Committee is to act as a centre from which information can be collected and disseminated. The various forms of information include bibli-

— production and publication of bibliographies - selective dissemination of information

The Committee should be able to compile and make available on request bibliographies on certain aspects of preservation and conservation such as policy making, paper, binding, preventive measures for printed and A/V material, disaster planning, security, education, specific methods and techniques relevant to conservation, microfilming etc. Subscribing to relevant international journals the Committee would be able to provide SDI to those interested in specific aspects of preservation or conservation, charging a fee to cover the cost of subscription, retrieval and/or photocopies if these are to be provided. It is suggested that the NPC subscribe to journals not available to other libraries. Identification of relevant articles in journals held in other libraries could be achieved through communication and those interested directed to these libraries. It would be preferable, though, if copies of the articles were sent to the NPC. Articles could also be identified by abstracts and/or bibliographies as for example Library & Information Science Abstracts, Library Literature or Paper and Board Abstracts and reprints acquired by the publishers if they offer a reprint service. The estimated cost of the subscription to these journals[146] would be

146 The proposed journal besides those mentioned in footnote 140 could include: Abbey Newsletter, Alkaline Paper Advocate, Information Management and Technology, International Journal of Micrographics and Optical Technology, Library Technology Reports, Microform Review, Micrographics and
Future programmes for the committee in relation to dissemination of information on preservation and conservation could be subscription to one of the relevant databases, as, for example, DIALOG or Conservation Information Network[148]. DIALOG is a commercial database vendor, providing on-line access to publications and information services. The CIN administered by the Getty Institute and the Canadian Heritage Information Network provides access to the international conservation literature required by conservators, curators, archivists, librarians and architects through three on-line databases: bibliographic, conservation materials and international suppliers. The first is a more viable option due to the fact that subscription membership is around £30 and provides access to over 425 databases and a DIALOG office is already established in Greece [149]. Subscription membership for CIN is around £37. Search charges will be covered by the users.

Bearing in mind the fact that from the previously mentioned subscription to journals over 50% is allocated to bibliographies and abstracts, subscribing to DIALOG might seem a

Optical Storage Review, Paper Conservator, Paper Technology

147 The equivalent of the English pound in May 1993 was approximately 330 drachmae.


149 Progeneia. 6 Botaris Street, Athens 10681, Greece.

264
preferable solution for bibliographic and abstracting services. Replacement of printed publication (bibliographies and abstracts) to CD-ROM equivalents where these are available, or their substitution to one of the above mentioned on-line services will be decided by the NPC according to users' needs and demands.

--production and publication of directories of suppliers, facilities, conservators, binderies

Information of this type could be available in the form of directories indicating the locality.
The suppliers' directory should be made available to libraries wishing to acquire material for preservation purposes as for example boxes, envelopes etc. made of acid-free paper or material for minor repairs.
The facilities' directory would indicate where facilities relevant to conservation exist (microfilming facilities in libraries for example) or private laboratories to which microfilming activities could be commissioned.
Practising conservators and binders, whether private or institutional, could be listed in the relevant directory and contacted by libraries or individuals who wish to consult them on various treatments or types of bindings.
Some of this information, as for example the existence of conservation facilities, could be gathered by the "increase of awareness group" while visiting the different regions.
--provision of information on courses and seminars or any other short or long term preservation - conservation related educational programmes

Information on such events should be compiled and up dated by the Committee so as to provide quick responses to individual enquiries. This type of information will in future allow the Committee to investigate and advise on gaps in training programmes or areas for future development. Furthermore the Committee should be able to provide information on courses abroad and a very useful source of information for conservation courses is the "International Index on Training in Conservation of Cultural Property" published by ICCROM.[150]

--consultancy services

The NPC should provide "consultancy services" for various aspects of preservation policy programmes as for example the preliminary surveys or information and guidance for building design.

8.1.5 COMMUNICATION / COOPERATION

--communication

One of the numerous advantages of communication is sharing information and this is an aspect where the Greek Librarians' Association could prove helpful. The Association's journal re-launched in 1992 could prove a useful platform aimed mainly at librarians, with information on preventive methods,

announcement of publications and A/V material, translations of various articles published in international journals relevant to their responsibilities, etc. In the beginning the above mentioned journal could serve as a platform for librarians and preservation managers and later a quarterly newsletter corresponding to the needs of preservation managers could be launched. This then will be the platform for exchanging ideas, national and international developments in conservation treatments, announcement of publications and A/V material, information about conferences, etc. Through the existence and availability of these publications the information needs of the two main groups in libraries could be covered.

---cooperation

The purpose of cooperation is exchanging experiences, ideas and distributing costs among those involved in such schemes. The National Preservation Committee should promote cooperation amongst libraries for local and regional training courses, purchase of conservation material in bulk and especially for conservation treatments. It should also emphasize the need for cooperation and where necessary coordinate activities such as preservation microfilming programmes and bibliographical control.
Meetings and conferences are another way of communication which provide platforms for new developments, ideas and problems to be aired. Such meetings therefore, should be promoted and organised by the preservation committee. Another advantage of these meetings which should not be overlooked is that they provide the basis for establishing contacts both on a national and an international level which can have a future positive outcome.

8.1.6 NATIONAL ISSUES
This is an area in which the National Preservation Committee should be careful to concentrate its efforts in order to make some impact.

--use of acid-free paper
It should campaign for the importation and use of permanent (acid-free) paper by publishers since as has been shown a large number of them use imported paper for their needs. It should contact and urge those Greek paper manufacturers who produce printing paper the pH of which is 6-6.5 to further improve their production by converting to alkaline processes. This attempt implies that paper mills will have to invest a considerable amount of money for this change. But as Frase states "The costs of salvaging the enormous backlogs in library materials on acidic paper are so great that expediting
the shift to alkaline paper will have a significant effect in restraining these costs. In addition, governments and others paying the bill for preservation are likely to be more generous if they are aware that the problem need not keep growing."[151]

The results of the survey showed that Greek publishers import paper from Western European countries, South America and Israel. Frase indicates that "some 75% of the paper capacity in Western Europe is alkaline; Finland's production is totally alkaline." [152] Some of the South American countries however, for example Brazil, produce paper the pH level of which is 4.5. Publishers and importers should be persuaded to redirect their business to such companies or countries which produce more acceptable for preservation purposes paper.

---translation of standards, guidelines

The Greek Standard's Organization should translate standards relevant not only as to the quality of paper (permanent paper) but for other activities related to preservation and conservation as for example storage and exhibition of library material. Standards should also be provided for bibliographic control of microfilmed material, filming, developing processes, etc. The Committee should emphasize to the Organization the need for the production of such standards in the Greek language and especially the terminology dictionary.

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152 Frase.
ary mentioned earlier (see page 256). In addition translation of various guidelines as those published by the Division of the General Information Programme of Unesco could prove to be helpful.

--research projects
Science is very closely related to certain aspects of both preservation and conservation and it is the results of scientific experiments which have led to conservation treatments and solutions. Greek scientists and for that matter chemists, in academic institutions should not be misled into believing that all questions on conservation problems have been answered. They should be approached by the Committee and encouraged to become involved in projects concerning various conservation aspects or alternative methods and techniques to the already existing ones.

--grants
It would be beneficial if the committee in cooperation with the National Grants Foundation or other institution or organisation[153] could offer grants to existing or possible future library administrators who wish to be educated on preservation administration abroad. Grants should also be provided to selected lecturers at library schools to obtain detailed training in preservation and conservation administra-

[153] The National Grants Foundation awards grants with the obligation on the part of the awardees to offer their services for at least five years in any Greek institution. This obligation does not apply to other organisations as for example the Public Benefit Foundation "ALEXANDER S. ONASSIS".
tion. This effort will serve to educate future "trainers". Furthermore grants award schemes should be extended to research projects and practising conservators. The benefits of national and international meetings, conferences, workshops etc. being known, prospective participants should if necessary be assisted financially to attend should they so wish.

--promotion of the creation of conservation and microfilming centres

The committee should play an active role in promoting and encouraging the creation of conservation centres and initiate a feasibility study for mass conservation treatment (mass deacidification). In addition it should promote the idea of Microfilming centres and the creation of registers of materials conserved or microfilmed, so as duplication of effort and unnecessary expenses be avoided.

--national register of microfilmed material

Microfilming is a conservation method which requires substantial finance. It is essential therefore to provide information as to what has been microfilmed so as to eliminate unnecessary duplication and waste of resources. The creation of a Greek Register of Microform Masters is the most effective way to provide this type of information. This register will be a bibliographic tool from which other libraries and institutions will be able to select material for addition to their own collections or find material housed elsewhere which is required by their own users. The database to be created
should be compatible and comply with the standards and parameters dictated as to the materials to be covered by the European Register of Microform Masters (EROMM)\(^{154}\).

---promotion of the creation of a national microform repository

Creation of the above mentioned microfilming centres prompts the question of appropriate storage facilities for the master negatives from which copies can be made and used for reference and every day use. The creation of a National Microform Repository is proposed, adequately constructed so as to provide the optimum environment for the above mentioned masters. The material could be microfilmed at the microfilming centres and the "archival copy" deposited to the NMR. It would be from this repository that duplicates would be produced and dispatched to the libraries when required. The establishment and creation of the NMR will also provide the appropriate host for the Greek Register of Microform Materials mentioned earlier.

Promotion of the creation of the microform centre without creating a suitable repository will only lead to a huge waste of time and money. It is therefore essential that the Committee promotes these two issues in parallel.

8.1.7 ECONOMICS AND LOCATION OF THE NATIONAL PRESERVATION COMMITTEE

Economics  Certain factors influence the initiation and successful progress of programmes and indeed of Preservation and Conservation programmes. They should be carefully organised and structured with their scope, aim, objectives and methodology laid down, allowing for changes where necessary so as to cater for future needs. All these however, depend on financial support and as has been stated repeatedly in the relevant literature, Preservation and Conservation are expensive. Of the two it seems far easier to acquire financial support for Conservation as the results can become obvious through various treatments. Preservation on the other hand, if properly supported and applied can ease the costs required for conservation.

The funds covering the needs of the National Preservation Committee should derive from the parent body. If this would be the Greek National Library then the budget should be part of the money allocated by the Ministry of Education or the Ministry of Cultural Affairs should this be the parent body. From a financial point of view it seems that if the NPC is established as a joint venture by the two ministries the burden of funds would be allocated to two bodies rather than one. The most immediate expenses would be the salaries of the NPC’s staff. The external support groups and the board of specialists would offer their services on a voluntary basis at least for the first few years and if the financial
situation improves in the future then the status could change. It goes without saying that the expenses for the "Increase of awareness group" will be covered by the NPC's budget.

**National Preservation Committee. Budget** It is estimated that the average annual cost of salaries would be around £25,000[^155] the costs for furniture and equipment around £9,000 and miscellaneous items annually around £3,000. Another £20,000 should be allocated to the NPC for expenses such as for example subscription costs, or the cost of travelling and accommodation for the "Increase of awareness group"[^156]

The production of material required for the objectives of this group, publication of literature e.g. bookmarks, the production of the A/V material could it is suggested be sponsored by publishers, or library equipment suppliers as for example the 3M security systems suppliers or others. It has been stated earlier that the National Preservation Committee should be able to accept financial support external to its parent body. The publications of The Committee should publicize and advertise its aims and objectives so that they are known. Potential sponsors should be approached and convinced of the importance of its objectives. Contacts should be established with all major enterprises and financial

[^155]: The average monthly salary for an administrative post is around 180,000 drch. (£545), that of an administrative assistant around 110,000 drch. (£333) and of a secretary around 90,000 drch. (£273)

[^156]: The equivalent of the English pound in May 1993 was approximately 330 drachmae.
institutions as well as individuals who could assist the purposes of the committee.

A number of projects have been proposed to be undertaken by the NPC. Amongst them the Greek National Register of Microforms, creation of mass/conservation and microfilming centres, a National Microform Repository. All these require substantial finance. The database for the Greek National Register of Microforms could be developed as a project by the University of Crete, which has a strong department in computers and has already designed an excellent computer system for the libraries' operations (circulation, acquisitions, cataloguing etc.) The creation of the conservation and microfilming centres (see also chapter 10) as well as the National Microform Repository, at least as structures, would be the responsibility of the Greek government. It would be the NPC's aim to persuade the government of their necessity and importance. Once the structures exist then financial support could be sought from various organisations and institutions both Greek and foreign.

It is not uncommon in other countries for companies or foundations to sponsor various conservation projects as for example the Volkswagen Foundation which has supported the microfilming projects in the former Federal Republic of Germany or the Mellon Microfilming Project at present in progress in the U.K., sponsored by the Andrew W Mellon Foundation of New York. In the past few years it has become very popular
for Greek companies[157] to support or even initiate projects which are mostly concerned with environmental issues or "adoption" of underdeveloped areas and help them financially to overcome their problems. These and other companies could be approached and their financial support and cooperation in certain areas explored.

In addition, international bodies such as the Commission of the European Community's Action Plan for Libraries or IFLA's PAC programme, through the regional centre for Eastern Europe, or Unesco, could be approached to facilitate financially or otherwise, provided that a complete programme of the committee's objectives is presented to them.

*Location of the National Preservation Committee* The National Preservation Committee, being administratively independent, could be located in either of the two big cities of the country, that is Athens or Thessaloniki. If decentralization would be preferred then the second city would become the location of the NPC. It is believed however, that the location will be a political decision.

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[^157]: The "Boutaris" winemakers and the "Barba Stathis" frozen food processing manufacturers for example.
REFERENCES


The previous chapter described, amongst other matters, methods for increasing the awareness and consequently the realisation of the necessity for preservation. The next logical step should be the implementation of the preservation policy programmes already described under "Preservation Policy Programmes". Most or parts of the programmes mentioned could be implemented in Greek libraries provided that some changes are made so as to conform to the present library situation. These programmes could improve gradually in the future based on their resulting benefits.

9.1 PRESERVATION POLICY PROGRAMMES FOR GREEK LIBRARIES

9.1.1. EVALUATION OF PRESERVATION AND CONSERVATION NEEDS

Based on the results of the preliminary surveys - collection, environment, building - priorities for preservation and conservation could be established.

Preliminary surveys: collection condition survey

This survey is mostly related to the acidity and brittleness levels of the paper based material of the collection. To extract information as to the acidity levels however, it is necessary to have either the appropriate tools (pH pens, pH indicator strips) or to use even more sophisticated equipment such as laboratory pH meters. Of the two methods,
the tools for the first one, that is pens and strips, are easily obtained from the suppliers. The brittle level of paper, however, is much easier to be established through the folding test.\[158\] In addition, through physical examination, data can be gathered on the condition of the selected items' binding, board and cover. Depending on the questions asked, collection condition surveys can provide information as to the nature of the deterioration and data that can assist in explaining why deterioration has occurred.

The relevant literature provides a number of collection surveys conducted in various libraries especially in N. America and the U.K.\[159\] all of which surveyed their collections using various random sampling techniques so as to quantitatively gain some sort of information on the size and nature of the preservation problem in their collections. A number of them made use of Drott's\[160\] random sampling methods, and others devised their own methods to randomly survey their collections.

The size of the collections housed in Greek libraries are

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158 The folding test shows the number of double folds a paper will endure before rupture. Paper breaking on three double folds or less can be conveniently categorised as brittle.


notably smaller than the above mentioned surveyed collections. Similar, yet simpler random sampling techniques, (for example those devised for the collection surveys at the University and Public library of Thessaloniki) could be devised so that by examining a much smaller number of samples an approximate picture of the condition of the entire collection could be gained economically and in a relatively small period of time. A quite simple survey methodology which could be adopted, is the one offered by the National Preservation Office\[161]\.

Libraries which wish to devise their own sampling method should do so bearing in mind that every volume in the target population must have an equal chance of being selected for sampling.

The environmental and building surveys are the ones that can be conducted by visual inspection, by interviewing staff, etc. Of the two it is the environmental survey that most needs appropriate equipment in order to measure the levels of temperature and relative humidity, the level of light and air-pollution. The first two levels can be measured with simple thermometers and hygrometers, placed in various places in the library.

More sophisticated and more expensive equipment is required for the measurement of light and air-pollution. Although it seems that there is no alternative method to be used for the measurement of air-pollution in certain areas such as Athens

and Thessaloniki where the pollution levels are higher than in any other area in Greece, information as to the daily levels can be obtained from the relevant broadcasts.

Information as to the type of light bulbs used in the library, how many hours these are unnecessarily on etc. and even calculation of the total hours of sunlight can replace costly devices required for this particular part of the survey. Another solution however, for measuring the light level is to use photographer’s light meters, if someone can provide one or if the library can afford to purchase one, although these may not operate in low ranges.

Data for the building’s security system and aspects of the condition of stack and workroom areas can easily be collected through visual inspection; damp areas are again fairly easily identified. Furthermore, data for the building itself, for example the categories proposed for identification by Cunha[162], do not present insuperable problems.

In addition, the delivery, photocopying exhibition and inter-library loans (if any) procedures should be identified as well as the existing disaster precautions (if any) e.g. fire extinguishers, the staff’s familiarity in using them, etc.

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9.1.2 PREVENTIVE MEASURES

Temperature, relative humidity, light and air-pollution are the main reasons of decay and maintaining them at appropriate levels results in prevention of further deterioration.

Temperature and Relative Humidity  The relevant literature provides various guidelines and standards as to their levels\(^{163}\). The desirable ones to aim for are flexible within the ranges suggested by Dureau and Clements\(^{164}\) (16-21°C and 40-60% R.H.), but they should be as low as can be tolerated by users and staff.

Fluctuations, which can be caused by transferring the material from one "climate" to another or by discontinuation of air-conditioning or heating systems during nights, weekends or public holidays, should be avoided as much as possible. In the event of strikes, which cause power cuts, the authorities should persuade the local electricity board to exclude libraries the same way hospitals are excluded.

Regarding the fluctuations due to transferring of material from one "climate" to another, that is from storage areas to reading rooms, it should be noted here that many libraries in Greece have these two areas in common. That is, the internal periphery of the reading room is usually covered with shelves


where the books are stored or the collection is kept in an adjacent room which is not separated from the reading area. In the case of rare books these are either kept in the director’s office, or in an other area inaccessible to the users area without any environmental control. This arrangement hinders maintenance of temperature and relative humidity levels appropriate both for the users and the collection. The stability of the above mentioned levels is usually maintained in libraries by the use of mechanical air-conditioning systems. Their cost however, makes them inaccessible especially to libraries with a limited budget. In cases like these, in order to limit the extremes of temperature and humidity simpler and less costly measures such as use of windows and fans to ensure good air circulation, insulation materials to control temperature, blinds to restrict light, dehumidifiers to remove moisture in areas of high humidity can be applied, providing that they are operated properly and regularly by staff.

Another option is that noted by Padfield[^165], that is the concept of "passive climate control" which can be effective in controlling temperature and humidity levels without mechanical air-conditioning. The two main principles of this concept are a) "to put items in a set of nearly airtight and close-fitting enclosures" and b) "to prevent rapid temperature change around the collection". The first principle, which

will make use of enclosures (similar to those used for the protective measure programme) around the items, will create a microenvironment which will delay the effects of changes in temperature and relative humidity on the item and therefore buffer it. The second principle suggests insulation of ceiling spaces and walls, stacking books closely, keeping book stacks away from outside walls or plant rooms where a furnace may be installed and building libraries with thick walls.

In applying this option, however, one should consider the cost involved in purchasing all these enclosures. In addition, where the building housing the collection does not belong to the local authorities or is rented by the institution or organisation, attempts like insulation of ceiling spaces and walls must be in accordance with the owner’s wishes, and the library administration should think very carefully about the cost involved in such projects.

**Light** To avoid the destructive effects of light, as these have been earlier described, certain measures should be employed. In the case of storage areas, switches may be fitted so that when there is no one in they are not lit. When this option is not feasible, the number of lights, especially fluorescent lights, can be reduced and incandescent bulbs be replaced with others of a lower wattage. Direct sunlight should be avoided, by using blinds or curtains, or by planting trees outside the windows. For libraries which can afford the cost, windows can be treated
with film that excludes ultraviolet light (it needs however, regular replacement) or they can be painted with UV-absorbing paint.

Air-pollution  To eliminate the deterioration caused by air-pollution, the incoming air should be filtered through the air-conditioning system. In a similar manner solid particles can also be reduced.
In a less costly way, dust and dirt can be prevented if windows are kept closed properly with no gaps to allow air movement into and out of the building. Another possible option is to adjust filters made from air-conditioning filter material over windows which are opened. An effective cleaning programme is also essential for reducing deterioration caused by airborne pollutants.

Housekeeping  Cleaning and monitoring the condition of the collections on an ongoing basis are the two objectives of housekeeping. To achieve the first, treated cloths to which dust adheres should be used and not dusters which merely spread it around in different places. Cleaning should not be limited to dusting, but consideration should be given to cleaning the perimeters of all rooms and floor areas since these are favoured by pests. The monitoring aspect of a housekeeping programme is of parallel importance as the cleaning itself. Monitoring involves regular examination of the collection and its storage facilities and it allows for early observation of problems, such as the incursion of pests,
of excess humidity, etc. Regular inspection should be made on all areas in the building, including areas not normally accessed. The purpose of this inspection is again to clean and monitor conditions to provide early warnings of problem spots. Removal of dead insects and other organic debris will eliminate biological pests and the unblocking of drainage pipes will eliminate water damage of buildings and collections, the last one being closely related to a disaster preparedness plan.

For one aspect of this particular programme, that is the cleaning of books, libraries could seek the assistance of the public which will be trained by the librarians as to how the material should be cleaned. Similar efforts are shown on the videotape produced by the British Library entitled "Keeping your words"[166] where a group of elderly volunteers is assisting in cleaning shelves and books. Greek libraries could establish contact with their local Open Protection Centres for the Elderly and seek the same kind of help.

Good housekeeping is one of the least expensive preservation programmes and one that can be beneficial to the collection and library building as a structure.

166 Keeping your Words, videotape (London: The British Library: 1984)
9.1.3 DISASTER AND SECURITY PLANS

The most common types of disaster are fire, flood and, in the case of Greece, earthquakes. No library is immune from disasters but there are buildings which are more susceptible due to their age and poor maintenance of electrical wiring and water pipes.

Most of the components of the four parts comprising a disaster plan can be effectively applied by Greek libraries. The restrictions which limit their full adoption are mainly lack of finance, insufficient number of specialists and inadequate number of staff.

Prevention requires actions which would minimise: a) the risks posed by fire and flood, b) the damage a disaster will cause by using appropriate storage equipment and library fittings which protect the items in the collections. Provision of security copies of important materials and tools, such as the library’s catalogue. Insurance for the library and its contents.

The first part of prevention is mainly concerned with maintenance of electrical wiring, water pipes and good housekeeping. Libraries should maintain these installations in good condition and where replacements are required the cost involved should be compared to that which would result from a disaster caused by poorly maintained installations. The catalogue, if the library is automated could be copied on disks and if not it should be photocopied, up-dated regularly and kept out of the library, possibly at the director’s house
with all the library's plans (building, electrical wiring, etc.)

Libraries are not usually insured in Greece and this is mostly related to the cost involved. This attitude should change since the money claimed will cover not only the repairs of the building itself, but also the treatment of the material.

Response covers the activities which need to take place to make a disaster plan useable. It covers preliminary planning stages as well as the essential updating needed to keep the plan current. Topics included are: establishing and training the disaster response personnel; identifying and marking irreplaceable material for priority salvage in a disaster; getting together and maintaining equipment which will be required in a disaster; listing key personnel, services and sources of equipment and keeping these lists up-to-date; instituting procedures which will notify members of the disaster response team and allow them to be assembled rapidly; establishing contact with conservation personnel and facilities in the region that are able to offer support in a disaster; and updating procedures.

Reaction deals with the procedures to be followed when a disaster has occurred: raising the alarm; assembling personnel; making the disaster site safe for personnel; making a preliminary assessment of the damage; briefing salvage teams; entering the disaster site; and removing, cleaning, packing and transporting damaged materials.
Identification and marking of irreplaceable material for priority salvage does not present any problem. Services and sources of equipment as well as information on conservation personnel and facilities, if not already known, could be obtained by the National Preservation Committee which could provide information for nearby regions as well. Installation and maintenance of smoke detectors and devices which will raise the alarm (police, fire brigade, etc.) is a cost which might not be affordable by all libraries. It is however, a one-off expense (installation) which could prove much cheaper than the costs involved in an extensive disaster.

Murray [167], implies that the number of staff to be involved in any salvage operation if a disaster does occur, should be more than 10 including the proposed alternates. Again, the problem of staff arises which in 70% of the surveyed libraries at least, is 1-5. A relatively easy solution to this problem is to involve in such operation members of the community or civil servants of the respective county or municipality. Such an involvement however, presupposes training, familiarity with the library’s interior and up-dating of any significant change in the library.

Freezing facilities are the ones mostly required in the event of a disaster. One solution is to maintain contact with the nearest meat market or even the nearest army facility for the use of their trucks to transport the material to the freezers’

location. Army’s generators could also be used until the electricity power is restored. Contact with the army seems the best solution for both urban and rural areas as they have assisted in many cases in the past when disasters have struck.

The last part, recovery includes: establishing a conservation programme to recover damaged material; cleaning and rehabilitating the disaster site; replacing treated material in the refurbished site; and analysis of the disaster and improvement of the disaster plan.

The only aspect which presents difficulties is the conservation programme due to the fact that this type of facility does not exist in the vast majority of Greek libraries. Consultation with professionals will dictate what can be done in the area by the staff and volunteers, for example drying of material not badly damaged and what material should be treated in proper conservation facilities as those proposed under "Conservation and Microfilming centres in Greece".

_Infringement of Security_ This aspect of disaster which can occur in any library can be dealt with in two ways. One of them includes installation of security alarms in order to prevent unauthorised access, connected to the police or to the director’s house. Additionally, security systems could be installed in the library prohibiting any attempt at taking out books or other material which are not to be issued to users. The cost involved however, in purchasing these security systems may be prohibitive for many libraries.
The other way, is to educate the users and the public in general so as to avoid or eliminate incidents of mutilation, vandalism, and theft, emphasizing the service provided by the library and the cost involved in replacing lost and mutilated items, while new ones may have to be purchased instead.

9.1.4 STAFF AND USER EDUCATION

It is assumed that some librarians will have already attended the introductory seminars arranged by the National Preservation Committee described earlier and would have acquired some knowledge of the methods and ways to avoid abuse of library material.

"Future attempts" and "Training of members of staff" would provide for the staff's education.

Furthermore, continual reminders to all staff both formally and informally will help to sustain their awareness.

The results of the survey had shown that users were the major hazard indicated to library materials (see 3.4.5.1).

Distribution of bookmarks, brochures, flyers and other handouts; printed messages tipped into problem volumes; messages on book wrappers, posters; audiovisual programmes in orientation sessions; a preservation awareness week which can provide a strong focus, are some of the possibilities which can be used for users' education. Forums in which user education can be pursued include local newspapers, staff newsletters, users' guides to the library, users' guides to the care of personal book collections, student orientation
activities. Although most of the material could be provided by the National Preservation Committee, individual libraries could design their own posters and/or produce bookmarks illustrating proper handling procedures, add relevant information to the library's introductory leaflets, etc.

A/V materials have been mentioned as methods of training and increase of awareness and these could be screened both to staff and users -- for the latter during a preservation awareness week.

Education training programmes for both staff and users should be a continuous process rather than an one-off attempt. It is necessary therefore that these educational programmes are repeated twice or more times during the year according to the needs of both staff and users.

The *protective measure programme* can be applied by most libraries. If the budget permits they can buy protective boxes and envelopes. Where this is not possible librarians could make the boxes themselves using acid-free paper.

Binding as an aspect of this programme, can be more beneficial when libraries are in a position to request a specific type of binding they believe is appropriate for certain material according to their value and expected use and not rely solely on the binder's preference.

**9.1.5 COLLECTION DEVELOPMENT AND MANAGEMENT**

Preservation makes sense only when it is seen as part of the cycle of acquisition, use and disposal.
The collection manager therefore or the person to whom the collection development and management has been assigned should make decisions as to the type of material to be acquired so as to meet from a subject point of view the aims and objectives of the library and the needs of its clientele. His or her decision should be such as to ensure that the materials will achieve the intended lifespan thus maximising the benefits of the library's financial investment in acquiring them. Such decisions should include the format of the material acquired, the type of edition -- paperback or hardback --, the type of binding if it is to be rebound or reinforced, etc. "Acquisition and Preservation" part of the short courses-workshops mentioned earlier could prove helpful for this particular programme.

The programmes described so far are related mostly to the preventive measures of a preservation policy programme. Part of these policy programmes are the various techniques of conservation mainly conservation/restoration and substitution.

9.1.6 COMMUNICATION AND COOPERATION

It would be preferable if the programmes discussed so far were not implemented in isolation by each library without any contact with other libraries of the same type or even of other types. Communication and contacts could be initiated during the "increase of awareness" seminars mentioned in chapter eight. Ideas could be exchanged for methods used for any of the programmes described and in this way possible mistakes
made by one library be avoided in another. Prior establish­ment of communication will provide a better ground for future discussions on cooperative schemes not only for preservation but for other activities as well in the same region.

9.1.7 CONSERVATION TREATMENT IN GREEK LIBRARIES

9.1.7.1 CONSERVATION SERVICE OPTIONS

A number of conservation options depending on the needs of the collections, the ability of the library to purchase equipment and supplies and the availability of personnel are offered by the relevant literature.\footnote{\textsuperscript{168} C.C. Morrow and C. Dyal, \textit{Conservation Treatment Procedures: A Manual of Step-by Step Procedures for the Maintenance and Repair of Library Material}, 2nd ed. (Littleton, Col.: Libraries Unlimited, 1986) 179-181.} The options offered by Morrow and Dyal being hypothetical provide some hints as to what conservation treatment could be undertaken by various types of libraries depending on the material, its use and the budget available.

There are three possible options which include the initial stage, the intermediate stage and a fully developed conservation service.

\textit{Initial stage}: short term remedial action including conservation measures such as removal to better storage conditions if possible, boxing, cleaning and pest control, first-aid repair treatment and minor repairs.
**Intermediate stage**: this stage would be a continuation of the initial stage and activities would be related to priorities, so far as availability of resources permits. This stage then would include **Restoration** whereby the treatment options would depend upon identified needs and priorities and the rate of development and expertise in the crafts of hand-repair and binding. It might also be possible to make use of simpler, more productive treatments, such as encapsulation or lamination for example, but only where proper maintenance of the equipment can be guaranteed. **Substitution** is another component of the intermediate stage and consideration could be given towards the end of this stage for the initiation of a preservation microfilming programme.

**Fully developed conservation service**: this stage of development of a preservation and conservation service will be reached only when expertise and resources have become adequate to tackle the most difficult types of restoration and to extend activities to deal with a wider range of library materials. This stage could include leafcasting treatment, a conservation microfilm unit if it has not been established already at the previous stage, or even mass treatment.

**9.1.7.2 Substitution service options**

Under the intermediate stage of the conservation service options, substitution has been mentioned as a possible component. Whether microfilming/reformatting programmes are to be established as part of the centralised conservation services
or as individual programmes there are certain stages the implementation of which will be determined by the nature and volume of the copying work to be undertaken. These stages are again categorised as initial, intermediate and fully developed microfilming and reprographic services.

**Initial stage:** The required minimum equipment for a basic microfilm and reprographic service would include a camera, a processor, a microfilm reader for quality control, a duplicator and electrostatic copier(s).

**Intermediate stage:** Expansion of the basic unit from the minimal service described in the initial stage would in most cases take the form of an increase in the number of microfilm cameras and electrostatic copiers.

**Fully developed substitution service:** Any development beyond the intermediate stage would be quantitative rather than qualitative.

9.1.7.3 CONSIDERATIONS FOR CONSERVATION AND SUBSTITUTION SERVICES

The initiation of any of the conservation programmes described above requires a number of considerations to be taken into account.

Common to both techniques are space, the work flow pattern, the existence of utilities, materials and equipment. For a microfilming/reformatting unit additional considerations
include the choice of supplier, maintenance, operating standards, choice of: electrostatic copiers, microfilming systems, camera, microfilm reader, quality control requirements. It is assumed that the necessary standards as to filming, processing and bibliographic control would have been established by the National Preservation Committee.

**Space:** One of the problems faced by the Greek libraries is space. A number of the surveyed libraries stated that there were plans for expansion (see Appendix N). These plans varied from expansion in the same building - addition of extra floor(s) -, new buildings specifically built for the library's collections, transfer to other buildings. None of them however, mentioned the intention of designing conservation workshops at least in the new buildings. Space being the major problem it is the storage areas they probably plan to expand so as to accommodate the material. The most rational explanation for not mentioning conservation workshops is that either they believed that conservation is not relevant to a library's functions or they had not thought about it. Both assumptions can be explained by ignorance and lack of proper education, aspects which should have been eliminated through the increase of awareness seminars mentioned earlier.

Of all the stages, the initial one of the conservation options requires a relatively small area which would accommodate a workbench for the minor repairs to be undertaken. Implementation of the other stages, either those of conservation or
microfilming, require more space according to the treatment to be undertaken or the quantity of material to be reformatted.

Specimen layouts that could serve as guides, corresponding to the three stages of both conservation and microfilming services appear at Appendix 0-01. Furthermore, the Guide to Setting up and Maintaining Micrographics Units [169] could prove instructive. In addition, a number of standard textbooks on conservation[170] contain lists of basic equipment and material needed in a workshop in relation to the treatment to be undertaken.

**Staff and training:** Staffing and training the personnel of these units is another issue that should be taken into consideration.

The relevant literature offers job descriptions for people staffing conservation services in libraries. The positions refer to conservator and conservation technician for the conservation unit and senior technician, maintenance mechanic, supervisor, senior and junior operators for the microfilming unit. Job descriptions of the above are provided at Appendix

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P and Pl. In addition, job descriptions for various posts in conservation departments are provided by ten universities in *Preservation Organization and Staffing*\(^{[171]}\)

The required number of staff for each stage will depend upon the balance between the quantity of work which needs to be done, the variety of treatments and the availability of funds to pay staff to do it. For the recommended initial stage staff requirements could be limited to one person, for example a conservation technician or if such a person is not available one member of staff who would have attended the training proposed under "Training of members of staff" (see page 259).

Unlike the staffing requirements of the conservation service, no previous specific education is required for the personnel of a microfilming unit which can be staffed by people with a secondary level of education, preferably with a technical bias.

The quantity and type of work to be done at each stage will dictate the number of staff. However, if the basic items of equipment needed for the initial stage are to be operated to their optimum capacity a minimum staff of three will be required.

Once staff have been selected it is essential that they be trained both in operation of the equipment and in its routine maintenance. Initial training on new equipment is best given

by the equipment suppliers, but it is essential that over a period of time sufficient expertise should be developed within the microfilming service so as to allow training of new staff to be carried in-house. It would be very useful if all staff members involved in the microfilming service could be trained to operate all the equipment. A member of the staff which will be specially trained in maintenance and repair could be nominated as senior technician. Day to day management of the unit would be his responsibility as well as the training of new staff. At the initial stage he/she should share in the general work but should have special responsibility in the checking and quality control. Expansion from one stage to another besides the increase in the number of staff will require instruction by the suppliers on the technical aspects of the new machines. If expansion takes place experienced staff members should usually be operating the new equipment and new staff the existing ones.
9.2 IMPLEMENTATION AND INTEGRATION OF THE PRESERVATION POLICY PROGRAMMES IN GREEK LIBRARIES

Larsen[172] states that "there is no set pattern for the organisation of a library preservation programme" Furthermore, the relevant literature provides examples of library models [173], [174], case studies [175] etc. and the programmes developed to meet their needs. The examples provided usually refer to types of libraries and especially academic and special/research ones due to their responsibility for long-term retention of materials with permanent value. As has been shown by the survey however, in the Greek library environment it is mainly the public libraries which have this type of material followed by the special/research and academic ones. Furthermore, from the relevant literature it is suggested that special libraries have a limited number of personnel but public and academic libraries a larger number of staff. As has been shown by the survey however, this is not the case in the Greek libraries (see Table 4.3). The integration of the preservation programmes in Greek libraries


therefore should be mainly according to staff and finance availability.

9.2.1 OPTIONS FOR PLANNING THE PRESERVATION PROGRAMMES

There are three options for the person or persons who would be responsible for designing, developing and implementing the preservation policy programmes and these comprise: appointment of specialists, appointment of a member of staff, appointment of a committee.

Appointment of Specialists Libraries could commission the design and development of the programmes by specialists. The only restraint on this option is the present limited number of specialists in this area and the cost involved.

Appointment of a Staff Member This second option, although viable, presents two problems, that is of the status of the person to be appointed and the cost involved. It is suggested that the person to be appointed should be a professional librarian. According to the results of the survey, however there were not many qualified librarians employed in Greek libraries, at least when the survey was conducted. The person selected for this assignment must be trained in order to acquire the knowledge and experience required, something which is not on offer at present in Greece. Consequently, this person must be sent abroad and this poses the problem of finance for the municipality or local authority or the Ministry of Education for the Public libraries, the University
authorities for the Academic and the Organisations or Institutions for the Special/Research libraries. However, the cost involved is one with a long term benefit and realization of this option, once an appropriate member of the staff has been selected, will create experts in this field which might prove to be beneficial for the future.

Appointment of a Committee the third option can be implemented in libraries "with sufficient staff to assign about twenty-four people to the task, each spending on average five or six hours per week over four to six months"[176].

Bearing in mind the results of the survey related to the number of staff in Greek libraries, this option could probably be applied only by a minority rather than the majority. Of the libraries surveyed 61 (58%) had staff of 1-5 members and this included all the types of libraries namely academic (where a central library does not exist), special/research and public, the last of which represents 22% of libraries employing this number of staff.

For smaller groups however, according to each library's capabilities, to form a committee of this type seems more practical and workable. The advantage of having an in-house group design and develop the programmes as opposed to the appointment of specialists, will help to increase the awareness and knowledge of the staff regarding preservation matters.

and any such programme developed as the result of the work of a library committee or group, which represents the entire staff, will have a wider basis of support among library employees.

The strong belief that preservation should be practised by all staff leads to the recommendation that these options should be applied for the evaluation of the preservation needs of the library, essential for the further development of a preservation programme.

Greek libraries can choose any of the three options fully or in part according to their financial situation, staff and time availability, or even combine some of the options for certain activities. The possible combinations of the three options referring to the preliminary stages can include a) appointment of a specialist to conduct the preliminary surveys submitting a report of the results and recommendations to the administration for further action to be taken (i.e. preservation programmes) b) to appoint a committee, groups or group to undertake the preliminary surveys and having obtained the results, consult a specialist for further action and c) to appoint a specialist as a supervisor of the appointed committee, groups or group for the preliminary surveys and be responsible (the specialist) for training them, provide them with material to consult etc.

From the relevant literature it is assumed that the most popular option is the third one (appointment of a committee)
and it is usually referred to in connection with the collection, building and environment condition surveys, the various procedures followed for photocopying, exhibitions etc. as well as the design of the disaster plan. Darling and Webster provide extensive guidance for the realisation of this option especially for the procedures the group or groups should follow.

For those libraries which decide to involve their own staff there are certain procedures to be followed as to the selection of the members of the group, their training, etc.

**Selection of the Group Members** The library director is the person who should have the responsibility of appointing the members of the groups or group, from the existing library staff and his/her "selection should be made on the basis of quality, that is potential for contributing to the study, rather than on availability".

This selection would involve members from the existing staff and this fact will eventually effect the normal routines of the library. Essential therefore, especially during the period of the surveys is the support and tolerance of other members of the staff, since participation in the group means members will be taken away from normal responsibilities which

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178 Darling and Webster 13.
will have to be allocated to other members of the staff through temporary reassignments. Formation of one group will also have an affect on the time necessary for completing these surveys since all three will be the responsibility of this one group.

In either case, that is of one group or a number of groups, one member of those selected should be appointed as "head" of the group or groups and it is this person who will consult the administration when necessary and will be responsible for meeting the deadlines for the production of the final report to be submitted to the administration. In addition to that this person would be responsible for providing the necessary educational and informative material to the members of the group. Darling and Webster[^179] provide guidance for the survey group organisation.

**Training** It is essential before commencing any of the surveys that the members involved in them acquire a knowledge of the nature and structure of the materials they are going to examine and the reasons they deteriorate. They should be trained according to the needs of the surveys, and especially for the collection condition one in order to provide as far as possible accuracy and consistency in the results. Darling and Webster[^180] state that the Office of Management Studies which is actually the publisher of the manual offers direct assistance to the study teams or groups. This type of

[^179]: Darling and Webster.

[^180]: Darling and Webster.
assistance could be offered to the Greek libraries undertaking the surveys themselves by the specialists on a specially designed consultation basis.

The relevant literature offers a number of survey procedures[181], with samples of survey forms which can be consulted in order to evaluate the libraries' preservation needs. Cunha[182] proposes a method which "is useful and practical because it does not require that the person using it have the expert knowledge and skills possessed by those with advanced education and training in conservation sciences". However true that might be it is felt that a person with the appropriate knowledge is necessary to evaluate the results and recommend the type of further action to be taken, a service that could be provided by the National Preservation Committee.


182 Cunha.
9.3 PRESERVATION MANAGERS IN GREEK LIBRARIES

"A library which wishes to create a preservation-conscious culture needs a senior member of staff responsible for it."[^183] As the relevant literature suggests, this need not be "a full-time job, but could be associated either with the post-holder responsible for collection management and development, or with the professional librarian with overall responsibility for the running of the building."[^184] Either of these options seem applicable to Greek libraries, especially those which either cannot afford at present an extra member to be employed but wish to initiate and implement preservation policy programmes or those which have a limited number of staff where the addition of an extra member is difficult to achieve.

Appointing as preservation manager a member of the staff with already pre-designated responsibilities in a Greek working environment -- in this case large public or central academic libraries --, in the long term might create unpleasant conditions which would affect the staff’s relationships and productivity. To avoid such situations the most logical solution would be to formally create posts for preservation managers with pre-designated duties and responsibilities.


Bearing in mind the problems, especially the financial ones Greek libraries face, it would be unrealistic to suggest that each library has its own preservation manager especially for the entirety of Public and Special libraries. Although public libraries are scattered all around the country the vast majority of Special libraries are concentrated in the Athens area, followed by the Thessaloniki area.

It is therefore recommended that a preservation manager post is created in each prefecture, the holder of which will cater for the needs of both types of Public libraries in the jurisdiction of the prefecture and those of the special ones functioning in the same area.

For prefectures, as for example in Athens and Thessaloniki, which have a larger number of libraries (dimosies-dimotikes) of the Public type and Special/Research compared with the other prefectures, the creation of a preservation manager post is proposed for each municipality.

The preservation managers could regularly visit the libraries to assess developments and consult on various aspects. Travel expenses could be provided for by a small contribution from each participating library.

The Greek National Library, although it is considered as one of the Public libraries, should create a similar post for its own needs.

For Academic Institutions where central libraries do not exist
the post should be created as part of the administration of the institution. Preservation managers appointed in central libraries of these institutions will also cater for the needs of smaller departmental libraries.

The above proposals do not exclude the possibility of the creation of the required posts in large special libraries and should not prevent future alterations for libraries which could afford a preservation manager for their own needs. The structure proposed includes libraries which administratively belong to different establishments and institutions in both private and public sectors. It is believed however, that it is the only solution at the present time that could prove effective.

All institutions, organisations and establishments in the respective prefectures and municipalities should be contacted and made aware of the advantages of this scheme in contrast to its total absence.

9.4 PRESERVATION'S POSITION IN THE LIBRARIES' ORGANISATION

Creation of any post should fit into the overall administration of the parent institution or organisation. It would therefore be necessary for all libraries to revise their organisational charts or create them where they do not exist, so as to meet their present and future needs not only in relation to preservation but to the overall function of the
library.

The relevant literature \[^{185}\] offers many examples of organisation charts which could be used as guides by Greek libraries. Furthermore the organisation of preservation sections of 15 libraries is illustrated in a publication by the Association of Research Libraries.\[^{186}\] Although the above mentioned charts refer to institutions which are already adequately organised as far as the other departments are concerned they nevertheless provide various options and new ideas can emerge which would cater for the needs of Greek libraries. The common characteristic in all those charts is the fact that the preservation manager occupies a central and powerful position within the library’s administrative structure and is involved at least at the periphery of all policy-making and planning activities of the library, something Greek libraries should not overlook. As an example, and since the organisation chart of the public library in Thessaloniki has already been illustrated, (see Appendix K) the post of the preservation manager should occupy a place in the Library Administration Section and cooperate with all the subdivisions of this section.


9.5. INTEGRATION OF PRESERVATION PROGRAMMES

Harvey states that "the most important change is not financial, nor does it involve additional staff time, but is a matter of altering attitudes"[187]

Assuming that the preservation awareness has been increased and the need for preservation realised, Greek libraries could then integrate the preservation programmes.

It would be unrealistic from the point of view of finance and staff to propose that all libraries implement all the above described programmes and especially those referring to conservation treatment.

It is therefore recommended that all libraries and especially the Public ones, irrespective of the number of staff, carry out concrete actions such as controlling and maintaining the environment as closely as possible to acceptable levels; keep the storage areas and the library as a whole as clean as possible, apply proper procedures for storing, handling and photocopying; educate the users so as to respect and not abuse material; draw up a disaster plan; cater for security. As far as conservation is concerned the initial stage is recommended where by undertaking minor repairs, material which is not very badly damaged and/or is in constant demand by the users could be repaired. Wherever possible, addition of supplies for paperback reinforcement, and pamphlet binding would allow the library to bind certain items inexpensively

and efficiently in-house, thereby reserving the binding budget for rebinding and recasing. Items whose cloth cases need repair or where the binding itself is badly damaged, should be sent to commercial binderies accompanied by specific instructions as to the type of binding required. Furthermore, some simple protective enclosure procedures\textsuperscript{188} which do not require expensive specialised equipment and previous treatment of the items, could be implemented. Morrow and Dyal\textsuperscript{189} and Milevski\textsuperscript{190}, to mention only a few, list both the amount of time it takes to perform a particular repair and the cost of materials for each procedure. Although the latter should be revised it still shows how little need be spent for such operations and how effective they could be in a restricted conservation budget.

Having recommended the above as a minimum for all libraries and especially the public ones, this does not exclude the possibility of further improvement where this is feasible or already in practice.\textsuperscript{191}

\textsuperscript{188} For example, creation of simple portfolios, phase boxes, double-tray box.


\textsuperscript{191} For example the public library which stated that it owns microfilming equipment.
After implementing the principal points, improvements and additions can take place. Academic libraries for example could install proper air-conditioning systems, establish in-house binderies, etc. They should consider collection development policies as part of the preservation programme, purchase of multiple copies of heavily-used material. These libraries, having a stronger budget than the public libraries for example, could implement the intermediate stage of conservation service options and/or the initial and later the intermediate stage of microfilming services. Similarly, Special/research libraries could also further improve their preservation programmes according to finance and staff availability.
REFERENCES


CHAPTER TEN

CONSERVATION AND MICROFILMING CENTRES IN GREECE

The proposal for implementing wherever possible the activities of the initial stage in relation to conservation was proposed in relation to the limited space, the finance required, and the insufficient number of conservation experts available. Being realistic, the libraries which will be able to establish the intermediate stage and/or the initial stage of the microfilming/reformatting service will be limited compared to the whole number of libraries in Greece.

Decayed material however, requires specialised treatment such as deacidification, fumigation, etc. and where necessary reformatting, services which can not be offered by individual libraries for the entirety of their collections.

The creation of regional conservation and microfilming centres is proposed which will meet the needs of libraries and individuals, the latter providing an additional source of income to the centres.

This proposal of regional centres is in contrast to the recommendations and guidelines offered in the relevant literature[192] where it is stated that the conservation workshop should be close to the main records and storage area. Proper

environmental conditions of the workshop's storage area and efficient and appropriate transferring procedures however could compensate for this alteration. Creation of these centres would mean that the facilities would be purpose built so as to best accommodate staff and equipment and would be so designed so as to cater for the possibility of future expansion.

10.1 ESTABLISHMENT OF THE CONSERVATION AND MICROFILMING CENTRES

The proposed conservation centres should be established under the auspices of the Ministry of Cultural Affairs in cooperation with the National Preservation Committee and there need not be more than four, located in areas which would cater for the needs of the whole country. The proposed areas are: Thessaloniki which will cover the regions of Macedonia, Thrace and Ipiros; Larisa for the regions of the Ionian islands, Thessalia, Central Greece and Evvoia[193]; Athens for the regions of Attica (Greater Athens) and the Aegean islands; Patras for the regions of Peloponnese and Crete. The responsibility of designing these centres should be assigned to a board of conservators and architects and one representative of the MCA and the NPC respectively. This board will devise a pilot plan for the establishment of one centre upon which the remaining centres will then be created. It would also be the board's responsibility to appoint the conservation and microfilming units' managers who will initially be

[193] Excluding Attica
responsible for the recruitment of these units.

10.2 FINANCIAL SUPPORT

The first essential aspect of this project, as indeed in any project, would be to ensure that adequate finance is available at the times when it is required, that is during the various phases of the project, for example construction work, ordering of equipment, etc. A number of sources have already been identified for the funding of projects described under "National Preservation Committee. Budget". It is believed that funding for conservation treatment would be more easy to acquire since the results of the treatment are more obvious than those of preventive preservation. International or national organisations, foundations or even individuals, when approached, may not provide for the whole project but most probably the aid would be in the form of training or grants for the purchase of equipment, or for specific projects as for example the Mellon Microfilming Project mentioned earlier. Commercial or other sponsorship should also be considered for specific projects.

An additional cost which should be catered for is the purchase of vans if the conservation centres will be responsible for the transportation of the material from the libraries to the centre and back.

319
10.3 COOPERATION AND COORDINATION OF CONSERVATION AND MICROFILMING CENTRES

Coordination and cooperation for bulk purchase of both material and equipment for the centres should prove cost-efficient. The centres should cooperate and exchange opinions and experiences of the treatment of various material. Coordinated efforts especially as to the microfilming of material would minimise the duplication of effort and finance expenditure. The Microfilming centres should be able to input data of the substituted material into the National Register of Microfilmed Material.

10.4 CONSIDERATIONS FOR CONSERVATION AND MICROFILMING CENTRES

The number of considerations to be taken into account noted earlier in connection with the establishment of a conservation and substitution unit, namely space, the work flow pattern, the existence of utilities, materials and equipment as well as potential future expansion apply to the conservation centres as well but on a bigger scale.

Space As the proposed conservation centres will be separately built, space as such should not be a problem. Its size should be such so as to accommodate for all the conservation treatments -excluding mass treatment- and the equipment required.
Roper\(^{194}\) provides guidelines in relation to the workshop accommodation, taking into consideration issues such as light, height, environment, minimum standards for the space required -- workbenches, material stores, document strongroom, office, etc.-- circulation space, lay-out, workflow, ergonomic considerations, electricity and water services, drainage, chemical waste, storage -- guidelines for the construction of the document strongroom, the materials and chemical store, health and safety matters, equipment and material in relation to various conservation treatments. Although the specimen layout suggested by Davies (see Appendix O) dates back to 1973, it is still considered a good starting point. A number of improvements however, could include: addition of a strong room to hold documents awaiting conservation; conversion of part of the fumigation area into a chemical store and handling area and installing freezers instead of a fumigation chamber (documents awaiting treatment should still be stored separately). Furthermore, Walsh\(^{195}\) recommends terra-cotta tiles for the floor or similar finish which will enable hosing down to take place and which will not be affected by spilt acids, safety shower and eyewash station, photographic area so as to keep visual record of the effects of various sorts of treatment of documents, office or offices for the staff and visitors and a library area which could also serve as film and

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slide projection area. The last two facilities could be shared by the staff of the microfilming centre which could be a separate unit of the conservation centre. The specimen layout for the microfilming options previously indicated can also be used as a guide for the microfilming centre (see Appendix 01) as could the British Standard Publication[196]. As with the conservation unit, the microfilming one should be designed in such way that further expansion will not cause any problems.

Recruitment At Appendix P the required qualifications for the conservators and conservation technicians have been indicated. Although it has been proposed that Conservation education departments be created in other Technological Educational Institutions both the establishment and graduation of conservators will require a minimum of at least five to six years. In the first years it might be rather difficult for all the recruited staff to hold the necessary qualifications and have reasonable experience in conservation. For this reason it would be necessary to recruit on the basis of potential. This means that a system of probation, with a maximum period of six months, should be introduced and firmly enforced. The minimum educational qualification should be secondary education, preferably with a technical bias. The same problems will most probably be encountered for the recruitment of


322
the microfilming unit staff and the same method should be followed, that of recruitment on the basis of potential with the same educational qualifications.

Where appointments are made by internal promotion, they should be on the basis of proven conservation or management ability and not on seniority alone.

Training Training by doing the job is an essential component, since it is the ability to perform the several relevant treatments efficiently and effectively which is the hallmark of a good conservator. Such on the job training will take a minimum of two years and during that period the productivity will be lower but improving[197]. During training it is essential that the Senior Conservator, or an experienced deputy, provides continuous supervision and instruction. Where no-one with the necessary experience and ability is available, it may be necessary to engage an expert consultant to supervise training. It may also be possible from time to time to invite a consultant to undertake a brief and concentrated on-the-job training course in a particular treatment or technique. Where more sophisticated equipment is involved, some training may also be available from the manufacturer or supplier.

On-the-job training, training by expert consultants and train-

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ing by the manufacturers are also applicable to the education of the microfilming unit personnel. As with the conservation unit there should be a Senior Technician who will supervise and instruct new recruitment. Again the productivity will be slower at the beginning but will be raised as experience and expertise is increased.[198]

Recruitment considered so far has been totally related to the actual conservation and microfilming work. Consideration, however, should also be given to the clerical staff required for the administrative operations of the centres.

Another aspect which should be considered especially in relation to the microfilming unit is the National Register of Microfilmed material which has been described earlier (see page 271). A network should be devised, and through it, each unit to be created should be linked to the Greek Register of Microform Masters so that data can be input and information as to what has already been microfilmed retrieved. In addition, procedures acceptable and corresponding to the nature and "archival" needs of the negatives to be transferred and deposited at the National Microfilm Repository should be taken into consideration. Libraries would receive diazo or vesicular copies. Other processes, as for example digital conversion, which at present are in an experimental and investigative stage once finalised could be implemented by the

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10.5 MASS CONSERVATION TREATMENT IN GREECE

Undoubtedly the benefits of this treatment option are great since they allow the simultaneous treatment of several dozen books. A number of processes are currently available. So far none of them meets all the requirements for a mass deacidification process - whether or not it is combined with a strengthening process - laid down by researchers and curators.[199]

Lienardy[200] provides technical information and parameters of selected and tested mass deacidification processes and Brandt[201] a comparative table of mass deacidification and strengthening processes (see Appendices Q and Q1). Most of these processes are still at the prototype or pilot stage. It is therefore impossible to establish with any degree of precision the costs and capacities of a large-scale plant. Nevertheless the costs of such an enterprise would be immense by Greek standards, at least for the near future. Without excluding the possibility of the creation of a mass

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325
deacidification and paper strengthening centre when more detailed data or the development of new and more effective processes are available, it is suggested that for the present efforts are focused on more realistic projects for Greece, as for example the creation of the conservation and microfilming centres.

10.5.1 MASS CONSERVATION ASSESSMENT GROUP

It is recommended though that certain steps are taken as for example the establishment of a group comprising conservators and librarians which will assess the extent of deteriorating material in Greek libraries and, based on the results, decide whether the situation can not be confronted in any other way than by creating a centre as the above. A viable option for estimating the extent of deteriorated material on a national level is the accumulation of the collection condition surveys which have been proposed earlier. Assuming that the results of the assessment are such that the creation of a mass conservation centre is justified, the next step would be the evaluation of the then existing processes which should be based on the criteria proposed by the experts.
REFERENCES


CHAPTER ELEVEN
PRESERVATION EDUCATION IN GREECE: A PROPOSAL

One of the reasons which has led to the situation described in Part A has been the lack of preservation education. Chapter three illustrated the current situation of Preservation education in Library schools.

Library preservation is now being considered as an integral part of contemporary librarianship. Library schools being the institutions providing the required for the profession education should produce graduates who are conscious of preservation and who are prepared to join a preservation-conscious profession. This can be achieved by presenting preservation information in library school courses.

11.1 PRESERVATION EDUCATION AT THE TEI LIBRARY SCHOOL

DEPARTMENTS

Under "Preservation Education" in page 103 it was stated that the inclusion of a compulsory Preservation and Conservation module, has been proposed for the Schools' curriculum. Undoubtedly this is a very positive step on the part of the Library Schools and its acceptance will make a big difference in the future Preservation of library materials.

One question which arises however, is whether the content of this module is adequate for the librarians. The three
components, i.e. methods and procedures of preventive preservation of printed and A/V collections, collection condition surveys and methods to evaluate the conservation techniques available are not enough for understanding the whole scope of preservation. Preventive preservation without explaining why it is needed is insufficient and collection condition survey is just one component of the surveys necessary for the evaluation of preservation needs.

The relevant literature offers ample examples of Preservation education components in library schools in various countries as well as guidelines proposed by IFLA [202] and Unesco.[203] The titles of these components vary from author to author depending on the country, the course and the level of intended qualification.

The Library Schools in Greece should offer what is commonly known as "Introduction to Preservation". The basic goal in such a course would be to introduce the students to the concept of library preservation, explaining what preservation involves and how preservation activities relate to the general goals and activities of a library. It should aim at producing librarians who will not just talk about preservation but practice it. To achieve this the topics that should be

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presented include:
--the nature and structure of library materials, the reasons that lead to their deterioration
--the options available for preserving library material
--the administrative aspects of preservation
--disaster preparedness planning
--minor repair

11.1.1. CONTENT OF THE TOPICS

The nature and structure of library materials, the reasons that lead to their deterioration
Description of the components and properties of library materials (printed, manuscripts, parchment, etc. and A/V and electronic media), historical development of materials and processes. Description of the internal and external reasons for deterioration.

The options available for preserving library material
Description of Preventive measures (standards for and maintenance of a desirable environment -- temperature, relative humidity, light, air-pollution --, housekeeping, storage of materials, training in the proper handling of materials, user education, phased preservation). Substitution-microfilming, deacidification and repair treatments; information about how to choose among the various options (advantages, disadvantages and relative costs of the above techniques)
The administrative aspects of preservation  The development and implementation of a policy for binding, re-binding of books and other printed material. Policies in relation to the restoration and repair of damaged materials. Conservation survey techniques (environment, collection, building) and their objectives. Substitution programmes for the preservation of the information content of decayed or decaying material. Programmes for regular copying of non-stable or impermanent material. Security planning and systems.

Disaster preparedness planning  The purpose of the plan. Preparing the plan.

Minor repair workshop  The content of this workshop should be aimed at instructing and creating simple protective enclosures, pamphlet binding, etc. It could include demonstrations of various bindings focusing on their advantages and disadvantages.

The content of the course outlined includes areas of knowledge which obviously only can and should be touched upon. Bansa states that "the criteria of selection of what knowledge shall be taught in a library school are: permanence, long term storage, danger of decay, correct handling, protection from damage."[204]

Library students should be familiar with the work of the conservator; the language of conservation; possibilities and

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limitations of conservation treatment; and the attitude and approach that the conservator takes to his work so that, as library professionals, they can use the conservator's expertise to help them meet their preservation goals. In-depth analysis, however, of the methodologies used are not necessary. Library schools are for librarians not conservators.

The same applies for binding, which is part of many training programmes for librarians. Binding one book does not make the librarian a binder. What he/she should learn to understand is the construction of a binding, and the various different ways in which a volume may be bound.

Preservation being an issue related to other functions and operations of libraries should not be limited to special courses, as for example the one described. It should be referred to in other courses, so that it will penetrate the librarians' training in order that later his/her daily work is based on informed decision.

The present curriculum of the Library Schools (see Appendix C) offers a number of options where Preservation information could be presented as for example in "Principles of Librarianship", "Modern Book Production", "Libraries' functions", "Principles of Management", "Libraries' management", "School, Public, Academic and Research/Special Libraries".
11.1.2 INSTRUCTORS

Having outlined the content of "Introduction to Preservation" the next question is who is going to teach it.

As one survey has showed in the U.S.A. "about half of the preservation courses are taught by regular library school faculty members; the other half are taught by outside guest faculty, who are brought in specifically to teach preservation courses."[205] The same situation is more or less experienced in library schools in the U.K.

Smith[206] offers three suggestions for educators in order to acquire the education to teach well: Read from the ever increasing literature on the subject, Attend conferences in which preservation information is being presented, Become active in professional Organisations such as IFLA and ICA where active preservation sections provide information in this area.

Both authors presuppose that literature and teaching material are within reach and through these the expertise can be acquired. These however and the "guest faculty" are scarce in the present Greek library environment.

The problem of acquiring the desirable expertise in Greece by


reading, where relevant material does not exist in the native language, has some viable solutions: the lecturers could make use of the translations proposed earlier under "Education: production of preservation education material" (see pages 253-259) and / or make use of the literature collected by the National Preservation Committee[207]. In addition, the Ministry of Education through the Institute of Technological Education could either finance translations or original textbooks to be written by Greeks. The same person after arrangements with the lecturers of the other courses could present Preservation to the students. Demonstrations of minor repairs or maintenance procedures could be offered by a visiting binder.

It goes without saying that the most desirable situation is that where the lecturer has studied in depth the subject even in a foreign language or as Russell indicates "the preservation administrator is possibly the best choice to teach a new course on preservation for librarians"[208]. For such a person it would be much easier to achieve the educational aim of the course. Furthermore, if that person had any kind of "hands on" experience then the visiting binder would not be required.

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207 The vast majority of the lecturers in both Library Schools are competent in one or two foreign languages especially English and French.

11.2 PRESERVATION EDUCATION AT THE ARCHIVE AND LIBRARY STUDIES DEPT. OF THE UNIVERSITY OF THE IONIAN

This new department according to its curriculum will offer the "Introduction to the Conservation of Cultural Heritage" module to the students during the 6th semester of the course. Some thoughts about this course have already been spelled out under "University of the Ionian. Archive and Library Studies Dept." (see pages 103-105).

The basic aim of the whole course is to produce graduates for administrative positions. As far as Preservation is concerned and by the content of the proposed module it is doubtful whether the required administrative education will be offered.

A Preservation manager, if the creation of such professionals is the intention of the course, should have in-depth knowledge not only of the topics mentioned earlier for the TEI Library Schools or those currently proposed by the University's curriculum. He/she should be able to plan, organise and implement all aspects of a preservation programme in a given institution. The main constraint at present is the proportion of the course to be allocated to the preservation of library material and that of museums. There are fundamental differences between the material housed in these two institutions. In addition an issue which requires further consideration is the appointment of a conservator responsible for the education of the librarians.
To meet the needs and demands of the Preservation aspect in Greek libraries some changes to the present module are proposed. These changes include a module on Preservation which will focus on library and archive material, while there could be an optional one for those interested in museum conservation. In addition, the creation of a course, most preferably a post-graduate one, totally devoted to the education of Preservation Managers is proposed.

**Preservation Module**

The topics should include those previously described for the TEI Library schools but greater emphasis should be given on the context in which preservation is taught.

Additional topics should refer to:

-- preservation and library management
-- the use of substitute media
-- the national and international context

11.2.1 **CONTENT OF THE TOPICS**

**Preservation and library management**  Consideration and evaluation of physical format in making acquisition decisions. The development of a programme for the preservation of the various material of the collection. Retention policies and weeding programmes. Building design, construction requirements and maintenance.

**The use of substitute media**  Selection of material for substitution. Choice of medium. The standards applicable to
these media. The bibliographic control of the substitutes. The administration of a substitution programme. Local, regional, national and international cooperation and coordination of these programmes.

The national and international context

Development of national and international preservation policies and their content. Cooperative efforts and activities with description of relevant programmes. International standards. International initiatives and the role of International organisations (IFLA, Unesco, ICA etc). General developments in other countries.

The theoretical approach to the subjects should also be supplemented by practical assignments as for example selection of material for substitution. The module being devoted solely on library and archive material it will not be necessary to increase the time allocated to it. The requirements for the lecturer however, should be revised.

11.2.2 INSTRUCTORS

As Russell indicates "The input of conservators is helpful in teaching preservation courses for librarians. The conservator has formal training in bench work and technical expertise. But the conservator may not be the best choice as the instructor of the course. Although he or she may be excellent in presenting certain technical subjects, such as treatment of
rare objects, the history of the book, and the nature of library materials, the conservator cannot be expected to have an overview of the administrative problems of a library, except in very rare instances. Most conservators do not have experience in developing approaches to mass collections, and they are not well prepared to present topics such as selecting materials for commercial binding and reformatting.\textsuperscript{[209]}

The teaching of preservation courses requires the expertise of at least two kinds of professionals: conservators, and preservation administrators. The ideal situation would be for both of these professionals to be available for a course as the above mentioned. It is therefore recommended that the Department's administration revise the requirements and focus on recruiting both professions rather than one. It is also recommended that these two will be in charge of the post-graduate course previously mentioned.

11.3 POST-GRADUATE COURSE IN PRESERVATION MANAGEMENT

A course of this kind is what is desperately needed in the Greek library environment; the opportunity of creating professionals who will introduce and implement preservation policy programmes.

This course should be open not only to graduates of the University Library and Archive Studies Dept. but to currently recruited managers/directors or assistant managers/directors

\textsuperscript{209} Russell 83-84.
of libraries. Admission could be limited to 10 candidates per year and it should be based on written examinations related to librarianship, one foreign language preferably English and/or German/French and an interview. The degree should be awarded to those who have scored a predetermined total of points based on a) course-work submitted during the period of attendance, b) written examinations and c) a report on a topic of their choice. The duration of the course would be four semesters (two years).

The aim of the course should be the provision of a theoretical, philosophical and ethical approach to preservation with scientific and technical knowledge plus practical administration and management. The topics of the course should be an amalgamation of the TEI Library School curriculum and that of the University Archive and Library Studies Dept. so as to provide for both types of participants. The additional topics as well as those previously mentioned would be studied in-depth.

The topics it should cover include:

-- materials used for information media
-- techniques of bookbinding
-- environmental conditions
-- reprographics and substitution
-- preservation policy programmes
-- preservation management
-- disaster planning and building design
-- techniques of repair
11.3.1 **CONTENT OF TOPICS**

*Materials used for information media*  Nature and structure of printed and A/V material: their properties. Historical development of papermaking. The physics and chemistry of paper and other elements comprising library collections e.g. inks. Standards for permanent paper for printed material and other records.


*Environmental conditions*  Temperature, relative humidity, light, pollution: their control and monitoring. Shelving and storage of types of collections. The use of materials. Staff training and user education in handling of materials.


*Preservation policy programmes*  The importance of preservation policy. The programmes (detailed analysis). Preservation
policy and its relation to other library functions. Funding and economics.


Disaster planning and building design: The purpose of the disaster plan, its content. Security and environmental control systems. Design of reading and storage areas.


For the realisation of the last topic "Techniques of repair" a workshop should be established so that practical "hands-on" instruction be available. The aim of this topic is to offer an understanding of what is involved in the conservation treatments, the difficulties, the time required and the economics involved. It would provide the means for a better understanding between the manager and the conservator.
Participants of the course would undertake projects preferably relating to their own institutions, such as for example collection and building condition surveys, environmental problems - possible and realistic solutions, development of a disaster plan, etc.

As for any other course to be taught, educational material should be available. The library to cover the needs of the department would be the main library of the university. The proposed course for the undergraduates will be introduced at the end of the third year of their studies. The post graduate one after the completion of the whole course. This gives plenty of time for the library administration to collect material relevant to the subject. It is believed that cooperation with the lecturers at this early stage will prove rather useful. As basic textbooks those already published (see page 253-257) could be used and more added if necessary. Furthermore, advertisement of the position in Greece and abroad [210] and the required qualifications will provide time for the Department's administration to evaluate the candidates and choose the best for the needs of the department.

[210] There are Greeks abroad, especially in USA who would not mind returning and offer their knowledge and experience if such an offer existed.
REFERENCES


PART B
SUMMARY

In the first part of the thesis the present Preservation and Conservation situation in Greek libraries was described and the factors which lead to the deterioration of collections in these libraries were identified and analyzed. Lack of awareness, ignorance and lack of guidance were seen as the main reasons to which this situation could be attributed. In the second part of the thesis possible ways of improving this situation have been described in terms of preservation policy programmes. The means to realise them in the Greek library environment have been suggested and a proposal in relation to the preservation education has been offered.

In chapter seven the preservation policy programmes have been described in relation to what they include and why they should be implemented, followed by the factors which make their implementation problematic in Greek libraries. The preservation policy has been identified as a statement of library preservation intentions and responsibilities which incorporates a set of programmes to be applied by individual libraries in relation to their own specific needs, aims and objectives. The programmes included comprise: a) The evaluation of preservation and conservation needs in order to establish priorities. This programme refers to surveys of the collection, environment and building condition as well as procedures relating to practices followed by the individual library as
for example photocopying, materials delivery procedures, etc.
b) The **preventive measures** the application of which aims at minimising the rate of deterioration. Included in this programme are the monitoring and stabilization of the environment so as to provide an acceptable atmosphere for both users and material, appropriate housekeeping routines so as to maintain the collection clean and minimise or eliminate bio-deterioration, protective measures by utilising protective boxes and envelopes, binding, etc. and protective measures to be employed during exhibitions and loans. c) The **disaster and security planning** programmes which aim at reducing the potential for loss by anticipating the possibilities and appropriately reducing them whenever possible. Disaster preparedness plans include prevention, response, reaction and recovery. Infringement of security plans aim at preventing thefts, attempts of vandalism.
d) The **staff and user education** programme aims at altering attitudes harmful to the material employed by both staff and users of any library. e) **Collection management and development** relates both to the relegation and disposal procedures as well as to acquisition policies designed so to ensure selection of material relevant to the needs of the users. f) **Cooperation** in relation to preservation can be implemented in five different services, that is information, consultation and surveying, cost-sharing, coordination and treatment. g) **Conservation treatment** programmes aim at either retaining the artefact by restoring it or retaining the information contained in it by transferring it to another medium -
substitution. A number of techniques are currently available and others are being investigated for the first aim including deacidification, strengthening of the paper etc. and micro-filming, digital conversion and photocopying for the second. For these programmes to be planned, organised and implemented each library needs a person who will assume the required duties of the preservation manager.

In the same chapter the factors to which the disappointing preservation and conservation situation has been attributed have been discussed in relation to the difficulties of implementing the preservation policy programmes in Greek libraries. To the already identified problems of lack of awareness, lack of education and lack of expertise other factors relevant to the above mentioned programmes included:

a) The absence of relevant publications in Greek. The fact that only one book and three articles exist in Greek for the subject in question can not be considered as adequate for education. The articles written by conservators do not really relate deterioration and preservation to libraries. Librarians therefore, without any knowledge as to how and why these subjects relate to the everyday operations of their libraries are most likely to ignore them as irrelevant. The fact that a number of libraries subscribe to international library and information science journals some of which sporadically include articles relevant to preservation or conservation can not guarantee that these are read due to the language barrier. Furthermore there is no evidence of distribution of these
articles (for example photocopies) and this is attributed to the lack of communication and the non existence of interlibrary loans. b) The lack of expertise and facilities has been attributed to the insufficient number of conservators produced so far. The lack of awareness as to the deterioration problem and the scale of the deteriorated material on the one hand and financial restraints on the other have resulted in a situation where facilities are not sufficient for the TEI Conservation department and organised conservation programmes of library materials are absent.

c) The lack of bibliographical and other relevant information sources required for locating material which could be replaced instead of conserved and the lack of directories recording the location of conservators or suppliers makes it difficult to identify the required information.

d) The present collection development status in Greek libraries is the responsibility of a few people not related to library objectives whereas library members are excluded from decision making committees. In addition, the non-evaluation of collections and the absence of weeding programmes are in contrast to collection development and management programmes proposed under the preservation policy programmes.

e) The present administration and organisational structure requiring so far no special qualifications for librarians and library administrators has resulted in the majority of libraries being disorganised and poorly administered.

f) The lack of initiative has been attributed to the indif-
ference of those who already implement any kind of preservation and/or conservation activities and especially those of the Greek National Library and the Greek Librarians' Association which have failed to recognise other needs besides those of automation.

The fact that the Greek National Library has been unable so far to assume the role of the leader in the field and the need for altering the situation in Greek libraries from a preservation point of view has led to this thesis making recommendation for the establishment of a National Preservation Committee (as described in chapter eight). The proposed Committee will aim at the promotion and increase of awareness, education, the promotion of the implementation of preservation policies, provision of information and consultancy services, promotion of communication and cooperation and endorsement of national issues. The priorities of the Committee would be a) to increase the awareness of and educate the recruited librarians, especially those of the Public libraries, b) promote the production of relevant publications in Greek and c) promote the implementation of the preservation policy programmes, especially to Public libraries.

A number of options have been suggested for the establishment of this Committee, the most favoured one being to be a joint venture of the Ministry of Education and that of Cultural Affairs under the auspices of the Greek National Library, administratively independent.
Two "external support groups" have been proposed which will undertake the first two priorities. The third priority and the remaining objectives of the National Preservation Committee will be met by the NPC's administration in connection with a board of specialists which will offer guidance and consult on various aspects.

**Promotion and increase of awareness:** To achieve the promotion and increase of awareness aim two methods have been suggested: a cycle of short seminars and a distribution of information leaflets. For the first method an "increase of awareness group" could achieve this aim by visiting the 10 regions of the country. Participants in these seminars would include representatives of all libraries in the region and of levels of library personnel. Part of the seminars would be common to all levels and then specific aspects would be separately directed to the library administrators and senior librarians. The content of the seminars would aim at explaining the reasons which lead the material to deteriorate, the relation of preservation to everyday library functions and the importance of its inclusion in the overall library management. For librarians attending the responsibility would be to transfer as best as they could the subject and content of the seminars to their colleagues.

The second method suggested, that of distribution of informative leaflets, is a more impersonal one compared to the first method. Increase of awareness should not only be directed to
libraries' staff but to the general public as well. As methods for this the production of short films, advertisements in newspapers, non professional journals and magazines and a preservation awareness week have been proposed.

**Education:** This objective includes one of the priorities that is the promotion of production of educational material, the introduction of short courses/ workshops in preservation administration, training of members of staff in the form of continuing education, the promotion of incorporation of preservation education in the TEI Library School’s curriculum and the promotion of the establishment of an additional conservation department at another TEI establishment as well as the introduction of a reprography course as part of the same department or that of the Photography.

A prerequisite to any kind of education is the availability of relevant publications. These being absent, two methods have been proposed for the development of publications in Greek: a) translations and b) encouraging writings by Greeks. This attempt for developing preservation publications in Greek will be the objective of the second group the "promotion of publications group".

The objective of this group is to engage and encourage professionals to translate and produce their own works in Greek. The material to be produced would not be limited to printed but A/V as well with the contribution of other relevant departments of the Technological Educational Institutions, as for example the Photography Department. Short courses and "hands-on" workshops aimed at preservation
managers or those appointed to this position including in-depth discussions on various managerial aspects is part of the broad education aim of the NPC. Also continuing education programmes for junior librarians and technical staff when and where required or thought appropriate.

The emphasis of implementing the preservation policy programmes and where necessary intervention to the appropriate authorities is another of the NPC's objectives.

**Information and Consultancy Services:** Production and publication of bibliographies, selective dissemination of information, consultancy services, compilation and publication of directories of suppliers, facilities, conservators, binderies, information related to courses and seminars or any other short or long term preservation - conservation related educational programmes providing the necessary answers to those requiring any information on subjects of their interest will be offered by the NPC.

As a platform for communication the journal published by the Greek Librarians' Association and later a newsletter aimed at preservation managers have been suggested as well as emphasis of the advantages of cooperative schemes to tackle the deterioration problems.

**National Issues:** Included are the promotion of use of acid-free paper for those publishers importing paper and for the Greek paper manufacturers to produce alkaline paper, translation of standards and guidelines relating to all aspects of
preservation and conservation as for example storage, developing technical processes etc.; research projects in chemistry for example engaging Greek scientists from Academic or research institutions; the availability of grants for research and attendance at courses abroad; promotion of the creation of Conservation and Reprographic centres for the conservation of deteriorated material; the creation of a national register of microfilmed material, so as to avoid duplication of effort and provide information as to what has been substituted and finally the promotion of the creation of a National Microform Repository for the proper storage of the "archival" copies of substitutes.

In the last part of this chapter the economics and the possible location of the National Preservation Committee have been discussed.

Chapter nine referred to the adoption of preservation policy programmes in Greek Libraries relating to "how" these programmes could be applied so as to conform with the present library situation complementing thus the "what" and "why" of these programmes described in chapter seven.

For most of the programmes alternate ways have been suggested so that they will conform with the present library situation. For example, where sophisticated equipment is required for the measurement of light, (environmental survey) the use of photographer's light meters are suggested or the planting of trees outside the windows to avoid direct sunlight (preventive measures) etc. The engagement of members of the community has
been suggested for cleaning books and for salvage operations in the event of disasters and establishment of contact with the army for the same reason. Elimination of thefts where security equipment can not be purchased due to finance reasons, could be achieved through educating the users. Users' education in proper handling of material could be offered by introducing a preservation awareness week, production of posters, etc. Informal or formal reminders addressed to the staff will help sustain their awareness. The continuing education programmes and the short courses on preservation management have been suggested as means to try and alter the collection development state.

Three options have been described for the conservation and reprography services respectively, including initial, intermediate and fully developed stages and the considerations that should be taken into account before establishing them have been indicated. All Greek libraries should attempt to introduce the initial stage, without excluding the possibility of introducing the later stages as soon as they may be viable. Implementation and integration options for these programmes have been suggested including appointment of specialists, appointment of a member of the staff and appointment of a committee indicating the possibilities and constraints for each of these options in the present library environment. The third option has been further analyzed in relation to selection and training as a more viable option for libraries which would wish to involve their own staff for the evaluation of the preservation needs of the library.
The complications of appointing a member of the staff as preservation manager in large institutions have been described. The creation of preservation managers’ posts for every dimosia of the Public libraries has been suggested and the creation of the same post in every prefecture the holder of which will be responsible for the respective dimotikes of the Public libraries. For Academic institutions which lack main libraries the creation of a preservation manager post has been suggested within the institution’s administration, whereas for those which have a main library and small departmental ones to create a similar post in the main library’s administration. The preservation manager’s position in the overall library administration has been described and the integration of the preservation programmes according to types of libraries and number of staff has been proposed.

In chapter ten the establishment of regional conservation and microfilming centres has been suggested so as to cater for the needs of the deteriorated collections. Four locations have been suggested which will cover the needs of the whole country. The necessary considerations to be taken into account have been described for both types of conservation treatment centres including space, recruitment and training. It has been suggested that for the first years and if the number of conservators produced by the TEI Conservation department is insufficient, recruitment should be undertaken on the basis of potential and the same process has been
suggested for the microfilming centres. The possibility of mass conservation (deacidification) treatment has been considered and it has been suggested that since most treatments are still at the prototype or pilot stages this option should be left aside for the time being while a mass conservation assessment group will make all the necessary assessments as to the real necessity of such an project in Greece. While this assessment is taking place and until a mass conservation treatment meets all the requirements set by the experts, all efforts in Greece should be focused on the centres previously mentioned.

The proposed educational introductions and changes to the present curricula of the TEI Library Schools and the Archive and Library Studies Dept. of the University of the Ionian have been described in chapter eleven.

In relation to the TEI Library Schools a module which will introduce the future librarians to preservation aspects has been suggested including topics which will address the nature and structure of library materials, the reasons that lead to their deterioration, the options available for the preservation of library materials, the administration aspects of preservation, disaster preparedness planning, and minor repairs workshops. It has also been suggested for preservation issues to be introduced in other relevant modules as for example "Principles of Librarianship", "Principles of Management" etc.

In relation to the newly established Library and Archive
Studies Dept. of the University of the Ionian the changes suggested for the present curriculum referring to "Conservation of Cultural Heritage" include the removal of the topics related to museum conservation, which could be offered as an option to those interested, in order for the module to be totally focused on library and archive materials. The proposed module would include the topics mentioned for the TEI Library Schools but with greater emphasis on the context in which preservation is to be taught and additional topics would include preservation and library management, the use of substitute media and the national and international context.

To meet the needs of preservation managers a post-graduate course on Preservation Management is proposed to be created in the same Department. This course will accommodate graduates of the Library and Archives course of the same department as well as recruited managers or assistant managers who wish to acquire the necessary qualifications for the post of the Preservation Manager. The topics to be included and discussed in-depth would refer to materials used for information media, techniques of bookbinding, environmental conditions, reprographics and substitution, preservation policy programmes, preservation management, disaster planning and building design and techniques of repair.

Issues relating to the instructors' qualifications for all the proposed courses, that of educational material have also been discussed and ways to overcome certain problems suggested.
RECOMMENDATIONS

The aim of the thesis was to identify and establish the factors that led to the deterioration of materials held in Greek libraries and propose possible solutions for the improvement of the existing situation. The deterioration factors were attributed to both the universally found physical causes, and also the existing Greek organisational, administrative and educational conditions. Added to these were the lack of awareness, the lack of facilities, the absence of relevant publications on preservation and conservation, the lack of initiative, the lack of bibliographical and other information sources from which to develop co-operative activities, the absence of collection development policies and the existing professional structure and attitudes.

The fact that library collections are part of the cultural heritage and the content of the collections the reason for the existence of libraries should not allow this situation to continue without an attempt to change it.

The main recommendations proposed in relation to the promotion of preservation and conservation comprise three interactive layers of activity on national, regional and local levels. The proposed creation and establishment of a National Preservation Committee as a single all purpose national body would voice the needs of preservation and conservation not
only to the relevant authorities but to librarians as well. **Regional and co-operative activities** is the second layer proposed in relation to the appointment of preservation managers for prefectures and **regional conservation and microfilming centres**.

At the local level the third layer of activity recommended relates to the **implementation of preservation policy programmes by each individual library**.

Promotion and implementation of preservation and conservation activities at the three levels outlined above would be incomplete without considering the educational aspect. The last recommendation therefore is concerned with **various changes and additions** proposed for the **education of librarians, preservation managers and conservators**.

The aim of the proposed **establishment of a National Preservation Committee**, would be educational and promotional and as a centre of dissemination of information. More explicitly the NPC with the help and assistance of "external support groups" would undertake the task of:

-- increasing the awareness of both librarians (of all levels) and the general public

-- educating selected librarians through seminars and continuing education programmes

-- playing an active role in promoting the production of publications (both translations and original writings) and/or other educational media in Greek
promoting the implementation of preservation policies in all Greek libraries

playing an active role in introducing preservation education in library schools, establishing additional conservation courses and introducing reprography modules

providing information and consultancy services relating to the production and publication of bibliographies, provision of SDI, directories of suppliers, facilities, conservators, binderies, relevant courses, seminars; consultancy services as to various aspects of applying preservation policy programmes

encouraging communication and cooperation at regional, national and international levels by means of meetings, conferences, etc.

engaging in national issues related to promotion of the use of acid-free paper, production of standards and guidelines, promotion of research projects, availability of grants, compilation of a register of microfilmed material, promotion of creating conservation and microfilming centres, and a National Microform Repository.

Although the ideal situation would be for each library to have its own preservation manager who would develop preservation policy programmes for each library, the reality of financial restraints and the state of the Greek library environment for the majority of libraries has led to the proposal of a more realistic solution.
The appointment of preservation managers has been recommended for each one of the country’s prefectures for the needs of the Public and Special libraries. For municipalities within prefectures with a larger number of the above mentioned types of libraries it is recommended that a post is created in each of those municipalities. Parent bodies of large Special/Research institutions which can afford the expense could create the post within their institution. The creation of the same posts for each one of the Academic institutions has also been recommended, as well as one for the needs of the Greek National Library.

In relation to the implementation of preservation policy programmes by individual Greek libraries it has been proposed that all libraries irrespective of type and size should engage in the following preservation preventive programmes:

-- Control and monitoring of the environment in order to keep temperature, relative humidity, light and air pollution as closely as possible to acceptable levels.

-- Following good housekeeping procedures so as to keep the storage areas and the library as a whole as clean as possible.

-- Application of proper procedures for storing, handling and photocopying.

-- Education of the users to respect and not abuse material.

-- Drawing up a disaster plan.

-- Catering for security.

-- Establishing communication and cooperation at local,
regional and national levels.

The initial stage of conservation treatment (artefact) as part of preservation programmes has been recommended as a minimum for all libraries and reproduction on acid-free paper for substitution purposes when nothing else is immediately accessible.

This particular recommendation should not be restrictive but rather encouraging for some libraries (as for example Academic, Special/Research and wherever possible Public) which may be able to afford further improvements to and additions to the preservation programmes. Conservation treatment could be upgraded to the intermediate stage.

The creation of four regional Conservation and Microfilming centres has been proposed for the appropriate treatment of material whether that would be the conservation of the artefact or substitution of the intellectual content of the item provided that appropriate storage facilities, that is a National Microfilm Repository is already available for the storage of master microfilms.

The last recommendation is concerned with the educational aspect of preservation for librarians, preservation managers, conservators and reprographic technicians.

The inclusion of a module introducing preservation aspects to future librarians of the TEI Library schools has been recommended. The changes suggested to the proposed module at the
newly established Library and Archive Dept. at the University of the Ionian will offer the necessary knowledge which will correspond to the intended creation of graduates for administrative positions. Finally, the establishment of a post-graduate course aiming to the creation of preservation managers has been recommended as part of the above mentioned University Dept.

In order to overcome the problem of the limited number of conservators and that of the absence of appropriately educated reprography technicians, it has been proposed that a second conservation department be established in one of the already existing Technological Education Institutions; the addition of a module which will cater for the education of reprographers has been suggested as part of the already existing curriculum of the Conservation or Photography departments of the TEI or even the introduction of training courses within the proposed Microfilming Centres.

It is believed that the proposed recommendations reflecting: self-help in terms of relying on local / national institutions and facilities rather than outside consultants realism, seeking to change attitudes and ideas making information available at all levels professional and administrative rather than the simple creation of a well-informed centre emphasis on low-cost preventive measures as a prelude to more expensive activities and equally highlighting the significance
of solutions which would provide substantial funding

will contribute to the necessary and urgent improvements
needed for the preservation of library collections in Greek libraries.
APPENDICES
APPENDIX A

SEASONAL TEMPERATURE AND RELATIVE HUMIDITY 1987-90[^1]

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APPENDIX B

PUBLISHERS' QUESTIONNAIRE

1. Name and address: ...........................................

Tel. ...................................................

2. Please indicate the names of Greek paper industries from which you purchase paper for your publications
   a) ...................................................
   b) ...................................................
   c) ...................................................
   d) ...................................................
   e) ...................................................

3) Please indicate the names and address of foreign paper industries from which you purchase paper for your publications
   a) ...................................................
   b) ...................................................
   c) ...................................................
   d) ...................................................
   e) ...................................................
### Appendix C

#### Technological Educational Institution

**Library School Curriculum [1]**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tr>
<td>Principles of Librarianship</td>
<td>Types of Libraries</td>
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<tr>
<td>History of Libraries</td>
<td>Descriptive Cataloguing</td>
</tr>
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<td>Descriptive Cataloguing</td>
<td>Classification</td>
</tr>
<tr>
<td>Classification</td>
<td>Foreign Bibliography &amp; Reference Sources</td>
</tr>
<tr>
<td>User's Psychology</td>
<td>Greek Literature</td>
</tr>
<tr>
<td>Educational Sociology</td>
<td>Modern Book Production</td>
</tr>
<tr>
<td>Greek Literature</td>
<td>English Typing</td>
</tr>
<tr>
<td>Literature and Books for Children</td>
<td>English</td>
</tr>
<tr>
<td>Bibliographies &amp; Reference Sources</td>
<td>French</td>
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<td>Greek Typing</td>
<td>German</td>
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<table>
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<tbody>
<tr>
<td>Libraries' Functions</td>
<td>Libraries' Management</td>
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<tr>
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<td>Descriptive Cataloguing</td>
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<tr>
<td>Classification</td>
<td>Indexing</td>
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<td>World Literature</td>
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<td>History of Greek Printing</td>
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<td>Principles of Management</td>
<td>Special Bibliography:</td>
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<td>History of Writing</td>
<td>Social Sciences</td>
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<td>Special Bibliography:</td>
<td>Library Automation</td>
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<td>Positive Sciences</td>
<td>Communication-human Relations</td>
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<tr>
<td>Introduction to Computers &amp; Information Science</td>
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<td>A/V Media for Libraries</td>
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<td>English-Terminology</td>
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APPENDIX C1

UNIVERSITY OF THE IONIAN. ARCHIVE AND LIBRARY STUDIES DEPT.
CURRICULUM [2]
STREAM: LIBRARIANSHIP

First Semester
Archives: Introduction to Archives I [3]
Introduction to the History of Political Institutions. Archival Sources of Modern Greece [3]
Librarianship: Introduction to Librarianship and Information Science [3]
Theory of Libraries & Information Centres I [3]
History of Libraries and Archives [4]
Museology: Introduction to Museology I [3]
Palaeography: Palaeography I [3]
General knowledge: Modern and Contemporary European History [4]
Medieval History (Byzantine-West) [4]

Second Semester
Archives: Special Archives I [3]
History of Archival Sources of the Middle Ages [4]
History of the Constitutional Laws of the Orthodox Church [4]
Italian, Latin or Turkish [4]
Introduction to Archives II [3]
Librarianship: Theory of Libraries & Information Centres II [3]
Bibliography I [4]
Bibliology I [3]
Museology: Introduction to Museology II [3]
Palaeography: Palaeography II [3]
Social Mathematics I [4]
Statistics I [4]

---


3 Compulsory

4 Optional
## Third Semester

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<td>Byzantine and Post Byzantine Diplomatics [⁴]</td>
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<tr>
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<td>Theory of Libraries &amp; Information</td>
</tr>
<tr>
<td></td>
<td>Centres III [³]</td>
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<td>Bibliography II [³]</td>
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<td>Museology:</td>
<td>Organising Museum Collections I [³]</td>
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<tr>
<td>Palaeography:</td>
<td>Palaeography III [⁴]</td>
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<tr>
<td>General Knowledge:</td>
<td>Organisation [³]</td>
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<td>Ancient Greek Art I [⁴]</td>
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## Fourth Semester

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<td>Palaeography:</td>
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<td>Systems Analysis and Design I [³]</td>
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<td>Palaeography:</td>
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<td>Research in Libraries [³]</td>
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<td>Introduction to the Preservation of Cultural</td>
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Seventh Semester
Librarianship: Organisation and Administration of Libraries, Archives and Information
Centres I [3]
Standards I [3]
Bibliometrics [3]
Laws Governing Libraries and Archives [3]

Palaeography: Latin Palaeography II [4]
Museology: Museum Paedagogics [3]

General Knowledge:
History of European Education & Literature [3]
Statistics II [4]
Psychology [4]
Medieval Art of the West I [4]
European History [4]

Eighth Semester
Librarianship: Organisation and Administration of Libraries, Archives and Information
Centres II [3]
Standards II [3]
Management of Data-bases [3]
Organisation, Storage and Retrieval of Data [3]
Communication and Publications [3]
Theory of Information [3]

Museology: Organisation and Administration of Museums [4]

General Knowledge:
Modern and Contemporary Art I [4]
History & Civilization of Ancient Middle East [4]
Symbolic Logistics [4]
**APPENDIX C2**

**KATEE LIBRARY SCHOOL CURRICULUM 1977-1981[^]**

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<td>Comparative Librarianship</td>
<td>Greek Literature</td>
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<td>History of Printing</td>
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APPENDIX D

RECOMMENDED BIBLIOGRAPHY FOR THE EDUCATION IN PRESERVATION AT THE ARCHIVE AND LIBRARY STUDIES DEPT. OF THE UNIVERSITY OF THE IONIAN.[¹]


QUESTIONNAIRE NO. 1

1. Name and address of institution..........................
   ........................................................................
   Telephone..........................
   Type:(please tick where appropriate) National.............
   Academic.... Special.... Public....
   Date of establishment .......................................  

2. Please indicate the number of staff employed in your institution
   Qualified librarians. | Unqualified | Total
   ........................................ | ................ | ..........................  

3. Please indicate the approximate size of your holdings:
   a) number of volumes | b) other printed material
      (books only) | (not journals/newspapers)
      type ..... size ..... | type ..... size ..... |
      ................ | ................ |
   c) A/V material
      type ..... size ..... | type ..... size ..... |
      type ..... size ..... | type ..... size ..... |

4. Rank which area of your collection is mostly used
   (eg.1st,2nd,3rd)
   reference ..........
   philosophy ..........
   theology/religion ......
   social sciences ......
   languages ......
   applied &pure sciences ......
   arts & architecture ......
   literature ......
   history & geography ......
   others(please specify)........................................
   ........................................................................

5. Please indicate the approximate % of your holdings
   according to the following dates of publication.
   ... -1850  | 1851-1900  | 1901-1950  | 1951-...
   ............. | ............. | ............. | .............
6. Please indicate the approximate number of users per year.

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<td>7,001-9,000</td>
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</tr>
<tr>
<td>9,001-.......</td>
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7. When was the building built (approximately)

8. Do you think your collection is housed in purpose-built accommodation? Yes.... No ....

If "no"

a) what are the problems?

b) are there any plans for future expansion/new building? Yes.... No....

If "yes" please specify

9. What are the main hazards to your collection?(please rank 1st, 2nd,3rd etc.)

lending .......
users .......
photocopying .......
environment (air-pollution,humidity, temperature,dust etc.) .......
other (please specify) .......

10. Do you have any preservation-conservation activities concerning your collection? Yes... No....

If "no" what are the reasons? (please rank them in order of importance to you eg. 1st,2nd,3rd etc.)

lack of expertise .......
cost .......
shortage of staff .......
not important to us .......
other (please specify) .......

11. Please add any further comments concerning preservation/conservation

379
APPENDIX E1

QUESTIONNAIRE NO. 2

1. Name and address of institution...........................................
   Telephone...............................................................................
   Type:(please tick where appropriate) National....................... Academic...... Special...... Public..................

2. Do you have any written preservation/conservation policy? Yes .... No ....
   If "yes" please enclose a copy.

3. Do you have any plan for physical disasters? Yes..... No....

4a. Is there any library staff responsible for:
    1. Deciding upon conservation priorities Yes ... No ...
    2. Specifying repairs required on individual items Yes ... No ...
    3. other (please specify) .......................................................

b. Has any member of your staff received any kind of training in the fields of conservation (eg. seminars, lessons in library schools etc.) Yes ... No ...
   If "yes" please specify how many and the nature of the training.................................................................

5. Do you have any in-house programme on preservation awareness for library staff? Yes ... No ...
   If "yes" please describe..........................................................

6. Do you have any written instruction for use of the material for the users? Yes .... No ....
   if "yes" please enclose a copy.

7. Do you have any conservation facilities? Yes .... No ....

a) If "yes" do you have: Yes|No
   1) an in-house bindery .................................................
   2) a specific conservation workshop ................................
   3) other minor repair facilities in-house .........................
   4) access to facilities elsewhere ...................................
      (if "yes" where to) ..................................................
   5) other (please specify) ..................................................

380
b) If you have in-house facilities:
   1) how many general binders do you employ? ......
   2) how many conservation technicians do you employ? ......

8. Approximately what percentage of your annual budget is allocated for conservation/preservation, binding, microfilming?

   conservation..............................
   binding.................................
   conservation+binding..................
   microfilming..........................

9. Which factors of internal library environment do you take into account in relation to preservation (eg. humidity, heat, light etc). Please tick more than one and rank them in order of importance to you (eg. 1st, 2nd, 3rd etc)

   Air-pollution......................
   Dust.................................
   Heat.................................
   Humidity............................
   Light.................................
   Temperature........................
   Pests.................................
   Other (please specify)...............

10. Can you adjust control environment conditions to meet preservation needs (eg. air-conditioning) Yes... No...

    If "yes"
    a) what humidity levels do you maintain .........................
    b) what temperature do you maintain ..........................

11. Do you use any means of preservation other than repair? Yes .... No ....

    If "yes" which
    microfiche .............
    microfilm .............
    photocopy .............
    other (please specify)........................................

12. Do you have any microfilming facilities? Yes... No...

    If "no" to whom are you referring?.........................

381
13. Do you keep any contact with experts in order to give you advice on preservation/conservation problems?
   Yes .... No ....
   if "yes" with whom:
   Conservation laboratories...........
   Industry
   Museums
   Outside binders
   Others (please specify)............

14. Do you subscribe to any conservation journals?
   Yes .... No ....
   If "yes", please write their title and country
   1. ........................................
   2. ........................................
   3. ........................................
   4. ........................................

15. Do you keep any contact with International organisations concerning conservation/preservation matters?
   Yes .... No ....
   If "yes" please specify with which..........

16. Do you think there is a need for the introduction of a lesson on conservation/preservation in Greek library schools? Yes .... No ....

17. Do you think there is a need for establishing technical schools for the training of conservators? Yes... No...

18. Do you think there is a need in Greece for:(please rank them in order of their importance and usefulness to you eg. 1st,2nd,3rd)

   National Advisory Centre for Conservation ............
   Special publications/translations in Greek ............
   Organised seminars ............
   Directories of products/facilities/advice ............
   Other (please specify)................................

19. Please add any further comments concerning preservation conservation and enclose copies of any relevant documents you have produced........................................

382
## APPENDIX F

### TYPE AND SIZE OF A/V COLLECTIONS IN THE SURVEYED LIBRARIES

#### AUDIO MATERIAL

**Discs**

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#### VISUAL MATERIAL

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383
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### Audio-visual

**Video-tapes**

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APPENDIX G

APPROXIMATE SIZE OF COLLECTION ACCORDING TO DATE-GROUPS AND TYPES OF LIBRARIES

a) pre-1850

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b) 1851-1900

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c) 1901-1950

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d) 1951-1989

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APPENDIX H

AREA LOCATION WITH ONE RESPONDING LIBRARY[1]

| Area   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

1 Excluded are those areas which appear in page 138, Map 4.1

387
APPENDIX I

UNIVERSITY AND PUBLIC LIBRARY COLLECTION CONDITION SURVEY FORM

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**Paper condition**

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**Cover material**

Leather ...... Paper ...... Cloth ......

**Cover condition**

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Mould stains ............
Pest stains .............

Other comments.................................................................

.................................................................

388
APPENDIX II

EXPLANATORY NOTES FOR CODES USED IN THE SURVEY FORM

Paper condition

0. Paper not cracked or crumbling; edges not worn out or roughened; no yellowing of paper; no pieces shower down when book shaken upside down; no tearing or breaking when corner of page pulled gently

1. Paper may show tear or small missing pieces; edges may look slightly worn; slight yellowing of paper may occur especially edges; no pieces shower down when book gently shaken upside down; no tearing or breaking when corner of page pulled gently. When fold test of 6 folds employed, no breaking or tearing when corners pulled gently.

2. Paper cracked, torn, missing pieces, crumbling; edges worn or badly roughened; maybe yellowing of paper; pieces of paper may shower down when book shaken gently upside down; tearing of breaking or cracking of pages when corners pulled gently. When fold test of 6 folds employed at corners; breaking or tearing occurs when corner tugged gently.

Boards and covers

0. Boards fastened to book, at hinges either outside or inside; corners of book not broken, bent or missing; spine of book not torn, no pieces missing; spine cover fastened tightly; cover not torn or badly worn, no repair work done.

1. Boards fastened to book, but there may be a crack at the hinge either inside or outside; corners of boards may be bent or worn but are not missing or badly broken; spine may have minor tear (perhaps at head or tail) but not ripped off or missing; cover still intact but may need minor repair or may be showing signs of wear, may have been repaired.

2. Boards not fastened to body of book, or so badly broken, missing or worn away; spine has major damage - torn clear away from body, missing major portions; cover badly torn, worn or missing large portions.
APPENDIX 12

ARISTOTELEAN UNIVERSITY OF THESSALONIKI. MAIN LIBRARY

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**ARISTOTELIAN UNIVERSITY OF THESSALONIKI. MAIN LIBRARY**

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PUBLIC LIBRARY OF THESSALONIKI (dimotiki)
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<td>1921-1930</td>
<td>22</td>
<td>4.5</td>
</tr>
<tr>
<td>1931-1940</td>
<td>24</td>
<td>4.9</td>
</tr>
<tr>
<td>1941-1950</td>
<td>20</td>
<td>4.1</td>
</tr>
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<td>1951-1960</td>
<td>53</td>
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</tr>
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<td>80</td>
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<tr>
<td>no date</td>
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<td>14.6</td>
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</table>

A P P E N D I X  18

PUBLIC LIBRARY OF THESSALONIKI (dimotiki)
Closed stacks

B. Places of Publication

<table>
<thead>
<tr>
<th>Place</th>
<th>No. of Books</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Cyprus</td>
<td>5</td>
<td>1.0</td>
</tr>
<tr>
<td>Egypt</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>France</td>
<td>30</td>
<td>6.2</td>
</tr>
<tr>
<td>Germany</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>Greece</td>
<td>380</td>
<td>78.4</td>
</tr>
<tr>
<td>Italy</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>Turkey</td>
<td>3</td>
<td>.6</td>
</tr>
<tr>
<td>UK</td>
<td>7</td>
<td>1.4</td>
</tr>
<tr>
<td>USA</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>USSR</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>no place</td>
<td>46</td>
<td>9.5</td>
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</table>
C. Paper condition

<table>
<thead>
<tr>
<th>Publication Date</th>
<th>Paper condition</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>good</td>
</tr>
<tr>
<td>1791-1800</td>
<td>---</td>
</tr>
<tr>
<td>1811-1820</td>
<td>---</td>
</tr>
<tr>
<td>1821-1830</td>
<td>1</td>
</tr>
<tr>
<td>1831-1840</td>
<td>---</td>
</tr>
<tr>
<td>1841-1850</td>
<td>---</td>
</tr>
<tr>
<td>1851-1860</td>
<td>---</td>
</tr>
<tr>
<td>1871-1880</td>
<td>2</td>
</tr>
<tr>
<td>1881-1890</td>
<td>---</td>
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<td>1891-1900</td>
<td>---</td>
</tr>
<tr>
<td>19--</td>
<td>1</td>
</tr>
<tr>
<td>1901-1910</td>
<td>5</td>
</tr>
<tr>
<td>1911-1920</td>
<td>1</td>
</tr>
<tr>
<td>1921-1930</td>
<td>3</td>
</tr>
<tr>
<td>1931-1940</td>
<td>7</td>
</tr>
<tr>
<td>1941-1950</td>
<td>8</td>
</tr>
<tr>
<td>1951-1960</td>
<td>33</td>
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<td>1961-1970</td>
<td>72</td>
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<tr>
<td>1971-1980</td>
<td>67</td>
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<tr>
<td>1981-1990</td>
<td>78</td>
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## Appendix I10

**Public Library of Thessaloniki (dimotiki)**

**Closed Stacks**

### D. Mould Stains

<table>
<thead>
<tr>
<th>Publication date</th>
<th>Mould Stains</th>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
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<td>1841-1850</td>
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</tr>
<tr>
<td>1851-1860</td>
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</tr>
<tr>
<td>1871-1880</td>
<td>3</td>
</tr>
<tr>
<td>1881-1890</td>
<td>6</td>
</tr>
<tr>
<td>1891-1900</td>
<td>1</td>
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<td>19--</td>
<td>--</td>
</tr>
<tr>
<td>1901-1910</td>
<td>4</td>
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<td>1911-1920</td>
<td>3</td>
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<td>3</td>
</tr>
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<td>1941-1950</td>
<td>2</td>
</tr>
<tr>
<td>1951-1960</td>
<td>3</td>
</tr>
<tr>
<td>1961-1970</td>
<td>1</td>
</tr>
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<td>1971-1980</td>
<td>--</td>
</tr>
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<td>1981-1990</td>
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<td>No date</td>
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</table>
APPENDIX III

PUBLIC LIBRARY OF THESSALONIKI (dimotiki)
Closed stacks

<table>
<thead>
<tr>
<th>Publication date</th>
<th>Pest stains</th>
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</tr>
<tr>
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<td>--</td>
</tr>
<tr>
<td>1811-1820</td>
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<td>1871-1880</td>
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<td>--</td>
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<td>--</td>
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<td>--</td>
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<td>1971-1980</td>
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</tr>
<tr>
<td>1981-1990</td>
<td>2</td>
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<tr>
<td>no date</td>
<td>8</td>
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398
APPENDIX J

MODEL OF PRESERVATION OPTIONS[^]
(treatments indicated in each box are inclusive)

<table>
<thead>
<tr>
<th></th>
<th>High Use</th>
<th>Medium Use</th>
<th>Low Use</th>
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</thead>
<tbody>
<tr>
<td><strong>HIGH VALUE</strong></td>
<td>Priority for appropriate conservation</td>
<td>Appropriate conservation</td>
<td>Defer conservation unless urgent</td>
</tr>
<tr>
<td></td>
<td>Boxing</td>
<td>Boxing</td>
<td>Boxing</td>
</tr>
<tr>
<td><strong>MEDIUM VALUE</strong></td>
<td>Conserve to meet use</td>
<td>Conserve to meet use</td>
<td>Defer conservation unless urgent</td>
</tr>
<tr>
<td></td>
<td>Possible microfilm substitution</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOW VALUE</strong></td>
<td>Microfilm substitute (or conserve to meet use, whichever is cheaper)</td>
<td>Microfilm substitute (or conserve to meet use, whichever is cheaper)</td>
<td>No treatment or substitution</td>
</tr>
<tr>
<td></td>
<td>Possibly discard original</td>
<td>Possibly discard original</td>
<td>Possibly discard when original deteriorates</td>
</tr>
</tbody>
</table>

Note 1 Value is taken to include bibliographic, aesthetic and financial factors.

Note 2 This represents a simple model of preservation options but items of exceptional value would be accorded full preservation protection, independent of use, with treatment necessary to conserve the item in its original form.

APPENDIX K
PUBLIC LIBRARY OF THESSALONIKI (dimotiki)

ORGANISATION CHART

MUNICIPALITY OF THESSALONIKI

CULTURAL SERVICES

<table>
<thead>
<tr>
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<th></th>
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<tr>
<td>Cultural Libraries</td>
<td>Music Activities</td>
<td>Vafopulio Cultural</td>
<td>Center Admin.</td>
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Libraries Administration Section

<table>
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<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Area</td>
<td>Children's Libr.</td>
<td>Aquis. Adminstr.</td>
<td>History</td>
</tr>
<tr>
<td>Libr.</td>
<td>Libr.</td>
<td>Libr.</td>
<td>Cat&amp;Class.</td>
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</table>

Main Library Section

<table>
<thead>
<tr>
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<tr>
<td>Reading Room</td>
<td>Circulation</td>
</tr>
<tr>
<td>Mobiles</td>
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Area Library Section

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<tr>
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<th></th>
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</thead>
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<tr>
<td>Ksirorini, Acropol, Tumpa, 40 Ekklisies, Kostanti-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nupoleos</td>
<td></td>
<td></td>
<td></td>
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</table>

Children's Library Section

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P.Poli</td>
<td>Kalithea</td>
<td>Orestu</td>
<td>40 Ekklisies</td>
</tr>
<tr>
<td>Stathmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. Patrikiu</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

Acquisition, Cat/Class Section

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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td>Acquisitions</td>
<td>Cat/Class</td>
<td></td>
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<tr>
<td>&amp; journals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

400
APPENDIX L

REGIONS OF GREECE

1) Aegean islands
2) Crete
3) Greater Athens
4) Macedonia
5) Thessalia
6) Central Greece and Evvoia
7) Ipiros
8) Ionian islands
9) Peloponnisos
10) Thraki

401
APPENDIX M

BASIC SELECTIVE LIST OF TITLES FOR TRANSLATION

General Writings


Specific subjects

Preservation Policies


Collection Management

Surveying the collections
Storage and Environment


Disasters


Security


Microforms


Library Buildings


Anthology

The following are titles which could be included in an introductory anthology for Preservation arranged in a potentially useful sequence.

Library Material


Environment


Collection Survey


**Format Conversion**


**Microforms**


**Preservation Policies**


**Handling**


**Disasters**


**Security**


APPENDIX N

FUTURE PLANS FOR LIBRARY BUILDINGS

The surveyed libraries were asked to indicate whether there were any future plans for the buildings housing their collections and there were what these plans included.

62.4% of the 85 valid responses (Figure N.1) provided a positive answer the majority of which were Public libraries (Figure N.2)

![Greek Library Buildings Future Plans](image)

<table>
<thead>
<tr>
<th>Future Plans</th>
<th>No. of libraries</th>
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<tbody>
<tr>
<td>Yes</td>
<td>53</td>
</tr>
<tr>
<td>No</td>
<td>32</td>
</tr>
</tbody>
</table>

Figure N.1
Only 49 libraries of those responded indicated what the future plans were. These indications have been categorised into: a) new buildings referring to buildings which were being built at the time of the survey and buildings which were already built and the transfer was to take place soon. b) transfer-expansion referring to transfer to already existing buildings, rent another building, expansion to same floor, addition of extra floor at the same building and c) very future plans referring to future plans to built another building for the library and considering future expansion (Figure N3)
Greek Library Buildings
Future Plans: Indications

No. of libraries

Indications
- New Buildings
- Transfer-Expansion
- Very Future Plans

Figure N.3
CONSERVATION FACILITIES [1]

A. Basic Layout Plan of a Conservation Workshop


---

B. Perspective of Binding, Trimming, Drilling and Pressing Layout

C. Perspective of Tooling, Deacidification, Sizing, Drying and Kitchen Layout
D. Perspective of Restoration and Lamination Layout
APPENDIX 01

SPECIMEN LAYOUTS FOR CONSERVATION AND MICROFILMING FACILITIES

MICROFILMING FACILITIES [1]

A. Initial Stage

---

2 J.A. Keene and M. Roper. Planning, Equipping and Staffing a Document Reprographic Service: A RAMP Study With Guidelines, PGI-84/WS/8 (Paris: Unesco, 1984) 68-70. The layout specimens refer to reprographic facilities incorporating photocopying and offset lithographic processes. Regardless of the implementaiton or not of the last two processes and especially of the last one the layouts could serve as guides.
B. Intermediate Stage

![Diagram of Intermediate Stage with labels and equipment listed in the key]

**KEY**

1. 35mm Microfilm Camera
2. Microfilm Reader
3. Microfilm Processor
4. Microfilm Reader Printer
5. Film Rewind Bench
6. Microform Step & Repeat Camera
7. Diazo Microfilm Duplicator
8. Microfilm Splicer
9. Microscope
10. Silver Microfilm Duplicator
11. Office Copier
12. Offset Litho Press
13. Offset Litho Plate Maker
14. Collator
15. Paper Guillotine

413
C. Fully Developed Microfilm Service

The space occupied by the key on the model layout, could accommodate further equipment as required.
APPENDIX P

SPECIFIC DUTIES AND REQUIRED QUALIFICATIONS FOR CONSERVATORS AND CONSERVATION TECHNICIANS[^1]

Conservator

Specific duties

1. Performs sophisticated and complex individual treatments on rare and unique library materials

2. Performs analytical and chemical tests, as appropriate, to determine treatment and provides detailed documentation of treatments performed.

3. Arranges for/councils about the treatment of artifacts not within his/her area of expertise

4. Conducts condition surveys and consults with subject specialists/curators and recommends treatment for specific items and whole collections.

5. Designs and organises the conservation treatment facility and specifies equipment and supplies.

6. Supervises the installation of exhibits of materials from the research collections.

7. Recommends repair and treatment procedures for non rare materials and trains and supervises conservation technicians.

8. Cooperates with other conservators to advance research and development in the conservation field.

Qualifications
Advanced academic degree in a related subject is normally expected.
Demonstrated knowledge of the physical and chemical nature of library materials and the causes of deterioration.
Advanced training in library conservation through a recognised academic training program or formal apprenticeship.
Demonstrated competence in the physical treatment of library materials.

Conservation Technician
Specific duties
1. Repairs books from the general collections including procedures such as rebacking, recasing, and simple rebinding.
2. Performs simple conservation treatments for flat paper materials including surface cleaning, mending, encapsulation and matting.
3. Constructs custom protective enclosures for rare/fragile materials.
4. Participates in phase conservation and collections maintenance activities such as storage containerization, refurbishing, stack surveys, environmental monitoring, inspection of microform holding, and cleaning of phonograph records and magnetic tape.
5. Performs routine maintenance on playback equipment and microform readers.
6. Assists the conservator in executing complex conservation
procedures for rare or unique materials.
7. Contributes to the functioning of the treatment facility by stocking and preparing supplies, servicing equipment and helping to maintain an orderly workshop.

Qualifications
Bachelor's degree or equivalent experience in a library, academic or educational environment.
Demonstrated understanding of and respect for research materials and the role of the library.
Superior manual dexterity and willingness to learn new techniques.
Training in library conservation with a qualified conservator or experienced preservation administrator.
APPENDIX P1

JOB DESCRIPTION OF MICROFILMING UNIT STAFF[2]

Senior Technician

The Senior technician will be responsible to the Preservation Manager for the operations and developments of the microfilming unit.

1) Manage the day-to-day operations of the service
2) Participate in the procurement of equipment.
3) Plan the layout and fitting out of premises allocated for use of the unit.
4) Supervise the installation of equipment
5) Participate in the recruitment of staff
6) Supervise the training of staff
7) Ensure that the quality of the product of the service meets the standards laid down.
8) Ensure the proper maintenance of equipment
9) Ensure the proper control of stocks of material
10) Allocate resources to specific operations in accordance with agreed priorities.
11) Participate in the identification and evaluation of reprographic systems which may promote greater economy and efficiency
12) Acquire and maintain an awareness of the current state of technical development in the field of


418
reprographics.

13) Advise senior management on the technical aspects of reprographics.

**Maintenance mechanic**

Under the direction of the Senior Technician the mechanic will:

1) Co-operate with suppliers in the installation and regular maintenance of equipment.
2) Effect repairs and the replacement of defective parts
3) Maintain a stock of spare parts to enable him to undertake 2 above

**Supervisor**

Under the direction of the Senior Technician the supervisor(s) will:

1) Undertake the day-to-day management of a component of the service
2) Undertake the training of staff within the component
3) Be responsible for quality control and checking within the component
4) Allocate and record the progress of work in accordance with agreed objectives
5) Undertake a fair share of the work of the component.
Senior Operators

Under the Senior Technician and Supervisor(s) the senior Operators will undertake such tasks as:

1) Operate the more complex of equipment
2) Maintain the stock of materials
3) Undertake the checking of microfilm

The senior operator will be expected to rotate between types of work and to acquire a wide range of experience.

Junior Operator

Under the direction of the Senior Operator and Supervisor(s) the Junior Operators will:

1) Operate less complex equipment
2) Acquire experience and undergo relevant training to fit them to operate more complex equipment on promotion to Senior Operators

The Junior Operators will be expected to rotate between different types of work appropriate to their grade.
<table>
<thead>
<tr>
<th>Name</th>
<th>Selection</th>
<th>Books</th>
<th>Newspapers</th>
<th>Archive materials</th>
<th>Maximum capacity</th>
<th>Cost (USD)</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wei T'o</td>
<td>leather bindings</td>
<td>yes</td>
<td>no</td>
<td>possible</td>
<td>150,000-200,000</td>
<td>3-7</td>
<td>on-site, cheap, simple, safe</td>
<td>selection, lack of uniformity, yellowing</td>
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<tr>
<td>Archival Aids</td>
<td>some inks</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>60,000</td>
<td>-</td>
<td>on-site, cheap, simple, few staff</td>
<td>selection, lack of uniformity, yellowing</td>
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<tr>
<td>Bookkeeper</td>
<td>some inks</td>
<td>yes</td>
<td>possible</td>
<td>possible</td>
<td>50,000</td>
<td>4-6</td>
<td>simple, quick, no odour</td>
<td>selection, surface yellowing, reaction only</td>
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<tr>
<td>Diethyl zinc</td>
<td>coated papers, plastic covers</td>
<td>yes</td>
<td>yes</td>
<td>possible</td>
<td>1,000,000</td>
<td>3.5-13</td>
<td>no odour, fungicidal</td>
<td>selection, complex, off-site</td>
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<td>BPA</td>
<td>leather bindings</td>
<td>yes</td>
<td>yes</td>
<td>possible</td>
<td>7,000,000</td>
<td>2-7.5</td>
<td>uniform, disinfectant</td>
<td>selection, yellowing, odour</td>
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<td>Vienna method</td>
<td>soluble inks, bindings</td>
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<td>yes</td>
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<td>-</td>
<td>aqueous method, consolidation</td>
<td>selection, disbinding</td>
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<td>prior fixing of soluble inks</td>
<td>possible</td>
<td>possible</td>
<td>yes</td>
<td>?</td>
<td>-</td>
<td>aqueous method, consolidation</td>
<td>little information, mass system awaited</td>
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<td>FMC</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>1,000,000-3,000,000</td>
<td>3-10</td>
<td>consolidation, no selection, uniform</td>
<td>off-site</td>
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<tr>
<td>Graft</td>
<td>for very brittle paper</td>
<td>yes</td>
<td>possible</td>
<td>possible</td>
<td>100,000-200,000</td>
<td>5-7</td>
<td>consolidation, deacidification possible</td>
<td>selection, irreversible</td>
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<td>Parylene</td>
<td>yes</td>
<td>possible</td>
<td>possible</td>
<td>consolidation</td>
<td>500,000</td>
<td>40-100</td>
<td>consolidation</td>
<td>irreversible, hydrophobic paper</td>
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## TECHNICAL PARAMETERS OF TESTED METHODS

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<thead>
<tr>
<th>Name</th>
<th>Selection</th>
<th>Books</th>
<th>Newspapers</th>
<th>Archive materials</th>
<th>Maximum capacity</th>
<th>Cost (USD)</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veri To</td>
<td>leather bindings</td>
<td>yes</td>
<td>no</td>
<td>possible</td>
<td>150,000 - 3,7</td>
<td>30</td>
<td>on-site, cheap, simple, safe</td>
<td>selection, lack of uniformity, yellowing</td>
</tr>
<tr>
<td>Archival Aids</td>
<td>some inks</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>200,000</td>
<td>30</td>
<td>on-site, cheap, simple, few staff</td>
<td>selection, lack of uniformity, yellowing</td>
</tr>
<tr>
<td>Bookkeeper</td>
<td>some inks</td>
<td>yes</td>
<td>possible</td>
<td>possible</td>
<td>60,000</td>
<td>30</td>
<td>simple, quick, no odour</td>
<td>selection, surface reaction only</td>
</tr>
<tr>
<td>Dextrin zinc</td>
<td>coated papers, plastic covers</td>
<td>yes</td>
<td>yes</td>
<td>possible</td>
<td>1,000,000 - 3.5-13</td>
<td>30</td>
<td>no odour, fungicidal</td>
<td></td>
</tr>
<tr>
<td>BPA</td>
<td>leather bindings</td>
<td>yes</td>
<td>yes</td>
<td>possible</td>
<td>7,000,000 - 2-7.5</td>
<td>30</td>
<td>uniform, disinfectant</td>
<td></td>
</tr>
<tr>
<td>Vienna method</td>
<td>soluble inks, bindings</td>
<td>possible</td>
<td>yes</td>
<td>no</td>
<td>2,000</td>
<td>30</td>
<td>aqueous method, consolidation</td>
<td></td>
</tr>
<tr>
<td>German method</td>
<td>print fixing of soluble inks</td>
<td>possible</td>
<td>possible</td>
<td>yes</td>
<td>3,000,000 - 3.10</td>
<td>30</td>
<td>aqueous method, consolidation, consolidation, no</td>
<td>little information, mass system awaited, irreversible</td>
</tr>
<tr>
<td>FMC</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>possible</td>
<td>1,000,000 - 3.10</td>
<td>30</td>
<td>consolidation, uniform</td>
<td></td>
</tr>
<tr>
<td>Graft polymerization</td>
<td>for very brittle paper yes</td>
<td>possible</td>
<td>possible</td>
<td>possible</td>
<td>500,000 - 40-100</td>
<td>30</td>
<td>decarboxylation possible</td>
<td>irreversible, hydrophobic paper</td>
</tr>
</tbody>
</table>

AA= Accelerated aging
AAD= Dry accelerated aging
AAH= Humid accelerated aging
## APPENDIX Q1

### COMPARATIVE TABLE OF MASS DEACIDIFICATION PROCESSES [2]

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>WEI T'O*</th>
<th>WEI T'O VARIANT</th>
<th>BOOKKEEPER</th>
<th>AKZO*</th>
</tr>
</thead>
<tbody>
<tr>
<td>supplier</td>
<td>WEI T'O</td>
<td>MALLET (CIM)**</td>
<td>Preservation Technologies Inc</td>
<td>AKZO</td>
</tr>
<tr>
<td>user</td>
<td>Public Archives Canada</td>
<td>Bibliothèque Nationale France</td>
<td></td>
<td></td>
</tr>
<tr>
<td>phase</td>
<td>liquid (methanol + CFC)</td>
<td>liquid (methanol + ethanol + CFC)</td>
<td>liquid (CFC)</td>
<td>gas</td>
</tr>
<tr>
<td>reagent</td>
<td>methoxy magnesium methyl carbonate</td>
<td>methoxy magnesium methyl and ethyl carbonate</td>
<td>magnesium oxide</td>
<td>diethyl zinc</td>
</tr>
<tr>
<td>substances formed</td>
<td>magnesium sulphate magnesium carbonate magnesium hydroxide magnesium oxide</td>
<td>magnesium sulphate magnesium oxide deposit</td>
<td>zinc sulphate and oxide</td>
<td></td>
</tr>
<tr>
<td>treatment capacity</td>
<td>60 books/cycle</td>
<td>100 books/cycle</td>
<td>30 books/cycle</td>
<td>300 books/cycle</td>
</tr>
<tr>
<td>subcontractors required</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>book preselection</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>book drying (moisture content)</td>
<td>yes (0.5 %)</td>
<td>yes (0.5% - 2 %)</td>
<td>no</td>
<td>yes (0.5 %)</td>
</tr>
<tr>
<td>total treatment time (hours)</td>
<td>68-85</td>
<td>56</td>
<td>3</td>
<td>45-55</td>
</tr>
<tr>
<td>pH</td>
<td>8.5-9.5</td>
<td>7.2-10.5</td>
<td>8.0-9.0</td>
<td>7.0-7.5</td>
</tr>
<tr>
<td>alkaline reserve (%)</td>
<td>0.7-0.8</td>
<td>0.5-1.5</td>
<td>2</td>
<td>1.5-2.0</td>
</tr>
</tbody>
</table>

* checked by independent laboratory
** The process developed by the Battelle Institute is not taken into account, as the relevant experimental results were not available at the time of going to press.

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## COMPARATIVE TABLE OF MASS DEACIDIFICATION STRENGTHENING PROCESSES

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>LITHCO*</th>
<th>BOOKSAVER</th>
<th>BRITISH LIBRARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>supplier</td>
<td>LITHCO (FMC)</td>
<td>BOOK PRESERVATION ASSOCIATES</td>
<td></td>
</tr>
<tr>
<td>user</td>
<td></td>
<td>Cleveland Public Library</td>
<td></td>
</tr>
<tr>
<td>phase</td>
<td>liquid (CIF)</td>
<td>gas</td>
<td>liquid</td>
</tr>
<tr>
<td>reagent</td>
<td>magnesium butoxytri glycolate</td>
<td>ammonia + ethylene oxide</td>
<td>acrylic and methacrylic esters</td>
</tr>
<tr>
<td>substances formed</td>
<td>reagent deposit</td>
<td>ethanolamines</td>
<td>polyacrylates and polymethacrylates</td>
</tr>
<tr>
<td>stage of development (year begun)</td>
<td>pilot (1990)</td>
<td>industrial plant exists</td>
<td>prototype</td>
</tr>
<tr>
<td>treatment capacity</td>
<td>150 books/cycle</td>
<td>900 to 9000 books/cycle</td>
<td>10 books/cycle</td>
</tr>
<tr>
<td>research began</td>
<td>1988</td>
<td>1988</td>
<td>1983</td>
</tr>
<tr>
<td>subcontractors required</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>book preselection</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>book drying (moisture content)</td>
<td>yes (2%)</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>total treatment time (hours)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7.9</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>alkaline reserve (%)</td>
<td>2.2</td>
<td>no alkaline reserve</td>
<td>no alkaline reserve</td>
</tr>
</tbody>
</table>

* checked by independent laboratory

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