INTERPRETATION OF THE ANCIENT PAST IN A MUSEUM OF ARCHAEOLOGY
San Miguel de Azapa Museum of Archaeology. Arica, Chile

Thesis submitted for the degree of
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This thesis examines different interpretations of the ancient past in a museum of archaeology. It focuses on the ways people make meanings from the remote past and how prehistoric populations can be known and understood. With the purpose of explaining the interpretation processes experienced in the museum of archaeology, this research scrutinized museum curators, exhibition designers and regular adult visitors. It was through the empathetic understanding of each of these groups' approach to the ancient past that this research could be developed.

Philosophical hermeneutics provided the project with its theoretical framework; qualitative research oriented the methodology and furnished the appropriate methods to optimise understanding of the problem. The case study approach provided coherence to all the processes of interpretation involved, within the museum and about the museum, by generating meaningful data from which the research question could be answered. The case study was the San Miguel de Azapa Museum of Archaeology, located in the northernmost part of Chile, South America.

This thesis contributes to museology with a corpus of theoretical approaches and methods in order to develop an understanding of the making of meaning in a museum of archaeology. It is also a contribution to museum education because understanding visitors' inner thoughts is the basis for better communication between the museum and its public.
To the Almighty and my parents who sowed the seeds of love and understanding in my heart.
Acknowledgments

We can never undertake any task without the help of many people with whom we share common interests, ideals and affection. We are members of different communities and in that capacity we actively participate in giving and receiving while constructing that relationship. When one is in the position of receiving, a sense of compromise and gratitude grows strongly and seeks a way of expression, at least with that small and meaningful word called thanks.

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INTERPRETATION OF THE ANCIENT PAST IN A MUSEUM OF ARCHAEOLOGY

TABLE OF CONTENTS

Abstract ............................................................................................................. ii
Dedication ........................................................................................................ iii
Acknowledgement ............................................................................................. iv
Table of contents ............................................................................................... v
List of figures .................................................................................................... ix
List of plates ...................................................................................................... xi
List of tables ...................................................................................................... xiii
List of appendices ............................................................................................. xiv
List of abbreviations ......................................................................................... xv

CHAPTER ONE
A research on interpretation in a museum of archaeology 1
Introduction ....................................................................................................... 1
Statement of the research problem .................................................................... 2
Philosophical perspective ................................................................................... 4
Principles of practicalities ................................................................................. 6
Intellectual puzzles ............................................................................................ 8
Purpose and application of this research ........................................................... 9
Literature review ................................................................................................ 10
   Theoretical archaeology .............................................................................. 11
   Museology .................................................................................................. 15
Structure of the thesis ........................................................................................ 19
Explaining the style of the thesis ....................................................................... 24

CHAPTER TWO
A theoretical perspective for a complex problem 27
Introduction ...................................................................................................... 27
On the philosophic perspective: Hermeneutics ................................................. 28
   Principles of hermeneutics ....................................................................... 29
   Hermeneutics in archaeology .................................................................. 38
   Hermeneutics in museums ...................................................................... 43
   Building on meaning and understanding .................................................. 51
On the way of putting principles into practice ................................................ 53
   Qualitative research ................................................................................. 53
   Methodological analysis: Grounded theory ............................................. 57
   Methods of data collection ...................................................................... 60
On the locus where the problem is contextualised: Case Study ...................... 63
   Identification of MASMA as an institution ............................................. 66
The reflective practitioner as instrument and participant of research .......... 69
   Position in the museum ......................................................................... 71
   Interest in the research ......................................................................... 72
CHAPTER THREE
Research in the field
Introduction
On how, who and what
Introducing the research participants
Introducing curators: two cases
Exhibition developers (EDT/COP): six cases
Visitors: ten cases
What moves interviewees to participate in this research?
Relationships among participants in this research
Description of the particularities of fieldwork
Time schedule
Interviews
Timing of the interviews
Important issues of ethical practice
Research evidence and data management
Transcriptions
Coding with NVivo
Analysis
Conclusions

CHAPTER FOUR
Participant archaeologists at the MASMA
Introduction
Curators
Archaeology as science
Curators in the context of Chilean archaeology
Curators' account of archaeology at the MASMA
Methods and validity of archaeological interpretation
Curators' opinions on the contribution of archaeology to the present
Curators' perspectives of making objects signify
Thinking on the bridge that links archaeology and the museum
Who is the beneficiary of archaeological research?
How well do MASMA displays represent archaeological research?
Major themes discussed by curators
Constructing theories based on curators' standpoints
Conclusions

CHAPTER FIVE
Inquiry in practice: exhibition developers
Introduction
Exhibition developers construct a COP which can be better analysed using the method of action-science
The ways in which the COP reflects on practice and construct knowledge
Learning and analysing the method. First seminar session
Disclosing the status quo. Second seminar session
CHAPTER SIX
Museum visitors: museum habitués

Introduction........................................................................................................ 232
Topics discussed by museum habitués.............................................................. 234
   Do visitors gain a vivid impression of the past at the museum?................. 234
   How would you describe your perception of the past from the way the
   museum presents it?..................................................................................... 235
   Do objects speak for themselves?................................................................. 237
   Is there an object/concept relationship in the museum?........................... 238
   Can you appreciate values from museum exhibitions? If so, are those
   values important to contemporary society?................................................. 241
   Is an appreciation of the past important for living and sharing a better life? 243
   What new knowledge have you acquired by visiting the museum?............ 244
   Which are the five words that best describe the MASMA?........................ 245
Analysis of topics discussed by museum habitués.......................................... 246
   Visitors’ perception of the past as it is presented at the MASMA.............. 247
   Meaning of the past into the present......................................................... 248
   Concepts and cultural values....................................................................... 249
   New knowledge at the MASMA................................................................. 251
   Museum habitués theories of interpretation of the ancient past................. 252
   Conclusions ............................................................................................... 256

CHAPTER SEVEN
Museum visitors: teachers

Introduction ........................................................................................................ 258
Topics discussed by teachers........................................................................... 259
   Can visitors have a vivid impression of the past at the museum?............. 259
   How can you describe your perception of the past in the museum?........... 261
<table>
<thead>
<tr>
<th>What is your impression of the museum?</th>
<th>262</th>
</tr>
</thead>
<tbody>
<tr>
<td>Museum and school relationship</td>
<td>263</td>
</tr>
<tr>
<td>Museum education</td>
<td>265</td>
</tr>
<tr>
<td>Following up the visit</td>
<td>268</td>
</tr>
<tr>
<td>Interpreting, understanding in the museum</td>
<td>269</td>
</tr>
<tr>
<td>Is cultural identity a subject to talk about?</td>
<td>272</td>
</tr>
<tr>
<td>Can students perceive values?</td>
<td>273</td>
</tr>
<tr>
<td>Analysis of the topics discussed by teachers</td>
<td>275</td>
</tr>
<tr>
<td>Teachers’ theories of interpretation of the past</td>
<td>281</td>
</tr>
<tr>
<td>Conclusions</td>
<td>286</td>
</tr>
</tbody>
</table>

## CHAPTER EIGHT

Interpretation of the ancient past in a museum of archaeology

<table>
<thead>
<tr>
<th>Introduction</th>
<th>289</th>
</tr>
</thead>
<tbody>
<tr>
<td>In search of an answer to the main research question</td>
<td>291</td>
</tr>
<tr>
<td>The meaningful past at the MASMA</td>
<td>292</td>
</tr>
<tr>
<td>Integrating results found among participants</td>
<td>295</td>
</tr>
<tr>
<td>Analytical generalization in the case study</td>
<td>299</td>
</tr>
<tr>
<td>Knowing together in the case study</td>
<td>301</td>
</tr>
<tr>
<td>Curators</td>
<td>301</td>
</tr>
<tr>
<td>Exhibition developers team</td>
<td>303</td>
</tr>
<tr>
<td>Visitors: Museum habitués</td>
<td>304</td>
</tr>
<tr>
<td>Visitors: Teachers</td>
<td>304</td>
</tr>
<tr>
<td>Research</td>
<td>308</td>
</tr>
<tr>
<td>The hermeneutic approach to the past in the case study</td>
<td>309</td>
</tr>
<tr>
<td>Archaeology in the case study</td>
<td>314</td>
</tr>
<tr>
<td>Museology in the case study</td>
<td>318</td>
</tr>
<tr>
<td>Practical implications of the research</td>
<td>321</td>
</tr>
<tr>
<td>Conclusions</td>
<td>323</td>
</tr>
</tbody>
</table>

## Appendices

I Archaeology. Linking research questions to methodology                              | 329 |
II Museum communications. Linking research questions to methodology                  | 330 |
III Public interpretation. Linking research questions to methodology                 | 331 |
IV Archaeological studies of the ancient past                                        | 332 |

Bibliography                                                                              | 333 |
List of Figures

Figure 2.1 Working organisation of the MASMA. The relationship among areas of the DAM is fluid and permanent, responsibilities may shift according to occasional demands ................................. 69

Figure 3.1 Example of simple text coding ....................................................... 125

Figure 3.2 Example of coded text into nodes ................................................... 126

Figure 3.3 Example of string attributes. It shows a section of a comparative spreadsheet. The horizontal axis identifies the case study while the vertical axis represents the attribute values ............................. 127

Figure 3.4 Example of modelling nodes into tree ............................................. 128

Figure 3.5 Example of a coding report ............................................................. 129

Figure 4.1 Theory of knowledge of the past: Curators ..................................... 174

Figure 4.2 Theory of interpretation and social relevance of archaeology: Curators .......................................................................................... 176

Figure 5.1 Descriptive action at the DAM/MASMA in relation to archaeological exhibitions .............................................................. 218

Figure 5.2 EDT/COP. Theory of practice reflecting typical situation....... 223

Figure 5.3 Critical analysis of practice: main strengths, weaknesses and problems ......................................................................................... 224

Figure 5.4 Theory of change for improvement ................................................ 225

Figure 5.5 Integration of EDT's theories of practice to produce a theory of knowledge ..................................................................................... 226

Figure 6.1 Theory of cognition of the past at the MASMA: Museum habitués ......................................................................................... 254

Figure 6.2 Theoretical model of interpretation of the past at the MASMA: Museum habitués ........................................................................ 255

Figure 7.1 Theory of cognition at the MASMA: Teachers ......................... 283

Figure 7.2 Theory of interpretation of the past at the MASMA: Teachers ... 286

Figure 8.1 Integration of data in MASMA case study ................................. 300
List of Plates

Plate 1  Detail of belt-bag. Woollen textile of the Arica-culture period 1000-1400 AD. Taken from the Museum’s web site.

Plate 2  General view of the Department of Archaeology and Museology (DAM). Watercolour by Raúl Rocha. Clockwise:
  a. Researchers’ offices, physical anthropology laboratory and storage rooms.
  b. Director’s office, registrar’s office, storage rooms, ceramics and photographic labs.
  c. Textiles conservation lab, textiles storage room.
  d. Researchers’ offices and space for temporary storage of archaeological material.
  e. Museum exhibition galleries.
  f. Education room.
  g. Petroglyphs, rescued from original sites after they were destroyed in building a road.

Plate 3  Entrance to the museum exhibition galleries.

Plate 4  Museum view from the Director’s office.

Plate 5  Display of Chinchorro mummies. Man, baby, unborn child, Woman.

Plate 6  View of second gallery of archaeological exhibition, illustrating the island showcase. This allows visitors to go to the left and skip the windows on the right, or vice versa, or go to the other side of the island window, and continue immediately to the ethnographic exhibit, skipping both sides.

Plate 7  Diorama of the coastal area, illustrating site of dwellings dated ca 2700 BC.

Plate 8  A typical showcase with archaeological objects in the foreground and drawings suggesting the use of some artefacts.

Plate 9  Diorama of the sierra, 3500m above sea level, where farming is possible in reduced microclimates using the terrace system.

Plate 10 Examples of archaeological textiles. Andean textiles are characterised by a dual organisation, each half mirrored or opposed in the other half. (Taken from Ulloa 2001. Catalogue of the exhibition of textiles 2001)
  a. Mesh textiles: cotton and woollen bags and woollen cap.
  Coastal textiles 1000-500 BC.
b. Woven textiles: Shirt with tie-dye patterns; neck detail of a half shirt; detail of a ceremonial textile now called *inkuña* in Aymara. 500-1000 AD.

c. Central part of a ceremonial bag called presently *ch'uspa; inkuña*, and four-pointed hat. 500-1000 AD. Tiwanaku, influence from the high plateau.

d. Central part of bag for carrying groceries, called *talega*. Typical cap of the Arica culture period. Woollen belt-bag. 1000-1400 AD.

e. Central part of a *ch'uspa*; middle half of a *ch'uspa*; Inkan cap. 1460-1500 AD. Inka influence.

Plate 11 Introduction to *Ayllu* ethnographic exhibition.

Plate 12 Photographic panel of young Andean women wearing red festivity shawls.

Plate 13 Stone Spanish colonial mill and press for olive oil, 18th –20th c. *In situ*. When the MASMA was located in this area, this was the original place for distributing museum showcases around. Now mill and press are isolated by panels.

Plate 14 Dr Calogero Santoro, archaeologist at work.

Plate 15 A EDT seminar sessions, April 2001. Clockwise: Raúl Rocha, videoing the session; J. Cordova-Gonzalez; Juan Chacama; Jorge Andrade; Gustavo Espinosa; Mariela Santos. Liliana Ulloa is the photographer.

Plate 16 Liliana Ulloa at work

Plate 17 Nancy Alanoca, participating visitor
List of Tables

Table 3.1  Purposive selection of participants indicating character and description of the three research-groups .............................................. 84

Table 3.2  Selection strategy grid, based on Miles and Huberman. (Miles and Huberman 1994: 28 Figure 2.6) ........................................... 85

Table 3.3  Name of museum staff interviewees, indicating activity and research-group .......................................................... 88

Table 3.4  Name of museum visitors, indicating activity and subdivision within research-group ......................................................... 102

Table 6.1  Summary of visitors' descriptive terms of the museum ...... 246
List of Appendices

Appendix I. Archaeology. Linking research questions to methodology .................................................. 328
Appendix II. Public Interpretation. Linking research questions to methodology .................................. 329
Appendix III. Museum communications. Linking research questions to methodology .......................... 330
Appendix IV. Archaeological studies and theories of the ancient past ................................................... 331
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAM</td>
<td>American Association of Museums</td>
</tr>
<tr>
<td>BSA</td>
<td>The British Sociological Association</td>
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<tr>
<td>COP</td>
<td>Community of Practice</td>
</tr>
<tr>
<td>DAM</td>
<td>Departamento de Arqueología y Museología. Universidad de Tarapacá, Arica, Chile. [Department of Archaeology and Museology]</td>
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<tr>
<td>EDT</td>
<td>Exhibition Developers Team</td>
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<td>EDT/COP</td>
<td>Exhibition Developers Team as a Community of Practice</td>
</tr>
<tr>
<td>FONDECYT</td>
<td>Fondo Nacional de Ciencia y Tecnologia. (National Foundation for Science and Technology)</td>
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<tr>
<td>M</td>
<td>Museum</td>
</tr>
<tr>
<td>MA</td>
<td>Museum Association</td>
</tr>
<tr>
<td>MASMA</td>
<td>Museo Arqueológico San Miguel de Azapa [San Miguel de Azapa Museum of Archaeology]</td>
</tr>
<tr>
<td>QR</td>
<td>Qualitative research</td>
</tr>
<tr>
<td>SERNATUR</td>
<td>Servicio Nacional de Turismo (State agency for tourism)</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>UTA</td>
<td>Universidad de Tarapacá. Arica, Chile [University of Tarapacá]</td>
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Chapter One

A RESEARCH ON INTERPRETATION IN
A MUSEUM OF ARCHAEOLOGY

Introduction

Museums of archaeology deal with a remote past that has no immediate cultural correspondence with contemporary personal experiences. Nevertheless past and present construct each other, since the present is a product of the past while the old forgotten past is brought to the present through the interpretation of archaeological evidence. Museums of archaeology attract many persons who want to understand the distant past but with different degrees of interest. Among them are those professionals who have devoted their lives to investigating the cultural remains of ancient societies in order to find meaningful explanations from and about their evidence, or those museum users who frequently visit the museum guided by a range of social and/or personal motivations. The question of what kind of interpretation of the past is possible in a museum of archaeology inspired this thesis.

To analyse the interpretation of the remote past in a museum of archaeology is a complex problem; it involves people but also the institution. This thesis focuses on people and how they make meaning in the museum. People can be individuals who are constructing the museum from inside, such as museum personnel, or visitors who represent the museum’s relevance among the community. Assuming that the personnel of a museum of archaeology are engaged in developing the institution, they are actively involved in the production of a meaningful past, either by
excavating, researching and interpreting the archaeological remains of the museum collections, or by producing attractive exhibitions that effectively communicate the museum findings, and all other activities connected with and supporting these aspects, i.e. conservation, education, etc. Whatever visitors appreciate from museum as an institution – research, interpretation or administration – is grasped mainly through museum exhibitions, especial programmes and publications, which are a fraction of the enormous activity developed in the museum. The museum1 as a social construct can facilitate actions and interactions within its sphere or inhibit them in a variety of ways, but this is a subject in itself and this thesis will only superficially address the influence of the institution on the people related to it.

The methodology I have used to answer the research question involved exploring and reflecting on personal experiences by listening to curators, exhibitions developers and frequent visitors. The purpose was to attain a deeper knowledge of the thoughts that motivate actions and interactions in the museum.

Statement of the research problem

The research problem ‘how is the ancient past interpreted in a museum of archaeology?’ emerged from the literature review, and also echoed a personal quest that I had been pursuing as an educator in a museum of archaeology.2 During the literature review on archaeology at the beginning of this project, I came across

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1 "...at least in some cases people lose control over the larger structures and institutions that emerge out of thought, action, and interaction." (Ritzer 2001: 36, 45). Ritzer refers to the reification of institutions, i.e. when the institution created out of need assumes a separate existence and become a power in itself.

2 Details of my involvement in a museum of archaeology are given in chapter two when I describe myself as a participant in the research undertaken.
Hodder’s set of questions reading ‘how does what it is said fit into more general understanding?’ and ‘how does what it is done fit into more general understanding?’

In the first question Hodder is referring to the analytical view of the researcher evaluating spoken or unspoken data; he concludes that if archaeologists do not have spoken narratives to work with they have patterned evidence that must be evaluated within a range of available information, and fit different aspects of the evidence into a hermeneutical whole. In the second question, Hodder discusses the interaction of archaeologists with mute evidence when there is no instance of emic understanding. In this case, the analyst has to evaluate his/her own experience with that of the ‘other’, trying to get deeper insights into the internal meanings according to which people constructed their lives.

Hodder’s explorations inspired me to formulate my own research question and also introduced me to the hermeneutic perspective. Time, space and language, expressing indigenous commentaries, separate us from the ancient past, but we can still gain insight into it through a hermeneutical approach and a sympathetic understanding. If this is possible among archaeological theorists what is it like among museum exhibition developers who are the link between archaeological research and the public? How do visitors perceive the museum’s interpretation of the past while constructing their own interpretation?

So the research question represents a multifaceted problem requiring explanations from different sources and paying attention to a variety of voices. Nevertheless, one

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3 Hodder 2000b: 710
4 Discussions of hermeneutics and how it is applied in archaeology are found in chapter one.
5 Emic is used here in its anthropological meaning, as an approach to the study of a culture in terms of its internal elements and way of functioning, as opposed to the etic approach that uses external schemes of interpretation.
cannot address all possible interpretations in just one research project, so the problem has to be focused and, in this case, attention is paid to curators, exhibition developers and frequent visitors, as I said above. The strategies used to approach the problem will be explained in the following sections.

**Philosophical perspective**

To set the research problem in a general dimension within the social and human sciences it is necessary to explain the ontology of the research, which is the philosophical perspective that permeates the whole endeavour. In this case it is hermeneutics that provides the leading principles for interpreting and understanding the multilayered, multivocal, multiperspective problem I am addressing.

Hermeneutics, embracing reflective interpretation, belongs to the consciousness of our relationship within the world; it is the natural way in which we find meaning about ourselves and about the world around us, as will be explained in chapter one. If the interpretive approach is pervasive in our efforts to understand the world, it is crucial when it becomes the leading principle to uncover museum-situated relationships, where the importance of the actions and interactions of interpreting the past must be understood and their meaning clarified.

It is necessary to establish that I consider hermeneutics primarily from Heidegger and Gadamer’s viewpoints, as a philosophy; hermeneutics is the philosophical perspective in which epistemological and methodological instances are informed.

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6 'Interpretation tends to occur implicitly, but it, nevertheless, interpretation' Flyvbjerg (2001: 28).
7 e.g. Gadamer 1989: 295 ‘Given the intermediate position in which hermeneutics operates, it follows that its work is not to develop a procedure of understanding, but to clarify the conditions in which understanding takes place.’
Nevertheless other philosophers, such as Ricoeur, see a more direct connection between hermeneutic philosophy, epistemology and methodology. Ricoeur\(^8\) does not contradict Heidegger or Gadamer’s hermeneutics, but he argues that hermeneutics must not be subordinated to *ontological* preoccupations where understanding is *a way of being* and a *way of relating to beings*. Ricoeur formulates his thinking on hermeneutics as *a mode of knowing* as well.\(^9\) Besides, a number of methodologists found mainly among social theorists and qualitative researchers\(^10\) have developed interpretive forms of research, informed by philosophical hermeneutics.\(^11\) In the light of these approaches I will moderate my Gadamerian perspective and adopt Ricoeur’s epistemological viewpoint of hermeneutics. With this reflection I am embedding my research problem in hermeneutics ontologically and epistemologically. These theoretical perspectives are succinctly developed in chapter one.

If the basics of the hermeneutical approach are to be discussed in the first chapter, it is necessary in this introduction to recall the centrality that hermeneutics ascribes to language as the means to achieve understanding.\(^12\) Language may take different forms. In this study it is speech, the means of disclosure of the participants’ inner worlds in a dialogical encounter with the researcher. Language is also the text produced by the researcher – transcriptions of dialogical encounters, which faithfully and respectfully fix the oral expressions of the interviewees. This text helped the researcher to analyse and conceptualise data. Language is the embodiment of

\(^8\) e.g. Ricoeur 1981: 43-44; Aylesworth 1991: 63.
\(^9\) Emphasis in the original (Ricoeur 1981: 44).
\(^10\) e.g. Denzin (1998: 313-344); Denzin and Lincoln (2000: 3) ‘Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible’.
\(^11\) Schwandt (2000: 189-213) traces the philosophical foundations of the interpretive tradition back to the works of Schutz, Weber, Heidegger, Gadamer, Geertz, Ricoeur, and others.
research, the final narrative containing the principles and the findings, which accounts for the careful editing the researcher must do, especially agonising when the written language is not the researcher’s native language.

*Principles of practicalities*

Epistemology is concerned with the theory of knowledge, what counts as knowledge and the principles which generate it. In this thesis interpretation of people, facts and events points the way to knowledge. Since interpretation is a human creative activity, knowledge will be generated through and with people, encouraging their participation, being sympathetic with their views, preparing a propitious ambience for them to reflect on their experiences, viewpoints and explanations on a range of topics. Recognising the other, being dialogical with people, carefully listening to their explanations and making sense of their viewpoints, follows the basics of hermeneutics; it accounts for the easy flow between ontology and epistemology in this case.

Generating knowledge includes a specific set of methods and techniques to gather evidence; these are informed by the research question, and the theoretical framework. The research question is multifaceted and engages a number of research sources: curators, exhibition developers, and visitors. Consequently, a combination of methods and procedures were required, those appropriate for the particular individual case and for the particular research-group. These methods and strategies correspond with qualitative research.
Qualitative research is described as dialogical, that is researcher and researched offer mutual understanding and support. It is interpretivist, meaning that the emphasis of understanding the problem rests on the analysis of the interpretation and meanings that participants ascribe to their actions or situations. Qualitative research is also described as constructionist, implying that knowledge is actively constructed in the mind of individuals, and that social phenomena are outcomes of the interactions between individuals; knowledge is not ‘out there’ separated from those involved in its construction.\(^\text{13}\) Therefore, qualitative research allowed me to generate data involving activities which are intellectual, analytical and interpretive, and proceed to construct a theoretical knowledge that is grounded in those data.

The activities undertaken corresponded with the methods used. These were in-depth and loosely structured interviews, which were conversations with a purpose, developed around a topic. These interviews were informal in style, flexible, intensive and data rich, open-ended, occurring in natural settings and sensitive to the participant’s points of view. When using these methods understanding is contextual and theory-emergent.

Another strategy used was the action science approach,\(^\text{14}\) which is a type of action research working with groups that are characterised as a community of practice.\(^\text{15}\) The community of practice becomes a community of inquiry, researching and building theories in practice about their common engagement and goals, in order to learn about themselves, be aware of the way they do things together and improve their practice by controlling contradictions, problematic effects and difficult

\(^{14}\) Friedman, V. 2001: 160
\(^{15}\) This subject is developed in chapter one. See for example Wenger 1998: 72-74
circumstances. My role as researcher was to create the conditions under which the reflective community of practice could build knowledge. In order to eliminate distance between participants, the members of the community of practice and myself became co-researchers.

*Intellectual puzzles*

Given the thematic breadth of the project design, diverse puzzling questions arose. These questions helped in the construction of the interview guidelines that were used to prevent losing focus during the conversations. Some of these questions read as follows: What is the special contribution of archaeology to the present? Who is the audience for archaeological research? How are archaeological research and interpretation of the past represented in the museum displays? Is it possible to get a vivid appreciation of the past? If not, what kind of knowledge does a museum of archaeology promote among its visitors? How has this knowledge come about? How can knowledge, learning, understanding and interpreting objects be described? Is an appreciation of the past important for living and sharing a better life? Are ancient peoples important in the construction of our present? What values can be appreciated from understanding other peoples' social organisation? Are those values important in any sense for contemporary society?

Further questions arose when thinking about the solution to my queries on the three interrelated research phenomena that construct my main question. In order to choose the most significant and to link the questions to methodology, I organised them in a table indicating the question, data sources and methods to be used, along with the purpose of each question. I constructed three tables, one for each source group.
These tables are presented in Appendices I, II and III. The model was taken from Mason’s example which links research questions, methodologies and justification. I found this model extremely inspirational and useful.

**Purpose and application of this research**

This research is intended to contribute to museology in theoretical and practical matters. Based on a case study, on the one hand it is a descriptive account of a reality described by curators, exhibition designers and regular visitors. Findings are theorised using a hermeneutic approach, but during the development of the research the hidden threshold of practice is also unveiled, providing information on which improvement could be based.

The case study method emphasised *how* interpretation of the ancient past is achieved by and among the different sources of evidence that interact in this museum of archaeology: curators, the team of museum exhibition developers, and the public who choose this museum to understand the distant past in a personal or social context. It also helped to find out *why* these different parties are interested in an understanding of the local ancient past.

While understanding how one event is linked to another, an awareness of social phenomena takes place, which at the same time makes strengths and weaknesses visible. Making the tacit explicit facilitates a better management of

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16 Mason 1996: 22-23.
17 How and why references are linked to Yin’s arguments (1994:1) on the case study methodology
18 Reference to the SWOT managerial analysis: strength, weaknesses, opportunities and threats.
weaknesses and threats in that particular museum. In addition, understanding in a
case study generates knowledge that can be useful in other similar cases, furthering
understanding of a particular problem, issue, concept or any other theoretical
elaboration.

Literature Review

The literature review, which helped to formulate and conceptualise this thesis, was
the first step in the research project. The subjects were related to museology,
archaeology and museum education. Once the main question was formulated,
according to the description already given above, my literature review broadened to
include other subjects as well, namely, philosophy, cognitive psychology,
methodology, qualitative research theory, anthropology, social theory, computer
assisted data analysis systems, and branches or tendencies springing from these main
subjects. Many books, chapters, journal articles, documents were intensively and
extensively read until the last line of this thesis was written. They were found
following the standard procedures, in university libraries, printed catalogues,
bibliographies, internet database sites, bookshops, and academic conversations.

Because this thesis crosscut so many disciplines, it is impossible to refer in this
introduction to all the authors who were significant in developing my theoretical
thinking. Some of them are not even mentioned in this text, due to the linearity of
focus required to express my ideas. In this section I will cite some of the most
important authors in the subjects of archaeology and museology, which are the core
disciplines concerned with this research, and no more than three titles by each author
consulted, in case of extensive production. Philosophy, psychology, social theory,
methodology, qualitative research theory, anthropology, computer assisted data analysis systems and related subjects are considered supportive and instrumental for the development of this thesis, and, in spite of their importance, I consider that reflection on my readings of these subjects would enlarge this section excessively. Therefore, the usual bibliographic references on the above disciplines are introduced while developing the reflective endeavours of this research.

Social disciplines are not separate one from the others. They have common grounds of reference when thinking about individuals, their social facts, actions and interactions. Even disciplines from the natural world – from Kuhn onwards\(^\text{19}\) – recovered the cognitive aspects of scientific paradigms, equating them with theories\(^\text{20}\), a perspective lost during the positivist\(^\text{21}\) era. Nevertheless, for pragmatic reasons, I separate my literature review by the main disciplines of this research: theoretical archaeology and museology.

*Theoretical Archaeology.*

Archaeologists interpret the past according to different theories and methods; consequently, interpretation in museums of archaeology most probably follows their theoretical viewpoints. On this account, I had to research the different theories that guide curators’ interpretation of the past.


\(^{21}\) Positivist based knowledge on value-free observation, measurable and verifiable experiments, which could be replicated and its results predicted. (e.g. Marshall 1998:510; Williams 2003:12).
After reviewing textbooks and theoretical publications, e.g. Binford, Clarke, Dobres and Robb, Gamble, Greene, Hodder, Renfrew and Bahn, Whitley, I can distinguish different periods in the history of archaeology, considering approach, problems discussed, objectives, explanations and concepts or perspectives involved. From these periods I selected those which, in my view, have been most influential. They are minimally described here and summarised in Appendix IV. These approaches help to situate the standpoint of curators, exhibition developers and visitors in the museum of archaeology where this research is based.

The prehistory of archaeology as discipline is found in early societies, when the past served as a foundation myth, assumed epic dimensions to explain the origin of the social group, and educate people to the principles of their ancestors. This function of the past is still alive in some parts of the world.

Among the pioneers of archaeology are those who applied scientific methods and techniques in their efforts to recover the past, e.g. T. Jefferson (1743-1826) who, testing common ideas about the builders of the Virginia mounds, excavated the mounds in his property to find that they were burial sites of American Indians; J. Hutton (1726-1797), who, noticing the uniformity of geological processes, developed a stratigraphic model that has been extensively used in archaeology; C. T. Thomsen (1788-1865), who classified the antiquities of the Danish Museum and formulated the Three Age System: stone, iron and bronze. I would also include in this group G. A. Pitt-Rivers (1827-1900) who adapted evolution theory to cultural artefacts and developed a classification system. The end of the nineteenth century was marked by 2

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23 Hall 2000: 7-8; Kreps 2003: 79-80
European expeditions to excavate monumental remains of the past in other continents. A number of those expeditions wanted to locate lost or unknown societies, mentioned in the Bible or epic narratives. A periodization of the ancient world began, and western museums received many of the excavated materials in foreign lands.

The pioneers set the principles on which traditional or culture-historical archaeology developed until the second part of the twentieth century. The definition of cultures was based on classification and typology of artefacts. Stratigraphy provided dating while recurrence of assemblage of artefacts informed on change, which was explained by migration, diffusion or innovation. A linear and evolutionary concept of society prevailed. Each stage of the chronological sequence was identified and dated, comparing traits of cultural remains. Among those archaeologists who advanced new ideas in the first part of the twentieth century, I want to mention Childe (1892-1957) who identified the development of agriculture with urban revolution. Boas (1858-1942), who insisted on the need of detailed field records, and, explaining culture in its own terms, introduced the concept of cultural relativism. Steward (1902-1972) who developed the concept of cultural ecology which indicated that change is not always due to social interaction but to environmental adaptation as well.

The principles of the culture-historical approach are still put into practice in many parts of the world its emphasis being on data, facts and classification. These allow archaeologists to organise data in time and space, create chronological tables geographically, by country, region and continents, and explain the cultural influences among them. Museum exhibitions organised following archaeological linear

24 Gamble 2001: 22
standpoints are generally understood in western societies, since cultural development and a developmental approach to understanding are part of school education as well.

The counterbalance of history with science developed in the second part of the last century. This was the so-called “New Archaeology” or processual archaeology, which explains how the various cultural systems of society fit together and work. Archaeology is considered closer to anthropology than to history. Adaptation and change can be identified from contexts in which artefacts are found, paying attention to environmental, social and ideological behaviour. Quantification of cultural traits is important and so is testing hypothesis and prediction, as scientific arguments. This approach is extensively applied in the United States of America and its cultural areas of influence, among them Chilean archaeology.

The postprocessual reaction was developed around 1980, mainly in England by Hodder, Shanks, Tilley, and Thomas. Postprocessual archaeology is described as interpretive, looking reflexively at data, because material culture is meaningfully constituted. This implies that material culture is not seen as a simple reflection of how society is organised but as playing an active role in social relationships; it shapes the minds of their creators, who in turn, creatively add to it.

If material culture is meaningfully constituted, it requires a hermeneutical approach. Meanings have to be interpreted in a dialogical way, taking account of the frames of

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25 e.g. Pearce 1990: 158-160
27 See Binford 1962
28 e.g. Hodder 1995: 83-91; Shanks 1992: 15-44; Thomas 2000; Tilley 1993
reference between cultures. Archaeologists are involved in the action and need to be part of these theories of material culture and social change; they take responsibility for their interpretation. So there is no one single past just as there is no unifying theory on archaeology.  

The postprocessual approach has not been free from criticism, but, under its umbrella, other theoretical archaeologies have developed, such as structuralism, interpretive and critical theory, Marxism and neo-Marxism, agency in archaeology. Whatever the approach, data are still all-important.

Interpretation of the past in museums and archaeological sites has been researched by a number of well-known scholars mainly Pearce, but also Carman, Pearson and Shanks, Shanks and Tilley, among others. In the United Kingdom The Society of Museum Archaeologists organises professional meetings and publishes *The Museum Archaeologist* to discuss projects and problems in this field. For Leone the past plays an active role in the society that is interested in it, and 'whether through the sciences of the past, the vernacular media, myth, or through museums, is an active vehicle for communicating and composing meanings.'

*Museology*

The literature review of museology was extensive and intensive but as I said above I cannot cite all the documents I read and studied. I will briefly mention my readings

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30 Brumfield 2000.
32 e.g. Longworth 1994
on the literature most closely related to my research problem; this is on museum and archaeology, museum education and interpretation, and university museums.

Displays in archaeological museums have been theorised by Pearce using a poststructuralist approach, which provides an interesting conceptualisation of cultural objects within a communication system.\(^{34}\) She developed a semiotic analysis expressed in a model,\(^{35}\) showing a chronological sequence of the range of choices from the actual material culture to its subsequent restructure of meaning into the museum archive and into its representation in the archaeological exhibition. This is to me an excellent example of theoretical thinking about making meaning and the construction of knowledge by curators and exhibition designers in the museum. In her model the past is represented by the material culture (signifier). The levels of its relationships are on the one hand, with the society that created its physical embodiments; which constitute a ‘signified’ within the operation of that society. On the other hand, this material culture (signifier) becomes the archaeologist’s communication material to be structured according to contemporary knowledge in theory and practice and become the ‘museum archive’. Within the cycle of restructures the signifier of the museum workers becomes the signified through the museum exhibitions.

I am not using a poststructuralist approach in this thesis, but her model is paradigmatic for museum exhibition analysis. Besides, I thoroughly agree with her amplitude of perspectives when she states that ‘the study and exhibition of material culture, like any other social study, has its own insights and perspectives to offer,

\(^{34}\) Pearce 1990: 143-169.

\(^{35}\) op cit: 148, Figure 10.5.
which are not right or wrong, objectively true or subjectively dubious, except in the crudest sense, but [they are] interesting, perceptive and intellectually exciting. 36

Archaeological site interpretation is addressed by Potter37 in exploring the differences between site interpretation and other environments exhibiting archaeological material for public understanding. S. Jones38 has analysed the role of archaeology and the construction of cultural identity, which he sees as a dynamic phenomenon, manifested in different ways in different contexts, with relation to different forms and scales of interaction. The relationship between archaeological exhibitions, education and the public has been addressed by Davis, Jameson Jr., A. Jones, McManamon, McManus, Merriman, Stone, Stone and Planel, Wood and Cotton,39 among others.

In museum education I would like to refer to Hooper-Greenhill, who says that things have meaning within the framework in which they are placed. Understanding requires a set of patterned relationships to incorporate the new elements of an experience. These patterns are extracted from the repertoire of the viewer and put to work to bridge the distance between the known and the unknown. Hooper-Greenhill says that the expert conceptualises through the mastery of his/her subject matter, and the novice by surface features. Both experts and novices can always attain a greater knowledge, as understanding is a continuing process of adaptation, modification and extension. The hermeneutic circle is never fully closed, but remains open to the

37 e.g. Potter 1997: 35-44. Also Leone 1998; Leone, Potter and Shackle 2000
38 Jones 1996
possibility of reviewing what has been apprehended or to enlarge previous concepts.

The process of interpretation is active and complex.\textsuperscript{40}

In the museum, interpretation is done for you, or to you. In hermeneutics, however, you are the interpreter for yourself. Interpretation is the process of constructing meaning. In the museum ‘exhibition interpretation’ refers to the way the exhibition is designed to enable visitors to understand the ideas it wants to put across. ‘Object interpretation’ is the act of interpreting objects for others, by making the links that they might be expected to recognise. An ‘Interpretation Officer’ might be an education officer, a designer, or an exhibitions officer.\textsuperscript{41}

This quotation describes hermeneutic interpretation of museum displays as two separate processes. One is the relationship established between the public and the objects on exhibition, which includes individual cognitive procedures and the viewer’s previous knowledge of the material culture.\textsuperscript{42} The other is between the museum professionals and the objects of the collections, having the public in mind, so that their interpretation is appreciated as the efforts of the museum to improve visitors’ understanding, and is expressed mainly in the exhibition layout.

In the literature review I found that university museums of archaeology do not have a strong presence in museum science\textsuperscript{43} despite being a propitious locus for the development of research and theory, and their potential for teaching new generations of museum professionals.\textsuperscript{44} Exhibitions in university museum galleries could challenge established interpretations of the past, helping museum visitors find new answers to their curiosity about the ancient past based on an advanced generation of professional expertise.

\textsuperscript{40} Hooper-Greenhill 2000: 118.
\textsuperscript{41} Hooper-Greenhill 2000: 172 n86.
\textsuperscript{42} See also Pearce 1992: 5
\textsuperscript{43} See also Dyson Jr 1990: 60, 62; Hooper-Greenhill and Moussouri [2002]: 26.
\textsuperscript{44} e.g. Kelly 2001; King 1980; MacFadden and Camp 2000.
knowledge. The present research is located in a university museum, but no matter how interesting this subject may be, it is not the central problem of this research. As I said above, the literature review was inspiring and helped me not only with the formulation of the research problem but also to sustain my viewpoints. In the following section the structure of the thesis will be presented.

**Structure of the thesis**

Museum science has two constituent aspects, the theoretical and the practical. Some studies link them together, while others address them separately. This thesis is built on the arguments presented above and is organised linking theoretical principles with empirical research, which results can be applied as practical answers to museum practice. One chapter will present and discuss theory, another will discuss methodological aspects and four chapters will be devoted to the application of theory and method in the research project. The last chapter contains conclusions and thoughts on the findings of this study.

*Chapter one* is the introduction to the thesis. It corresponds to this chapter, which contains a statement of the purpose of the study, the problem statement, a short presentation of the theoretical framework, the epistemology and methodology of the research, the literary review and the structure of the thesis. Due to the complexity of the leading question, no single aspect of the thesis has a simple formulation. Everything is multifaceted, multilayered, multivocal. Each chapter addresses a specific subject matter, which is not an isolated but integrates into the whole; each one constructs the whole and the whole is formulated in relationship with each part; the parts and the whole belong to each other as in a hermeneutic approach.
Chapter two discusses the theoretical framework of the thesis in a succinct way, but is more explanatory and linked to the research problem than the brief presented in this introduction. Philosophical hermeneutics and the way these principles illuminate archaeological research and museum science is explained in Gadamerian terms.

A short discussion on methodology and methods comprises the second section of the chapter. It is based on qualitative research and those characteristics described by theorists that are most closely related to my theoretical viewpoint and can help me to generate data which will assist me with finding an answer to my problem. The rich description of qualitative research accounts for the broadness of the concept, the amplitude of scopes that have been added and reviewed through time, and the number of disciplines that find suitable approaches under its umbrella. In spite of the many possibilities qualitative research offers, almost every definition includes in one way or other the concept of interpretive commitment.

The chapter ends with the presentation of the researcher, myself, as a conductor and participant in this research. I also explain my position as a museum professional, my interest in this research and my relationship with the collaborators in this research.

Chapter three contains a description of the selection and composition of the research-groups. There is also a presentation of each participant, translating his or her own words in relation to this research.

The following section describes contextual details of the process of data collection as time schedule and interview timing. A special emphasis is given to ethics in relation
to approaching participants and presenting their views when analysing and presenting data in the written account of my research.

Fieldwork produced a great deal of data, which would be very difficult to manage without computer-assisted qualitative data software. I used NVIVO 1.3, which allowed me to code natural speech – the original dialogue – around concepts, and organise and retrieve meaningful text regarding the research problem in order to conceptualise structures and build conceptual networks. NVIVO is a great facilitator for coding natural speech, interlinking data and producing good presentations, including images and sounds, but it is a complex system and learning to use it was a bit difficult for me, though I am happy with the results. It is impossible to include the complete process and all the data in this thesis, due to its breadth, but examples will be provided for each step of the analysis. Analyses of data and interpretation of findings are crucial in this thesis. The complete records and analyses are bound in a separate volume that is not included in this thesis because the data is in Spanish.

*Chapters four, five, six and seven* paraphrase or quote the voices of the informants. Chapter four is devoted to the curators’ voices. Although it is a narrative of their voices around the topics concerned with the research question, it is described as interpretation because it is necessary to select, for theoretical reasons, those topics that are most meaningful for the purpose of this research. This same circumstance turns the narrative into an interpretive act. Following that transcription there is a recapitulation and discussion of the findings. The final section corresponds to the construction of theories from curators’ practice.
A different pattern of presenting data is found in chapter five where the exhibition developers team’s reflects and questions their practice, following the method of action-science. Action-science is participative in more aspects than the deep recounting of thoughts and feelings in regard to a given subject. Participants become researchers in the real sense when analysing their common engagement, practice and shared repertoire as a community of practice (COP). They are committed to generate knowledge on the status quo and take action towards an agreed practice improvement. Consequently, interpretation of this reflective method is reported differently from that of curators and visitors. In the first section of the chapter there is a description of the exhibition designers as community of practice. In the following section the structure of the process is presented as well as the process itself, describing the four seminar sessions in which the participatory evidence is disclosed. It is a long description, though very synthetic, of the four extensive seminar meetings. This section is followed by an interpretive discussion of findings and the theorised practice leading to a theory of knowledge among the exhibition developers team (EDT). The chapter ends with an archaeological interpretation of past as seen by EDT/COP and the other research-groups, museum curators and visitors.

The pattern of interpreting visitors’ voices in chapters six and seven, follows the scheme just presented for curators, but visitors are presented according to their main motivation for visiting the museum. Visitors who frequently go to the museum for pleasure are called, in this research, ‘museum habitués’, while those who regularly visit the museum mainly for professional reasons, in this case introducing their students to the local archaeological past, are called ‘teachers’. Museum habitués and
teachers are presented in different chapters. Both groups are visitors and each participant in these groups can go to the museum for personal interest or to introduce the museum to someone else. Museum habitués say that they also go to the museum with their relatives, acquaintances and visitors. Teachers say the same, including one working as a tourist guide, but when asked about their experiences in the museum they had in mind their students’ experiences as well, which is why they were individualised as ‘teachers’ and a separate chapter was dedicated to them.

In chapters four, five, six and seven, the procedure of analysis of fieldwork data is a dialogical process going from the part to the whole and coming back to the part for more in-depth analysis, using a hermeneutical approach. In this process different levels of abstraction were reached, which facilitated the construction of theoretical models of practice and interpretation among curators; practice, action and improvement in the case of the exhibition developers team; and interpretation and meaning making among museum habitués and teachers. These models correspond to the reality observed and analysed; under these circumstances they are valid as far as the conditions in which they were produced are maintained. This means that they are not paradigmatic models, but are subject to revision according to new developments in the case study.

The last chapter summarises the research and arrives at a conclusion of the enterprise undertaken in this project. It integrates the whole process of theoretical and empirical research. Here is the justification of the project, and its perspectives for the future. We have found with the participants that past and present are linked by our personal interest in the world we live, and the way we relate to our historical frames. The past
is reached through dialogical perception and distributed cognition, this means knowing with others: our friends, the museum professionals, and with the instruments that instigate reflective thinking, for example the museum exhibitions. Visitors can reach many levels of interpretation, understanding and meaning, depending on the degree of engagement they develop in each visit to the museum. The practical implications of this research are better understanding among all the components of the museum.

My procedures have followed the logic of the theories presented above. By understanding each part of the thesis, the whole became clearer, and if not, further thought will be illuminating. Understanding is open, never fulfilled, a permanent invitation to wander into the unknown, with a purpose.

**Explaining the style of the thesis**

This thesis is written in first person, being consequent with the hermeneutic principle that says that the interpreter constructs understanding from the world-at-hand. Moreover, this style indicates the reflexive role of the researcher and her participatory action, as suggested by many theorists of QR.\(^4\)\(^5\) The intention is to emphasise that the research has been conducted among and with participants rather than on or about them.\(^4\)\(^6\)

Although the narratives of the recorded interviews were transcribed verbatim, they cannot be reproduced *in toto* in this thesis due to the enormous amount of data


gathered in the field, which required careful selection, and, because the narratives were in Spanish. These facts bring about two methodological practices based on hermeneutic principles. In the first case, selection was based on analysing categories considered most relevant for theorising within the scope of this thesis. In the second case, interpretation meant translating meaningful thoughts expressed in Spanish into English. Since the two languages hardly ever have exact correspondence among terms -- except among nouns corresponding to physical entities with exact meaning in both cultures -- translation is about concepts and meaning. This fact makes me reluctant to reproduce participants' opinions using quotation marks.

After the theoretical chapters, the report of findings through description of setting and events begins straightforwardly. Report of participants' voices has been unobtrusive as far as possible, considering that I have to choose what to report, translate their opinions and summarise their thoughts when paraphrasing them. So 'unobtrusive' means here fairness: respectful and careful transcription, avoiding bias concerning participants' views. While transcribing their views, I tried to avoid footnotes or intrusive analysis, except when lack of explanation means that the reader could not understand the local or colloquial expressions. In such cases I introduce footnotes and insertions in square brackets. After reporting participants' opinions on the topic addressed, I summarise the facts related to the research problem and analyse the content of the section.

Another characteristic of my writing is the frequent use of illustrations, diagrams, and tables, intended to support, remind, demonstrate and enrich the concepts embedded in this thesis. I understand that to use figures with the frequency I require
is not the general way of narrating in ethnographic research, but I think that if they
lead to a better understanding of the text they could be accepted as part of the whole.
I present tables to illustrate the complex selection of participants and to individualise
them, indicating activity and research-group. Diagrams were used to model the
constructed theories on practice, knowledge and interpretation of each research-
group as required. A few other illustrations have a summarising purpose.

Being a writer is difficult, but a researcher cannot avoid expressing in text the results
of the inspiring account of fieldwork. Gifted writers approach this task with pleasure
and make the readers participants of that joy; more than one, I think, must write the
best they can, working patiently word by word, as I do. The result reveals that
painful endeavour. I am perfectly conscious that this is not a good piece of literature,
just an honest report of consciously developed research on a subject that has as an
all-embracing purpose to discover the different interpretations of the past found in a
museum of archaeology in order to contribute towards a better understanding
between museum professionals and museum visitors.
Chapter Two

A THEORETICAL PERSPECTIVE FOR A COMPLEX PROBLEM

Introduction

The efforts to understand and explain the different interpretations of the ancient past in a museum of archaeology begin with an explanation of the theoretical framework that illuminates the paths to this goal. This means thinking about my own questions and interpretations, and placing them in a wider perspective. A summary of that theoretical framework is presented in this chapter.

Hermeneutics is my ontology and the way I think I can get into understanding and knowledge. The subdivisions under the heading of hermeneutics in this chapter relate to those main principles that are relevant to my research, i.e. describing hermeneutic philosophy, the hermeneutic circle, historicity and the fusion of horizons, language and translations, and hermeneutics in relation to the disciplinary fields of my concern: archaeology and museology. The arguments presented are grounded on relevant literature and summarise the research undertaken to support my theoretical viewpoints.

The heading on the way of putting principles into practice concerns my methodology, which is based on qualitative research and grounded theory, and the heading on methods of data collection describes the methods I used in order to provide the evidence that supports my reflective thinking. The strategy chosen for data generation
is the case study that is developed in a separate section, as it is the introduction of the researcher who is considered as instrument and participant of the research.

**On the philosophic perspective: Hermeneutics**

I came to hermeneutics trying to understand the theories that allow archaeologists to interpret cultural objects of the past and establish their relationships in social contexts. From the various theories and methods reviewed, the interpretive approach appealed me most, as I considered it was coherent with the way my research question could be answered. Looking reflectively at archaeological data enlarged my understanding of the past, and provided me with the hermeneutic prism, through which material culture is seen as meaningfully constituted. This means that cultural objects are considered to play active roles in organised social communities, including shaping the minds of their creators.

Research into hermeneutics took me to a vast world of thinking, but I shall base my arguments here on Heidegger and Gadamer,¹ founders of philosophical hermeneutics. Precisely, it was Gadamer’s philosophy as well as his hermeneutic analysis of history and language that offered me the ontological guidelines for developing this thesis. His perspective on history and the knowing subject helped me to understand the links between past and present, while his deeper conceptualisation of language supplied me with a wider dimension to understand the dialogical encounter with people’s self-presentation during fieldwork. Furthermore, hermeneutic interpretation allowed me to gain a deeper understanding of language communication, particularly on translations.

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between different languages, e.g. Spanish into English, useful when interpreting participants' voices during the writing stage of this thesis.

Principles of hermeneutics' philosophy

Hermeneutics is the philosophy of interpretation and understanding, which constitutes the mode of being of the reflective individual. From this statement several concepts can be noted. First is the notion of the individual [Being]² who is a born person in a given place and time [Being-in-the-world]; place and time could be understood as the historical location of the individual [his/her historicity]. Second, this individual is capable of knowing, which implies mobilizing thoughts, existing and newly created concepts; hermeneutics is an active effort. Third, the desire to know implies a stimulus outside the knowing person, something that is not clear, that is puzzling or not perceived beforehand, and is located in the individual's historical perspective [Being-at-hand, alongside, already-in, ahead-of-itself³]. Fourth, interpretation is undertaken with the purpose of understanding that which is not clear, puzzling, or other querying situation. Fifth, that which the individual [I] wants to understand is also a being [Thou] that gathers within itself the perspectives of being-in-the-world and its historicity. Seventh, understanding is then dialogical, implying two parties, the knowing person and that which need to be understood, I-Thou engaged in a conversation where

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² Concepts into square bracket refer to Heidegger's notions of the reflective Being, *Dasein*, that are incorporated in and shared by Gadamer's philosophy. I consider them working concepts with a greater dimension than expressed by the words 'individual' or 'reflective person' that I am using here.

³ These terms are related to Heidegger's *Dasein* "This entity which each of us is... includes inquiring as one of the possibilities of its Being, we shall denote by the term *Dasein*" (Heidegger 1962: 27). *Dasein* is for Heidegger finite and temporal, it exists as born, and as born, it is already dying. Being-in-the-world means to be projected upon the world. Dasein is absorbed in the stream of fore-structures, which implies that understanding begins with what we have already grasped, had or seen, a world of significance to which we are related. When those structures are understood we say that they have meaning. Thus, the possibilities of access and modes of interpretation of Being are diverse, varying in different historical circumstances. (Heidegger 1962a: xlvi, 22, 159, 168, 296; 1962b: 192, 426). Cook (1991:107) understands *Dasein's* temporality as being-ahead-of-itself (future), being-alongside (present), and being-already-in (past).

Heidegger's *Dasein* is an extremely complex term to be translated. (Aspiunza 1999: 19).
meaning has to be worked out, negotiated, to arrive into understanding. Thou could be a person, object, event, something that requires interpretations. Eighth, understanding includes disclosure in the moment of the encounter, as it represents a hermeneutic mode of being, and openness in the sense that it is not confined to a given ending, since understanding has a multiplicity of possibilities. In my view, these eight elements make up the basic principles of hermeneutics.

Now, how are these principles realised? Philosophical hermeneutics states that it is first, through language. Language is a way of organising thoughts in a discursive, linguistic or other forms of constructing meaning, that is shared by the observer, the knowing person (I), and the observed (Thou) or created by them in order to get into understanding. The individual’s language precedes any specific dialogical discourse, as it was grasped unconsciously as part of being raised in a society, and it is the way of becoming one of its members. Because the fore-meaning of language is so pervasive and familiar it may become unnoticed. The same occurs with traditions, in the form of morals and Gadamer’s prejudices. Gadamerian prejudices are specific social structures, viewpoints, linked to a historical moment; they are generally accepted without questioning because their authority is based on knowledge. The person who presents them e.g. parents, the educational system, legitimises these prejudices. Historical consciousness is involved, since understanding the other starts from the individual’s fore-meanings and prejudices that are shaped by the society to which the

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4 Fore-meaning(s) refers to meanings which were not originated, created or developed, by the knowing individual but precede his/her historical moment. Fore-meanings were amassed through time by the society to which the individual belongs.

5 Heidegger (1962a: 155, 203ff.) says ‘Language is the house of Being’. Quotation in Davey (1991: 42, 48) as well. I understand this quotation perfectly well because being Spanish my mother tongue, I feel secure and at home in my native language.


individual belongs. What is important in this fact is that the knowing person needs to be aware of the bias that prejudices and fore-meanings can bring to understanding.

Understanding is a circular process and Gadamer conceptualises it as the hermeneutic circle.

_On the hermeneutic circle_

The relationship between what is unclear and what is understandable grows slowly conforming to a logical circular argument. A problem is analysed in its components and, by understanding the part, the whole becomes clearer. In the process, an enlarged whole appears, affecting the individual parts in such a way that the oscillating movement between the whole and the parts produces a better understanding of the problem and prompts further questions. This is known as the hermeneutic circle.

According to this principle understanding is always provisional. This circularity is not a method, Gadamer explains, it is a basic principle to clarify understanding; the movements within the circle do not dissolve the circle but realizes it in more perfect way.

Within this ever-growing circularity of interpretation, hermeneutics means openness. Understanding is never fully accomplished. We can reach a point where there is no more dialogue, but this dialogue can be reassumed when new reflections indicate an opportunity to widen the spectrum of consciousness.

This is also the perspective of my research: to reach the point where no further analysis can be made at this time. Nevertheless, my interpretations will remain open for review.

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9 Gadamer 1976: 67
and reassessment in the future. It is important to avoid misinterpretations, but the possibility of error and culturally stereotyped perceptions are human realities and alert us to any complacency.

On historicity and fusion of horizons

I want to explain the concept of horizon in Gadamerian terms. Gadamer argues that scholars have dissociated the present and the past since the birth of historical consciousness while pursuing objectiveness. In hermeneutical perspectives Gadamer reckons Husserl as the first philosopher to explain subjectivity – the flow of experience of the knowing subject – as absolute historicity, which means a time-related consciousness, so that objectiveness lost centrality and the knowing subject became important. The concept of universal horizon consciousness was first developed by Husserl and reinterpreted by Gadamer.

There are many modes of historical awareness, writes Gadamer, but all of them begin with a conscious act of reflection on effective history – i.e. the situation in which we find ourselves with regard to the tradition that we are trying to understand, analysed through meaningful questions. We should not forget that Gadamer considers that historical consciousness exists only under specific historical conditions, which are influenced by the prejudices and interests of the historical moment in which they take place, provided that prejudices are reflectively considered. An important part of this analysis occurs in understanding the tradition from which we come.

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11 e.g. Husserl 1964.
12 Gadamer 1975: xx-xxi.
The concept of horizon is closely linked to this perspective; it represents the individual's flow of experience that accompanies and invites the individual to advance further. To acquire a horizon means that one learns to look beyond what is close at hand, to see it better, within a larger perspective and in more realistic proportion. Because prejudices require continuous testing, the horizon of the present is permanently in a process of being formed. Hence the horizon of the present cannot be formed without the past, which has its own horizon; these historical horizons need to be acquired. Therefore, understanding the past or present cannot be isolated endeavours; past and present influence each other, producing a fusion of horizons.14

It is this concept of fusion of horizons that has been significant in the development of interpretive archaeology, and is meaningful to me in understanding the perspectives in the museum of archaeology. My individual flow of experience put in a larger historical perspective, creates my horizon of the present, which then cannot be isolated from the horizon of the past, both horizons fuse in the conscious act of interpreting history and traditions. But because we are aware of our prejudices, and are permanently testing them, these horizons are not stable; they are permanently in the process of being formed.

On language

Language is central to the hermeneutic explanation of the world. I agree with Gadamer15 when he explains that language prefigures our thought, since western civilization is a linguistic one, and perpetuates itself in education, which is also linguistic. We think in words and communicate our thoughts in dialogical structures,

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which are grasped unconsciously from the social surroundings to which we belong, since the nature of our being-in-the-world as individuals who can understand is constituted by discourse. Sensations, feelings, emotions, the most abstract experience can only be communicated using a linguistic referent: intangible love, beauty, remorse, pain, pleasure, in whatever dimension or strength, if addressed to someone have to be explained using a common language with the addressee, otherwise communication is impossible. Gadamer also uses dialogue in the way of acquiring understanding of something that takes place in the discursive exchange between speakers, the 'speech between speeches', this means something intangible, not spoken but present and understood by the persons engaged in dialogue. A shared spoken or written language facilitates understanding but those unspoken messages of dialogical expressions, as well as the hidden meaning of things, which act as the speech between speeches are also part of the discourse.

Dialogue is not only produced in live conversation, it also arises from texts through the questions that readers or interpreters want to understand and answer. Furthermore language, as a dialogical structure requiring understanding, is also present in cultural objects, ephemeral musical interpretation and dramatic performances that challenge us. Articulated in such a way, interpretation is required by the archaeologist who interrogates material culture excavated in the field. It is incumbent for museum exhibition developers, who reinterpret the past produced by archaeological research,

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16 Discourse is understood following Heidegger's discussion of λόγος (1962: 55-58; 203) as German Rede, translated as talk or discourse, meaning manifestation of thoughts in conversation. Similarly, Ricoeur (1991: 145, 149) explains discourse as a language-event, always addressed to someone. Lawlor (1991:83) analysing Ricoeur’s concept of language as discourse clarifies that Ricoeur’s problem is not the universal structure of language but language as communication.

17 Smith (1991: 23, 37) explains that Gadamer in this case is using language in the Platonic sense: understanding does not occur in the knowing individual but in the interrogative discursive exchange between speakers, or in the dialogical process between the interpreter and the text.

18 Gadamer 1989: 86-87
and have the mission to communicate this knowledge to lay people through visual, tangible, representations. And so it is for museum visitors, who try to understand archaeological displays, in the ephemeral encounters experienced in a museum visit.

To dialogue means applying a language that empowers the parties – people, cultural objects, etc – to reach substantive understanding and agreement – cultural objects have their own language as mentioned in the previous paragraph, and meaning has to be hermeneutically negotiated. Language also means openness, disclosure of intentions, presentations of oneself and representation for another, because if the knowing person wants to be engaged in dialogue has to disclose his/her thinking; disclosure means presentation of him/herself, which the other party can see as a representation.

On translations

In this thesis data, which support the theoretical arguments of understanding the past in a museum of archaeology, were obtained from Spanish speakers in northernmost Chile. This fact demands thinking about the possibility of making those thoughts available to the English-speaking world.

The researcher is a native Spanish speaker belonging to the same northern Chilean cultural community; consequently she could possibly reach deeper understanding of interviewees’ concepts and their construction of meaning than other members of the Spanish-speaking world. If differences of meanings between native speakers of the same language may occur, greater is the possibility of mismatching among different language systems. A language system is related to a culture, which shares conceptual

19 See for example Hudson1995: xi-xii
maps and codes that fix the relationships between concepts, signs, etc. \(^{20}\) People belonging to a given culture learn the system unconsciously in everyday contexts and practice, as I said before.

When I learnt English as a second language, I had to acquire a reflective and intentional approach to the perspectives of meaning-making in the English conceptual world and its language system. Thus, I noticed that there is no guarantee that every object or idea has an exact equivalent in the other culture. The translation between cultures and languages is not a matter of translating nouns, verbs, adjectives, etc. in which a bilingual dictionary could be helpful, \(^{21}\) but to think in the equivalents that makes a thought in one language understandable in the other without losing its meaning.

Paraphrasing participants' thoughts in this thesis brings the essence of what was said in Spanish to what should be understood in English; it looks for an effective exchange of thoughts and coherence of intention; it is not a literal version of the original. \(^{22}\) This is the reason that a translation is altogether an interpretation, and the words spoken by the authors in one language could never be really quoted in another language. Meaning has to establish its validity in a new way.

The gap between the spirit of the original words and that of their reproduction in a different language can never be closed, no matter how faithful the translation is. \(^{23}\) I recognise with Gadamer that a translation that is taken seriously is clearer than the original but at the same time flatter. A re-awakening of the original, a recreation by the translator is necessary, preserving the character of the own language yet reciprocating

\(^{20}\) Hall 1997: 12, 21, 25. \\
\(^{21}\) Wittgestein 1974: 21 \\
\(^{22}\) Bouquet 2001: 193 \\
\(^{23}\) Gadamer 1989: 384-389
meanings in the other language, in the same way that the hermeneutic dialogue try to find understanding between the parties. Translating is mediating; it is simply an extreme case of hermeneutical difficulty.24

On the usefulness of philosophy

Hermeneutic philosophy provides the logic for actively creating understanding for the intellectual being who is capable of questioning and understanding a given reality. In this case, when I chose hermeneutics as my ontology I was choosing principles to understand people, their interpretation of the past, and I had also to understand people’s actions and interactions occurring in a museum of archaeology. The way I get into understanding people is through language, used dialogically in its most natural common way, the discourse of everyday events. Interpreting conversations is the most elemental way of understanding.

Nevertheless, hermeneutics is necessary to me because understanding is not easy; the ambiguity of meaning of human expression, resulting from the difficulty of articulating our thoughts clearly sets real limitations in our daily communication. Besides, the polysemy of language, actions, facts and events, in their capacity of multiple meanings has to be considered. Hence, the possibility of understanding is threatened by the possibility of misunderstanding.25 But, the perceptive stimulating hermeneutics assures me that I am capable of understanding people, texts, actions and interactions because I behave as a Being who question my world-at-hand with the properties of my Dasein. This means an open and deep dialogue, which has no final conclusion, instead, has the capacity of growing to make meanings clearer, in coherence with the historical moment

24 Gadamer 1989: 387
25 Gadamer 1975, 75-76; 1989: 498-499
that influences my comprehension, yet is not limited by it,\textsuperscript{26} thus neither my prejudices nor my temporality separate me from the possibility of knowing and understanding.

\textit{Hermeneutics in archaeology}

In this subsection the applicability of hermeneutics to archaeological interpretation of cultural objects are reviewed focusing on Hodder, Shanks and Tilley's literature and paying attention to the selected principles of hermeneutics that are linked to my research question as discussed above. It is in the light of their selected thoughts on hermeneutics applied to archaeology that I shall analyse data provided by the archaeologists participating in my research. Since I am not an archaeologist I am not creating my own perspective of how cultural material can be analysed by archaeologists using a hermeneutic viewpoint. What I have done in this section is to select from the literature research I undertook for this thesis, those thoughts that in my view are applicable for this study. These include the cultural meaning of objects, the importance of context, the dialogical relationship between archaeologist and cultural material, historical consciousness and the fusion of horizons, and the applicability of hermeneutic principles to interpretation of archaeological remains in order to access the ancient past. These aspects are developed in the following paragraphs.

Hermeneutic principles suggest that archaeological objects are 'meaningfully constituted',\textsuperscript{27} in other words, archaeological remains embody ideas and concepts embedded in social life that influence the way in which material culture is produced, embellished, used, and discarded. These meanings are bounded within contexts, which means the totality of the relevant environment within which the object is associated \textit{in}

\textsuperscript{26} This is a reference to Gadamer's historical coherence 1975: 506: 'Historical coherence must, in the end, be understood as a coherence of meaning that ... transcends the horizon of the individual's experience'.

situ, during the excavation process – burial sites, architectural structures, artefacts, ornamentations, fauna and plant remains, and includes everything that could throw light on the motives, functions, purposes or intentions of the original society in the organisation and distribution of material culture in meaningful spaces. The natural or built environment where the remains were located is also meaningful.

The relationship between the object and its contexts is dynamic: the context both gives meaning to and gains meaning from an object. Archaeologists are guided by this dynamic relationship to ask meaningful questions; without context archaeological understanding is impossible. Consequently a dialectic relationship is established between the archaeologist and the object in context. The answer to the questions posed will depend on the theoretical perspective that the archaeologist brings to the encounter when reading his/her data, since archaeological interpretation vary widely from one scholar, or theoretical trend, to another.

Interpretive archaeologists state that the ancient and unwritten pasts exist only in their connection with the present; in fact the past is created in the present from ideas, convictions, and values. The way in which the past is conceptualised, data interpreted and analysed, provides meaning for the present along with political and social implications, including a critical perspective of power. Hodder says that the basis of conceptualising the past must rest on practical work and the archaeologist’s own

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29 cf. Trigger 1985: 228
32 Shanks and Tilley 1992: 129-130; Tilley 1998: 325. Power is expressed in a range of possibilities from productive to repressive ones and a mixture of them
historicity\textsuperscript{33} – his/her understanding of the world – yet this has not one unique direction, the past in brought to the present by the interaction with archaeological data, but the past also constructs the archaeologist’s present with a new understanding of the world.

These frames of reference, past and present, produce a dialectical discourse between the archaeologist and the object, as in I and thou. The successive questioning of the object implies a hermeneutic circle of understanding until the object begins to reveal its meaning. But any interpretation of the past is multiple, since material culture is polysemous and meaning is multivocal, situated within a system of signified-signifiers, conjunctions and repetitions – as in language – with meaning shifting between different levels and contexts. Hence the archaeologist’s choices of theoretical interpretations of material culture are permanently open to re-evaluation;\textsuperscript{34} this means that interpretation is never fully accomplished. Understanding is always difficult, and depends on the disclosure of the parties in dialogical conditions, so that if interpretation of the past is possible from the standpoint of the present, some meanings are very difficult to reconstruct, e.g. those meanings which depend on the structure and social position of the individual who produced the object in the ancient past are elusive in the present.

When Shanks and Tilley analyse the hermeneutic perspective involved in this process they particularly discuss two essential elements of interpretation: the hermeneutic circle of evidence and the role of the archaeologist as interpreter. They refer to Gadamer and Heidegger’s concepts of the hermeneutic circle, described above, but cite Bauman\textsuperscript{35} who explains the understanding of life from cultural objects, beginning with the ‘divination of the totality to which the confronted object belongs. If the guess is correct,

\textsuperscript{33} Hodder 1991: 17
the element in question reveals parts of its meaning, which in turn leads us towards a better, fuller, more specific reconstruction of the totality.

The process of archaeological interpretation, in its growing circular awareness, allows the grasping of meanings from material culture. First, the circle of interpretation — Hodder prefers to call it spiral — is available to the researcher in an ontological way; one cannot escape interpretation since it resides in our Being. Second, the archaeologist does not describe empirical episodes or objects, as in a classificatory methodology, but places those objects and episodes in the space of understanding, and is able to justify the interpretation. Third, archaeological data exist only when they are interpreted, as opposed to the traditional recording, classification or dating, which identify objects, producing taxonomies or referral data. Fourth, archaeologists cannot dispense with being present, with their presuppositions or fore-knowledge, values and ideas; interpretation is not aiming at the kind of objectiveness that leaves the interpreter outside the process. Interpretation realises with the inclusion of the interpreter since it is dialogical and attempts to provide reciprocity of understanding between different languages and different cultures. In this dialogue, the parties move toward a consensus, which is more than the sum of the parts; it is a fusion of horizons of past and present, object and subject, within the hermeneutic circle in which the interpreter is engaged.

Interpretive theorists explain the difficulty that archaeologists face in understanding the ancient past since it requires a fourfold interpretive endeavour: There is the hermeneutics of the discipline in contemporary archaeology, the hermeneutics of the

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36 e.g. Hodder 1995: 215-216, 220, 236.
37 Trigger 1985: 225
society to which the archaeologist belongs, the hermeneutics proper to the alien culture and the hermeneutics that transcends past and present, the fusion of the horizons we have explained above; the past lives in the present and in the way it is conceptualised. Further, the way the past is analysed and conceptualised has political and historical implications in the present, and this is one reason why the past is real and not dead.

No matter the important contribution of hermeneutics to the interpretation of the past, it is necessary to recognise that it is not the only method to access the past, but it is included in the process. Praxis of archaeological work has not changed for a long time, says Hodder, except for the higher attention paid to contextuality of data within a site or region. Processual contribution to scientific method, sampling design, environmental reconstruction, and so on, coexists with postprocessual interpretation of data. So, although data may be collected within a processual theoretical framework, they can be reused and interpreted within other frameworks. It is at this level that hermeneutics is important.

I shall go no further considering the importance of hermeneutics in making sense out of archaeological data. The reader will notice that the hermeneutic principles analysed at the beginning of this section have been theoretically applied to archaeology and will be very helpful for me to construct the following subsection on hermeneutics in the museum.

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41 Hodder 1995: 172
Interpretation in the museum involves the institution personnel and museum visitors, because the museum is a social institution in origin and purpose, having the mission of collecting, preserving, researching, storing, displaying, and organising activities around cultural objects for learning and enjoyment of people; it is also a place for unfolding and developing self-consciousness, as well as an agent of historical awareness. But the museum personnel and visitors have not equal relationship with the collections of the museum. In general, it can be said that the greater the engagement the deeper the knowledge and the variety of interpretations that can be made from the objects and their contexts.

On the one side, the museum staff: a research curator, conservator, educator, registrar, exhibition designer, photographer, manager, cleaner, gardener, security guard, and on the other side: museum visitors from the community, from outside the community, members of special organisations, children, adults, and so forth, all of them make meaning of the collections at the museum. However, their interpretations will differ in depth and purpose. There are theoretical, technical, functional, purposeful, artistic, financial, custodial, intellectual, sensory, fanciful, dreamy, appraising, dissenting, ideological interpretations involved in different degrees and compounds, not solely for museum professionals and staff. Visitors can also construct a range of interpretations including the intention or need to have a deeper intellectual or theoretical understanding of archaeological material for a given purpose or as a reflective way of being.

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42 e.g. ICOM 1997: 3; Kreps 2003: 1-2
Besides, interpretation in museums largely depends on the type of collections they are concerned with and how they are documented. When collections can be documented with the assistance of people’s memories, images, written records, music and the like – as in community museums or museum of contemporary history, or contemporary art, etc – documentation is to some extent facilitated, and so is theoretical interpretation; there are common knowledge and/or personal experiences involved. When none of these supporting data exists, as in a museum of archaeology concerned with prehistoric societies, interpretation has to be worked out supported by even more complex strategies. Perhaps some of those prehistoric societies had systems of recording their history or daily life, but without recognising those forms they rest as mute as their musical instruments whose melodies are not playing their messages any longer.

In a museum of archaeology those collections of ancient objects belonging to a remote past, which have no relationship with our present history, cannot be understood without the assistance of archaeological research. This explains my deep interest in knowing how archaeologists make sense of that remote past. Naturally, social objects of whatever period, old or recent, can be freely and directly appreciated as artistic or technological expressions by any person, but when the social meaning of an archaeological object is implied understanding is not easy. We have seen in the previous subsection how interpretive archaeologists refer to the difficulties involved in making meaning from the remains of the ancient past, requiring a fourfold hermeneutics, and archaeologists devote their whole time to this endeavour. Quite different is the situation of museum visitors who may dedicate a few minutes of their

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43 cf. Hooper-Greenhill 2000: 3
44 Conventionally term to identify ancient societies whose deeds are not recorded in written form that palaeographers can read today.
visiting time to understand each one of the museum displays, all of them containing several meaningful archaeological objects.

The purpose of this research is to understand how different people interpret the ancient past in a museum of archaeology. As indicated in the previous chapter, the people this study focuses on are curators, exhibition developers and adult regular visitors, in a case study. It is not the purpose of this chapter to advance conclusions. At this level we do not know yet how the participants of this research interpret archaeological objects and if they use any hermeneutics at all; this aspect is analysed in the last chapter, after having presented and analysed each research-group. The fact that I have chosen a hermeneutic approach as philosophy and as a way to analyse my research data does not imply that the participants of this research interpret the museum from this perspective as well.

Because I considered with Gadamer that hermeneutics is a way of understanding the world we live, I think that every activity in the museum could follow hermeneutic principles. But I shall focus on exhibition and education in the following paragraphs, and see if my frame of reference is different or similar to hermeneutics applied to archaeology.

Exhibitions in an archaeological museum are generally organised in accordance with the theoretical standpoint used by archaeological research. If the approach is culture-historical it is understood that the displays can be explained as a tale following a chronological sequence of evolution and diffusion, emphasising comparison of cultural archaeological traits. If the approach is functional-processual, objects are understood as
relatively uncontroversial facts, documented by hard sciences; the exhibition could then be organised either as a story of the past or as separate subjects illustrating the functionality of technology in activities such as farming, hunting, etc.

If the approach is postprocessual, archaeological remains are understood considering the role of the individual in history. Material culture reflects synchronism in a cultural tradition, action and thoughts, ideological and symbolical aspects. Objective knowledge is perceived as illusory. Pearce provides an example of this approach: when the objects are understood as signs and symbols, the emphasis is on the structures of thoughts in material culture; then it is difficult to represent the abstract concepts involved in an exhibition, says Pearce. She illustrates the case with the exhibition *Symbols of Power at the Time of Stonehenge*, which concentrated on the manifestation of power, prestige and status in the third and second millennia BC. Leone et al. illustrate the Marxist perspective with the case of the Annapolis excavations. In this example, six of the seventy sites were opened to visitors who were toured around the site as in a museum gallery. The authors say that the critical view was exemplified by ceramic shards that were taken as indicators of segregation between rich and poor people, to describe domestic work, social and family life, indicating the inequalities between them. The binary divisions went on with concepts as insider/outsider together with the statement about the relevance of the past to the present.

Cotton and Wood describe the new construction of the Prehistoric Gallery in the Museum of London, which I consider as an example of interpretivist theory in museum

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46 Pearce 1990: 156-160
47 Leone et al. 2000: 466-469
displays. They conducted a previous qualitative research to know what people knew, and wanted to know, from prehistory; the results reported that people showed interest in everyday domestic life, which is absent in most archaeological displays. In order to satisfy people’s interest in domestic life, the exhibition developers incorporated the results of recent archaeological work; created a more attractive and welcoming setting; used humour and irony in order to change visitors’ preconception of prehistory, and made meaningful connections of the present with the distant past. They also incorporated different sensory stimuli to convey ideas, including the de-mystification of the museum as authority, by admitting the limitations of archaeological evidence, and offering visitors a range of open-ended alternative explanations. They hoped that this approach enabled visitors to construct their own interpretations, made judgement and drew conclusions, in order to retrieve their own prehistories from the museum displays.\textsuperscript{49}

So far I have addressed the possible links of hermeneutic interpretation with exhibitions taken from the literature, now I would like to discuss hermeneutics in museum education, exemplifying with my own experience. Paraphrasing Shanks a Tilley,\textsuperscript{50} I think that the museum educator has to construct at least a threefold hermeneutic approach. The first one is for understanding the museum collections, the second one is for interpretation of the collection on display and the third one is for interpreting museum visitors.

In order to understand the meaning of the museum collection, the museum educator has to analyse it in close contact with those research curators who interpret the

\textsuperscript{49} cf. Shanks and Tilley 1992: 93-99

\textsuperscript{50} op cit: 107-108
archaeological cultural materials of the museum, and establish the links that these materials have with collections outside the museum. Before researching on the hermeneutic approach, I constructed this level eclectically from different theories, influenced by the authority of the archaeologists who instructed me on the subject.

The second hermeneutics is the interpretation of the collection on display, which has its own dynamics. This involves the purpose of the exhibition and its narrative form; if the exhibition is chronological or thematic the organization of thoughts and emphasis in the display are different. Furthermore, it is necessary to have a detailed knowledge of the research circumstances of each object, in order to satisfy the public interest in excavation procedures; these are site location, laboratory research, dating method and publications. In interpreting collections on display, knowing the theoretical contextual representation, which surrounds the archaeological objects helps considerably, this explains the need of working together with exhibition developers.

The third hermeneutic interpretation that the museum educator has to construct concerns the society with which the dialogue is established: the museum public. Before developing my hermeneutic consciousness I constructed this level on the basis of my pedagogic formation, assisted by psychological, anthropological and sociological studies.

Before studying hermeneutics I unconsciously applied some of its principles, as everybody does. Because I worked with archaeologists to construct my first level of interpretation, I realised that there is no just one way of analysing the past; that there is no one way better than the other; they are different ways and if coherently applied they
are valid, since there is no one absolute truth. In the second level of interpretation I had already known that objects are inseparable from context. The relationship between them is dynamic, they explain each other; deeper thoughts on the relationship of the object and its context provide greater understanding. In the third level I had already incorporated alternative interpretations of the past as presented by the objects on display, and dialoguing with visitors I advised them not to be scare or disappointed with different interpretations of the past, because knowledge is always in the process of being formed and we are capable of permanently getting into a better understanding.

After studying hermeneutics I have acquired a theoretical approach to analyse my way of being, my relationship with other people when I establish a conversation, as a human being as well as an education practitioner in a museum of archaeology. Now I am equipped with theoretical support, and the results of the present research as a starting point. My theoretical thinking involves understanding the construction of the past in a museum of archaeology, which is going to be presented in the following chapters interplaying with participants’ viewpoints.

Comparing the potentialities of the hermeneutic approach in archaeology and in education in a museum of archaeology the similarities are greater than the differences. Both are interpreting the ancient past with a social purpose: to make it meaningful to our present society. So that visitors’ perspectives of past can change and they can perceive that the past is not a separated part of history but it is part of their life experience; the past can be conceptualised in the present. Archaeology and museum education use the hermeneutic circle of understanding. However, there is a time sequence between both of them, archaeological interpretation is first, and it is
constructed from the dynamic dialogue between object and context. The museum educator’s interpretation comes later when the object is already interpreted; it is a secondary interpretation going from the detail in each exhibition case to the whole, represented by the entire exhibition.\(^5\) Language articulates both the archaeologist’s and museum educator’s thoughts in spoken and written expressions; both use pictorial representations, sign and symbols to convey meanings that cannot be expressed otherwise or to reinforce messages. The fore-meaning of language and prejudices\(^5\) in both cases facilitate understanding, nevertheless fore-meanings and prejudices have to be critically analysed to avoid bias. Both archaeology and museum education are concerned with authenticity and not with truth; even when hermeneutic discourse frequently use the term ‘truth’ it is in no way implying the positivist scientific truth. Hermeneutic truth means authenticity, genuineness, there is no confusion or way back to an incontrovertible truth which, in hermeneutics, is not attainable.

Museum education in the same way that archaeology has in hermeneutics a consistent and favourable theoretical approach, nevertheless hermeneutics is not exclusive or contradictory with other disciplines, epistemologies or theoretical principles. On the contrary, the amplitude of scope of its philosophical principles provides great potentialities to other non-positivist disciplines or theoretical thinking.\(^5\)

Briefly, my fields of interest – interpretive archaeology and museology – have in hermeneutics an excellent ontological perspective. Hermeneutics is optimistic in perceiving the arcane histories of the past but conscious of the limitation of human beings, it is open to further revisions. Authenticity rather than truth is its aim. This

\(^5\) See also Hooper-Greenhill 2000: 116-117
\(^5\) Explanation of the concepts of fore-meanings and prejudices are given at the beginning of this chapter.
\(^5\) See for example Alvesson and Sköldberg 2000: 8-9, 117
authenticity has to be worked out through facts and historical consciousness, which, to say it again, refers to the involvement of the knowing subject with its time, values and prejudices. By asking meaningful questions to archaeological remains and through theoretical interpretations, the past can be brought to the present taking account that we assume responsibility for our positions.

Building on meaning and understanding

I have presented the complex subject of hermeneutics in a very simple way, referring only to those aspects that have a direct relationship with this thesis. I have placed my frame of reference within hermeneutics; this is my ontological guideline. What I have done in the preceding subsections is to separate those ideas of chosen theorists that are relevant to the perspective of my research and made them converge, showing the agreement existing between philosophical hermeneutics and hermeneutic applied to archaeology and museology.

Philosophical hermeneutics helped me to formulate my epistemology\textsuperscript{54} as well, for its principles address the problem of knowledge. Understanding implies knowledge. The dialogical relationship brings an enlargement of the self with the appropriation of the human nature that is disclosed in dialogue. In this sense I agree with Wolff who explains that hermeneutics is a complete ontology, epistemology and methodology implied,\textsuperscript{55} which provides hermeneutics with an enormous advantage over traditional theories, since it does not set the boundaries of traditional disciplines\textsuperscript{56} in defining these principles.

\textsuperscript{54} Epistemology means the way I construct knowledge.
\textsuperscript{55} Wolff 1975: 113,129.
\textsuperscript{56} Wolff 1975: 52
Ricoeur also defends the epistemological significance of hermeneutics without losing its ontological character. He criticises the enlargement of hermeneutics from *regional* (methodological) to *general* (ontological) hermeneutics as a subordination of epistemology to ontology, changing a *mode of knowing* in order to become a *way of being*. Hermeneutics cannot treat problems of method as secondary and derivative; otherwise it would divorce philosophy from its integrative function, says Ricoeur.

It is not necessary to repeat once again those hermeneutical principles that has been presented and commented upon, in defining how hermeneutics allows me to construct knowledge, which is built on meaning and understanding from language, texts, objects, ephemeral experiences, and events occurring in the museum of archaeology. These principles are implied when I answer the question who, why, what, when, where, and how I can achieve my purpose.

*Who?* is the interpreter: I, myself, in my capacity of historical relationship with the world (Being-in-the-world, or in my historical circumstances: Being-already [past], alongside [present], ahead of myself [future]). *Why?* Because there is ambiguity in language, texts and actions, consequently, there are possibilities of understanding or misunderstanding. *What?* are ideas, facts and events expressed in language, texts and actions requiring understanding. *When?* is the precise moment, which is accompanied by uncertainty, especially when something is intriguing rather than obvious, when there is a gap in meaning. *Where?* is the locus of the provisional truth pursued, which resides in the interpreter along with her historicity, alertness, tradition, and can be expressed in

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57 Ricoeur (1981: 59; 1991: 69) refers to *Regional* hermeneutics as the earlier methodological approaches, such as those exegetic explanations of religious and classic texts until Schleiermacher and even Dilthey, and *general* hermeneutics to Heidegger's, Gadamer's and their followers.

58 See also Aylesworth 1991: 65
a written form, as in this thesis. *How?* corresponds to genuineness, the provisional understanding which is permanently open to further interpretations.

Knowledge is understood as the reflective appropriation and reproduction of the meaning of social practice; consequently it is a resource for social action as well.\(^{59}\)

This thesis is intended to produce such knowledge, for this purpose it was essential to obtain and organise data to reflect upon. In the following section the methodology used to generate data is explained.

**On the way of putting principles into practice**

The set of strategies and techniques employed to obtain data, methodology and methods, are addressed in the following subsections. Methodology is a way of studying and thinking about social reality, which requires the development of strategies to gather relevant information in order to answer the research question.\(^{60}\) Methods are procedures and techniques to accomplish the task. So the first subheading in this section explains my methodology, which is qualitative research and grounded theory, while my methods: in-depth inquiry and action science, are described further down.

*Qualitative Research*

The qualitative research (QR) approach is mainly concerned with exploring, understanding and explaining what another human being is perceiving, interpreting, conceptualising, doing, or saying in a particular setting. I have some experience with quantitative analysis in visitor research. The results can be used as managerial data, but

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\(^{59}\) cf. Dodd 1999: 189; Giddens 1990: 38-39

\(^{60}\) See Mason 1996: 19; Strauss and Corbin 1998: 3-8.
they do not provide insights into the cognitive and emotional processes of a visitor to the museum. Consequently, the results are not very useful for a museum educator. In this particular case, qualitative research offered the best instruments to understand the initial archaeological interpretation of ancient material culture and the reinterpretation of that distant past by museum visitors.

QR is interpretive and grounded in people’s lived experiences. It deals with the social interactions of daily life and the meanings the participants attribute to these interactions in their natural settings. QR is conducted through an intense or prolonged contact with a life situation, using various methods and strategies to explore the topic of interest without exerting pressures or imposing ideas on the participants.

QR is flexible, allowing innovation according to the living encounter. It is puzzled by the complexity of meanings the participants in the research may derive from cultural objects, social events and interactions, and tries to understand them through attentive and empathic listening. Previous planning is necessary but it is not a strict pattern to be adhered to until it no longer reflects a life situation. It is a process, allowing the flow of ideas, knowledge and understanding in many forms.

Nevertheless, in social research nothing stands there to be easily caught and applied. QR is an umbrella term for research strategies that share certain characteristics: data is richly descriptive and not easily handled by statistical procedures. Research questions

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61 e.g. Cordova-Gonzalez y Cuadra 1995; Cordova-Gonzalez y Bernal 2001.
63 e.g. Miles and Huberman 1994: 6.
64 e.g. Bogdan and Biklen 1992: 27, 32; Gibbs 2002: 3; Marshall and Rossman 1999: 2.
65 e.g. Gibbs 2002: 3; Mason 1996: 4; Silverman 2000b: 2.
are formulated to investigate topics in context so that researchers are concerned with understanding behaviour from the subject’s own frame of reference and do not always approach their research with specific hypotheses to test, as in this research, I had to construct knowledge from my participants’ interpretation of the past, I had no concepts to test.

QR crosscuts disciplines, fields and subject matter. Being multi-method in focus – using methods such as case study, interview, personal experience, life story, participant observation, etc. each of them a subject in itself – QR is always involving an interpretive, naturalistic approach to its subject matter. If there is no one, unique way of conceptualising QR, nor is one way better than another, so how can we know that our procedures are trustworthy?

In the early stages of QR movement many theorists look for validity, reliability and generalizability of results as a way of sustaining their research, especially among psychologists. Yet Gibbs explains that looking for valid, reliable results, consistent across repeated investigations under diverse circumstances, is a way of thinking that belongs to quantitative research.

Rather, qualitative researchers looks for validity in the way life situations are presented and interpreted, in other words, the way data are reported and analysed. Validity is not monolithic. The research method is valid when it generates the data that it is designed

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68 e.g. Mason 1996: 3.
69 Denzin and Lincoln 1998:2-3, also Alvesson and Sköldberg 2000: 8-9, 272-273
72 Miles and Huberman 1994: 278.
to collect.\textsuperscript{73} There is a natural validity in the truthfulness with which real events are honestly and faithfully described. In this thesis, natural validity is a must. Interpretation of data tried to eliminate bias, such as overemphasising positive cases, ignoring negative cases, paying too much attention to the unusual, and vague definitions of concepts, all these problems arising when managing a voluminous amount of data.\textsuperscript{74} In order to avoid these bias I used NVivo, a computer-assisted qualitative data analysis software, to process and analyse textual information, spot misinterpretation and facilitate data management.

As for reliability – the degree to which a study is repeatable – and generalizability of findings, qualitative researchers take different positions. In this case, reliability is understood as the consistency of the study; the competence with the case study method, its proficiency in analysing the different epistemic levels,\textsuperscript{75} its motivation and intention, and the coherence of methods across the research. In the design of this research great attention has been paid to this coherence. Briefly, hermeneutics and qualitative research are absolutely coincident in trying to understand another persons' thoughts in dialogue; language is the means of communication; the end of the endeavour is a partial closure aiming at genuineness but not at generalizable rules; hermeneutics and QR are flexible without adhering to rigid patterns; both of them are puzzled by the complexity of meanings and try to decode them through attentive and empathic understanding. Further, the case study is a typical qualitative method, appropriate to use grounded theory, and grounded theory is the methodology on which is based the software I used to analyse my data. Consequently there is no conflict between any of the principles,

\textsuperscript{73} Houtkoop-Steenstra 2000: 2.
\textsuperscript{74} Gibbs 2002: 11.
\textsuperscript{75} Scholz and Tietje 2002: 334. On reliability, see also Bryman 2001: 270-273; Schwandt: 2001: 226
strategies or techniques used in this research; on the contrary they reinforce each other producing natural fluidity of ideas, knowledge and understanding among them.

Generalizability is proper to quantitative research; it is rarely an aim in qualitative research, less in the case study analysed and reported here. I am not searching for rules or laws applicable to all museums of archaeology. The inter textuality of meaning is related to the system of significations within this case study, in other words, the relationship of meaning-making between the three groups of participants is proper of this particular museum. And this is coherent with the principle that there is no truth that creates a paradigm to which other museums should subsume. But the way in which data signify and are interpreted is very important because it could help to inspire reflection and understanding in other similar cases.

Methodological analysis: Grounded theory

I chose grounded theory as the methodology for my research analytical process. Strauss and Corbin describe the concept of grounded theory as theory derived from data, systematically gathered and analysed through the research process. The researcher begins the project open-minded, with no preconceived hypothesis to test, and it is in the interplay with the analysis of data that theories are emerging. ‘Because grounded theories are drawn from data, are more likely to offer insight, enhance understanding and provide a meaningful guide to action.’

Before going any further I think it is necessary to explain what theory means in this thesis. The concept of theory is pervasive in social sciences and it is used in different

76 Strauss and Corbin 1998: 12
contexts. I think the context provides its meaning. On the one side theory has an abstract meaning, what Ritzer calls metatheory, and implies a reflective thought on extant theories in social sciences e.g. cultural analysis, feminism, qualitative research. On the other side there is the theory of practice, which is an applied theoretical thinking or the development of theory during the analysis of empirical data, with the purpose of making sense of data or help to understand, explain or make predictions about the social world. In this thesis I am using both concepts. When I am explaining my theoretical framework including Strauss and Corbin ’s metatheory of grounded theory, I am using the abstract concept, and when I explain that theories emerge from the analyses of data, I am using the applied concept of theory.

Owing to the emphasis the grounded theory approach places on data, and the subject under study, the selection of people to be interviewed is guided by their relevance to the research topic and not by their representativeness or other considerations. Then at the moment of analysing data the researcher should let data suggest coding. The interplay of coding according to the emerging categories from data and subsequent abstractions from analytical thinking, allows a theoretical coding, which leads to theoretical writing, since theory emerge from data, as in a hermeneutic circle. Constructing theory is not an easy task; it is an ongoing process occurring over time. It begins with the first bit of analysis and ends with the last section of writing. In all phases of analysis there is a dialogical interaction between data and the researcher, who integrates those bits into the whole, and comes back to the part. This circularity is one

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78 See also Bal and Boer, eds. 1994 The Point of Theory. Practices of cultural analysis.
of the strength of the approach, because it forces the researcher to permanently reflect on the whole process and on the particular step in the light of the other steps.\textsuperscript{79}

The software I used for managing and analysing data, NVivo, was strongly influenced by grounded theory in its construction; \textsuperscript{80} therefore the program provided me with good support for applying the method. Using NVivo I could read the text reflectively identifying and coding relevant categories; then, categories were refined, developed and interconnected; later, the central category that ties other categories together was identified and related to the other categories. The process was circular, producing and revisiting each stage permanently, in order to recognise concepts and become aware of their meanings.

Theories can fulfil different functions but in this thesis, they are versions of the world-at-hand, the one which helps to solve the identified problem. These versions undergo a continuous revision, evaluation, construction and reconstruction; according to which there is no right or wrong representation of given facts, but versions or perspectives through which the problem is seen. Theories present finding in relational statements, abstracted from data, which can be presented in more than one way. For example they may be integrated in narratives, or used in explanatory statements, such as ‘under these conditions’, or using diagrams, which are very useful to gain distance from data and integrate concepts. Integrating data in diagrams are very abstract representation of data.\textsuperscript{81} I used all these three possibilities in writing this thesis.

\textsuperscript{79} Flick 2002: 42-43.
\textsuperscript{80} Gibbs 2002: 165; Richards 1999: 15, 137
\textsuperscript{81} Strauss and Corbin 1998: 144-145.
Though the composition of my subject is diverse, including perceptions of three different sources of knowledge – museum curators, museum exhibition developers and visitors – it is also closely integrated. I wanted to understand the intentions of the actors from inside. Understanding required empathy with them and with the meaning they make of their experience. I needed to be tuned in to the perceptions of the participants in order to capture the processes ‘from the inside’ and be aware of their individual attitudes towards related material productions. Proximity to my purpose was provided by the selected methods. These are described in the next section.

Methods of data collection

The complexity of the research subject required multiple methods of data collection to address informants pertaining to the different parties mentioned above i.e. in-depth and semi-structured interviews, and action-science, which was enriched by participant observation and videotaping. These methods are explained further down. The parties are found in a linear sequence within the process of archaeological interpretation. First in time are archaeologists, who interpret the past from the standpoint of the discipline. Secondly come museum exhibition developers, who give shape to archaeologists’ interpretation by an act of reinterpretation to create museum exhibitions, which stimulate museum visitors’ interpretation; this is a corporate endeavour of a group of persons acting as a community of practice, to be explained further down. Visitors form the third party; they make sense of the past by appropriating the meanings on display; yet, visitors are not passive receivers in this line of meaning making, and they could not be, because interpretation is action, an engagement with what is being interpreted.

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82 This citation is taken from Miles and Huberman (1994: 6). Quotation by the authors.
The archaeologist is the agent who generates the collection of material culture through fieldwork and constructs their theoretical meaning through prolonged and direct contact with the material. He/she is the first interpreter of the material culture excavated in the field, while the museum visitor accesses the past by means of the communication strategies devised by the museum, e.g. objects in contexts, representations, texts, discourses, actions and interactions. The contact of visitors with archaeological material is short and in many occasions physically distant, having a partial sight of the whole. The museum tries to facilitate visitors’ encounters with the past and offer them propitious grounds for constructing meaning, within the possibilities offered by the budget and managerial opportunities. So we are dealing with the construction of knowledge in a given discipline (i.e. archaeology), the vehicles to make that knowledge meaningful (i.e. museum exhibitions) for users of the findings in that discipline (i.e. museum visitors) and the manifestation of understanding that those engaged in the processes are willing to communicate to the researcher in dialogical situations.

Resources and methods were compatible with qualitative research; the meanings of the ancient past for the participants were explored, analysed, understood and explained so to allow me to reach an understanding of the problem. I relied mainly on in-depth and semi-structured interviews, trying to explore the interviewees’ reflections as far as possible in an informal, dialogical, face-to-face empathic encounter, intended to capture the deep meaning of personal experience as expressed in words and the speech between speeches.\(^3\) The researcher did not interfere in the participant’s narrative except to facilitate the flow of communication. This method quickly produced a large amount of data. The value of in-depth and semi-structured interviews resides in its flexibility, the

\(^3\) The speech between the speeches is something intangible, not spoken but present and understood by the persons engaged in dialogue, as indicated above
responsiveness to emerging issues, and the possibility to gain direct access to the
interviewee’s experience.\textsuperscript{84} Interviews were required because curators and visitors act
as individuals in the practice of their activities and in their connection to the museum
interpretation of the past. But exhibition designers, who act as a team in the conjoint
enterprise of developing museum exhibition projects, were addressed as a community
of practice (COP), and the method used was action-science.

A COP is an association of persons characterised by a joint enterprise, mutual
engagement and a shared language, learned in the course of their professional education
and context-dependent practice. ‘Language’ implies here a set of values, knowledge,
terminology and procedures through which the members of the community frame
practice problems and connect them to a range of acceptable solutions.\textsuperscript{85} Action-
science is defined as the development of a community of inquiry among a community
of practice. In other words, it is a participatory way to integrate both the production and
use of knowledge, with and among individuals and systems, for the purpose of
promoting learning in an enterprise that is characterised by uniqueness, uncertainty and
instability.\textsuperscript{86} Thus they can build ‘theories in practice’, create alternatives to the status
quo, combine interpretation with critical assessment made explicit among them, and
instigate changes in the light of values freely chosen by the members of the community
of practice. The researcher became a member of the community of practice without any
prominence among them, following the suggestions of Argyris et al. and Friedman.\textsuperscript{87}
Participant observation and video tape recording of group seminars were included.

\textsuperscript{84} e.g. Schwandt 2001: 136-136.
\textsuperscript{85} Friedman 2001: 160; Wenger 1998:72-85. The reader may notice that language is written into inverted
commas, indicating a particular use of ‘language’ that is explained in the sentence in which it is
included. This cannot be confused with the hermeneutic use of language I have explained before.
\textsuperscript{86} Argyris et al 1985: 4-12; Friedman 2001: 159. Also Kemmis and McTaggart 2000: 570-571
\textsuperscript{87} Argyris et al 1985: 225-226; Friedman 2001: 160
Action-science is not an innovative qualitative method created for this research, there is a literature written on the subject. I was inspired by those authors cited in this research, Argyris et al. who theorised and applied action-science in educational contexts, and Friedman in health services; Kemmis and McTaggart as well as Denzin and Lincoln\textsuperscript{88} recognise how participation, experience and action attempt to make qualitative research, humanistic, holistic and relevant to those practitioners who concrete their work realities in conjoint enterprises. The method is illustrated in this thesis in chapter five when analysing the case of exhibition designers or developers.

On the locus where the problem is contextualised: Case Study

The main guidelines of this study have been presented and discussed; attention is now directed to the place where this research was carried out, using the approach of a case study. Much QR examines embedded phenomena in a single case.\textsuperscript{89} The case study is a unit of analysis embedding theoretical and practical issues for the research project,\textsuperscript{90} allowing in-depth understanding of the problem under scrutiny. My theoretical perspective of the case study is mainly based on Stake and Yin. Stake\textsuperscript{91} defines case study as a form of research interested in individual cases paying attention to what can be learned from a single case. He emphasizes the importance of designing the study to optimise understanding of the case rather than pursuing generalization beyond itself. Yin\textsuperscript{92} argues that case study is the preferred strategy when “how” and “why” questions are being posed; this means when the focus is on a contemporary phenomenon within some real-life context. I will provide some examples of this statement further down.

\textsuperscript{88} Denzin and Lincoln 2000: 376.
\textsuperscript{89} Miles and Huberman 1994: 27.
\textsuperscript{91} Stake 1994: 236.
\textsuperscript{92} Yin 1994: 1.
The selected case study for this research is the San Miguel de Azapa Museum of Archaeology (MASMA), Arica-Chile. MASMA is a university museum of archaeology. The specific interest in this case study is the possibility of finding within its organisation the different levels of interpretation that are implied in the research problem: archaeological research is its staple activity; MASMA has an in-house team of exhibition design, and it is a point of attraction for the urban community and tourists as well. As most museums, it hosts visitors with different characteristics. In addition, the findings of this study and the knowledge constructed from this research are going to be applied in my practice as museum educator.

Carrying out research at the MASMA offered me the possibility of communicating with the interviewees in a common language, Spanish. This is an important point. When trying to get into participants' thoughts not only spoken words are meaningful, silence, incomplete sentences, gestures, body language signify, they are part of the speech between speeches, discussed above. These aspects are diminished or lost when dialoguing in a foreign language.

So, what could a case study do for this research? The case study could optimise understanding of the interpretation process of ancient societies within the wholeness of the museum institution by listening to voices inside and outside the museum. It could optimise understanding of the coherence of processes developed in the museum by making explicit the relationships between the parties, from the starting interpretation of archaeological research all the way through to the final user, mediated by the organizational interpretation of the ancient past through meaningful exhibitions.

The case study can answer "how" that interpretation is produced and "why" is there a need for interpretation. It can provide a holistic account of events, which include social supports and constraints to the institution. A case study facilitates the understanding of how one event is linked to another and provides the context for discussing a particular topic. Theoretical problems that are not frequently examined can be discussed in a friendly, sympathetic conversation instead of using the academic language, which is not conducive to openness and confidence. Thus the tacit becomes explicit, initiating improvement of existing conditions if appropriate.

The case study becomes a source of data that legitimises its position in the historical course of events, because it is inherently interesting. It discloses a social system that, while illuminating the object of interest in the research, reveals the particular and idiosyncratic in a world of generalizations that has failed to specify the conditions which lead to understanding.

Centring the answer to the main question of this research in the MASMA, as a case study, provides other similar cases with the opportunity to reflect on a real situation that functions in its own terms. An exact match is hard to find. Collections present a wide variety of characteristics. There are no common practices among archaeological museums on acquisition, documentation or display of material culture. Some collections are donated and have no original references; others are bought lacking archaeological contexts; some of them are purposefully excavated and are richly documented and studied; others are excavated as rescue work and are subject to missing information. Some are loans, exchanges, bequests. Some archaeological museums have only one politic of acquisition; others have mixed procedures. The range is very considerable. See for example Pearce 1997; Beagrie 1994.

Documentation is referred here as an inclusive term of registration and research. Both present the most varied condition among archaeological museums. '[Documentation] is an absolutely core function...' Southworth 1990: 18. See also Pearce 1992; Shanks 1992.

Display of material culture differs enormously among archaeological museums. It depends on the individual museum policy, collection resources, financial support, space, availability of commercial stocks, community links, opportunities related to dates, and a thousand other reasons.
of archaeology do not have equal opportunities for enhancing communication between curators and visitors or developing museum educational programmes which enable users to have a more comprehensive experience than simply reacting to displays: labels, hands-on opportunities, auxiliary tape recording or computer technologies. But from the case study we can derive a general proposition, theoretical or empirical, that can be workable in other cases of the same class. 'There seems no reason to exempt case studies from the normal assumption that one can reasonably make generalizations from what one knows already until information inconsistent with this becomes available.'

The case study is something that functions, and can be improved, like everything else in a changeable world.

Identification of MASMA as an institution

MASMA belongs to the Department of Archaeology and Museology (DAM), a university unit devoted to local archaeological research and to the University of Tarapacá, located in Arica, northernmost Chile. This is a regional university whose mission is to develop the Tarapacá region based on the strengths and opportunities it offers. One of the outstanding strength is the possibility of studying the remote past from the superbly well-preserved evidence of human life in the desert across several millennia. Research has shown that organized societies lived in Arica ca 8000-2000 BC, developing artificial mummification of corpses in a place where dehydration and conservation of organic matter occurs naturally. For those peoples who knew the environmental conditions very well, the artificial preparation of bodies for interment could be more than just preservation. Burial rites include selected tools, which evidence

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98 Allison et al 1984; Arriaza 1995a and b; Focacci 1974; Muñoz and Chacama 1993; Schiappacasse and Niemeyer 1984; Standen 1997.
the links the living community had with their dead members and the intersubjective meaning objects had for them, as Shanks and Tilley suggested in the above reference. Human agency as well as natural causes provide the opportunities to explore the past in this geographical space, 18° 30' - 20° 15' S / 68°-70°30’ W.99

Archaeological excavations at the DAM have systematically and continuously been undertaken since 1957, registering collections of all kinds of movable and immovable materials, and complying with national regulations on archaeological research and exhibition of cultural material excavated on or under the national territory.100 The history of the museum is linked to the university system, which has evolved through time, thus the MASMA/ DAM has undergone different links of dependence that have affected its stability. It began as an appendix to the historical research department, being located in the Azapa valley, 12 km from Arica city, in a derelict Spanish colonial olive oil mill. Display cases were distributed in the vacant space. When, in the 70’s, this museum section achieved the rank of Department of Anthropology, the Director, a social scientist, provided the DAM with academic staff: four archaeologists, one physical and one social anthropologist, one ethno-historian, two conservators for textiles and ceramics, two museum educators, two helpers in museum education, and one exhibition designer. The exhibition space was the same, but displays improved, making its simplicity more attractive.

Knowledgeable staff increased productivity and the Department turned into an Institute of Anthropology and Archaeology. But the Chilean political situation under dictatorship discouraged social research, and the museum staff was dismantled. The

Institute survived because of the service the Museum was offering to tourism. Soon the Institute was absorbed by the specially created Faculty of Andean Studies. Once united with the strong Department of Geography and History, DAM was deprived of the museum library, the publication of its journal *Chungara* was interrupted and scanty funding was allocated for research and museum activities. Currently, the DAM belongs to the Faculty of Social Sciences, Administration and Economy. Its research staff has strengthen positions, postgraduate qualifications, and scientific prestige. Its *Chungara* journal now publishes regularly. International and national funds enlarge the university-allocated budget for anthropological and museum education research,\(^1\) consequently the museum shares in some of this welfare.\(^2\)

The museum has no independent budget, and it struggles for rescue funding to solve immediate problems and bids for grants at national level in order to carry out specific projects. The museum’s personnel are only two people, responsible for the reception desk and the museum shop; they are hired on annual contract. Museum professionals belong to the DAM whose main purpose is scientific research, but all members of the DAM are linked, and generate museum activities. There is only one museum educator, myself, but researchers and professionals cooperate in helping visitors when requested. There are three full time archaeologists; four conservators for textiles, stone, ceramics, and registration/documentation respectively; one botanist, a social anthropologist and a physical anthropologist. Research assistants are hired on a project basis.

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\(^1\) Interdisciplinary research programmes on visitors studies, learning software, led by myself.

\(^2\) King, M A (1980: 25) writes that 20% of university museums in USA have no director. King, L (2001: 24) writes that average university museums in USA receive only 41% of annual expenses.
The exhibition developers I mentioned above are members of this staff. None of them takes primary responsibility for museum exhibitions. See Figure 2.1. In this figure research is described in the middle column, and mentioned again under museum; the museum cannot function without research and its results. They correspond to each other.

![Diagram](image)

**Figure 2.1 Working organisation of the MASMA. The relationship among areas of the DAM is fluid and permanent, responsibilities may shift according to occasional demands.**

Responsibilities are taken organically at MASMA/DAM; based on individual professional responsibility, there is a corporate answer to non-regular requirements, as to develop a new exhibition, prepare professional meetings, receive special guests and so on. Whatever resonance this research might generate, the answer to its main question could be incorporated into the mainstream of museum theoretical practice, because its approaches address conceptualised problems in this case study as a working unit.

**The reflective practitioner as instrument and participant of research**

The great involvement of the researcher in this thesis, from the visualisation of the problem all the way through to its theoretical understanding, requires introducing
myself to explain my role as and instrument of research and conductor of the process.\textsuperscript{103} The first person narrative style of this thesis, explained in the introduction, is indicative of the researcher's engagement in all aspects of the study.

I am a Chilean museum educator at the MASMA who has undertaken this research with the purpose of theorising on practice and produce knowledge that could lead to better relationships within the museum community. In other words the research problem was considered to be interesting and useful. It was grounded in a personal and professional motivation; a search that I had begun using quantitative research, the one which did not provide a satisfactory answer. Literature on the disciplines involved – museology and archaeology – and on the theoretical framework described above – philosophy, psychology, methodology, and qualitative research – allowed me to frame my research question and explain it within a more theoretical level of understanding.

A few biographic details could explain my arriving to this point. I was hired as a museum educator by the University of the North, the former legal status of the University of Tarapacá. Being professionally trained as a teacher and educator, my research experience was first linked to bibliographical research on local and regional Andean archaeology and anthropology, in order to have deeper knowledge of the subjects I had to communicate to museum visitors. After obtaining my master's degree on heritage management at the University of Birmingham, I turned to empirical research focusing on museum visitors in order to better satisfy their expectations. Before I became engaged in this PhD project, I was researching on new strategies for improving museum communication, i.e. devising the computer programme \textit{Yatiqasiña},

\textsuperscript{103} e.g. Janesick 2000: 386; Riessman 1993: 1; Wolcott 1990: 19.
and evaluating its performance with school students. It is inappropriate to include here the list of my publications because this is not an appraisal of the researcher but a general background to show her relationship with the subject of the thesis.

Understanding the meaning-making processes that take place in the museum, as well as the interrelations between the parties involved in the processes, could make my participation more useful in the museum community while stimulating others to undertake similar procedures.

*Position in the museum*

I have being working at the MASMA for more than twenty years. This responsibility puts me in close contact with curators, since they feed me with their permanent new knowledge of local archaeology, the one I have to explain to museum visitors. Even if I knew the story I did not know how it was constructed. As an inside observer of the reality studied, I felt that the knowledge already gained needed to be explained, and indeed my perceptions were greatly modified after the completion of this study, and I could understand interpretive processes in a way that I could not have done before. The fact that I am a member of the community I wanted to investigate meant that my reflective approach was also a reflexive way of looking at my own interpretations of actions and interactions within that environment.

DAM/MASMA is a small university department situated 13 km from the city in an enclosure of the Azapa valley. The physical isolation of this university campus facilitates the close contact among all members of the DAM/MASMA. A friendly relationship has developed through years of common enterprise and engagement with our responsibilities; nevertheless, I realised that my professional contact with technical
and administrative staff was superficial before this research took place, I knew more about their likes and dislikes than about their work. The findings obtained from the team of exhibition developers were new to me; I had a rather distant participation in the development of museum displays. The relation with curators was closer but, in spite of having observed archaeological fieldwork, and laboratory practices, I had never asked curators core questions about their interpretive theories and methods until now.

My relationship with museum visitors is not permanent, I have organised educative activities at individual or group request in the museum or as outreach programmes. But, the museum do not allocate funding for education or interpretive activities, so resources have to be bid from external funding. Most research projects finance empirical aspects of the research, which do not include regular education activities. The University or the DAM do not recognise the need for an annual budget to develop education activities, so that my contact with visitors is neither frequent nor deep.

*Interest in this research*

My interest in this research is intellectual as well as pragmatic. Most research I had previously undertaken was applied research, using methodologies of quantitative research. Research grants in Chile require positivist, modernist approach, requesting practitioners to use replicable methodologies, quantified variables and generalizable results. So when this thesis gave me the possibility of using a qualitative approach for the first time, I was full of expectations about the results of this new experience. I could gain a deeper understanding of the phenomena I had partially and superficially touched before. I had a shallow knowledge of visitors’ interest in the past, due to the quantitative research previously done, but I had no idea of how curators constructed the
past. Neither I knew what was the internal mechanism that allowed exhibition
developers to organise the interpretation of the past that appears on display.

My intellectual interest was to understand the interpretation process of the material
evidences that were meaningful for ancient societies long ago disappeared; how could
they be meaningful today, when there is no possibility of emic understanding between
cultures. The question puzzled me since I began working in the museum. I knew the
results of local archaeological research that was represented in museum displays but I
did not know how those stories were constructed, and what could they mean for
museum visitors. Counting acceptance or disproval, measuring attitudes or intensity of
feelings towards or against museum propositions was not the answer I wanted.

On the other side, the practical issue of this research points to knowing how the
phenomenon is distributed among the different parties playing a role in museum
interpretation. After completing this study I am in a better position to organise my
participation as a museum educator, whether to offer an improved service to the
institution, the community or museum public.

**Relationship with participants**

In qualitative research the relationship between the researcher and participants become
all important, there should be a complete agreement between the parties on the purpose
of the research, and the way in which it is intended to be developed. This is a matter of
ethics but in addition to it, it is required for constructing the meaningful dialogue which
leads to mutual understanding.
This dialogical relationship cannot be produced if there is a difference of status between the researcher and the party who collaborates with the research. So it is my conviction that during the dialogical encounter all members participate with the same credentials. The only difference is that the researcher proposes the subject and the topics to be discussed by participants; it is the researcher who starts the game to immerse in and disclose inner realities. It is only with the free agreement and motivated engagement of the interviewee that this action could take place. Once data was collected, the same respectful attitude was maintained to truthfully recount their voices.

In the chosen sample, there were participants who I met for the first time, but there were also friends and colleagues who had shared experiences, although never before analysing the topics of this research. In all cases the effort to communicate and understand each other was the same.

It is hard to organise our thoughts and experiences either as a speaker or as a writer; it is hard to communicate those thoughts either as a listener narrating what has been heard, or as theorist making sense of the wealth of thoughts and experiences gathered. But the huge amount of data collected accounts for the success of having created true rapports with participants, facilitating them to open their minds and their feelings with a sense of equal collaboration in this research. Participants’ openness obliges me to them and to the truthful narrative of their opinions.

It is not necessary to go on describing my viewpoints as a researcher since I have theoretically organised every part of this thesis, and the reader finds them plainly explained in each chapter of it. If it is still necessary to repeat them once more I would
say shortly that they are interpretive, dialogical, searching for reciprocal understanding, participative, sympathetic with the other, context sensitive, reflective, open to new perspectives, listening to plurality of voices, searching for plurality of meaning, accepting provisional closing of interpretations, and looking for genuineness rather than for conclusive truths; closure is provisional and may be modified by further analysis.

Conclusions

In chapter two I have reviewed the theoretical framework of my research in the light of ontological and epistemological paradigms. Ontology based on hermeneutic principles was also considered within the disciplines to which this research is bound, archaeology and museology. The first contains the subject matter of the museum and the topic of discussion with participants; the second is the field in which the purpose of this research is meaningful. Being explicit about the ontology and methodology of the research undertaken follows the present tendency of conceptualising qualitative inquiry in perspectives where the practicalities of doing are enriched with reflexivity on knowledge and the ways it is constructed.

A description of methodology and methods chosen are also focused from the theoretical viewpoint, thinking in the coherence of the whole research structure to validate results and accounts for the soundness and reliability of the process. Methodology and methods are in accordance. Strategies and procedures for action — such as principles, the logic of sampling, representativeness, sampling strategies,

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104 It means not to argue the other person down but considers the weight of other's opinion (Gadamer 1989: 367)
105 e.g. Alvesson and Sköldberg 2000: 4; Easterby-Smith, Lowe and Thorpe 2002: 29-51; Maykut and Morehouse 1994: 3-24; Schwandt 2000: 189-205.
criteria and justification for sampling construction – will be presented in the next chapter, as an important part of the research in the field.

This chapter ends with the presentation of the author as a pivotal agent of the project. She is an instrument of research as well as an active participant in the whole process. Ontologically and methodologically the researcher fulfil the task of understanding which is all embracing, from reading texts to set questions, engaging in conversation to answer those questions, taking the dialogues to a written form and analysing texts again using the circular hermeneutic approach. As it has been discussed in this chapter, hermeneutics defends also the right of the interpreter to form part in the construction of meaning; in the same line, qualitative research requires active participation of the researcher in every step of the process. Interpretation demands presence and action; nobody can do the task of interpreting for you. This justifies the inclusion of the researcher’s personal details in this chapter.

Qualitative research has a very precious potential as a research strategy to penetrate the inner worlds of participants; this allowed me to grasp individual and group perspectives about the way interpretation of the past is achieved from museum collections and exhibitions. Addressing the three sources of knowledge that make meaning from archaeological material, from inside and outside the institution, allows me to analyse the problem in light of the entire museum sphere. The views of the different actors who interpret the past, their different individual conditions, professional environments, personal commitments and agendas, from which to construct theories of knowledge and interpretation in a museum of archaeology construct a sound perspective of the whole.
Nevertheless, I am quite conscious that this is not the conclusive study in a world of permanent change.

Collection and management of data, and presentation of participants will be presented in the next chapter in a style that combines description and analysis of fieldwork. Fieldwork produced an enormous and comprehensive amount of data. The exhaustive analysis of those data provided answers to the research question and imparted meaning to it. But before addressing the meaning of data, a detailed description and explanation of fieldwork was considered to be helpful for understanding the whole process.
Plate 1. Detail of a belt-bag. Woollen textile of the Arican Culture period, 1000-1400 AD.
Taken from the MASMA's web site.
Plate 2. General view of the Department of Archaeology and Museology. Watercolour by R. Rocha.

a. Researchers' offices; physical anthropology lab; storage rooms.
b. Director's, registrar's offices and storage room; ceramics, and film labs.
c. Textile conservation lab; textiles storage room.
d. Researchers' offices; temporary storage space.
e. Museum exhibition galleries.
g. Petroglyphs.
f. Education room.
Plate 3. Entrance to the museum exhibition galleries.

Plate 4. Museum view from the Director's office
Plate 6. View of the second gallery of archaeological exhibition, illustrating the island showcase. This allows visitors to go to the left and skip the windows on the right or vice versa, or go to the other side of the island window, and continue immediately to the ethnographic exhibit, skipping both sides entirely.

Plate 7. Diorama of the coastal area, illustrating site of dwellings dated ca. 2700 BC
Plate 8. A typical window case with archaeological objects in the foreground and drawings suggesting the used of some artefacts.

Plate 9. Diorama of the sierra, 3500 m above sea level. Where microclimatic conditions allow farming, the terrace system is used.
Plate 10. Examples of archaeological textiles. Andean textiles are characterised by a dual organization, each half is mirrored or opposed in the other half. (Taken from Ulloa 2001)

a. Mesh textiles: cotton and woollen bags, and a woollen cap 1000-500 BC.
b. Woven textiles: tie-dye shirt; neck detail; ceremonial textile. 500-1000 AD.
c. Ceremonial bah; inkuna; four-pointed hat. 500-1000 AD.
d. Carrying bah; cap of the Arica culture; belt-bag. 1000-1400 AD.
e. Ceremonial bags; Inkan cap 1460-1500 AD.
Plate 11. Introduction to *Ayllu* ethnographic exhibition.

Plate 12. Photographic panel of young Andean women wearing red festivity shawl.
Plate 13. Stone Spanish colonial mill and press for olive oil, 18th-20th c. *in situ*. When the MASMA was located in this area, the mill was the original place for distributing museum show cases around. Now mill and press are isolated by panels.
Plate 14. Dr. Calogero Santoro, archaeologist, at work

Plate 15. EDT seminar session, April 2001. Clockwise: Raúl videoing the session; J. Cordova-Gonzalez, Juan, Koke, Gustavo, Mariela. Liliana is the photographer.
Plate 16. Liliana, textile curator, at work.

Plate 17. Nancy Alanoca, participating visitor
Chapter Three

RESEARCH IN THE FIELD

Introduction

The important contribution of empirical research can be understood in various senses. New research data illuminates theoretical frames, demonstrating their practicality in the field, strengthening them, offering grounds for reviewing their connection with praxis or providing arguments for change.

I have discussed the theoretical framework of my research in the previous chapter. In this one I want to explain my fieldwork procedures in the case study. I went to Arica with sound philosophical perspectives, organised procedures, and clear objectives, but with no hypothesis to test. I undertook my fieldwork open-minded, receptive, intrigued and purposeful, and came back with hundreds of pages of data, testifying to collaboration, good-will, compromise and participation from interviewees. This evidence constructs the edifice of meaning, focusing on how the museum interpretation of archaeological objects and events – proposed by curators and exhibition developers – is perceived and understood by museum visitors at the San Miguel de Azapa Museum of Archaeology (MASMA).

In the following pages the reader will find a description of the research procedures for addressing participants, a description of the participants – curators, museum exhibition developers and visitors – and a narrative account of the practical
construction of fieldwork, i.e. the procedures undertaken, the analytical process of data, and the structure for making meaning out of that evidence.

**On how, who and what**

Theoretical perspectives and the objectives of the research question explained in chapter two were the bases for selecting my participants. I framed my selection criteria mainly according to the strategies suggested by Mason,¹ which are explained in this section.

*Theoretical selection of participants*

Selection of participants was guided by theoretical principles, which some authors understand as synonym of purposive strategy.² In the way of traditional descriptions I could also describe sex, occupation and age of participants, however, these characteristics are not primarily meaningful in answering my research question so they are found interwoven with the presentation of participants; I am interested in participants’ individual experiences and knowledge, which are informed by their historical and cultural situation.

Participants were chosen for their characteristics, relevant to the research and for their capacity to explore concepts or processes around the subject under scrutiny. The researcher retains some flexibility in the systematic collection of data³ since it is the meaning of social action that is important.

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² Fink 1995: 4-8, 67; Flick 2002: 64-67; Schwandt 2001: 232-233
³ e.g. Flick 2002: 279; Hartley 1994: 218; Mason 1996: 5, 33
The selection of participants was intended to determine interpretive theories of understanding the past, the potentiality of the museum to reveal research processes in exhibitions and the experiences in relation to museum visiting as well as perceptions of the meaning of the museum. I was also interested in people’s perception of the importance of the past in improving understanding of the present, as well as any other views that might emerge in the dialogical encounter.

Museum displays are the tip of the iceberg of museum policy, management, research and education-communication resources. All these aspects originate in the museum personnel’s intellect, understanding, intention, resolution and commitment. It was thought that a meaningful selection should include cases from the wholeness of the museum interpretive parties, mainly from the original interpreter of the archaeological material culture all the way through to the visitor.

Participants in the following groups, were expected to disclose different layers of interests, capacities and approaches, as well as different depths of understanding: 1) Archaeological researchers or the museum’s curators who produce the original, academic source of interpretation of ancient objects and events. Their interpretation injects life into ancient objects and describes the social circumstances connected with them. 2) Museum exhibition’s designers who interpret the academic propositions about objects and events and translate them into museum displays that are purpose-built to help visitors to understand their messages; and, 3) Visitors who develop individual interpretations from museum display according to their personal knowledge and experiences, the concurrent social environment and their cultural traditions. By interviewing people belonging to these three interpretative groups I
could have the perspective of the whole process of interpreting and understanding at the MASMA. These three groups will be called ‘research-groups’ and will be addressed as curators, museum developers and visitors. (See Table 3.1)

The selection of these three research-groups, characterised by different personal traits and qualifications, was considered to be broad and varied enough to provide rich data which would illuminate my problem and help to answer my research question. They represent pivotal elements in the interpretation process at this archaeological museum.

Selection frame

The complexity of the purposive selection required the generation of an adequate frame of reference, since there was not a ready-made sample from which to select the case studies, as in quantitative studies. The purposive selection was determined according to opportunity and feasibility criteria. Opportunity criterion means the possibility to address those information-rich individuals who are willing to take time from their work or private life to participate in the research. Feasibility criteria relates to the number of interviews that are possible to undertake within the limits of the research conditions, e.g. funding, time, access, and so on. The number of participants in each defined research-group was small but nested in their contexts and studied in depth, this means that each person was a member of the group chosen; that the purpose was to stimulate such openness in conversation that data could be rich and the analyses of data could explore different viewpoints and different intensities of expressions, so that the understanding pursued could be obtained.

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4 see for example Miles and Huberman 1994: 27
The number of collaborators chosen from a particular research-group was decided first of all on theoretical principles; it should provide me with a range of data to explore processes, similarities and differences. But there were also practical boundaries, such as those explained by opportunity and feasibility criteria mentioned above. Time was also crucial at the moment of deciding the number of interviewees. QR is time consuming; it is flexible to the point of preventing any timetable limitation during the encounter with participants. It is also overwhelmingly time consuming at the moment of transcribing field notes and collected data. One hour of a taped recorded interview takes an experienced typist 6-8 hours for transcripts,⁵ and researchers are generally not experienced typists. Once data are collected, the analyses, such as coding, understanding, making connections, making meaning out of each case, relating cases within the research-group and the whole process, require unlimited time, greatly exceeding the most conservative prediction.

It was necessary to develop a separate strategy to select the individual case study and number within each museum-related research-groups: curators and exhibition developers. Selection in the museum research research-group was limited due to the mobility of curators in their professional duties. However good fortune and the archaeologists’ good will allowed me to interview the most senior archaeologist, a highly qualified person who has been in the Department for more than twenty years. He was Director of the Department, consequently of the Museum. He was, at the time of the interview, a member of the University Board of Directors. The second choice was the youngest scientist, qualified as a physical anthropologist.

⁵ Krueger and King 1998:75.
The exhibition developers were contacted through the Director of the Department of Archaeology and Museology (DAM). The whole group agreed to participate in the research, which was presented as an action science strategy, following the pattern described by Friedman, Kemmis and McTaggart, introduced in chapter one and developed in chapter five.

Museum visitors can be grouped in a number of working descriptions, depending on the scope and purpose of a given study. For this research, I thought of visitors as Non-adults and Adults, and I decided that the Adult group could better understand and explain the intellectual questions of making meaning from cultural materials in a museum of archaeology. Having in mind the Adult group, I thought of visitors coming to the museum for the first time and those who come often. For the purpose of this study the latter group was considered able to provide richer experiences and deeper thoughts.

Recurrent or regular visitors can go to the museum for personal interest or for professional requirements; I thought that both groups would bring interesting perspectives to this research. Regular visitors drawn by personal motivation exhibited a variety of characteristics which broaden the scope of viewpoints when collecting data. Regular visitors who go to the museum for professional commitment focussed on schoolteachers, among others, such as cultural animators or tourist guides that are also regular visitors on duty. Schoolteachers were especially considered because their personal viewpoints inescapably have significance in shaping young minds, stimulating habits of observation and museum visiting, and

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6 Friedman 2001: 159-170; Kemmis and McTaggart 2000: 570-571
7 cf. Falk and Dierking 2000: 27.
because teachers who can appreciate the importance of an archaeological museum become the principal link between the museum and the school. Teachers were chosen as individuals having personal views on the museum. See Tables 3.1 and 3.2.

The Visitors' research-group includes then those who revisit the museum out of choice, called here Museum habitués, and those mainly drawn by duty: Teachers. In order to identify and characterise the three research-groups I drew table 3.1, and to clarify the criteria for choosing the participants I drew Table 3.2, which is inspired in the typology of sampling strategies reproduced in Miles and Huberman.  

<table>
<thead>
<tr>
<th>Research-group</th>
<th>Curators</th>
<th>Exhibition developers</th>
<th>Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character</td>
<td>1 Field Archaeologist</td>
<td>1 Physical Anthropologist</td>
<td>5 M. habitués Different qualification</td>
</tr>
<tr>
<td>Description</td>
<td>Senior PhD Master in Archaeology</td>
<td>Textile Design, Draughtsman, 2 Teachers of Arts, Ceramicist, Photographer</td>
<td>Architect, Journalist, Social Worker, Spanish language teacher, Secondary student.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 History, Philosophy, Computing, General basic education</td>
</tr>
</tbody>
</table>

Table 3.1 Purposive selection of participants indicating character and description of the three research-groups

Table 3.2 summarises the strategy used for choosing participants in this research. The vertical columns indicate the research-group: Who? Indicates the group from the museum standpoint. The horizontal axes explain the credential for selection. How? explains the selection credentials, and Why? indicates the purpose. Terms included in both axes have already been presented in previous paragraphs. Explaining the table is repetitive, and its intention is only to assist in reading the procedures for selecting collaborators with this study.

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8 Miles and Huberman 1994: 28. Figure 3.6
Table 3.2 Selection strategy grid based on Miles and Huberman (1994: 28 Figure 2.6)

The research credential indicated in the Curators’ cell corresponds to ‘criterion’, meaning that in this cell cases meet the criterion standard of being information-rich. In the Exhibition Designers’ cell the credential is ‘group membership’, focusing on the responsibility they hold. In the museum visitors’ cell, the type is ‘chain’. This means that interviewees were found with the help of a third party who suggested that those visitors could result information-rich participants. In most cases the museum receptionist was that third party, in one case a teacher introduced me to another colleague of hers.

The purpose for choosing these particular respondents is indicated as ‘Intensity’ in the Curators’ cell, meaning that these are highly involved individuals with in-depth knowledge of the problem. ‘Theory’ explains the Exhibition Designers’ cell because the purpose is to construct the theory in practice, according to the action-science method used. In the Visitors’ cell the type ‘variation’ indicates the intention to document and identify diversity within patterns among museum habitués, while ‘stratified purposeful’ indicates my intention to work with similar cases, teachers, which could facilitate comparisons among them.
Trustworthiness and authenticity

What may emerge from this qualitative study is descriptive of specific situations; interpretive of what it meant to the people involved; theoretical, involving concepts and their relationships, used to explain actions and meanings; and evaluative, including judgements of the value of actions and meanings.9

I was concerned with constructing meaning that could shed light on a problem that is based on and consistent with the detailed analysis of the situation in the case study. For this reason I have looked for trustworthiness and authenticity criteria, to justify all these efforts.

Trustworthiness is based on credibility, transferability and dependability.10

Credibility is exemplified in this thesis by the multiple accounts of the social reality of the museum in the words of curators, exhibition developers and visitors.

Transferability can be understood as the possibility that the events taking place at the MASMA may be used as a source of information for making judgements in other similar cultural organisations. Dependability is assured by keeping records of this research available to peer scrutiny; although they are in Spanish, they are available in the form of reference volumes of data transcriptions and analysis and in electronic files using NVivo. This research is very important to me as a museum practitioner, and I invested all my efforts to complete the most trustworthy research I could attain.

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10 Bryman 2001: 272-274;
As for authenticity, fairness is the quality of balance.\textsuperscript{11} Fairness is concerned with avoiding bias on the participants' views. It corresponds here with the careful and respectful verbatim transcriptions of participants' opinions, and the inclusion of all voices treated evenly.

Having discussed in this section the selection of research collaborators, it is time to introduce the participants who provided meaning to this research.

**Introducing the research participants**

As already discussed, the research design considered constructing data from three synergetic sources in a range of dimensions of the MASMA. I shall first introduce the museum's people. Table 3.3 displays the names, activity and research-group of each member of the museum interviewed. You can notice that there are two members of the exhibition developers (EDT/COP) who are also curators, but their participation in museum exhibitions was favoured.

The style of the report is mixed, taking the form of a narrative in my words and that of direct expressions of participants' thoughts, translated into English, in an indented text. Quotations are preceded by the capital letter of the given name of the participant. The letter I. introduces me in the dialogue.

\textsuperscript{11} Lincoln and Guba 2000:180-182.
Table 3.3  Name of museum staff interviewees, indicating activity and research-group

<table>
<thead>
<tr>
<th>Name</th>
<th>Activity</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calogero</td>
<td>Archaeologist</td>
<td>Curator</td>
</tr>
<tr>
<td>Vivien</td>
<td>Physical anthropologist</td>
<td>Curator</td>
</tr>
<tr>
<td>Gustavo</td>
<td>Teacher of Arts/Registrar</td>
<td>EDT/COP</td>
</tr>
<tr>
<td>Jorge (Koke)</td>
<td>Teacher of Arts/ Administration</td>
<td>EDT/COP (Curator)</td>
</tr>
<tr>
<td>Juan</td>
<td>Draughtsman/Archaeologist</td>
<td>EDT/COP</td>
</tr>
<tr>
<td>Liliana</td>
<td>Textile designer/textile conservator</td>
<td>EDT/COP (Curator)</td>
</tr>
<tr>
<td>Mariela</td>
<td>Ceramicist/object conservator</td>
<td>EDT/COP</td>
</tr>
<tr>
<td>Raúl</td>
<td>Photographer</td>
<td>EDT/COP</td>
</tr>
</tbody>
</table>

Introducing curators: Two cases

Curators did not object to their names being presented in this thesis, but for the sake of brevity, Dr. Calogero Santoro will be cited as C. and Vivien Standen, M.A., as V. otherwise I shall use their first name. Calogero was interviewed in his house, Vivien in her laboratory of physical anthropology.

Calogero

Calogero is an archaeologist who went to high school in Calama and got his professional qualification in the University of the North, Antofagasta, northern Chile. He got his Master’s degree at Cornell and a PhD at Pittsburgh, USA.

At the moment of choosing a university career he had no clear idea of what road to follow. Research on social matters was something he wanted to do although he had only a vague idea of what that meant. He was also interested in working in open spaces; going to the field seemed to him an appealing adventure. In the last years of high school he had the opportunity of listening to famous archaeologists who had achieved results that impressed his young mind. He thinks that these facts, together with his passion for reading, made him decide on archaeology. By the time he was studying human evolution and other subjects at the university, he was well aware that
archaeology would satisfy all his aspirations. Meeting well-known researchers as lecturers at the university and having the possibility of accompanying them in fieldwork was especially rewarding for him.

After finishing his university studies, choosing a place to work was hazardous. There were not many places to work in Chile. Seminar students found placements as research assistants for short periods. He went to Arica trying to find any position available. The only vacancy was in physical anthropology, but he had to qualify in that field to get the job. He applied for it and got annual contracts, but he was always expecting an appointment as a field archaeologist. That opportunity came when the paleopathologist, Dr. Allison, required well documented excavated material to analyse. After five years of temporary contracts, the University of Tarapacá hired him as an academician in 1979. He has been a member of the DAM for 21 years, 26 years including the previous temporary contracts.

He thinks that the years at the university have been a blessing for him not only because he has found a place to work but for the possibility to grow as well.

C. I say that we are in a privileged situation; we are paid for doing what we want to do without any special requirement. We have all the time we need to produce what we are supposed to produce, in spite of poor conditions we may have, for example our library. When we did not have computers or telephones we still had that space for doing something. I do not know how people appreciate the conditions the university offers us. I think that very few realise the ideal conditions in which we work. Nobody says a word about how you organise your work and why you are doing whatsoever, [or] if you accomplished what was intended or not. Nobody controls your time. And I think that some people take advantage of this relaxed style, which at the end of the day undermines the university own development.

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12 Archaeological research is regulated by the Law on Heritage Monuments, few national institutions are allowed to do research, besides departments of archaeology were closed during the dictatorship, and archaeology research survived in departments linked to university museums.
Still, I think that I was lucky to join this Department, because all of us want to grow within our fields, including you [he is referring to me] who came here with the intention of creating an intellectual niche to develop. (Section 1.5, Para 88).

Calogero continued analysing each of the cases in the DAM and their contribution to the general production, some greater than others, and noticing that when individual production takes primacy, the group development suffers.

When asked how he benefited from his doctoral degree, he replied saying that first he learnt how to make things better. He thinks that consciousness precedes any intention to undertake a problem of knowledge. Theoretical perspectives as well as methodological resources are essential to solve problems, he said. Studying in the USA helped him to understand and recognise these instruments in order to apply them efficiently within the conditions of the local reality. He thinks that it is also important to share the knowledge gathered teaching, writing and researching, because it is necessary to look after those generations that will replace us in our commitments.

C. I would like to consolidate the line of research I am engaged with. In this moment I am trying to apply a statistical model to archaeological variability and trying to get away from the traditional scheme, to reach a more scientific archaeology. I want to tell a story based on more solid data. I want to escape the impressionist view that has been the mainstream till now. (Section 1.16, Para 128).

And Calogero illustrated his words with a number of examples.
Vivien

Vivien completed high school in Iquique, northern Chile, and her qualification in physiotherapy was obtained at the University of the North, Antofagasta. Her Master degree in archaeology was taken from the Catholic University of Lima, Peru.

She described her devotion to archaeology as a natural engagement that took place in her childhood, stimulated by the daily contact with ancient remains in the desert land of Iquique, where any domestic or public works digs uncover archaeological remains. Even though she could not enter archaeology as a career, due to university requirements, she found a way of applying her knowledge of human anatomy to archaeology. She began participating in archaeological and anthropological research teams in her native Iquique.

Vivien joined the DAM in 1983 as a research assistant to Dr Allison’s research team working on pre-Columbian diseases. After a period of time she left to get her master’s degree in archaeology. When she came back she was hired as a part time researcher. Formally she has been at the DAM for ten years, but fifteen years from the beginning of her engagement with research at the DAM. Explaining her experiences she says:

V. I feel I am privileged, because we know how difficult it is to develop this discipline in a poor country. It is difficult for an archaeologist to find a job since positions are limited to museum and academic fields. Perhaps this is due to our lack of interest in looking further to create new spaces; perhaps it is because archaeology is highly academic. [In Chile] An archaeologist is not going to be a cultural manager but a researcher. (Section 1.4, Para 27).

When asked what benefit the master’s degree brought to her career she complained that in terms of salary was of no importance. After getting the degree, her position as
a research instructor\textsuperscript{13} did not change, due to the qualification guidelines used in the University of Tarapacá, which are based on teaching rather than or equal to researching. ‘In this university you are hired as a researcher and evaluated as a lecturer; research status has not a high profile here’, she said. Nevertheless she recognised that the master’s degree put her in a better academic position, for titles and degrees in curriculum vitae are all-important at this moment. She recognised as well that the degree allowed her a better methodological understanding. Presently, she feels that she is behind the latest technological methodologies in bioarchaeology, since technology advances with such a speed that updating is a must. She is applying for a PhD degree in physical anthropology.

V. I must confess that my time to recycle [renovate] has come. I need to review my theoretical thinking, although I am not sympathetic with postmodernism. Nevertheless, these new perspectives shake the floor you are standing on, and force you to rethink the bases on which you are constructing the story or doing a reconstruction of a fragment of history… But I feel that in spite of the floor shaking all the same there are solid elements that support cultural reconstruction. But I have to recognise my weakness on the new theoretical approaches, except on specifics related to my work. I need to study how these matters are resolved in other parts of the planet. (Section 1.11, Para 119).

Being the only physical anthropologist at the DAM, I asked her how her absence was going to affect the development of that area of research. She thought it would not be a problem because she is planning to work with data she has already collected, so it would not be a hiatus in research. Besides, the laboratory of physical anthropology will remain open since there is a lab assistant in charge of the care of collections of human remains. This assistant has long experience in managing the loan of material for laboratory research. Furthermore, academic agreements with other physical anthropologists to share the study of DAM collections will not be interrupted.

\textsuperscript{13} Research instructor is the beginner’s position in the academic ladder.
Chilean physical anthropologists form a small group, and their relationship is smooth and constructive.

When asked of she prefers to be identified as an archaeologist or a physical anthropologist, she combined both terms and said she liked to be called a bioarchaeologist. The synthesis describes the interdependence of physical anthropology and archaeological fieldwork. She said that the first without the second is affected, and exemplified: ‘in tomb offerings distribution has meaning and communicates relationships which cannot be missed when interpreting the human remains’. She is of the opinion that a bioarchaeologist needs to be part of the fieldwork team in any expedition, in order to have a direct appreciation of fieldwork findings, as part of the methodological approach.

*Exhibition developers (EDT/COP): Six cases*

Exhibition developers build a community of practice (COP) when developing a museum exhibition project. But this COP is formed by individuals. I will provide a general description of each of them based on years of personal contact because they did not introduced themselves during the interview. Nevertheless, during the conversation some personal concerns appeared, mainly related to their work at the DAM and as a COP, and these are narrated in their words. In alphabetical order, using their given names, they are: Gustavo (G), Jorge (familiar Koke, I used K to differentiate him from Juan), Juan (J), Liliana (L), Mariela (M), Raúl (R). All interviews were conducted in different places of the museum premises, according to each one’s preference, Gustavo, in my office; Jorge, Juan, Liliana, Mariela, and Raúl
in the education room. But additional conversations took place in their offices or in common places of the DAM such as corridors, gardens or the cafeteria.

Museography, museographer, museographic, are used to mean setting up museum exhibitions as nouns and adjective respectively.

**Gustavo**

Gustavo is a teacher of plastic arts. He arrived at the DAM as a research assistant in rock art projects; after some years of annual contracts he was hired by the University of Tarapacá (UTA) as a professional officer. He is the registrar of the collections of the DAM/MASMA. In this capacity he is also in charge of the storage of collections. Presently he is completing his master’s degree in social anthropology in Cusco, Peru.

Gustavo’s contribution to the EDT/COP is proposing ideas, drawing large sized paintings and collaborating in every detail of mounting the exhibition.

G. As a registrar I think that it is necessary to create a well-defined database, describing the objects that have museographic potential, including photographs of the pieces. It would help with the selection of objects for display. The use of computers has changed the painful task of opening boxes in storage rooms to separate those that have exhibition potentiality from those that do not. I think that if we optimise this aspect, which is not very difficult at this moment, it will be a good improvement for the exhibition process. (Section 1.7, Para 40).

He is critical of the importance the university assigns to the museum. This causes a series of problems, for example, in defining the roles of museum Professionals.\(^{14}\) At the technical level responsibilities are specific and exclusive [draughtsmanship,

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\(^{14}\) In the description of personnel qualification in the University of Tarapacá’s, a Professional is a qualified practitioner who does not teach or research, consequently is not an academician, and has not right to academic improvements. Professional(s) with capital letter marks this special meaning.
photography], but as for conservation, including documentation and museography, being a Professional causes great misunderstandings. The university does not allow Professionals to engage in higher studies, and his master's studies have caused problems within the DAM. The possibilities offered to Professionals are basic courses, but the requirements of museum professionals are not considered. Only academicians have the possibility of obtaining postgraduate degrees, and Gustavo thinks that this fact hinders the development of the MASMA.

G. I think that some time ago we were leaders in several aspects of conservation and even documentation; we were respected, we were leaders at a national level. Today museum practice has improved in several museums in Chile, since their professionals are not restricted by university regulations that allow only academicians to improve their status, while those in the Professional pay scale cannot. Thus museology in those museums is better prospected than in ours. I feel that if we do not strengthen the academic level of this museum we are going to be left behind. To me it is clear, but I think that for the rest of the museum personnel it is not. This museum is strong in research but extension work is deficient, although extension is the counterpart of research. [At our retirement] We are going to leave an empty place; we have to think of the future. (Section 1.35, Para 315).

Jorge (Koke)

Koke is a teacher of plastic arts. He is in charge of administrative aspects of the museum. As a member of the EDT/COP he is the person in charge of the accounts, and responsible for the bureaucratic actions linked to that. The UTA is a highly bureaucratic institution and paperwork is complex and slow.

K. Look, I have to identify the item in which each income and expenditure fits, [according to the university accounts scheme]. Generally we know how much money is available for the exhibition, and we discuss where to spend it. Decisions are combined with the design, so we know where the money is going to be invested. (Section 1.1, Para 7).

I. The outgoes are allocated by you or by the group?
K. By the design. For example in Ayllu\textsuperscript{15} the largest investment went to those big photos, and it could not be rebated. We could do nothing about that. (Section 1.1, Para 11).

Besides his bureaucratic responsibilities, Koke says that he takes part in the setting up of the exhibition, mainly when display devices are not available in the market. As a teacher of plastic arts, he can apply some of the abilities learnt as a university student and also those developed by personal interest. He says that because he was trained in plastic arts he can develop additional abilities on the field, for example he learnt and applied serigraphy on his own. He added that he also has some knowledge of electricity and mechanics, learnt from his father, on the street, in different places.

K. I enjoy what I am doing. Yes, I like it very much, because it is not something fixed. I have the problem that if I am spending too much time in only one routine I get bored and feel uneasy... (Section 1.2, Para 45) I am engaged in so many activities that I cannot devote myself to just one of them. I have to choose one and the others are put aside. Projects have to be prioritised. In the last years the main concern has been the storage system, funded by Fundación Andes.\textsuperscript{16} Each year I promise myself to pay more attention to the museum galleries, but facts overrun intentions, and I think that now that the storage system project is going to end, I can hopefully do it. (Section 1.2, Para 49).

He also expressed interest in getting practical experience in exhibition processes taking place in other prestigious museums as a kind of workshop. For him being part of that experience is more useful and illustrative than books.

\textit{Juan}

Juan began his studies in archaeology at the University of the North, Antofagasta, but he did not complete them. He graduated as a draughtsman at the University of the North, Arica. With this credential, he joined the DAM as research assistant in

\textsuperscript{15} Temporary exhibition.
\textsuperscript{16} Fundación Andes is a national foundation that has helped to finance several projects at the DAM.
archaeological projects. Recently he completed his studies in archaeology at the University of Chile, Santiago, and currently he is reading for his PhD in ethno-history at the University of Chile, Santiago. At the time of the interview he was Director of the DAM/ MASMA. I wanted to know how this responsibility affected his participation in the group of exhibition developers.

I. As Director of the Department, how will your participation in the new museum exhibitions be affected?

J. There will be no change. I will have the same role, motivating, coordinating, and when it is necessary to hit a nail, I will do that as before. (Section 1.17, Para 167).

He commented on the exercise of the action science reflective analysis:

J. It is interesting because we can transmit, in this case to you, a kind of... summary of these 10 to 15 years of work, which, if I were to put these words on paper, would depict the museographic method of the MASMA. (Section 1.23, Para 338).

He also commented on the engagement of everybody to make the museum relevant:

J. In general, everyone in this team... I do not know exactly, but you have to evaluate it... Everyone has the same appreciation, some more than another, but we are conscious... I have put names to the three texts on displays, the written texts, the objects and the complementary images. We know that we do that. A nice example was when we were preparing *Arica Prehistorica* we were waiting for the Fundación Andes’ grant that was so long delayed, and we had an additional funding from the university of 100,000 pesos [some 100 sterling pounds]. We knew that in the case that we have only this small amount of money the drawings to illustrate the presence of man behind the archaeological artefacts could not be missing, and we spent the whole amount in those drawings. For us Andean people originated these cultures and they should be represented somehow. (Section 1.23, Para 274).

Then the painter had the problem that she could not imagine a man wearing that flat object kept in a drawer. So Vilca [Andean carpenter and fieldworker at the DAM] wore the archaeological woollen shirt and modelled for the drawing. [Then the soft folds of the shirt hung naturally]

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17 Permanent exhibition at the MASMA
18 After conservation procedures woollen shirts lie flat in the drawers.
and the Andean face traits and body proportions agreed with the whole]. (Section 1.23, Para 278).

In this paragraph the contribution of everybody is seen overtly, as Juan explains.

**Liliana**

Liliana is a textile designer from the University of Chile, Santiago, who wrote her Professional thesis on design of archaeological textiles. For this purpose she went to Arica for fieldwork, and remained there ever since. As soon as she completed her studies, she was hired by the university to undertake research on archaeological textiles. She learnt textile conservation in Switzerland, Spain, Portugal and the USA at the Winterthur Institute. She is presently a PhD student in social anthropology at the Universidad de Barcelona, Spain.

She declares that her contribution in museum exhibitions has been selecting and preparing the textiles that go on display, writing texts, and offering her aesthetic opinions. She has been at the MASMA longer than the other members of the EDT/COP, and she can recall when all the members of the museum participated actively in the production of exhibitions. Even when Flavio [an architect] was hired as a museographer, his main duty was structural rather than archaeologically contextual. She says.

L. My role has never been of total responsibility, but I have collaborated writing texts, providing the textiles that are taken to the galleries, and giving my opinions on aesthetics. (Section 1.1, Para 8).

... I would say that with Flavio there was better organization. Before Flavio’s arrival, the exhibition production was more visceral: someone had an idea and, if accepted, it was developed without planning. Flavio considered the architectural design, the morphology of the exhibition. He had the visitor in mind, but he also followed the chronological model of
display intended. I would say that the main difference between then and now is that the museum looks more 'modern', the design is cleaner, if compared with the craftwork of old exhibitions. (Section 1.4, Para 61-63)

But I would say that, with Flavio, the human agency behind archaeological object began to appear (Section 1.4, Para 71)

When I reminded her that in textile exhibitions she has total responsibility, she agreed with me. When asked if being a part in exhibition design is rewarding for her, she agreed but she was of the opinion that improvement is always possible.

**Mariela**

Mariela is a ceramicist. She is in charge of object conservation at the DAM. She also cares for preventive conservation in exhibition and storage rooms. She studied at the University of Chile in Arica, and had a conservation term at Winterthur Institute, US, in object conservation. She is presently finishing her master degree on cultural studies in Cusco, Peru. In relation to her participation in museum exhibitions she says,

M. If I think carefully, I think that my role in developing exhibitions is to give the image that the exhibition must have; the aesthetics, colours. All of us collaborate in these aspects but I think that when Juan thinks of my participation these are the aspects he has in mind, and I am pleased with this responsibility. It means to think about the place of one particular object, which colour goes with it, how the piece will look like, and what is the object telling. These are the aspects that I deal with in museum exhibitions. (Section 1.1, Para 8)

I. Do you feel comfortable with this responsibility?

M. Yes, yes. I like it very much; I like aesthetics, and I like to play with colours. I think about what we want to present in the exhibition, and then I think in sensations, and I begin getting into it and I feel nice. I like it, I like it, I like to feel the colours; I want to feel the colour of each object we are adding because each object has its own colour, which plays an important role in giving strength to the idea we want to convey, and I like it. (Section 1.3, Para 24)

I. When you identify colours and ideas do you feel satisfied?
M. Not completely. What I feel and what takes place do not agree one hundred percent. You can never be satisfied. To find that... the colour or texture you imagined cannot be found easily, but, well..., you proceed accommodating ideas. The other thing is that we develop most of the exhibition. We develop those volumetric objects we require since in Arica we cannot find those craftsmen who can fulfil our requirements, and feel as we feel, to express what we want to show. (Section 1.3, Para 28)

... We are never satisfied, if we were satisfied next time... I think it is part of the creativity, for if we are not satisfied there is room for improvement next time. It is like climbing higher each time. This gives strength to the exhibition, in the sense that we are looking for a higher level each time, and the exhibition we have now has to be improved. It is part of the game you play hoping the situation will improve in the future. If we put it into a balance, I think we do more than we think we do, and it is our intrinsic position that the future projects need to be better. (Section 1.3, Para 32).

Raúl

Raúl studied plastic arts at the University of Chile in Arica but he did not finish the career. He became interested in photography and has followed distance learning courses to improve his knowledge in this field. He came to the DAM as a research assistant in rock art projects, and stayed until he was hired as a technician. He manages the photography lab at the DAM, and the storage of drawings and maps, because he is in charge of both the topographic as well as the photographic records during archaeological fieldwork.

When asked about his responsibilities in exhibition projects, he explained that it is concerned primarily with the photographic record of the pieces that are taken to the galleries. The records are in black and white prints as well as colour negatives. These records are kept in the photographic archive as an exhibition file. He is also in charge of the pictures that go on display as part of the exhibition setting and those for catalogues and other uses. When asked if he liked his role, he said:
R. I like it very much. I am conscious that I am contributing to the knowledge, study, interpretation and communication of our past, and each project is a challenge to my professional production. (Section 1.3, Para 28)

When asked about which working conditions he would like to improve, he referred to deficiencies of the photographic storage room, which is not free from insects and dust; moreover temperature and humidity fluctuate, especially in summer time. In his opinion this problem should be addressed soon to protect the collection.


Visitors: ten cases

Visitors are divided into two groups: Museum habitués and Teachers, as explained above. It is an artificial division following a functional purpose but both groups have the characteristic of visitors, having the same relationship with the museum. They come to see the exhibitions and go back to their normal life, most probably enriched by the experience, without changing the museum. The social character of knowing in the museum is present in the two groups, both, museum habitués and teachers, influence and are influenced by those around them.\(^{19}\) The difference between them is that teachers' way of interpreting the past from museum exhibitions plays a leading part on their students due to the authority of their position at school.

Each visitor is introduced following the style used in the previous sections. The reader will notice that in this subsection some descriptions are shorter than others, it is due to the time allocated for the interviews. The interviews were intended to be intense and content rich on the subject of the thesis rather than on personal details. The interviewees graciously gave up part of their working or family time for the

interview, and some of them expressed concern about the length of the interview. Most visitors kindly agreed to be interviewed in a neutral space where there was exclusive dedication to the analysis of the problem. Others could not find a more propitious moment and locale than their own workplace, where surrounding conditions were distracting in some cases; therefore, the central problem was immediately addressed and personal details were kept to minimum. Table 3.4 shows the names, activity and group frame of visitors, in order to clarify the identities and number of participants there are in the research-group.

<table>
<thead>
<tr>
<th>Name</th>
<th>Activity</th>
<th>Subdivision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balbi</td>
<td>Architect</td>
<td>M. Habitué</td>
</tr>
<tr>
<td>Diego</td>
<td>School student</td>
<td>M. Habitué</td>
</tr>
<tr>
<td>María Inés</td>
<td>Journalist</td>
<td>M. Habitué</td>
</tr>
<tr>
<td>Nancy</td>
<td>Social worker</td>
<td>M. Habitué</td>
</tr>
<tr>
<td>Sam</td>
<td>Teacher of Spanish</td>
<td>M. Habitué</td>
</tr>
<tr>
<td>Etna</td>
<td>History &amp; geography</td>
<td>Teacher</td>
</tr>
<tr>
<td>Lili</td>
<td>Philosophy</td>
<td>Teacher</td>
</tr>
<tr>
<td>Jorge</td>
<td>General basic education</td>
<td>Teacher</td>
</tr>
<tr>
<td>Roberto</td>
<td>Maths/computer</td>
<td>Teacher</td>
</tr>
<tr>
<td>Víctor</td>
<td>History &amp; geography</td>
<td>Teacher</td>
</tr>
</tbody>
</table>

Table 3.4 Name of museum visitors, indicating activity and subdivision within research-group.

*Museum Habitués: Five cases*

Museum habitués represent those people who regularly go to the museum for different reasons, for example out of a personal interest or wishing to take relatives and visitors to an interesting place in Arica. Some of them also go for professional reasons, for example as organisers of professional meetings, since the museum provides them with a congenial place to discuss their problems. None of them have professional links with the museum.
**Balbi**

Balbi is a young architect. He was born in Arica and attended primary and secondary school in Arica. He has just got his professional title and has returned to his native city to organise his architecture office. The interview took place at his office.

He claimed to have visited the museum since childhood.

> B. I visited the museum in primary and secondary school. In fact, I think that my first visit took place some eleven years ago. (Section 1.2, Para 19)

> ... and I have visited it again and taken my guests there. Well, first visiting it by myself, and then showing it to my visitors. (Section 1.3, Para 24)

Balbi happens to be a member of the architectural firm that is bidding with pre-projects for the construction of a new museum building. For this reason in days previous to the interview, he went to the museum a few times to look at it from structural and environmental viewpoints as well. He is critical of the small space allocated to exhibition galleries. His comments on these aspects can be found in the main text of data analysis corresponding to museum habitués.

**Diego**

Diego was a student in his last year of secondary school at the time of the interview. He was born in Arica and has completed his primary and secondary studies in Arica as well. His father is a university lecturer in engineering and his mother is an executive secretary who has worked at the university on term contracts. One of those periods was taken at the DAM/MASMA, an appropriate time for Diego to visit the museum frequently. The year I interviewed Diego, he had visited the museum in four consequently occasions in order to complete an academic assignment.
The interview took place at his house, while he was waiting for a companion with whom he was going to a football game. I wanted to have a young adult viewpoint, so I accommodated the interview to his tight agenda. He was willing to participate but finding the time was difficult because he was always very busy.

When asked what career he wanted to study [I had thought it could be archaeology] he answered:

D. My dream is to study engineering like my father. (Section 1.2, Para 10)

I. You have told me that you have been to the museum several times What has brought you there?

D. Because my mother was there, I had the opportunity of going to the museum and I used to see the mummies in the conservation rooms. I knew the museum, and I know what it is like, and what I can find there. (Section 1.3, Para 12)

It is clear that for Diego the museum means mummies, dead people with no contemporary meaning. Only during the reflective questions of the interview did new thoughts come to his mind and contradictions appeared, meaning that he could also find something else from museum displays. Diego is a very nice person but at that moment he behaved like a student; he did not develop any proper thoughts on the subject, but expected questions to be asked which he answered with spontaneity.

*Maria Inés*

Maria Inés is a journalist. She was born in Copiapó, northern Chile. She studied in the University of the North, Antofagasta, and has worked as a journalist in the Arican local newspaper as well as in the UTA on annual contracts. As a journalist she has been to the museum several times, but she has also visited it for personal interest.
The interview took place in my house at teatime. When asked how often she had visited the museum, she answered:

"MI. Well, this version of the museum exhibition, say... five to six times."
(Section 1.1, Para 8)

I have walked around the place, looked at each case carefully... Look! It is curious but each time you visit it you discover things that you did not see previously. That could happen for many reasons, if you are tired, or have a loss of attention, which can happen frequently, especially in summer time when it is so hot that it is difficult to concentrate. But it is curious that the more you visit it the more interesting you find it. You can better appreciate what is on display and discover new elements that contribute to a better understanding of how life was among the inhabitants of Arica, in this area. (Section 1.3, Para 14)

"... The Museum has so much information. It is impossible that in just one visit, of... how long? ... some half an hour, which is more or less the normal time of a non-quick visiting. Without being too slow, I think that it is insufficient; one hour is insufficient. (Section 1.3, Para 18)

Some inconsistencies of minor importance are found in Maria Inés’s wording. They are obliterated by the force she puts into expressing her thoughts. For example, in the last paragraph quoted you cannot tell which is the minimum time she thinks a museum visit takes, but her inconsistency is discounted by the idea that however much time one spends on a visit, it is not enough. Clarifying whether she thinks that half an hour or an hour is the normal time spent visiting the museum is, in my view, irrelevant in this case. If her opinion had influence on e.g. managerial decisions, it would have been important, but that is not the purpose of this research. What matters here is that she clearly thinks that one visit is insufficient to get grasp of what is on.

Nancy

Nancy is a social worker. She identifies herself as an Aymara descendant, and she mainly works helping Aymara farmers of small plots with their legal rights to water resources. She is self-employed after working for ten years in the State Office of
Agricultural Organizations. The interview was held at her house. When asked how
many times she has visited the museum she said:

N. Well, since it was opened, some forty or fifty times (Section 1.2, Para 16)

I. So you have experienced several exhibitions; you almost know the history
of the exhibitions at the museum!

N. Yes, you are right!

... I think the museum has been evolving. I am, somehow, telling you my
experience as a visitor during my lifetime as well as accompanying my
visitors there. These are my observations. I think that the museum has
improved a lot, from being too archaeological and very.... has improved to
show a sense of life. It has become more ethnographic, I would say.
It is more dynamic and educative, although I think it could be more so. I
was pleased when the interactive computer facilities were installed in the
museum. Children, and parents as well, played choosing costumes for the
pre-Hispanic figures, and it was a pity that the last time I visited the
museum those computers were no longer there.

... I think that a message is missing, a warm message to the visitor. (Section
1.6, Para 33)

Nancy has a motherly attitude, very friendly, and provided practical advice that I
think could be of help for exhibition developers and myself, as a museum educator,
to improve museum appreciation. She knows that she has greater knowledge of the
Andean worldview than the one we, museum people, could possibly have, and she is
sympathetic with our efforts to acquire it.

Sam

Sam is a British student of Spanish at Leeds University, UK. His aim is to become a
teacher of Spanish as a second language. He has already finished his studies, and
came to Arica in a professional exchange programme, organised by the Faculty of
Education at the UTA. He was offering English language practice to Chilean students
who are preparing to become teachers of English as a second language at the
Department of English of this university. The interview, held in Spanish, took place in his office at the UTA, between two teaching periods. When asked how many times he has visited the museum he said:

S. How many times? ... Three times. (Section 1.2, Para 38)

I. Three times. And do you think that a visitor to the museum can have a real vision of the past?

S. I think so; I think that the mummies on display transmit that idea. From the very first time I was there I got it immediately, do you understand me?, because in front of me there was a human being. This is why I think you can get into the past; it is not so much because of the supporting drawings. Those human corpses... that were alive so many centuries ago... and were there... I don’t know, they impressed me deeply. (Section 1.3, Para 47)

Sam appears to be a very sensitive person. He is easy to approach and open and straightforward in his opinions.

Teachers: Five cases

Teachers were chosen for their individual opinions and personal interpretive response to the museum. While interviewing them it became clear that teachers could not separate their own experiences of the past, from those of their students. They clearly showed a distributed cognition, which means learning together with their students.\(^{20}\) Then, the original idea of interviewing teachers for their own sake became inclusive of their students’ reported experiences. In spite of some museum habitués also reported experiences of the people with whom they have shared their museum visit, the homogeneity of perspectives among teachers obliged me to distinguish this subgroup from museum habitués.

\(^{20}\) See for example, Salomon 1993b: 111-114, 120, 132-135; Perkins 1993: 100-101
Teachers belong to various school organizations whose administrative staffs have divergent views concerning the educational potentiality of the museum. In some cases bureaucracy discourages museum visiting and teachers find difficulties when taking their students to the museum.

When describing the teachers’ workplace I must explain that in Chile public schools are run by the government and are free, while private schools are run by private organisations, and they are generally quite expensive.

Etna

Etna was born in Arica and studied from school to university in that city. She got her qualification in pedagogy of the social sciences at the UTA. Presently, she is a teacher of history and geography at the Liceo Abraham Lincoln, which is a private school offering primary and secondary education levels. She teaches in both levels.

For this research we met in two occasions. The first interview took place in her school, in an empty classroom, between two teaching periods. The second interview took place in my house over tea, which stimulates talking. She began by acknowledging the museum as facilitator of her students’ visits. She said:

E. I want to thank the museum because the school asked for special attention for our students, and we got it immediately, the teacher of philosophy, Lili, and I, OK? We went the day before the visit, right? To see what the museum could offer us... I had already visited it, but I needed to know what new things we could find... (Section 1.1, Para 6)

I. Is Lili the teacher of philosophy?

E. Yes, she is. Both of us had similar objectives, which was the culture of the primitive inhabitants of Arica. The only inconvenience was that on that day there were too many students in the museum, from other schools
as well, so we had to... There was not a guide for us, not a catalogue. That was the only problem I had. (Section 1.1, Para 12)

I. That was a problem.

E. Yes, because in previous occasions there was always a guide, but that day, due to the other school groups, I had to act as a guide myself, explaining each case to the students. They were very pleased and time finally run out. (Section 1.5, Para 16, 20)

Etna went on describing her and her students’ experience on that day. She also said her colleague’s experience that was different from hers. Lili and her students attended a lecture organised for them in the education room, and her students had the opportunity of working with the *Yatiqasiña* computer programme in that room as well.

Etna is a dynamic and well-organised person. Most teachers take their students to the museum without giving notice of their visit, so this causes gallery congestion and the disruption that Etna was referring to. Students from other schools came at a time when Etna was supposed to be specially attended to. Being a resourceful person, and having been with her students at the museum in other occasions, she could counterbalance that inconvenience to her and her students’ satisfaction.

Lili

Lili is a young teacher of philosophy as well. She studied in Arica but after graduation she had a previous appointment in Iquique. Presently, she teaches philosophy in the last two grades of secondary school at Liceo Abraham Lincoln in Arica. She said she enjoyed her profession because she likes to work with students. I met Lili at Etna’s suggestion. The interview took place at her school, after she had finished teaching. The place was the staff room, and we had a good rapport in spite
of the surrounding noise. But after about forty minutes, the school ceremony of
celebration of the national day began. The noise of the loudspeakers caused us great
disruption, and after a while we had to end our meeting.

When I asked Lili how many times she had been to the museum she said:

L. I was born in Arica, so I have gone to the museum many times, from my
school days onwards. Besides, I regularly take there anyone who comes to
Arica to see me. A visit to the museum is a must. (Section 1.5, Para 48).

...This was the first time I used the venue as a teacher. I coincided with the
history teacher in the subject we were doing with our students. I introduce
Greek philosophy in fourth grade, and I thought that it would be a good
idea to compare what was taking place in Greece and what was happening
here with these cultures. I wanted to give my students wider concepts, a
cosmovision of pre-Columbian cultures, and with this in mind we went to
the museum. The teacher of history was dealing with pre-Columbian
societies as well. (Section 1.5, Para 52).

Lili seemed a very sensible and knowledgeable person to me. Conversation flowed
easily independently of the continuous surrounding activity. Only when the
loudspeakers made it impossible for us to hear each other, did we end the
conversation. Unfortunately, we did not find another opportunity to pursue our
reflective dialogue. She was open and friendly and willing to collaborate with this
research whenever possible, but we could not agree on a date for a second meeting.
Nevertheless she covered most of the subjects that interested me for this research.

Jorge

Jorge is a teacher of general basic education with a major in social sciences. In this
capacity he teaches at the D-24, Gabriela Mistral Public School. This school is
located in an impoverished suburb of Arica, and his students have limited economic
resources. A trip to the museum means hiring a bus, which neither his students or the
school can afford, so he organises various activities in order to earn the money they need for hiring the bus. This shows his interest in providing his students with a more comprehensive education.

Jorge came to the museum to be interviewed. I invited him for a cup of tea at the museum cafeteria while we talked over the subject proposed for the interview. Then we went to the museum gallery and he commented on the displays. Finally we talked of learning and understanding in my office. It was a long intense interview.

Working as a tour guide he has taken his clients to the museum, just as he takes his own visitors. He reminded me that I have helped him to explain the museum to his 7th and 8th grades students, and that I had also worked with a small group of his younger children with Yatiqasiña, the interactive computer programme we had designed. He added:

> J. You have been a good hostess, helping us to enlarge the perspectives of the schoolroom, since teachers' work is theoretical and we work just with written content guides... The visits to the museum help the students in their efforts to know about all American societies and their surroundings in the past as well as in the present, especially Arican peoples. (Section 1.1, Para 14).

I have also brought tourists to show them this museum... (Section 1.14, Para 61).

Jorge is a caring person. He loves his children and wants to help them as much as possible.

Roberto

Roberto is a teacher of computer programmes in the public school Eduardo Frei Montalva in Arica. This is a comprehensive school of primary and secondary education. Roberto teaches in both of them. He studied pedagogy in mathematics at
the UTA and his degree seminar was in computer science. He worked for only one
year as a maths teacher, then turned to computing and has been teaching computer
related operations for 10 years. He shares the computer lab with another colleague
who was on professional leave in the USA. The interview was held at his laboratory,
during his working time, so that students were busy with some tasks while the
interview took place. Roberto expressed his thoughts on the subject of the interview
during both the class and the break; when the second period of class was about to
begin we had to finish the interview.

When I asked R. how he knew about the MASMA, he said:

R. Taking my relatives there. I have many relatives in Rancagua [a city
located south of the capital city, Santiago; some 2100 km from Arica].
Whenever a relative comes to see me I take him [her] to the museum, the
Morro, the beaches, but it is the museum that is most important. It is
obvious! Because in this museum, even if it is a small place, all the old
traditions of Arica are found. We are talking of the native peoples of this
place, long before Arica was as it is now, do you understand me? One
immediately has a panoramic view about what life was like, traditions,
customs, their colour, their way of life, everything is there and I am very
interested in those aspects. I have always been keen on those things. I
mean this northern culture interests me more than the southern culture,
because I find this one more demanding. (Section 1.5, Paras 48-54)

I. Do you mean living in the desert?

R. I mean the way in which life is depicted in the museum, you feel... I mean
there is an intention to show how people lived, do you understand me? It
calls my attention when you find... hum?... You have a maquette of the
sea, a way of fishing, the way they lived. When one looks at that maquette
one immediately grasps the pattern of their lives. And then, after seeing
the maquette, all the utensils they had and the resources to which they had
access, can be seen. It is not just one museum case but the whole
exhibition that is different from other museums I have visited. (Section
1.5, Para 54)

Roberto gave me the impression that he enjoys his work, but he also seems to be
looking for something beyond technology. His professional training is not
humanistic, nevertheless he is sensitive to other ways of life and can perceive the
rigour of the desert north in contrast with his native Rancagua, a fertile, populated area, next to the political centre where decisions are taken, and everything looks running smoothly.

Victor

Victor was born in Arica, two years after his parents moved from Valdivia [some 3200 km south of Arica] to the north. He studied pedagogy in social sciences and graduated as a teacher of history at the UTA. He is also a teacher of religion, has taken several courses in ethnicity, ecology and participatory education, and joined a programme leading to a master’s of social science that he has not yet completed. He has travelled along Chile\(^{21}\) and to the neighbouring countries, studying different realities. He describes his professional development as heterodox [I think he wanted to say heterogeneous, but I did not interrupt his thoughts to check the meaning of the word he was using; I guessed the meaning from the following sentences]. He said approximately:\(^{22}\)

V. I would say that my advantage is that my formation has been heterodox. I would explain it as follows: what the university taught me is no more than the 10% of what I know now through my personal contacts and my own reflections. Now I have pursued studies in this university, in other universities, and outside the university, for example working in non-governmental organisations [NGO]. All these have allowed me to reach a certain theoretical-practical maturity. I have defined my basic position. I think that, as a teacher I have to play an intellectual role in Chilean society. (Section 1.1, Para 13)

He said he likes his profession and feels fulfilled as an individual. In spite of all the problems that the teaching profession brings, he thinks that he had the advantages he has described above [he repeated them using different expressions]. He concluded by

\(^{21}\) In Chile you always have to travel along the country. There is no other possibility; the country is very long and extremely narrow.

\(^{22}\) I found difficult to translate his thoughts since they were not very clearly expressed.
explaining that he is engaged in learning from the opportunities life offers him, as a result of his personal quest.

The school where Víctor works is an evening school. His students are people who left regular schooling at some point in their lives and have come back to complete their secondary levels. Most students work during the day and go to school in the evening. Víctor characterised his students as people of low income, consequently getting money for a museum visit is not an easy task. Besides, Víctor cannot take his students to the museum on weekdays, but only on Saturdays when there are no museum personnel to help him with interpretation of displays. He complains about this fact, and generalises by saying that the museum does not offer him any help at all.

I was very grateful to Víctor because he was so frank in his opinions. Sometimes I was offended by his remarks, as a member of the MASMA, but I did not show that. In order to ease the flow of his thoughts I never interrupted him or explained to him the reasons the museum has to act as it does, unintentionally causing him problems. Even though the museum can explain why visitors’ problems originate, the problems still exist, and we have to face them.

*What moves interviewees to participate in this research*

After listening to my interviewees, it is my impression that their willing attitude towards this research is due to their personal affinity with local archaeology and the past, as meaningfully constructed by the authoritative analyses of archaeologists. All participants, except two cases, were born in the desert of northern Chile where
findings of well preserved archaeological remains are frequently noted in the local media: TV, newspapers, radio. So that expectations of the Arican community grows and many people go to the museum to see and listen to experts’ viewpoints. The frequency of archaeological finding in northern Chile influenced Vivien and Calogero in choosing their profession.

Agreement to participate was immediate in every case. Problems arose about the amount of time they could allocate to the interview and the meeting place. These had to be negotiated. All the participants enjoyed talking about a topic that they had never considered a subject for reflection: going to the museum is a natural response to a permanent stimulus. The museum is there to put them in contact with the intriguing ancient past.

Participants working in the DAM/MASMA made a life decision when they began studying and caring for the remains of the distant past. All of them confirmed their commitment to their responsibilities, something taken for granted. Consequently, to analyse their experiences surprised and interested them. The time that the museum participants set aside for this purpose always took longer than we had planned. Calogero’s unique interview went on for four intense hours.

*Relationships among participants in this research*

Relationships among the members of the DAM/MASMA are congenial; any difficulty is solved with good will and discussed in reasonable terms. Nevertheless, there are no professional discussions that help people to grow together towards a given objective. The exception is mounting an exhibition when EDT acts as a
community of practice. Even so, there is no theoretical thinking about the exhibition to be developed but rather a practical reaction to problem solving. Once the exhibition is open there is no further engagement of the EDT/COP with the exhibition. Curators work separately, each one adhering to the research agenda they have devised and the projects' deadlines they have accepted. Occasionally, if a specific subject requires an immediate solution, some or all members of the museum collaborate to deal with the emergency. Once the problem is solved, they return to their individual projects.

There is only one museum educator, and in her absence or when groups are too numerous, other members of the Department willingly collaborate interpreting the displays if visitors ask for this service. In general, the relationship between DAM/MASMA personnel and museum visitors is attentive, even cordial, but it is not permanent or deep. We are recognised by members of the community on the streets or at social events, and the friendly attitude is resumed, but in general, members of the DAM/MASMA do not have an active social life because we are too concerned with our demanding work. The university hires us for 44 hours a week, but we work more than that, compelled by research projects, lecturing, professional writing, professional meetings and the like.

Now that all the participants in this project have been introduced, I will proceed to the particularities of fieldwork.
Description of the particularities of fieldwork

Time schedule

Fieldwork took place on two separate occasions, from August to September 2000 and January to April 2001. These dates were chosen according to opportunity. January to April is summer time in the southern hemisphere, and it is vacation time for institutions belonging to the regular education system. Consequently, it was not a propitious season for interviewing teachers; they were interviewed in August and September, before the busy period of semester evaluations. Instead, January to April was considered appropriate for interviewing museum habitué and the museum staff at the beginning of a new academic year.

Opportunities to interview participants were taken whenever possible during these periods, since their personal agendas and regular duties took precedence. However, parallel activities took place between the two interviews periods, such as participant observation at the DAM/MASMA, review of documents and related literature.

Interviews

In-depth interviews were attempted in open-ended dialogical interactions. The idea was to focus on the interviewee’s experience, feelings and meaning-making strategies when interpreting the past in the museum of archaeology. The degree of freedom for participants to organise their thoughts on the agreed subjects was as ample as possible, and great care was taken with each individual case. When respondents did not feel comfortable or able to organise their thoughts independently, semi-structured interviews were applied in order to facilitate the reflection on aspects of the general subject proposed. The guideline applied in semi-
structured interviews was flexible, mainly adapted to the natural flow of conversation. Questions did not follow a strict order nor were they at all compulsory.

Conciseness or amplitude of answers, or the possibility of developing new ideas were unrestricted. Avoidance or brevity on some topics during the interview was not insisted on unless they were essential to the aim of the project. In that case the participant was encouraged to rephrase or refocus. This does not mean that some aspects were irrelevant to the research, but the natural flow of the conversation was favoured; some other members of the research-group would address the topic anyway. Statistics recording the times that a topic was addressed was not an issue, so that the same topic could be addressed in a variety of ways or not discussed at all by some participants.

In the museum habitués research-group the semi-structured interview was the method used, because they expected to answer a questionnaire, the type they were familiar with. Teachers, instead, organised their thoughts around the proposed subject more independently. For both groups this was the first time they were in a position of thinking over a recurrent activity that was not intended to be such or a subject to talk about. The focus on museum interpretation, and knowledge gained from a visit to the exhibition galleries was a completely new subject of discussion for all of them.

Among the museum professionals, curators were also addressed separately via an in-depth interview on a proposed subject, encouraging open-ended answers. Due to the

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23 Teachers and museum habitués did not consider themselves as frequent museum visitors. To visit the museum is not something they could accommodate as a category in their lives.
difference in individual characteristics, and time of employment in the museum, the information proved varied, but both participated with good will, sincerity and openness, making the interview a gratifying experience for the researcher.

The EDT/COP group was addressed using reinforcing methods. One was the action-science approach for communities of practice\(^{24}\) and the other a semi-structured individual interview addressed to each member of the team. The action-science approach was developed in four sessions or seminars, as will be explained in chapter five. The individual interviews were planned considering that in group sessions not all members have equal opportunities to express themselves, unless the session is highly structured, which plays against spontaneity and sets a time pressure so as to offer equal access to the floor. The subjects discussed in the individual interviews were integrated in the seminar sessions and they are not analysed separately in this volume.

During the interview great attention was paid to creating a friendly atmosphere so that people would feel free to express themselves without any constraint. Even so, there were environmental and time restrictions with two teachers who preferred to be interviewed on the school premises between two lesson periods. This resulted in shortened interviews, and a lost opportunity to develop further ideas on related subjects. A third teacher was partially interviewed at school; the second interview took place on a different day, over a friendly cup of tea in a comfortable atmosphere. A time restriction also occurred with the visitors, Sam and Diego; Sam had a teaching session following the interview, and Diego a training game.

\(^{24}\) Friedman 2001:159-170
Research design and strategies were observed systematically during fieldwork. The researcher contributed only by encouraging the flow of thoughts, carefully avoiding expressing her opinion on the subject, even when the participant’s comments would have prompted a contribution from the interviewer in a different situation.

The teachers’ segment discussed, in addition, the subjects of understanding, learning and knowing, which were not addressed in the other research-groups. The idea of presenting these topics to teachers was based on the fact that the concepts are common expressions in the educational profession, and are also a matter of importance in museum education.²⁵ Besides, they were reflecting on their own experiences as well as on those of their school children, and on the school stimuli for visiting the museum.

Timing of interviews

Originally in-depth teachers’ interviews were planned to take forty-five minutes per session. It was thought that two to three sessions would be needed, depending on the participant’s time availability and openness to the proposed subject. In fact the number of sessions varied; most teachers preferred to have one extended meeting instead of separate sessions. Two of them preferred two encounters. On the other hand, museum habitués expressed themselves concisely; they were not familiar with analysing a taken-for-granted subject. They needed to be prompted with questions to bring to mind aspects of their museum experiences. Most of them were interviewed in one session of about fifty to sixty minutes.

The four seminars applying the action-science method were to be developed in about forty-minutes each, taking into consideration the difficulties of coinciding participants’ work agendas. Some of them took considerably more time, in spite of the Director’s request to be careful with the time schedule. Discussions were interesting and participative, so they often lost track of time, the Director included. Interviews with colleagues were not time-related; they were open to allow inclusion of all personal opinions. The longest interview took four hours, the shortest around forty-five minutes. This reflects the freedom of the participants during the process, and the flexibility of the researcher to the circumstances. Nothing had to be forced or uncomfortable, and also if they spontaneously recounted minute details of their experiences they were most welcome, and in no sense limited.

Fieldwork produced a huge amount of data. Nearly twenty tapes of 60 and 90 minutes were recorded, necessitating a long period of verbatim transcription and data management. All recorded information was in Spanish, the native language of the participants, except the British citizen Sam Selleck, who also preferred to speak in Spanish as language practice.

Data structure, analysis, and general procedures for data management are explained in the following sections.

**Important issues of ethical practice**

At the moment of addressing and explaining the purpose of the research project, all interviewees were asked about the necessity for confidentiality of their opinions. They were not worried about confidentiality and were pleased about the possibility
of being mentioned in this research. Accordingly, I have written the real names of the participants and their professions without concern. For conciseness I mentioned just their first name. The only expression of discomfort was met in the seminar sessions, when one member of the group expressed annoyance with videotaping, consequently video recording is limited and is not included as a document for analysis.

My commitment is to be as truthful to the participants' opinions as possible within the realm of my interpretation of texts and circumstances. I am also engaged in theoretical research, and the supporting framework chosen facilitate it. Consequently, I am clear about my responsibilities; I am also aware of my rights in respect of my data, my analysis and explanations, but I cannot take responsibility for anticipating how others might use my research.26

This research is explanatory; it is intended to build a picture, to analyse and interpret the findings. It is a search to answer the main question of museum interpretation on archaeological matters in a new way. Other researchers could take my research and explanations as a model to imitate or deconstruct or enlarge upon, but I am quite sure nobody will ever be harmed by my interpretations.27

Research evidence and data management

Generating data for understanding and explaining the problem of interpreting the ancient past in a museum of archaeology followed the suggested methodology of qualitative research, and the methods of inquiry already presented. The sampling

26 Mason 1996: 161
27 When rewriting this thesis I came aware of the Statement of Ethical Practice of the British Sociological Association (BSA) 2002, my principles coincide with them. The reader will notice coincidence of my ethical arguments in this thesis with articles 1, 6, 13, 14, 16, 17, 21, 23.
strategy to generate meaningful data has also been discussed, and the fieldwork process described above.

In this section the structure and analysis of data are outlined. A procedure was used from the stage of transcription of the tapes, to coding and to charting the information into tables and trees that provide an easy way to read the data, and help to develop analytical thinking. The procedure was devised with the purpose of having a consistent system for indexing the data, according to a set of common principles and concepts\textsuperscript{28} that could allow cross-sectional analysis whenever possible. Cross-sectional analysis was intended at the very beginning for the whole sample but because the emphasis was rather on in-depth thoughts and coding was emerging from data, cross-sectional analyses was not facilitated except among the subgroups.

Transcriptions

Interviews were recorded on audiotapes containing the speech of both the researcher and the interviewee, and the discussions of the community of practice that took place in the seminar meetings. The first parts of the action-science seminar's sessions were also videotaped; but, as explained above, they were interrupted at a participant's request.

Transcriptions in this case correspond to the written form of each audiotape, using WinWord 2000 as text processor. Careful attention was paid to transcribe verbatim each interviewee's speech in order to be faithful to the speaker's accounts and opinions. When inaudible passages occur, especially in the group discussions, they

\textsuperscript{28} see Mason 1996: 111
were not completed, a space being left blank. Transcriptions are in Spanish. No comments were added at this stage of the process, except for a few clarifying explanations enclosed in square brackets.

In order to make sense out of the enormous amount of information obtained during fieldwork, an electronic system of sorting and coding ideas was chosen as indicated before. The software NVivo was devised to help qualitative researchers with the complexity of data management in natural speech. This was a completely new tool for me but I trusted the researcher\(^{29}\) who mentioned it as a powerful resource for analysing qualitative data. The learning process of trial and error when using NVivo was slow but ultimately rewarding. The first step was to transfer transcription files from the Word text into plain text files and import them into NVivo files as documents.\(^{30}\) Hereafter NVivo terms for data management will be used.

**Coding with NVivo**

Coding is the first instance of data analysis. One has to disaggregate data, break information down into manageable units and identify each unit with a name, code or category. Mason calls this phase slicing data.\(^ {31}\) This is a rather descriptive or explanatory procedure which reflects the interpretive view of the researcher who selects and names the categories to be coded, based on the actual language of respondents. The method used in this process was the grounded, a posteriori, inductive and context-sensitive scheme as described by Schwandt.\(^ {32}\) In Flick's terms it was a sequential analysis, one that follows the performance of the interaction. In


\(^{30}\)I did not know then I could have imported Word files in rich text, with the extension .rtf

\(^{31}\)Mason 1996:111

\(^{32}\)Schwandt 2001: 26-27
this way, meaning accumulates in the development of the activity. A participant could express more than one idea in one single sentence, and very frequently a number of paragraphs do not carry any meaningful notion for the research purpose; consequently they were not coded, or were coded following the main idea expressed as additional information. Then there was back and forth work between data segments, codes and categories, to identify isolated or related notions among categories as they proceed through the text. Information did not appear in order, sequentially or neatly around a topic; it was dispersed, repeated in different sections or biased, going towards unrelated matters, and sometimes recapturing key aspects. Coding was not an easy or straightforward process but the software helped immeasurably.

*Documents, nodes and attributes.*

NVivo data can be managed according to these three systems. Documents are transcriptions that have to be sliced into meaningful units, which can be edited, formatted, and reported on; see Figure 3.1.

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**VIVIEN STANDEN**  
Physical anthropologist, 180 min. interview held at her laboratory. First contact 9th April. Interview divided into parts for extension. First part 10th April 15:30-16:30, second part 12th April 2001, 16:00-16:45

**Preliminaries**

Q. Vivi, esta es una investigación que estoy haciendo para el doctorado y quería saber cómo se interpreta el pasado desde el punto de vista de la investigación arqueológica, y cómo llega la investigación arqueológica al visitante. Entonces quería entrevistarte a ti, al grupo de diseño museográfico con quienes hemos tenido ya un par de reuniones, y a algunos visitantes. Lo que te voy a preguntar tiene que ver con la cosa teórica y las relaciones que tu has tenido con la institución, con la difusión del conocimiento y con la relación de la antropología física, preguntas que no se han formulado en la entrevista o que se tocaron pero que a ti te gustaría retomar. Como son hartoas preguntas podríamos dividirlas en una o dos sesiones, como tu estimes más conveniente.

En lo personal me gustaría preguntarte ¿por qué elegiste la antropología física como actividad laboral?

**Choosing physical anthropology as a career**

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33 Flick 2002: 196
A node is a container for categories, concepts or ideas about data and coding. It can represent any category relevant to the project. (See Figure 3.3). When coding text in NVivo, the lines coded and the node title are highlighted, and an optional view of a node stripe indicating the coded passage may appear on the computer screen. The areas highlighted in different colours are not neatly reproduced in this text, mainly when there are two or more codes for the same paragraph, which could contain more than one meaning, so they will not be represented in figure 3.2, but I included the optional node stripes, indicating the colours of the highlighted coded text. Nodes can be organized hierarchically into trees or kept without organization as a free node.

Figure 3.2 Example of coded text into nodes

Attributes are values representing information about documents or nodes I wanted to store.\(^3^4\) I used attributes in tables to compare categories among the participants belonging to a subgroup. Ideas contained in the text were characterised and sliced into sections with a name or category, with the appearance of a subtitle. This category was coded as an attribute with a string value; this means expressed with

\(^3^4\) see Richards 1999:12-13; Gibbs 2002: 17
limited number of characters in the form of text, so concepts have to be synthesised, see Figure 3.3.

When this information was later retrieved it briefly described the attribute value linked to each one of the case studies within the subset of the research-group. For practical purposes, the first column in Figure 3.3 indicates the attribute value; the cells of following columns represent the participants' opinions for each value. This spreadsheet helps in cross-sectional analysis.

<table>
<thead>
<tr>
<th>Any improvement of these conditions?</th>
<th>Gustavo</th>
<th>Raúl</th>
<th>Jorge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Imp Dbase for exhibit management of objects</td>
<td>Space &amp; professional improvement</td>
<td>Learn exhibition design in workshops</td>
</tr>
<tr>
<td>Archaeology or art emphasis?</td>
<td>Aesthetic value of archaeological Obj. stands</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Design evaluation</td>
<td>No</td>
<td>A fortuitous visitor's impression</td>
<td>Only internal front-end comments</td>
</tr>
<tr>
<td>Exhibition impact evaluation</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Exhibition structure</td>
<td>General discussion/ subject/curation</td>
<td>Dir. Calls for ideas. Team plans &amp; exe</td>
<td>Curators &amp; group leader decides</td>
</tr>
<tr>
<td>Exhibition texts</td>
<td>Curator resp. design team edit for labels</td>
<td>Curator resp. Design team edit for labels</td>
<td>Long labels play against effective comm</td>
</tr>
<tr>
<td>Group structure</td>
<td>A tacit leader, each one assumes respons</td>
<td>A tacit leader, each one assumes respons</td>
<td>A leader assigns responsibilities</td>
</tr>
<tr>
<td>Is communication an aim of exhibitions?</td>
<td>Yes, but we lack the method to know</td>
<td>Yes</td>
<td>Not clearly stated</td>
</tr>
<tr>
<td>Is the exhibition design a means of communication?</td>
<td>I think so. Even if people cannot understand</td>
<td>Yes, it is</td>
<td>Yes, in general terms</td>
</tr>
</tbody>
</table>

![Figure 3.3 Example of string attributes](image)

This shows a section of a comparative spreadsheet. The horizontal axis identifies the attribute values.

Analysing the attribute tables I could easily spot the topic that had been skipped. Then I went back to the participant’s interview. In some cases the information was found and the cell filled in, in other situations the information was not provided and the cell was left blank, or filled with `n/a`, non-answer. Absence of answers is not a problem for this qualitative study since I am not counting responses; this means an interviewee’s answer is meaningful as a notion and not as a statistical figure.
At the same time categories were coded as nodes. I consistently used tree nodes to describe the category and the ideas linked to it as parent node and its children. These are the related concepts growing as the branches of the tree. The free node option was rarely used, and when used, it could fit, after further analysis, in one of the categories of the tree. The notion of the tree is relational. See Figure 3.4.

![Figure 3.4 Example of modelling nodes into tree](image)

**Coding report.**

A coding report was prepared. This is a rich text of documents organised into a coding pattern, showing numbers of lines and paragraphs. See Figure 3.5.

At this stage I began translating the main ideas expressed by participants in the visitors research-group into English. Considering that translations were so time-consuming, and struggling with word equivalents that convey the same meaning between Spanish and English would hardly help with the analysis process because my mother tongue is Spanish, I suspended this extra work and did not continue translating the selected texts. Nevertheless, in all cases coding and descriptions were
in English, but the referential verbatim citations were transcribed in the original
language.

Figure 3.5 Example of a coding report

**Coding report format.**

Each research-group files were organized in the following order:

2. List of attributes.
4. Tree node model, a graphic summary of the node report.

It is not possible to include in this volume even part of this enormous analytical
work, nor it is necessary. What is important here is to report those thoughts that
helped me to answer the research question. This involves a selection of topics
discussed by the participants; selection was necessary due to the extensive findings
from the four research-groups interviewed with open-ended discussion subjects.
The three [four] research-groups are separately analysed in chapters four, five, six and seven according to method. The visitor group was separately analysed distinguishing museum habitués and teachers.

**Analysis**

Analysis was inspired by objective hermeneutics adapting Flick’s\(^\text{35}\) illustrative process:

- Strictly sequential, rough analysis of texts, to discover embedded thoughts in the dialogical or narrative discourse. This analysis facilitated coding verbatim transcriptions.

- Paraphrasing and translating verbatim expression into categories to give thoughts a structure. This is slicing data, naming the parts with a title or category.

- Connecting data sources to research questions. This includes starting from the decision of a purposive selection of respondents, explained in detail in this chapter.

- Linking individual case phrasing to research-group opinions, as part of data management already described.

- Explanation of general relations among research-groups to the main research question, to be seen in the next chapters where each research-group is analysed separately.

Therefore, the result of open-ended, semi-structured interviews, which aimed at encouraging participants to say more rather than less, provided me with grounded

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\(^{35}\) Flick 2002: 204-207
ideas, which were first coded in the natural flow of conversation. A second analysis allowed me to re-categorise, in a fewer number of concepts, distinguishing broad topics whose narrative report is still too massive to be included in this volume. I had to devise a third mode of organisation to include all voices in a reduced space.

Following the initial methodology, I decided that the participants’ voices would be summarised around the research questions that puzzled me at the moment of designing the research fieldwork. This process follows. But we should bear in mind that there is much more information to work on in the future.

Conclusions

The structure of fieldwork used to collect meaningful data from personal experience on interpreting the ancient past, and making meaning from that experience, has been reported in this chapter. The subsequent structure of analytical thinking, giving an order to the immense quantity of data gathered from fieldwork, has also been addressed here. These structures provide the grounds for confidence that field data interpretation has a solid frame and avoids bias. I think that a clear explanation of procedures is indispensable for replicability if another researcher is interested in a similar application.

Introducing participants in this chapter is also a way of grasping a reality that is always present in this thesis. I am working with people, wanting very much to get into their inner self through a sympathetic approach. It is true that at every moment my personal interpretation is present. It could not be otherwise; following my theoretical perspective, I am an active part of the research, projecting, executing, and
analysing results with ethical responsibility and in rapport with the authors of the ideas communicated.

Because of that ethical responsibility, I need to let participants speak for themselves, respecting their views, no matter if at the moment of reporting I have to paraphrase them and translate their words into English. This will help the reader understand my conclusions and answer the main question that prompted this thesis.

As source data is in Spanish, careful translation of the participants' voices was required when quoting their words. Paraphrasing their statements for other sections of the chapters that recount their thoughts was equally demanding. Whatever the method, it involved a conscious, analytical interpretation, since long uninterrupted discourses have to be shortened, and selected paragraphs highlighted. Coding and organising thoughts into categories are also selective and analytical in purpose. Data analyses are the concern of the following four chapters.
Chapter Four

PARTICIPANT ARCHAEOLOGISTS AT THE MASMA

Introduction

In the previous chapters the reader has become acquainted with the theoretical frameworks which guide this research from its philosophical to its practical aspects. The reader has also identified the actors who interpret the past in the museum. Concurrently, a narrative of facts about the processes developed in the field was presented, together with the analysis of data, in order to obtain a meaningful understanding of the interpretation process at the MASMA.

Now it is time to listen to the voices of the participants in the interwoven relationship of interpretations produced in the museum as a place of encounter among people, social facts, events and ideas. Letting participants speak for themselves is part of my framework, as has been explained in chapter two: in order to know what a person thinks I have to establish a dialogue with him or her. It is from his/her words that I can construct my explanations about the way the ancient past is interpreted in a museum of archaeology. It is by listening to their views on the subject and by analysing their responses that I can identify how the past is perceived by the different actors –curators, EDT/COP and visitors– and how their interpretations relate to one another.

Understanding participants’ voices involves a triple hermeneutics: translations, selection and presentation. To translate from Spanish into English requires
interpretation and selection of expressions to accurately reproduce participants’
opinions as well as paraphrase long sentences into concise expressions of thought,
since we, Spanish-speaking people, tend to be loquacious. Hermeneutics guides the
selection of material from the body of interviews, which involves a circular analysis
of data going from the parts to the whole and vice versa. The third hermeneutic
aspect concerns the way in which the selection of material is presented as evidence,
which includes finding out a linguistic expression of thoughts and selection of
methods of reporting findings that agree with the purpose of the research. Using this
triple hermeneutics, this chapter and the following three reproduce, in turn, curators,
EDT/COP and visitors’ views.

Participants’ voices are organised around the main research subjects that have
emerged during the methodological analysis of data, following the grounded theory
approach and the aim of this research. At the end of each section, after reading
participants’ opinions, I add a comment on their thoughts.

To the best of my ability I reproduce their concepts authentically, fairly and
faithfully, fulfilling the principles of ontology, ethics and methodology, since ‘an
important aspect of qualitative research is that it is dense – rich and deep.’
Nevertheless, my analytical participation permeates the whole chapter.

Curators: Calogero Santoro and Vivien Standen

The curators were presented in chapter two. A description of the methodological
decision to interview these curators can also be found in that chapter. The questions

\footnote{Morrison 2002.}
that underpinned the guide for their interviews are found in Appendix I. Nevertheless, the method used was not based on questions but on discussion of subjects, so the guidelines should not be considered a questionnaire. I encouraged natural dialogue, the natural flow of thoughts of the participants, in this way curators discussed most of the answers I wanted to elicit.

Curators were interviewed using the in-depth approach, in order to reach their inner thoughts on methodological subjects. These subjects were proposed at the beginning of the interview, and they were free to explore the issues by choice. The interview guide raised topics in a dialogical mode, enlivening the conversation.

Since my approach was qualitative in nature, I did not interfere with the curators’ opinions, except to prompt their ideas on a given subject. I followed hermeneutic principles, so stimulating thoughts was part of my dialogical approach. During data analyses both strategies were maintained; I respected curators’ opinions and translated them into English as faithfully as possible, as Spanish and English do not correspond to each other in wording or spirit. Translations became more thoughtful but less colourful.\(^2\) The hermeneutic circle of understanding was applied during the analysis period. As explained in chapter three, the first coding emerged from the transcription of natural speech using NVivo. Then, successive revision of coding allowed me to understand facts. From those facts I abstracted ideas and went on to subsequent levels of abstractions, which allowed me to theorise about curators’ practice. Analysis consisted of a circular visiting and revisiting of data to generate concepts and organise them into a more general understanding.

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\(^2\) cf. Gadamer’s thought in the citation on translations in chapter one.
Topics generated from data were grouped around the curators’ reasons for choosing archaeology as a profession. This aspect was presented when introducing curators in chapter three. In this chapter attention is given to their opinions on archaeology as science; the contribution of archaeology to the present; the meaning of objects as social facts, and the theory and practice of the discipline. I asked them about their experience as members of the DAM, how they visualise the theoretical approach developed at the Department and how they regarded the future of the DAM.

Communication of archaeological research was also a subject discussed, as well as the relationship between archaeology and the museums in Chile and at the MASMA. There was time for them to expand their views on related subjects or on any other issue they thought pertinent. The elaboration of their thoughts on these subjects is presented in the following sections.

**Archaeology as science**

Calogero affirms that archaeology is a social science whose objective is ‘predicting’ social facts in the past. Archaeologists have to identify a society according to a system of data, and according to interpretive models.

C. Well, archaeology... in fact, if we could predict something in archaeology we are not predicting but postdicting, as Binford said, right? Then, what does the archaeologist have to do under x circumstances? ... Tell me what your data are and I will tell you the type of society we are dealing with. This is the level of precision that one could get. But when trying to create explanatory models for human society in the past, [you see that] the human variability is so important, so huge, that you always face the problem that a model functions in a given space, in a given time... But if you take that model to the neighbouring province or move it from one continent to the other, then the elements that are fundamental in one historic cultural reality are mostly irrelevant in another place, and, inversely, the elements that are irrelevant in this reality are fundamental in the other. Thus there is a theoretical discussion about the extent to which we could establish general explanatory models for human society. There is a complex theoretical discussion about that. I think that even if
we could never achieve large theoretical models, at least we could try to understand certain levels of organization, starting from a more critical analysis of data. (Section 1.9 Para 121).

... Archaeology is a discipline that is very close and can function with the most rigorous scientific method, the most rigorous, normally associated with biology. (Section 1.9 Para 121).

Vivien does not separate bioarchaeology from social sciences. Although she is concerned with human biology, genetics and paleopathology, the objective of her research is to generate knowledge about human society. The human being is her centre of interest. Her purpose is to construct a historical process as objectively as possible.

I. Where do you place physical anthropology in the spectrum of sciences?

V. I place it among the social sciences. That is, the object is to gather knowledge from human society; the little bone is a tangible object of study, but the aim is to generate knowledge about the whole society. That is clear. (Section 1.15 Para 74).

... I do not say that there is a specific method for physical anthropology; I mean, basically the theoretical statements of other disciplines are useful. (Section 1.19 Para 98).

... The epistemology we have is to generate knowledge so that others may know, it is obvious!. Physical anthropology uses methodologies from other hard sciences that are more instrumental, using apparatuses, and so forth; but it is clear you have to put that in a more social context. So when we know that some people were suffering from syphilis or tuberculosis, we should know how such society stood or coexisted with those ill people. Can you see the point? Putting that hard evidence in a social context is when the epistemological problem arises. (Section 1.27 Para 206).

... Basically, in the archaeological environment in which one grew up, archaeology is a social science where man [the human being] is always present, isn’t it? You try to attain a reconstruction of the historical process as objectively as possible, don’t you? The objective criteria are provided by the methodology used, and the more methodologies you use for objectivity the better. Sometimes one ruminates on the risks involved...

3 Vivien is a physical anthropologist but she prefers to call her activity ‘bioarchaeology’. In this summary I respect her view.
which history is the one we are telling? All the same, although we trust
our own objective tale, that we are super objective, that we are scientific
in the sense that we start from a hypothesis, which has to be answered
with these methodological tools, which are instruments to measure and
provide precision; all the same, there is a component of risk. That is clear.
Sometimes one uses the ethnographic analogy, as an instrument of, of...
Say, in my case, for example, if you have a given context; it can be a
domestic context, with a number of human bones, half burnt, tied
together, can you imagine how many possibilities might explain why they
are there? Of course, it is complicated, it is a complex situation. Then in
spite of having a general theory, when you begin to spin the problem thin,
then... (Section 1.19 Para 102)

Both curators stress the need for a rigorous scientific approach to the study of
cultural material and a theoretical management of data. Both of them are concerned
with the objectivity of the history they are constructing from ancient societies to the
present: the archaeologist using biology and other rigorous sciences, and the
bioarchaeologist looking for more human perspectives. They follow an overt
functional-processual approach where explanations of material culture are based on
scientific analyses of data, and the answer of specific questions leads to generalizable
explanations. Nevertheless, they also have a tacit interpretative approach in which
theory should be tested against facts. Both of them realise that theoretical models are
not universally applicable or useful for large-scale realities.

_Curators in the context of Chilean archaeology_

Calogero considers that Chilean archaeology has no well-developed theoretical
models. Leading archaeologists, such as Rivera⁴ or Nuñez⁵, are satisfied with the
culture-historical paradigm because they moved from history to archaeology. They
are also trying to discover the impact of great Andean civilizations on Chilean

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⁴ Mario Rivera, Chilean archaeologist, PhD University of Wisconsin.
⁵ Lautaro Nuñez, Chilean archaeologist, PhD University of Tokyo.
territory. While doing so they set a great bias in Chilean prehistory because six to seven millennia of hunter-gatherers are considered an anti-culture, a substratum of the complex urban societies that, in the Andes, began only three to four millennia ago. They forget the periphery, which is becoming increasingly more complex than previously foreseen.

The tendency is to tell a story, with sequential events characterised by certain traits, ordered according to stratigraphic information, absolute chronologies and spatial distribution, but there is no attempt to explain these phenomena. The culture-historical approach goes hand in hand with diffusionism. Changes in Chilean prehistory are explained as the influence of external migrations but this lends very little relevance to local populations. According to this view, local peoples underwent cultural changes initiated elsewhere. Invaders would have subjugated local populations, imposed new ways of life on them, and pushed them to less productive areas. If this was the case it needs to be proved, says Calogero. There is no critical analysis of the migratory model.

One of the first revisionists of traditional Andean archaeology was Lumbreras in the 1970s. He tried to break with the culture-historical scheme, although he is still very much on that path, says Calogero. But at least he sought to apply a different theoretical model in his attempt to reconstruct the history of ancient Perú. He applied the Marxist historical materialism method and tried to understand all processes as clashes of social classes. Lumbreras intended to establish that certain social structures were based on the exploitation of economic resources and the creation of

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6 Guillermo Lumbreras, Peruvian archaeologist.
certain mechanisms for social cohesion, in order to maintain the status quo. Calogero maintains that Murra developed the only new model for the Andes. His model stimulated understanding of the political-economic relationships in Andean societies. Murra provided Andean anthropology and archaeology with a theoretical backbone and promoted a stream of new analytical ideas.  

Nuñez and Dillehay are working on the barterer model, using llamas as cargo animals to explain changes in the past, but Calogero thinks this paradigm is still in its infancy. Few people intend to establish complex analytical models. Berenguer is one of them. He tries to assimilate North American and British models to understand social change. Berenguer's analysis is discursive, qualitative and rigorous; a method that should be managed with care lest it becomes mere conjecture.

C. Well, I have tried to escape that model. In fact, my doctoral thesis is not culture-historical. It is a typical processual archaeological thesis, where statistic and numerical analyses, are largely employed. I still keep that perspective. We have been establishing and recognising cultural variability based on statistical analyses. We have also moved from the archaeology of one site to wider regional context, right? I do not think that one can understand the local phenomena, for example, from one unique valley, one unique site; I think that this requires a regional view, and that is what we are doing. I think that the young students of archaeology coming from the University of Chile [Santiago], not only those who work with me but those who work somewhere else as well, are somehow on the move. They are refractory to processual archaeology in general. I have met them in postgraduate courses, in the Congress, they are quite hostile to quantitative archaeology, right? They are scared of it, they have a kind of ...

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7 John V. Murra (e.g. 1975), North American ethnohistorian, who developed the model of a maximum of ecological niches to which Andean peoples had access in order to satisfy socio-economic needs.
8 Tom Dillehay, North American archaeologist.
9 José Berenguer, Chilean archaeologist
10 When Calogero uses the plural form of I, he is referring to the research group that accompanies him in his projects.
11 XV Chilean Archaeological Congress.
They see that statistics has limited possibilities. They identify processual 
archaeology with Binford, and Binford is a kind of Mephistopheles, a 
malign figure in the history of archaeology. They much more identify 
with non-processual archaeology, with the so-called postmodern 
archaeology, the one that goes with Hodder and all that group, right? 
which is more relative, ok?, that in which you can also find theoretical 
deficiencies, analytical deficiencies. (Section 1.32 Para 238).

... I would like to consolidate the research line I am developing now... 
where the statements about the way of life of ancient peoples are based on 
statistical analyses or more substantial analyses. Nobody has tried chemical analyses to find out why these peoples used 
certain herbs and not others, right? And if they used those herbs what 
advantage could that bring, ok? Or on dietary terms, for example, well... 
Were they really carnivorous? Were they really omnivorous? Were they 
really fishermen? How much and how was diet balanced? I do not 
know... And then try to see how were they organised; analyse the kind of 
political relationships they had, right? Archaeologists everywhere try to 
solve these problems now; how we identify peoples’ way of life, but 
going deeper than an impressionistic archaeology, right? to really narrate 
a more scientific story based on far more solid data, yes? (Section 1.16 
Para 128).

Vivien also recognises Lumbreras’ Marxist approach as a way to brake with the 
culture-historical tradition, but she notes his evolvement into newer perspectives as 
well. She recalls the Seminar at the University of California, Los Angeles, USA, 
where Lumbreras and Hodder were invited to discuss the early emergence of the 
State as a social organization. Hodder explained his view on the Middle East and 
Lumbreras on the Andean societies. The prevailing opinion that changes are 
produced by economic stimuli is in question. It is supposed that sedentariness began 
with the cultivation of land and animal husbandry, but new excavations of large 
Palaeolithic villages show that hunter-gatherers –surrounded by wild plants and 
animals, with no intention of cultivation or taming animals– built well-structured 
settlements. So, it is time, she comments, to break with long established axioms and 
analyse the past with a clear mind.

\[12 \text{But Calogero has asked for identification of the herbs he has found in his excavations.}\]
V. I also think that what was done before [in physical anthropology] is still valid. For example, what Patty did on cranial deformation contributes to the history of this tale, the objectives we have... (Section 1.27 Para 206). The subjects I am working with have to do with migration, origin, antiquity, and these always turn up the heat. (Section 1.10 Para 107).

... Although in our case they are not so polemical. There is nothing to discuss, our material is pristine and provokes interest. We have been working with macroscopic paleopathology; we use X-rays, in a few cases a scanner: non-destructive techniques. Depending on the pathologies we are studying, some differences about the origin of diseases may occur... And the other subject on which we have been engaged lately is violence. An article we have just published in the American Journal of Physical Anthropology deals with this subject. Some evaluators of the journal questioned why some traumas are identified in such a way. Finally, [after further explanations] the article was published. (Section 1.10 Para 111).

Vivien analyses the contribution of other Chilean physical anthropologists working in Santiago in the Museum of Natural History, in the University of Chile and in the University of the North in Antofagasta.

V. In Chile there are just a few working in this line, with this level of specialization, aren’t there? I would say we share methodologies in the kind of work we are undertaking, the kind of research, problem types...

Rothammer works on origin, migratory movements; if people came from the Andes or the Pacific, north or south; where they passed through and how one can differentiate these groups.

... Some time ago these studies were based on morphometric analyses, statistic analysis, based on a cluster of craneometric measurements; these were proven by statistic analyses, if data came closer the groups analysed were similar, if data scattered, the groups were said to distantiate from a common genetic origin. Today, with the boom of molecular studies, the same problems are worked with more precise genetic traits. (Section 1.27 Paras 218-230)

... Now I have to review my ideas, I must confess. I need to review my theoretical orientation, but I shall go on being... I do not agree with postmodernism... (Section 1.23 Para 142)

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13 Patricia Soto-Hein, Chilean physical anthropologist now working at the Musée de l' Homme, Paris.
14 Standen 1997.
In the opinion of both curators, Chilean archaeology is slowly changing from a traditional culture-historical approach to a more processual one, carefully trying to gain an objective appreciation when reading data supported by scientific analysis from other related disciplines, and using both statistics and instrumental technology as research strategies.

Some new approaches have appeared on the Latin American scene, which have not yet taken root in Chile. Nevertheless, the active participation of these two curators in congresses, as lecturers in postgraduate courses, and as authors of scientific papers places them in good position to promote interest in their propositions. Reflecting on Chilean archaeology, these curators think that progressive change is needed, paying greater attention to the type of questions they pose to archaeological data.

The prevailing culture-historical approach is seen in Chilean archaeological museum exhibitions; the new approaches have not yet reached museum galleries.

Curators' account of Archaeology at the MASMA

Calogero has witnessed substantive changes in the development of the DAM, and consequently in the museum. When he arrived, Focacci\textsuperscript{15} represented a very primitive style of doing archaeology. This, in his view, is not a pejorative expression, but simply a part of the discipline's history.\textsuperscript{16} He recognises that from his arrival, things have changed dramatically: the DAM/MASMA has been open to different

\textsuperscript{15} Guillermo Focacci, founder archaeologist of the Museum.
\textsuperscript{16} Focacci excavated cemeteries, collecting selective objects; analysis was descriptive, and classification was based on ceramic styles. There was not a rigorous description of fieldwork findings. Descriptions were made in the laboratory based on Focacci's remarkable memory for facts.
disciplines such as physical anthropology, cultural anthropology, ethnohistory, paleopathology, chemistry, botany, a range of perspectives that influence the way in which the past is analysed and archaeology conducted.

Calogero recalls some traditions that have been forgotten at the DAM: in 1972 Platt prepared the first research development plan for the Department that was useful for a long period, now we need to work on another one. Similarly, we used to meet and critically discuss theoretical problems and practice. This sound scheme has disappeared in the demanding academic environment in which we now live. We do not talk any longer; we meet just for solving problems. We rush from one commission to another, preparing this paper and the other. There is no time to exchange opinions, he says. He hopes that with the coming postgraduate programme organised by the DAM there will be an opportunity to regain the space for discussions.

C. When we were preparing the master’s degree programme, we invited different theorists to think about what aspects the programme should emphasise, and we listened to such disparity of ideas that we abstracted what we thought more appropriate for our case and gave shape to our own programme, right? Tristan Platt was the only person invited to offer us a seminar, and he accepted willingly. (Section 1.22 Para 418).

... I think that two things need to occur: the old generation—now we are the old generation—has to finish their PhD studies. This is basic, but I also think that it is important that new people, young people, regularly integrate with our staff. (Section 1.23 Para 463).

... [The importance of having people with PhDs] is not only for the degree’s sake, but for the responsibilities the degree brings with it, in terms of publications and FONDECYT projects. In the DAM there are people who contribute very little to these standards. And I say if you are a member of a research centre you have to gain that right, yes? ... I would

17 Tristan Platt, British cultural anthropologist working at the DAM 1971-75.
18 FONDECYT (National Foundation for Science and Technology). This is a competitive source of funding research projects which brings academic prestige, and the number of FONDECYT projects the academician of a university are capable of obtaining contribute to its annual accreditation status.
like this Department to be an Institute where people are in transit. Those who belong to the institute are obliged to publishing an article in an indexed journal per year, and one in another general type of publication. If one year the researcher could not obtain a FONDECYT, the following year should; it is a must, right? (Section 1.23 Para 494)

... The other very important issue is to professionalize the museum. I think that in this Department the museum is being left behind. I think that there are too many people and very few professionals. The few professionals do not show commitment that can be appreciated, or conditions are not given for them to become professionals. There are many people who are not professionals, and that makes me sad. (Section 1.23 Para 510).

On the communication of findings to the general public, Calogero says

C. When I say diffusion I mean texts with basic information; a kind of encyclopaedic information, right? Then, er... for example, if somebody says 'I want to know more about this', well, there should be certain kinds of texts... As an example, Chungara is available for people interested in Andean archaeology. Everything on the Chinchorro mummies should be in the web page of the University, because it belongs to the museum. All our texts should be on the Web, those of general knowledge and the scientific as well. And people could access to those texts, if they want to know more; all right, this is the list of texts in English and in Spanish, including a table of contents... We have to prepare the University for this, to accept credit cards for information that is not free, but at the same time this information should be provided immediately... if this service is available it should be kept running.

Vivien has noticed progress in the working conditions of the DAM/MASMA since she arrived there. She remembers working at a cheap bench on her arrival. Today quantitative and qualitative changes show progress.

V. We should get better conditions, but it is all right as far as it goes. Anyhow, it is a matter of just looking around! [She shows her laboratory]. (Section 1.27 Para 178).

... From 1995 when I came back [after obtaining her master’s degree], I think that the change was in the attention paid to our collections. Perhaps research has suffered from the emphasis on conservation of our heritage, and I think that this aspect finally became important and we had to sink our teeth into it, didn’t we? Previously, the emphasis was on research and that aspect [conservation] was put aside. But yes, that is the price of the development [of the DAM] in terms of research as such. Financial
resources have been allocated to conservation of collections. (Section 1.29 Para 282).

On the future of the DAM/MASMA Vivien says:

V. Now I think that we also need to find a formula to spread our research. A series of small books are being written. Lucho\textsuperscript{19} has one on rock art, and Bernardo\textsuperscript{20} and I have one… addressed to the general public, [non-specialists on physical anthropology]. We have just a few ways of explaining what our remains mean; the quantity we have… (Section 1.29 Para 286).

I. What language do you think should be used to explain the concepts, meanings and values of archaeological objects?

V. Technical, specialized, but if you want this subject to be used by school children, I think we should simplify, in inverted commas, shouldn't we? Information should be rigorous but also we should motivate … [the readers]. (Section 1.31 Para 292).

In the view of these two curators archaeology at the DAM/MASMA means research, but both of them are also concerned with communication of research. They look for a direct communication of their findings through written forms, in scientific papers and in literature reaching the general public, using technical and specialized language. I have not seen those little books Vivien described, I do not know how technical language could be simplified for children, but I think it is worth the effort. Specialist literature does not draw general public attention, and teachers ignore much of the interesting findings of research. In this way old perceptions of archaeology are perpetuated in school texts, which teachers pass on to their students and which continue to shape the younger generations’ minds. Sometimes the exhibitions challenge what is taught at school. I think it is very important to write those little books that Vivien was talking about.

\textsuperscript{19} Luis Briones, rock art conservator at the DAM/MASMA
\textsuperscript{20} Bernardo Arriaza, physical anthropologist from the Arizona State University, permanent visiting professor; he stays at the DAM/MASMA twice a year for a month or so.
While Calogero is thinking of a more rigorously scientific development of DAM/MASMA, emphasising research and academic production, including professionalization of the museum personnel, Vivien is thinking of a more comprehensive development where conservation of collections is as important as research. She justifies the impact on research development of the Department if the scanty resources are allocated to conservation of collection. As I am acquainted with Calogero’s way of thinking, I know that he is not against conservation. When the decision to attend to conservation of the collections was taken, he approved; now it seems he regrets that decision, but in fact he does not. I think that he wants everything proceeds harmoniously, but that is almost impossible with the personnel we have, the resources and time available. We need to work towards a harmonious development of the DAM/MASMA, and critical thinking helps. This research contributes to such critical thinking.

*Methods and validity of archaeological interpretation*

Calogero indicates that statistical tendencies clearly orient interpretation of fieldwork data. He cites the case of a student who has recorded a large number of bones and stone flakes from a 4 by 2 metres trench with hearths at both ends. He could not read the data gathered, but when he plotted the excavation, and counted the flakes and instruments, he noticed a ring of stone debris near the hearth, bone frequency being minimal. Bones were far from the hearth, and they were badly bitten and chipped. He then reconstructed the scene: people sat near the hearth to work; they ate and perhaps the bones were thrown away to the dogs. If you do not set an order in the amount of data, you cannot read them, he added. Calogero gives a second example which is reported in his own words further down.
C. The statistic tests provide validity to the interpretation. You could... but... look! tendencies are given clearly. I have two interesting examples, one of them belonging to the period when I was teaching a course in the post graduate programme [in archaeology]. There was a student who did not trust the statistical method at all. Then I introduced an exercise to the class. The exercise was going to be marked, and I suggested they use data from their own projects. I said ‘Do not create anything new for this course, so that you can progress with your research subject, and this will not be an arid task, out of context. Try to do statistic analysis, tables of material, whatever.’ (Section 1.34 Para 302).

I summarised the first example above. The second example is reproduced in Calogero’s words:

C. Then the second case was the same thing. No, he was really interested [in the method]; he compared two valleys in relation to the frequency of one type of ceramics. According to the literature, the two valleys were territory of a given cultural group using a given ceramic type. When the student analysed the shards he realised that the ceramic x was statistically insignificant. (Section 1.34 Para 302).

... Statistics at least helps you with providing an order to the universe [of samples] (Section 1.34 Para 306).

... If you do not give an order to your numeric universe it is impossible to read data. I mean, when we are dealing with spatial distribution of certain cultural elements, right? When we want to see certain phenomena of social complexity, I think it is important to count items, because that at least provides an order to the universe [involved]. Data say, ‘look, this universe is ordered in this way’, then you have something to work with. (Section 1.34 Para 310).

Vivien explains that in bioarchaeology the methods commonly used belong to other biological sciences, each time gaining greater precision, according to the development of science technology. She also uses the statistical method to interpret physical traits such as cultural skull deformation. There are standard methodological criteria to establish comparisons that are discussed in professional meetings.

V. Everything is linked together; we have to contrast data. If I analyse a bone, a deformation, I have to say something about that, I have to interpret what I am seeing, and how am I going to interpret it? I need
something to base my interpretation on and that is provided by the methodology I am using, do you see? (Section 1.21 Para 124).

Professional meetings are important for discussion, of course, and to agree criteria standards, which are useful at the moment of establishing comparisons; yes, they are important for that. (Section 1.19 Para 110).

To contrast findings and validate interpretation, DAM publishes *Chungara*, an anthropological journal including research of the centre-south Andean region. DAM organizes national and international professional meetings to present and discuss research subjects. These curators are members of international archaeological and anthropological organizations and submit their findings to discussion in international conferences and seminars. These are the principal techniques used to validate results.

**Curators’ opinions on the contribution of archaeology to the present**

Calogero says that archaeology shows that, throughout history, human societies have experienced thousands of forms of thought organization; thousands of ways to make sense of life, and this leads to a tremendously important matter: to understand the neighbouring being, the one who is different. To understand a multicultural world is a vital matter at this historical moment, people do not easily understand the problem.

C. The other thing, which is important, is that at the same time... that is, on the one side it is important that one can approach multiculturalism in order to rescue one’s own identity, and try to learn how to live in a world where there are distinct societies and where there are distinct identities. But it is also important that people learn to respect and love their own identity, right? They have to learn how to avoid thinking that the only way to rise in this society is by imitating others, converging in attitudes and in cultural postures, right? This is the present-world’s tendency, towards uniformity; abandon traditions which are seen as a sort of provincialism. I think that the way of life of a society is its way of life and full stop; it should not be right or wrong, or ugly or anything. It is a way of life and that’s it. (Section 1.22 Para 149).

In the old days peoples were not very tolerant. There was almost an attitude of rejection of the other, alterity; that which is identity, we are
ourselves as far as we are not the others, and those others see us as distinct, right? Then all those limits are created, aren’t they? Those frontiers, right? that sometimes are as solid as the walls that have been built, like the pukaras.\textsuperscript{21} There are social frontiers, closed, where people are not allowed to penetrate a certain nucleus, even within their own society. But in our global village, there is an enormous possibility of communication between people. I think this is a matter of great importance. (Section 1.22 Para 149).

Vivien echoes the generally accepted concept that the contribution of archaeology to the present rests on the proposition that by knowing the past the future is more likely to be tamed. Another important contribution of bioarchaeology is to find out our genetic inheritance, and the possibility of recovering the physical traits of long-past populations. Recently bio-archaeology has contributed to forensic anthropology in the effort of identifying corpses that may belong to secretly eliminated prisoners, arrested because of political causes during the dictatorship.

V. I think that our subject of study is also very complex... we enter a very complex terrain, in terms of... Of course our work implies human subjects as well. But the quantity of information that an individual can give us, in terms of reconstruction of the past, is impressive if compared to a projectile point. This means that, using modern methodological techniques, an individual can disclose everything. There has been a lot of work [in this field]; an explosion of knowledge has been generated. Some time ago it was said that the stone age, the paleolithic, which... how was it reconstructed? Evidences were artefacts, lithic industries, but the human being was absent, there was not a human being behind [those theories]. (Section 1.17 Para 84).

[Today human remains tell you] everything. An individual shows his/her life conditions, diet, clothes, hairdressing... the raw materials used. A human being in context has clothes, rest of food, so the quantity of information that a body can give you is incredible, besides all that genetic information you mentioned. Can you imagine that now viruses can be identified? That was impossible some time ago. We could only identify bacterial infections, isolating old bacteria... as virus diseases do not leave lesions in the body structures, unlike bacterial lesions that generate a chain of reactions in the bone structure, so that you can follow the path of an infection there, and the infection is generally of bacterial origin. The viral infections do not [leave that path]. Molecular biologists, virologists

\textsuperscript{21} Inka’s walled defence-station built with stones.
are identifying viruses in 2000 to 3000 year old mummies. Then an enormous perspective in the field of epidemiology, and the origin of diseases, is open. What kind of diseases were associated with what kind of physical, ethnic or racial, within inverted commas, groups?. (Section 1.17 Para 88).

Both curators explained the meaning of archaeology to the present time not only in terms of bringing the remote past to the present, explaining other ways of organisation and living, but also in terms of social values and practical applications. Calogero gave great relevance to what the past can teach the present generations about the ethical perspective of accepting cultural diversity. At the same time he recognises that cultural identity is needed, and valuable, in what it may contribute to the richness of a multicultural world. I agree with him in the value of sharing and enjoying cultural diversity without losing our traditions, which give us the possibility of situating ourselves in the world. In a hermeneutic perspective I could say that if we are here, being ourselves, we can know our world-at-hand.

Vivien adds the practical issue of trying to understand epidemiology. By knowing the origin of diseases through bioarchaeology and paleopathology, our present world may take a more holistic approach to social health.

In my view this is why archaeology attracts so much interest; not only is it fascinating to learn about the arcane worlds of the past, but the past is always a starting point of reflection for the present. Nevertheless this does not happen spontaneously, a conscious intention of understanding is crucial.
Curators perspectives of making objects signify

Calogero is of the opinion that a single object can make a great difference. For example if a fragment, a statuette or a complete shell of *mulu*\(^{22}\) is found somewhere other than the area of its origin, this would mean that it was transported to the place, and the people who organised the transit of that material with a social value were the Inka.\(^{23}\) A similar situation occurs if a *kipu*\(^{24}\) is found in the Azapa valley, strongly suggesting some Inka influence. Other cultural traits are not so clearly diagnostic.

C. There are some objects that can be very... one unique object may make a very great difference, right? (Section 1.36 Para 361).

\[\ldots\]

An *usna*, that ceremonial platform in a large plaza.\(^{25}\) The plaza is surrounded by monumental buildings, extraordinary buildings, so beautiful that they were always identified as belonging to the aristocracy, administrators or noblemen, right? All right, a group of archaeologists, Morris,\(^{26}\) I do not know exactly, began the excavations, and one of the buildings turned to be a *kallanka*, those places where, er...er... those workshops for weaving. The quantity of spindle whorls and tools for weaving was impressive! And there was another sector where the quantity of shards from *keros*\(^{27}\) and big *aribalos*\(^{28}\) for *chicha* was astonishing. Then what was Craig Morris interpretation? That these places, which were supposed to belong to administrators and noblemen, were indeed public places where the State provided *chicha to mit'ayus*,\(^{29}\) in these big places, in front of the *usna*. Now again, if the analysis of the ceramic rims had not been undertaken Morris could have never realised that these shards corresponded to these two types of ceramics, and he could have never arrived at that conclusion. (Section 1.38 Para 338).

\[\ldots\]

Of course, if just a list of findings was made, the answer would have been that there are fragments of *aribalos, keros*, pots, etc., but as English people say, ‘so what?’ what was happening there? Was the nobility living there? Most probably, because the buildings were so beautiful and big buildings are usually associated with the higher social hierarchy, aren’t they? But here we have a case where other data say something different, right? Ideally, independent lines of data should be established in order to

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\(^{22}\) Spondilus shell whose habitat is restricted to the Ecuadorian coast on the Pacific.

\(^{23}\) We spell Inka, please accept this spelling.

\(^{24}\) A mnemonic system of knotted cords to record figures and events.

\(^{25}\) He is refereeing to Huánuco Pampa (Perú) ceremonial site.


\(^{27}\) Kero: Ceremonial vase for sharing chicha (kind of beer made from maize) during festivities.

\(^{28}\) Aribalos: big containers with a pointed bottom to ease pouring the liquid.

\(^{29}\) Mit’ayu: Andean workers paying a tribute of labour to the Inka.
explain a given phenomenon, right? If data indicated that in a particular place ceramics were typically decorated, the implication would have been: here they ate nicely. If gold were found, the answer would have been: these rooms were indeed for the nobility, but those presuppositions were not confirmed. That is why I say that one has to carefully explore, on the one hand certain principles that are generally accepted for interpretation of data, right? But could there be another way?

Vivien did not address this subject directly. She is of the opinion that archaeology is concerned not only with objects but with subjects, meaning human beings. And it is the subject, the individual under study, who provides the most important information. She emphasises the context in which a mummy was found as the most important support for interpretation, and then the support of recent technical methodology, which helps with obtaining hard data and allows a more objective interpretation of findings. As for the context of the individual subject she says:

V. ...if a mummy is taken to the laboratory and its head is separated from the body, then what happened? How was the head in the tomb? Was it separated during the recover of the body? How was the body placed, where was the head placed, towards what direction was it facing? In what cardinal direction was the body? In which place was...? Everything has a meaning. Was the pot placed on the knees, or feet, or head? Everything is important. If the physical anthropologist doe not have that information, it is very difficult to recover it afterwards, that is why I want to be there at the moment of excavation. (Section 1.13 Para 68).

Curators agree that objects have meaning according to context, and this thought is coherent with what we found both in processual and interpretive archaeology when reviewing archaeological methodologies. Curators give examples that justify why these contexts are so meaningful. Calogero explains that there is a knowledge that has been accumulated through years of practice and interpretation of cultural material, which should be questioned. Sometimes it becomes a hypothesis to test in

research, but these studies originate not in laboratory conditions but in the field, in
the relationship of the findings to the conditions of their discovery, plus
methodological thinking supported by organised data. Even when Calogero indicates
that some diagnostic materials, such as objects made of *mullu* or *khipu*, are self-
explanatory, my personal opinion is that they are in the same conditions that the case
of the *ushnu* he illustrates, everything should be contested, and put into question in
the light of the whole contextual elements. This means that objects are never self-
explanatory; they have to be placed in a perspective in which they can signify.
Generally accepted interpretations could be correlated with prejudices in Gadamerian
terms, and they are the beginning of further thoughts.

Vivien addresses the problem of the meaning of objects very well when she
illustrates the case of a head separated from its trunk that was taken to her laboratory
with no further references. Indeed a human head belongs to a human being, no
question, and it is an object of study but the missing contextual information spoils its
interpretation and its social meaning conveyed by the internment conditions to which
it belonged. The head becomes merely statistics and loses its human dimension.

In a museum exhibition the perspectives that make objects signify are all important.
It is impossible for a museum exhibition developer engaged in setting up
archaeological displays to acquire that interpretive perspective unaided. This
reinforces the idea of partnership and working together with curators. Visitors are
interested in archaeology but they are not devoted to primary research so, in the short
time they assign to a museum visit, they rely on the museum interpretation to gain
understanding of material culture. Research of archaeological materials that invest
ancient objects with meanings makes the difference between an archaeological museum exhibition and a display of a collection of ancient objects anywhere else.

Thinking on the bridge that links archaeology and the museum

Calogero says that there is a clear brotherhood between archaeology and museums. From the very beginning Chilean archaeologists have been working in museums, creating local museums as result of research programmes, or being connected with them when research was undertaken under sponsorship outside the museum. During the dictatorship, 1973-88, when the social sciences were threatened by political power, archaeology survived protected by the museum’s public image and for its contribution to hard science.

Law sanctions this link. According to the Law of National Monuments, collections excavated on and under the surface of Chilean territory should be held and displayed in museums of archaeology or sent to the National Museum of Natural History.31

C. If we talk about social meaning, the only way that archaeology has a social meaning is through the socialization of archaeology, and the best way to do this is through a museum. (Section 1.25 Para 617).

... In our Department, for example, I never say I belong to the Department of Archaeology, we say we belong to the museum. This means that we, as an organisation, identify ourselves with the museum, the museum is first and it shelters research; it is not the other way round. It is not that we are a Department of research which in addition has a museum. (Section 1.25 Para 621).

... Héctor32 has a different perspective; he thinks we are a department of anthropology whose main role is to develop scientific research, and the museum is as a consequence of that. (Section 1.25 Para 625).

32 Héctor González social anthropologist of the DAM, recently incorporated to the research staff.
Vivien sees that everything is interlinked; she exemplifies the case with bioarchaeology, which is not just laboratory practice but fieldwork as well.

Museology does not emphasise the art object but cultural objects within a context.

V. In the same way museology does not deal with the beautiful object as just a beautiful object, not at all! The object has to be put within a context, and that context is given by archaeological research, which documents the object that is going to be displayed. When one knows the history of an artefact, it is no longer just an artefact. It symbolises, represents elements of a culture and it transfers information; it becomes enriched. If the object were displayed without the archaeological information, it would have an intrinsic value, but as I told you before, that process which humankind has been conquering...

The museum provides a sense of the archaeological work within the community, and the researcher is part of that community, is part of that society. We work here but we are not separated in 10,000 or 2,000 years from reality. Sometimes it seems that we are indeed separated, we are encapsulated here, without connection to the real world, but that is just what we need to fight against. (Section 1.16 Para 267).

The relationship that Calogero sees between archaeology and museums is a tradition maintained in Chile supported by our legislation on cultural heritage. In the world, the birth of archaeology as well as anthropology, was linked to museum collections, but they were separated to become university-based disciplines. Most noticeable is anthropology, which produces 'a kind of knowledge gap between historical collections and the intellectuals who might have been expected to work on them.' Nevertheless Bouquet, who edited a book on academic anthropology and museums, recognises that there is a revitalised interest in museum anthropology in the last fifteen years. Héctor's reference to the museum as secondary to the interests of anthropology can be situated in this lack of interest that Bouquet mentioned in the above quotation. Consequently, in our case study, a brotherhood exists between archaeology and the museum, while the social anthropologist sees, at best, a

33 Stocking 1985: 6-12
34 Bouquet 2001: 2
subordination of the museum to his discipline, and, in fact, as far as I can see, as a member of the DAM/MASMA, Héctor’s research projects do not focus on the museum’s collections.

Archaeologists think that their disciplines have a social meaning, and museum exhibitions are the most stimulating means to socialize archaeological findings. Thus in the curator’s, and my own views, museum displays should complete the human dimension of cultural material dating millennia, by establishing a link with present day community interests.

*Who is the beneficiary of archaeological research?*

Calogero says that research is addressed to the scientific community to validate results. This is the first step. Once validated, knowledge should be socialized and become a common asset. The problem is how we reach that stage. Calogero thinks in strategic terms working in an interdisciplinarian way. But he adds that in Chile archaeologists are very jealous of their territory, which he thinks does not facilitate communication. If you require collaboration from other sciences you need to be open, he concludes.

C. Once knowledge is validated by the scientific community, the next step is to socialise it, right? and turn it into a common asset, not one shared by the 4 to 5 persons opining on the subject, right? The problem is how we get passed this stage. It is always a complex matter. Some people say that this is not an important subject to think about, but I believe in strategic areas, right? For example, in the last postgraduate course I had two journalists who were studying for a master’s on archaeology, and they asked me what my opinion was about their presence in this programme, since some people were critical of their presence. (Section 1.21 Para 333).

I told them I was pleased with their presence in that course. Then the students felt more comfortable, as if … because they said they had been very badly treated [because they were not archaeologists]. I think
socializing knowledge is something we have yet to accomplish in Chile. (Section 1.21 Para 337).

Vivien opines that the research archaeologists are doing is inward-oriented; it is an academic production. Effort engaged in research is scarcely trickling down to the community. Our objective is that the community can know its environment, its past, its history. Archaeology is not developed for professionals to gain intellectual prestige. She realises her own responsibility for spreading knowledge. We do very little to communicate our findings, she says.

V. Well, I go to schools whenever I can, when I am invited. But I think we do very little; we invest a very short time of our schedule spreading on knowledge. I mean in order for that the little children playing on the street may know that there, in that same place, some 10,000 years ago people lived, organised themselves, in other words that they may learn that things did not begin yesterday...

...This is a belated responsibility all social scientists have. Because we are social scientists! If we think of it, it is as if everything loses its meaning! Because if the archaeological bone has syphilis, it would be worth knowing if people suffer today this disease, if so to what percentage of people it affects. Then, looking back in time, where are those antecedent data? For example, five hundred years ago there was such percentage, some thousand years ago there was another figure, and thus all of us are sharing knowledge! medical science and the community. We should give a sense to the new knowledge we generate!.

As for the relationship between archaeology and the school system Calogero says:

C. Where I can see this relationship most directly is in textbooks of prehistory... of the history of Chile. What the university teaches [to students of history pedagogy] is something outside reality, terribly reductionist. They classify peoples in an awful way, it is terrible, then... (Section 1.27 Para 677)

I. Do you think that the objective of the museum should be communicating research and motivating learning among visitors? Do you think that this could be an objective?

C. I would say so. Yet, I cannot say that that should be the only objective. I think that the museum should also be a place for entertainment, for someone who wants just to have an impression, some one who comes
from Arizona, Paris, who knows. Such a person is not interested in details but in having an impression. 'Hey, look! Indeed the history of these populations is long here', ‘Look, see how they buried their dead’. Two or three aspects are going to impress such visitors and last in their memory as general information, but I think that processes are not important for them. On the contrary, I think that it is important for a local student to know well the regional history, as part of an identity phenomenon, in order to explain local history to a foreign visitor, as a subject of conversation, when acting as a tour guide, at work, I don’t know! A way of understanding the culture of their own past and make the past part of their social roots. In this case it is worth being well informed, and the museum needs to be more aggressive and communicate its messages in better way. (Section 1.27 Paras 683-685)

Vivien says that the relationship between the museum and the school system is tremendously important because teachers are not aware of the interpretation of the past as the result of recent research.

I. Have you experienced any difference between what is taught at school and what is on show at the museum?

V. I think so. I can say this for the people I taught in the Diploma course. They were teachers... concerned with the population of the Americas... and this is something that has been eternally discussed in the Society [Chilean Archaelogical Society]. It is necessary to leave the capsule [ivory tower]. It is important that teachers specialise in this subject and then those teachers became multiplying agents at school. If you survey the schools in Arica, I think that not even 5% of teachers and students would know that the first [Arican] inhabitants lived south of the agro-and-stock farm market. People lived there some 10,000 years ago, because the environment was different perhaps, some source of water could have generated an ecosystem.35 Who knows! I think that nobody who buys potatoes in that market knows that a few steps further, there was a hierarchized space, a place important in the history of the city. (Section 1.19 Para 303).

Two subjects were addressed by curators in this section. The first was who they thought were the beneficiaries of research and second, how schools are related to archaeological research. The opinion of the curators on the first subject was that archaeological research is first addressed to colleagues and the scientific community.

35 This is a very dry area with no source of water.
Yet they recognise a debt to the general public. Both of them try to pay that debt whenever possible, lecturing for general public, and addressing teachers or other professionals who could help with the diffusion of research.

Both of them are dissatisfied with the gap between traditional teaching and archaeological research. The educational system is very slow in adopting and transmitting new research to teachers and teachers are the same with their students. In fact, textbooks have repeated the same information since the beginning of the twentieth century, when archaeology was not even born in this country. They recognise that they have been encapsulated in research and have not paid attention to properly reviewing textbooks.

As museum educator, this gap causes me very great problems. On the one hand I have to communicate the archaeological research generated in our university and in the Andean area, but on the other hand this knowledge conflicts with what teachers have taught their student. It is a delicate situation. I cannot diminish the authority of teachers, but I have to transmit the interpretation of material culture agreed in our Department. I know there is no easy answer; each case is singular and should be addressed in its complexity, but I wish this gap might be bridged soon.

*How well do MASMA's displays represent archaeological research?*

Calogero is of the opinion that there is no a clear link, because interdisciplinary work has been decreasing in the DAM/MASMA. Exhibitions have become a private subject for a group of people, unlike some time ago when all members of the DAM/MASMA discussed exhibitions and subjects and texts were analysed jointly.
Calogero says that if curators are accused of having no interest in the discussions on exhibition projects, it is because the opportunities have to be created. He thinks that because of his complaints, they were called to informative seminars, but there was not room for deliberation. In his opinion discussion should take place from the very moment there is a possibility of a new exhibition. He says that there should be no confusion between the production of the exhibition and all the previous processes of decision-making, choice of topics, depth of information, and so on. In an interdisciplinary work everybody collaborates.

C. I have always said that we should do many things in the museum with maquettes, even in open spaces. Abroad I have seen representations that are very simple, but here we do not risk anything. This means that they [the exhibition developers, EDT/COP] do not try because they have never seen that, or they may think that a simple presentation is not worthy, not conspicuous. Things become confused, because we postpone many things waiting for the ideal conditions to arrive, and while waiting nothing is done. (Section 1.26 Para 637).

... Well, when the last exhibition was mounted I was in the United States [of America], but all the same, I regret that somehow we [curators] have lost the museum as an instance of analysis and communication. I think this is mainly due to my personality [wanting to get involved in exhibitions]. Basically we understand interdiscipline in different ways, and there I think ... as an example, Juan plays to both sides; on the one hand he sits on this side and says 'I am a museographer' and then he sits on the other side and says 'I am an archaeologist', he plays the two sides. With this play, he thinks that archaeology could be satisfied. (Section 1.26 Para 649).

... I think mounting exhibitions is a conjoint process; first the archaeologist can say which artefacts really represent a certain function or activity. Then from this assemblage the museographer can choose those objects which, say, aesthetically, represent the message that the archaeologist says they should represent. I think that there should be a discussion, there must be. For example, the museographer says 'I want to show this vase'; 'hey! but do you know, that that vase is saying nothing?' this means, the vase is aesthetically super beautiful, but it does not represent the population of Arica. For example a carved crystal vase made in the Czech Republic is a conspicuous subject but it has no meaning. Now if you tell me 'look, we are to represent the influence of the tax free zone on the Arican family between the 70s-80s ', Aha! This vase fits well, and besides it is

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36 Juan Chacama, Director of the Department in that moment.
aesthetically beautiful, that is the phenomenon explained. Then, it depends on the social context that you want to represent. This is why discussion should be permanent. It is not that the archaeologists say which are the four more important objects representing something and that is all [his/her engagement], do you see? It is a permanent matter, it is an interdisciplinary work. (Section 1.26 Para 645).

I. From your point of view, are the exhibition designs effective in communicating ideas? Can people understand their meaning?

C. Look, this is very difficult to answer, because I think it deserves an opinion survey. But beforehand, we should know which message we want to put forward. I say, for example, that in this moment there is not a clear idea of what we want to represent. There is a general idea of what we want to represent, there are some fundamental issues, but we have never thought about messages. First we have to define the message if we want to measure its impact. Nevertheless, many people who have visited the museum like it, very much. They find it didactic; they say that they can learn, that they can grasp something. So, independently from the message we want to present, people can get something from it, people have the impression that they learnt something. This means that, independently from a conscious or clear message, there is something that transcends it, and I think that it is also a matter to evaluate. (Section 1.26 Para 653).

Well, what happens, for example ... remember what I told you the other day, we... for example, the time tunnel is flat, it has no contrast. Everything related to hunter-gatherers, should have a given environment. So that when people pass to the other place [period], they notice that something happened. I said, let’s put something on the floor, for example, you are walking in the period of hunter-gatherers; then illustrate hunting scenes, so that the area is not empty. But I must say that the aesthetic of the museum is very tight, freedom is missing. I have noticed that people are afraid of creating, to brake with space, they are not free to think, I see them too restrained, scared, I do not know what they are afraid of, I think because they are not professionals and when one tells them that, they get angry. They say ‘What do you know!’ and I say ‘Nothing! I do not know anything! but I have seen museums!’ and in a museum you have to fly. The museum is a space to create, then ... (Section 1.26 Para 657).

Show that man [human beings] had a very hard life. I think that idealising old days, that the past was always better, that men lived in symbiosis with nature ... I do not think they lived in symbiosis with nature. I think they were massive pollutants, only they didn’t realise it. All those syphilis traits, intestine parasites... I think were the product of hygienic problems. (Section 1.26 Para 661).

For example, archaeology is possible because people lived, ate and slept in the same site, without caring about removing refuse. (Section 1.26 Para 665).
The dead were buried at the same site, so we can do archaeology. If people had had a healthy and clean environment, if they had burnt their refuse, we could not do archaeology. If they had thrown litter into the sea, we would be left with nothing, or we would have clean sites. (Section 1.26 Para 669).

On the effectiveness of exhibitions Vivien says:

V. Well, I don’t have a clear perception of what people say about the exhibitions, but based on the commentaries I have heard, people find the museum small. People always find the museum small. They understand the subject of process, going from gatherer societies towards progressive states, and find that conservation... well, I am talking of people that come from outside Arica, I am not talking of the Arican community. (Section 1.18 Para 291).

I. Do people find the museum small because they want to see more?

V. Of course! Right! They want to see more. The same experience we have as visitors, because when I go to other museums I do not want the visit to end, by no means! (Section 1.18 Para 295).

... I want to see more, more and more, and I think this is what people who come to see this museum experience. They see two, three mummies. No I would like to see a complete room. If I were in Egypt I would like to see at least fifty! (Section 1.18 Para 299).

Vivien would also like a more active participation in discussing exhibition design.

She misses an instance of a previous discussion about what the museum wants to communicate, and how information is to be displayed. I do not feel I have been left out, but the opportunity has not arisen, she explains. What I can do in those discussions is to offer hard data, the content to be presented, she concludes.

V. We passed from one extreme to the other. When Marvin was here, and there was not great concern about how things had to be done and the way in which human remains were displayed, there was a moment when people said that this was the museum of the mummies, do you see? Now we have the opposite, we have nothing on display. I do not share the viewpoint of covering the skulls, why? They are part of life as well! Then I think that physical anthropology is not represented in the

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38 The decision of covering the face of mummies was taken as a sign of respect for the person.
Both curators recognise that the displays in the museum impact on people, first because of the quality of the material and its conservation, and second for the way it is displayed. Visitors, in their opinion, understand the chronological order, but in Calogero's eyes this should be made more relevant, adding visual devices which would show that peoples in the distant past had a hard life with deficient sanitary conditions. Both curators expressed the need of greater involvement in exhibitions from the very beginning of the discussion on the subject, the selection of material, the way collections will be displayed, texts and so on. But Calogero recognises that DAM/MASMA has never discussed whether the exhibition of cultural material should have a given message; he understands that exhibitions are more aesthetic than thoughtfully designed.

Vivien understands the intention behind covering the faces of skulls on display, but she considers that death is part of life and should not be hidden as offensive or ugly. She recalls the time when Marvin organised an exhibition on paleopathologies that provoked pros and cons among visitors. On this subject my experience is that visitors are either extremely impressed, and thoroughly accepting and excited by the possibility of accessing this information or the opposite, deeply offended because a human being is exposed in a showcase as an object. We conducted research on this subject and found that the proportion of sympathisers and opposers was almost even, slightly greater towards the opposers. There is a fascination about mummies and death on display as a reflection of life, and a prospect of our own reality and this

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is what Vivien sees and defends. On the other hand there is a horror about death; death should be kept indoors, it is disgusting to see mummies displayed, it is considered a lack of respect for dead people who should be left in peace, and not disturbed. People are also concerned about archaeology disturbing sacred sites and removing those objects that were intentionally placed with the corpse and whose meaning is lost in museum cases.

As a museum educator, this subject must be treated with great care. I have found that those in favour of seeing mummies displayed have a scientific mind and a positivist thinking, while those opposed are driven by religious or philosophic principles. Whatever the position, I never forget that mummies represent people who deserve the same respect as living individuals. Mummies are not objects of the past; they are human beings who preceded us in time.

Anything else to add?

C. Look! I think one thing is important to remark: in spite of all one can say, that there are problems, shortfalls, theoretical weakness, lack of professionalism, weakness in postgraduate studies, right?. Despite all the shortcomings ... in general, I would say on the whole, the institution is sound, right?. The institution is sound, in spite of all the problems that one could enumerate, or the human weaknesses one could itemize, right?, the whole is harmonious rather than inharmonious, right?. And I tell you that to a certain extent, that is part of its success. I mean there are no antagonistic sources; the atmosphere is amicable, right? There is no animosity, no terrible envies, fights among the personnel, no antagonistic postures. People, in general, work with enthusiasm, right? Perhaps production is not the kind one would like to see, but there is a positive uniform motion, I would say a positive inertia, and therefore our prospects are good. There is a mystique that has grown around the museum; there is a way of being which people who visit our place of work notice.
Sole commented once that people downtown [in the city campuses of the University] had the impression that here people do not work; but the opposite is true. When one comes here one can notice that people are working, they arrive early, stay for lunch, and work all day, working, working. This is because there is so much to do, people come and go, sit and produce, I do not know! We produce things, right? Then as I say, it is not what one would expect, right? One always wants more, but in general, we are not immobile, we are moving forwards... (Section 1.55 Para 746).

V. I think that all of us work hard, some harder than another, myself looking into the bones, Lily studying textiles and you in the museum, all of us work hard but in parallel lines, I think that we need a guru... [Someone to generate a common line of research]. (Section 1.41 Para 366).

Vivien thinks that we need someone to create a more collaborative environment. Our work is parallel rather than confluent, she says. Nobody interferes in our work; we are privileged in the sense that we are free to organise our projects and contribute for the development of the museum in general.

With the curators’ final words I complete this section. The reader might notice the two different personalities: Calogero is talkative, expressive, intense, while Vivien is more relaxed, moderate, expressing herself more concisely. But the subject interested both immensely, and I am grateful for their openness. The subject evolved as in natural conversation, there was nothing prepared before hand, there was no questionnaire to think about, hence repetition of words, rewording, hesitation, pet words are part of the natural flow of thoughts when talking on a serious subject without previous preparation. I kept some repetitions and vague expressions to convey the real dialogue as it happened; in other cases I eliminated repetitions to make the thought clearer, and changed wording to make sentences more understandable for English speakers. What may be a vague expression for an English

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41 Soledad Palma the secretary of the DAM/MASMA
speaker is clear to me, but I am writing in English so to be faithful to the author’s ideas I had to accommodate his/her idea with different expressions.

**Major themes discussed by curators**

In the previous sections we have listened to curators’ opinions. This section is a review of those opinions, adding some comments and putting them into the perspective of my research standpoint. I begin with curators’ understanding of archaeology as science.

Curators situate archaeology within the realm of social sciences due to its concern with human societies of the past, but at the same time they emphasise its strong interdisciplinary connections with hard sciences such as geology, biology, mathematics, physics, and chemistry. Their purpose is to reconstruct a historical process in the past as objectively as possible. Therefore I see that curators place archaeology within a positivist rather than an interpretive philosophy or macrostructure.

Considering theoretical archaeology in Chile and at the DAM/MASMA curators recognise a long, although tacit, connection with the culture-historical or traditional approach. This approach sees the past as a progressive development, and the history of changes is based on evolution or diffusionism. Change in ancient Arica is seen as evolving from simple to complex societies, based on traits observed in objects; then diffusionist explanations are added, where highly evolved states i.e.

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Tiwanaku and Inka, are seen as turning local peoples into passive receivers of culture developed in the high plateau. And this is the story told in most museum exhibitions.

Curators indicated that in order to understand archaeological materials they are supported by a system of data collection and interpretive models. These are not universal models, since human variability is enormous and a model developed for one place or society may not be applicable in another. Hence, the problem of method is important because archaeological data throw light on social phenomena and help to construct explanatory theories. Theoretical change is slow, but it is noticeable in their own research methodology, which is closer to processual rather than traditional archaeology. Being aware of the different approaches developed in the northern hemisphere, and considering that not all models work well worldwide, curators are interested in analysing them and seeing how well they can be appropriated for the Chilean case and the particular circumstances of Arican archaeology.

To break with the traditional pattern, other Latin American researchers have explored alternative methodologies: Lumbreras and his adoption of the Marxist historical materialism to explain change in the Andes; Murra creating his model of maximum ecological niches to which Andean people could gain access; Nuñez and Dillehay

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44 Despite Calogero does not follow Hodder’s analysis, in this point they coincide. e.g. Hodder 1999
45 Similar ideas are found in Binford 2001: 2-3, 114.
47 Although I have read some of Lumbreras, Murra, Nuñez, and Standen’s bibliographies I cannot cite them here, because they are not part of my thesis. I am reporting the curators’ references to them as Andean methodologists who have influenced Latin American archaeology.
48 The central-south Andes is a mountainous desert land, with small oases and microclimates scattered at variety of altitudes, from coastal areas to over 5000 meters above sea level, providing opportunities for human life. These are the ecological niches that Murra refers to. From remote dates Andean people developed a sophisticated method to gain access to these different niches, transversally and longitudinally.
in their attempt to create a new economic model based on llama as cargo animals; Berenguer using post processual methodology. At the DAM Santoro is using processual data interpretation that is statistically informed, based mainly on Drennan.\textsuperscript{49} In fact, both curators employ natural science and statistic methodology to explain social facts within a processual methodology. They are not convinced by post processual interpretation. Without rejecting the approach, they decided it was not appropriate for their purposes. DAM/MASMA is slowly changing from the traditional classificatory approach of findings to more statistical management and interpretation of data.

Calogero’s perception of the contribution of archaeology to the present has an ethical perspective. He says that archaeology powerfully illustrates that there are different ways of thinking throughout history, thousands of ways of life, and thousands of ways of organising human society. These facts give scope for understanding the multicultural world we live in. At the same time, while understanding others, we may reflect on and understand our own identity that is no better or worse than other peoples’ ways of life. Although Calogero did not put this remark in a philosophical perspective, it is clearly a philosophical viewpoint as is Vivien’s idea expressed in time related perception. These thoughts point to the individual’s subjective consciousness of the world and the historical coherence that transcends the horizon of individual experience.\textsuperscript{50}

Knowing the past is step toward understanding and constructing the future. But the past also contributes to understanding the present. Vivien says this without

\textsuperscript{49} e.g. Santoro 1995; Drennan 1996
\textsuperscript{50} cf. Gadamer 1989: 506
recognising the hermeneutic principle of ‘fusion of horizons’ because hermeneutics is not her perspective but it is mine, so I can identify it. When Vivien is explaining her thoughts on the meaning of archaeology to the present, she gives a practical example: the social use of the space that can be traced from long ago to the present. Besides, in the Chilean case, dating the antiquity of dehydrated corpses buried in the desert, can tell us if the bodies correspond to archaeological mummies or to recent criminal interments. These practical examples bring about another philosophical idea grounded in the meaning of intellectual power, the academic knowledge to construct and transform the frames of meaning of the past.

Objects are considered social facts, implying subjects who produced and used them. Objects are not limited to a sensorial experience, but they are embodiment of concepts that transmit information, which represents elements of a culture. This transforms them from material into cultural facts. In some cases a single object can convey clear evidence to the specialist’s eyes, mainly when there is a unique identified source of production. But, curators say that scientific data obtained from multidisciplinary analysis provide a huge amount of information that helps greatly with interpretation of material culture. In addition, documented objects can convey social data that are not part of its composition. The artefact symbolises and represents elements of a culture. It transmits information and enriches concepts.

Besides, curators agree that well-preserved mummies provide an enormous quantity of information about genetics, health conditions, diseases, and patterns of social aspects that can be recovered, including attire and corporal adornments that also

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51 cf. Ritzer 2001: 185
52 Tilley 1998: 325
53 cf. for example Hodder 1995: 12 'material culture is meaningfully constituted'
signify. This ideological position of curators makes the difference when interpreting cultural materials. Curators' perception of objects as expressions of human agency, are to be passed on to museum visitors in exhibitions that are expected to communicate this interpretation.

First, research findings are addressed to the scientific community for discussion and validation of results, curators said. Once the new knowledge is validated, it should be socialised to become a common asset. Archaeological findings are communicated to lay persons through the museum or mass media; nevertheless, curators recognise that they seldom think in terms of mass communication. Considering curators' perspectives I could say that communication of results to peers would be part of the research process and not a final stage, but since Arican archaeological findings are so unique, there is no counter reaction, and communication to peers generally becomes the final stage of the process.

Curators describe the relationship between archaeology and museums as a solid brotherhood resulting from tradition and the Chilean legislation concerning archaeological remains. Besides, they recognise that if archaeology is a social science it should benefit human beings, therefore communication of the result of findings should reach the broadest possible audience. The best way to socialise archaeological findings is through meaningful exhibitions in the museum, which is the permanent institution established for that purpose. The museum is the sum and substance of the archaeological work in the community, says Vivien, and the

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54 cf. Pearce when she says that excavation or collections of archaeological archives can only be justified if the archives are available for use in the broadest possible sense.' (Pearce 1990: 113).
researcher is part of that community. Museum galleries allow archaeologists to give back to society the investment the State makes in supporting research and museums.

Whether the MASMA represents archaeological research faithfully is not a matter of general agreement. Curators feel that the exhibition galleries are not displaying research at its best. They miss a longer and deeper contact between curators and exhibition designers from the time an exhibition is proposed. They feel that they have lost control over the museum’s exhibition galleries as an opportunity for analysis and communication. Aesthetics have overrun the social context of the object.\textsuperscript{55} The important contribution of physical anthropology\textsuperscript{56} is not considered. In spite of everything, curators recognise that the museum somehow represents the Department’s viewpoint. The permanent display represents what has generally been accepted as the evolution of pre-Columbian societies in the Arican region. People like the way archaeology is presented and seem to understand something of its meaning.

In curators’ experience, spontaneous visitors’ comments on displays are favourable. They have heard that visitors find exhibitions educative. The narrative is understandable, and visitors have the impression that they have learned something. Curators say that we feel we have the best museum in Chile, but there is no way to evaluate whether this appreciation is true or not. Curators also recognise the enthusiasm among the personnel when setting up a new exhibition, which marks a continuous progress at the MASMA. One curator reports that people think the

\textsuperscript{55} Similar opinions were expressed by Shanks and Tilley already cited
\textsuperscript{56} Standen prefers to describe her work as bioarchaeology instead of physical anthropology. I respected her view in the verbatim transcriptions and paraphrases, but at this stage, I prefer to use physical anthropology, for in my opinion bioarchaeology would include zoological and botanical aspects which are not studied by Standen.
museum is too small. Despite having such large collections, very little is on display. Indeed displays are limited to the available built space, and EDT takes care to avoid overloading display cases.

As for the relationship between archaeology and what is taught at schools, curators acknowledge the gap. School texts are old; annually printed history books do not update contents; newly validated archaeological findings are not included. Teachers communicate outdated information, and the vicious circle is maintained. In spite of the rich archaeological information Arica has amassed, one curator estimates that no more than 5% of the Arican population knows its history, or the former uses of the space they inhabit. Vivien suggests instructing teachers on the subject so that they could help with its diffusion. My personal view on this suggestion is that teachers trust the printed material; if books are edited by the Ministry of Education then contents are a matter of faith. Teachers do not question the obsolescence of books.

Built areas, natural shelters and rock art were not discussed with the interviewed curators, since they do not deal with these subjects, but as part of my daily observation I know that other curators of the DAM do. Built areas, natural shelters and rock art have cultural meaning and have been interpreted according to a given methodology. Some museum visitors were interested in rock art; and I mention these topics in the model presented in Figure 4.1.

The recapitulation of curators' ideas in this section, including my comments, facilitates the reader's understanding of the analysis that follows. Curators participated openly with this research; consequently, I can draw a theory of
knowledge and a theory of interpretation of their opinions. These are abstractions of the totality of data gathered and can explain how curators’ concepts are incorporated in museum exhibitions in the case study.

*Constructing theories based on curators’ standpoints*

According to curators’ opinions and the above discussion, I can construct a theory of knowledge that shows how curators make meaning at the MASMA. This model represents a guide to understanding this particular microcosm, and explains how curators’ understanding of the past could influence visitors’ perception of Arican prehistory at MASMA. See Figure 4.1.

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**Theories and Methods**
- Theories/models for data collection & interpretation, based on the culture-historical paradigm; Murra’s socio-economic model, processual analysis and interdisciplinary approach
- Context relationships

**Purpose**
- Identify social facts in the past
- Tell an objective story of linear events
- Explain cultural variability
- Place human being as the centre of research

**Communication**
- Selective: to peers for validation
- Ample: to the community through the museum
- Open: through publications

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*Figure 4.1 Theory of knowledge of the past: Curators.*

The model depicting the theory of knowledge I constructed from curators’ interpretation of the past is seen as a process having three interrelated components: the purpose of interrogating the past, the theories and methods to obtain that purpose, and the communication media, which are always a two way process.
The purpose of interrogating the past, through material culture, is to identify social facts in the past, since the human being is the centre of archaeological research. Those social facts allow the researcher to tell a story with sequential events, which explain cultural variability.

This is accomplished through theories and methods. Theories and models for data collection and interpretation are based on scientific frames of reference. At the MASMA, interpretation of the past is based on the culture-historical paradigm, but for some time now it has been evolving towards socio-economic approaches, such as Murra's Andean ecological model, and processual analysis based on scientific and statistic methods. They also use critical analysis and an interdisciplinary approach. But the context of cultural material is all-important and it is the beginning for interrogating archaeological data.

The communication component represents the feedback in this theory of knowing, which is selective when addressed to peers for validation of a proposed interpretation of the past; ample or broad, when it is presented in the museum galleries and it is addressed to the community who might reflect a common past from the display cases. Communication at the museum is not conditioned to any pre-requisite that is why I call it ample or broad, but is linked to the specific space of the museum galleries. While communication by means of publications, is open in the sense that it reaches wider audiences than in the museum building, and might receive review or criticism from peers or other professionals located anywhere in the world.
Theories of knowledge also influence practice; the social relevance of archaeology in bringing the past into the present and sharing findings with the community is found through meaningful exhibitions at the MASMA. Figure 4.2 illustrates the model constructed on the theory of practice, which includes interpretation of the past and the social meaning of archaeology at the DAM. This model can be read as a triangular structure with two anchors in its base, on the one side is interpretation of archaeological materials; on the other, the social meanings derived from those interpretations. The relationship between archaeology and the museum is presented at the top of the triangle, indicating how curators visualise the link between their discipline and the MASMA.

Figure 4.2  Theory of interpretation and social relevance of archaeology

Interpretation of archaeological remains has different dimension among curators: mummies are interpreted as life compendia, taking account of their physicality, including appearance, biosocial aspects, healthiness and also their relationship with
intangibles such as their worldview and social organization. Objects and buildings are interpreted as social facts, while space and natural enclosures as living frames.

The social meaning of bringing the past to present communities is seen as a way to help us to find our cultural roots and reveal our own identity. A curator says that this perspective is especially valid when self-identity is undermined, for example through constant and massive publicity that exacerbates imitation of other realities as better, prettier, more comfortable, and the like. At the same time, understanding our own identity helps us with understanding social plurality, since if we are identified by our characteristics—which are no better or worse than anyone else’s—and we want to be respected, then it is possible that we might gain respect for the other. Consequently archaeology’s contribution to regain the past has a positive implication in understanding our present; besides there are practical uses of archaeological knowledge in health, legal aspects, art, technology and so forth. The time relation past and present implies reflection on the future as well. Knowledge grows, and with it the possibility of a better future.

Curators consider that a traditional brotherhood has existed between archaeology and the museum. This parental link is the result of the Chilean law on heritage and as the historical origin of archaeological research in museums. Besides, considering archaeology as a social science with the ethical perspective of giving back to the community the results of research, the museum is the most obvious place to fulfil this purpose, since it is open to all, the local community and the largest audience, personified in the universal tourist.

The construction of these theoretical models puts together the findings on curators’ perceptions of the past, their perspectives on drawing meaning out of it, and their opinions of how these meanings can reach the public. These were key points in my research. These models helped me with the comprehensive interpretation I am constructing on the understanding of the past in an archaeological museum.

Conclusions

This chapter has reproduced curators’ views on selected subjects, because whole interviews are too voluminous and detailed to be transcribed in this thesis. Selection of opinions was based on their direct relevance to answering my research question. Translating curators’ expressions as well as paraphrasing their concepts implied hermeneutic approaches both in listening and dialoguing and in reading and understanding the transcripts of the interviews. Hermeneutic principles were also applied in analysing and theorising on data.

It may be difficult to understand how hermeneutics worked in this research. Explanations are already stated in chapter one, which begins with recognising that QR produces an enormous quantity of data; that these data are scattered in 120 pages of curators’ transcript discourses, and had to be organised somehow to be meaningful. For me somehow meant hermeneutics.

So hermeneutic principles were applied in the methodological analysis of data when coding the transcripts of natural speech and in the sequential analytical instances. These principles were: a) hermeneutic understanding of the other in a positive way, not trying to discover the weakness of what was said but bringing out the strength of
their arguments; b) the hermeneutic circle of understanding, going from the coded data, which is the basic component, to the major concept implied by the data; by understanding each small segment the concept became clearer. Once the concept became clearer a revisit to the coded data could enlarge my understanding of that little piece. With this to-and-fro in the hermeneutic circle of understanding I analysed my data, not only curators, but also EDT/COP and visitors’ interviews.

Furthermore I used the hermeneutic principles on language in reporting the results of my research: a) I used the English language as a means of communication in this thesis, this means I employed an organised linguistic expression that could allow me to disclose myself, present and represent those participants who speak Spanish, in an English speaking world. b) I could translate their concepts because I understood what participants said and meant, otherwise it would have been an impossible task.

Translation is interpretation, reciprocating meaning between languages as far as possible, i.e. I could not translate the mood that allowed curators disclose their thoughts and feelings while thinking and talking, submerged in the subject that they have chosen to realise themselves as human beings, capable of knowing the world in which they live. Some thoughts were very precisely expressed but others were a word game, repeating words to emphasise concepts now and then, leaving suspended thoughts that I could understand well because of the context to which they belonged. They frequently used pet words that gave them time to go on thinking as in any casual discourse, nevertheless, translating this form of language into English makes no sense for this study, I am not translating art literature portraying characters but translating their thoughts on archaeological interpretation as faithfully as possible.
Curators' methodological perspectives on the subjects discussed allowed me to create models to visualise and explain knowledge generated at the DAM, as well as the curators' conception of the social relevance of archaeology to the present. These perspectives will be reviewed in the last chapter when all aspects discussed in this thesis converge.
Chapter Five

INQUIRY IN PRACTICE: EXHIBITION DEVELOPERS

Introduction

In chapter two I suggested that a museum educator requires a treble hermeneutics to understand how the ancient past is interpreted in a museum of archaeology. After understanding the theories of museum collections, the hermeneutics involved in the interpretation of the collection on display follows. Exhibitions are very important, because they represent the state of the art of the museum’s archaeological research and the way curators communicate with the public. From the public’s point of view, archaeological exhibitions are the means to understand the distant past.

In my practice I have tried to give the best interpretation of exhibitions for each particular person or group I have met. Nevertheless, I did not know the details of how those exhibitions materialised. In this chapter that process will be analysed. Short explanations are given about the exhibition developers team (EDT) as a community of practice (COP) and the method of action-science appropriate for this COP. The core of the chapter involves the process of analysing EDT’s work according to the method chosen and, finally, the construction of theories in practice.

Exhibition developers construct a COP which can be better analysed using the method of action-science

The task of preparing and mounting exhibitions is undertaken at the MASMA by a team of exhibition developers. It is a team, so they are not working as separate
individuals but as a group, which has the characteristics of a community of practice.\textsuperscript{1}

This means that, when devoted to the enterprise of starting a new exhibition, the EDT/COP are mutually engaged, having common interests, and its members share a repertoire of routines, concepts, and ways of doing things that identify the group. Since they are a group linked by action, action-science was chosen as the most appropriate method to analyse first, their common engagement; second, the archaeological interpretation within the group; third, how this archaeological interpretation is passed on to the public through exhibitions and, fourth, their problems and possible solutions.

This chapter develops the method of action-science, which characteristically is designed to learn about a COP. Its method consists in creating appropriate stimuli to transform this COP into a reflective community of inquiry on their own practice, interpreting their own procedures, building their theories in practice and creating alternatives to the status quo, as described and reported below. Once the method of action-science is acquired, it is meant to be incorporated as a regular practice of the COP, so the reflection on practice for the sake of improvement will be permanent.

Action-science was developed in four seminar sessions, the first of which aimed to create skills to conduct the process. This was part of the method indicated by Argyris et al.\textsuperscript{2} so that it could be replicated in the future. In the second and third seminars there was an analysis of practice, identification of problems encountered and proposed solutions. In the fourth seminar there was a discussion of the findings and a summary of the previous seminars; then the emerging theory of practice was

\textsuperscript{1} Aygyris, Putman and Smith, 1985: 4-6; Friedman 2001: 159; Kemmis and MacTaggart 2000: 270; Wenger: 1998: 73, 83.

\textsuperscript{2} Argyris, Putman and Smith 1985: xv.
identified by the group. The seminar sessions were long and discussion-rich, which facilitated the construction of the theories of knowledge, practice and improvement for this community of practice.

The ways in which the COP reflects on practice and constructs knowledge.

The first step toward the application of action-science was to communicate my project to the Director of the DAM and ask his authorization and collaboration to carry on with the plan I had prepared. Having obtained his permission, and following his invitation to the participants, the first informative meeting took place, and the process began.

The process was structured in four seminar sessions and individual interviews with all members of the team. For the seminar sessions, the tables of the room were organised into a square so that there was no leading position, and discussions could flow without precedence (See Plate 12). My working scheme was typed and distributed to all participants to be used as a source of reference.

Only at the beginning of the first seminar did I take the chair to present, explain and teach action-science method which was a totally new procedure for everyone. I also presented a time schedule to be discussed and agreed by the group. In the last session I again took the chair to summarise systematically the data gathered during the previous seminars, in order to facilitate theory discussion and arrive at conclusions.

The first seminar began with the presentation of the research project, and the action-science method, an explanation of the concept of community of practice and why I
thought EDT was a COP, a proposition for seminar discussions, and a description of expected collaboration within the action-science approach. We agreed on a schedule for the following sessions and individual interviews. The group responded with interest, in a collaborative manner, and discussions developed openly.

Between the first and second seminar sessions I interviewed the members of the EDT individually. The questions that resulted in the guidelines to the interview protocols are found in Appendix II. Again, protocols provided subject for discussions but questions did not restrain the interviewee’s liberty to answer broadly, briefly or skip the point. The main idea of the semi-structured interviews was to listen to all voices on the same subjects discussed in seminar sessions in case some one took the lead, the rest could just approved and personal differences were ignored. Because the results from individual interviews were so close to those from the seminar session, I am not going to report them separately as it was already done with the curators. Problems discussed individually and in seminar sessions are presented in the report of the fourth session.

The second seminar occurred after the individual interviews. The same and other topics discussed in the semi-structured interviews were analysed by the group to observe coincidence, modification of thoughts and group agreement on individual perspectives on the subjects. In the third seminar focus centred on developmental alternatives, based on earlier analyses. Possible solutions for detected problems were also sought. The last seminar contained a systematic recapitulation of the previous sessions, a proposition of theories of practice to be discussed and sanctioned by the participants, and a proposal of agreements to be developed in the future.
The hermeneutic principles pervading this thesis were consciously applied during my methodological process of analysis of this participant-group. Besides, action-science as a method of analysis of practice could also be understood in hermeneutic terms. When EDT/COP discussed practice they wanted to interpret their actions to come into understanding of their procedures; when the discussions actually took place they unconsciously went round the parts to see the whole and vice versa, the hermeneutic circle was active though unnoticed.

*Learning and analysing the method. First seminar session*

During and after my introduction, explanation of purpose, method and strategies, such as collaborative reflection on practice and scheduling, questions arose about the concepts. For example, the novelty of the method required a clarification regarding its established theoretical base, such as I did in chapter two.

I emphasised the principles guiding my research on MASMA as a case study:

- There are no universal answers to problems detected. All solutions are temporal and subject to review, and to critical analysis, starting from the fact that knowledge does not spring from nowhere, or from observation, but from modification of previous knowledge\(^3\) and previous practice.\(^4\)

- Museums of archaeology do not share communication strategies between curators and visitors, or develop education programmes that aim at visitors' comprehensive understanding. Some rely just on labels; some promote reactive attitudes to exhibitions, hands-on devices, or taped explanations.

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\(^3\) Popper 1994: 51-52.

Since museums have their own character, the objective of this research is to identify problems within the case study and to search for possible solutions, analyse what can be learnt from the case, and see how theories are manifested in it.

Emphasis was put on the working principle that each member of the group becomes a researcher who critically analyses the common practice and builds theories of practice for the purpose of creating knowledge. This means a practice that includes a shared perception of reality, unspoken choices and decisions, a language developed to communicate the specificity of the joint enterprise, a way of doing things, and the goals and strategies to achieve them. Critical thinking about the exhibitions would allow the group to better control the option tacitly taken, and consequently obtain better results. This means being able to accept their own limitations and correct bad practice if necessary, but also to analyse achievements.

Once the presentation concluded the general discussion began.

M. Well, besides collaborating with your research I think that this exercise is an opportunity for us to understand the state we are now in. I think that we can discover some interesting aspects, since normally we have no opportunity for reflection on our work or to analyse if it is good or bad. We never take time for such reflections. (Section 1.20 Para 75)

L. While you were speaking several ideas struck me, for example from the point of view of the visitor, what I have heard... (Section 1.20 Para 81)

... There are many different opinions. Some people think one way and others just the opposite. (Section 1.20 Para 85).

K. There are several parameters to measure opinions. But some people do not like something...(Section 1.20 Para 87).

L. And the same thing delights someone else, then...(Section 1.20 Para 89).
K. That's why I think opinions cannot be properly measured (Section 1.20 Para 92).

J. Is it possible to have a template to record opinions from the Visitor's Book? (Section 1.20 Para 96).

I. Yes, it could be. The problem is that the Visitor's Book is a very biased source of information, since sometimes the book is taken as a book of complaints, and most people do not even sign the book recording their visit. (Section 1.20 Para 100).

Liliana and Mariela agreed about that. Generally, the Visitors' Book registers the extreme cases: either very satisfied or disgusted. I told them that I had published two articles on visitors' studies with Cuadra and Bernal, respectively. Mariela asked if those studies were at the DAM, and I said they were published in Chungara⁵ (the journal of the DAM), but it seemed they had not read them. After those general comments, a long discussion followed on organising the subsequent group and individual meetings.

G. Julie, Do you need to videotape the session? Is it part of the methodology? (Section 1.20 Para 118).

I. Does it bother you? (Gustavo nods) Ah! All right! Yes, it is part of the methodology. (Section 1.20 Para 120).

G. Well, it does not matter if it is like that. I feel I'm being monitored. (Section 1.20 Para 122).⁶

Then the discussion went on to organise the following work schedule, the personal interviews and the other seminars. Once the schedule was settled, other topics arose, for example, problems regarding maintenance of Ayllu, an ethnographic exhibition, that is not carefully observed: the potatoes on display decay before being replaced with fresh ones. It became clear that maintenance of displays is not a problem that

⁶ Due to Gustavo's expression of discomfort videotaping was not included in this research.
concerns EDT/COP. They consider that their responsibilities end with the opening of
the exhibition; keeping it working is not their duty.

Another comment referred to visitors' lack of understanding of a contemporary wall
calendar in one window of Ayllu. Some visitors complained that the calendar with a
picture of the south of Chile was inconsistent with the exhibition. Our explanation
was that it was simply a commercial calendar, the type that is offered to customers at
the beginning of the year for free as a means of publicising the shop. The calendar
belonged to a shop owned by an Aymara family that typically has commercial links
with Aymara people, consequently it was perfectly related. This fact revealed another
problem: messages included in the design of showcases are not clearly conveyed. As
social theorists, we are aware of social relationships among ethnic groups identified
in the community, and a detail like that functions intertextually with the rest of the
display. It is so evident to us that we assume that every person can read it as well.7

Juan explained that our error is trying to transmit messages. Archaeological
museums do not send messages — they just exhibit objects. Mariela explained that
they try to put them in a human context. Human agency is central in their conception
of exhibiting archaeological material.8

I contributed to the discussion by saying that most archaeological museums do not
have the rich documentation we have. In general archaeological museums exhibit
bought, donated, borrowed or found items that are not methodologically excavated
and explained. Research is our strength, and it is our duty to communicate it.

7 This indicates that exhibitions are self-referential, meaning addressed to museum people, without
caring if visitors understand the meanings involved.
8 This comment links EDT with the social meaning of the past indicated by curators above.
The discussion continued to reveal another problem of the *Ayllu* ethnographic display. There is a confusing island showcase representing wedding costumes.

I. I would like to know why, in the wedding showcase, the man is facing forward and the woman is facing backwards. (Section 1.34 Para 409).

M. It represents duality. (Section 1.34 Para 411).

I. But in the Andean world husband and wife are just one being. (Section 1.34 Para 413).

M. No, but they also have problems. (Section 1.34 Para 415).

J. No, but it is true that in that showcase we had problems we could not solve. Walter Quispe [Aymara informant for that exhibition] said that it was not right that one faces in one direction and the other in the opposite direction (Section 1.34 Para 417).

I. I also think that.... Well... (Section 1.34 Para 419).

J. What happened in that showcase was that from a certain angle the couple had their backs to the viewer. (Section 1.34 Para 421)

M. Ah! yes. Our idea was not that the man goes backwards and the wife forwards. That was not the idea, instead that they complement each other. (Section 1.34 Para 423).

I. Once I asked Manuel Mamani [Aymara linguist] ‘Please, tell me, if you are always looking for the perfect equilibrium, why you always choose a *caporal*, a man, for the festivities?’ He was very surprised and answered ‘What? A man? A man is never alone. A man to be a person should have a wife! A man has always a wife. They are one, they don’t exist separately. The couple is one.’ (Section 1.34 Para 425).

L. The couple. (Section 1.34 Para 427).

The discussion continued for some time but there was no plan to change the display.

Then the subject turned to the interpretation of the ethnographic material on display and the disparity of visitors’ opinions about the success of the exhibition.

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9 This is an example of the EDT/COP not always reaches a common understanding but assumes responsibilities as one entity.

10 Mamani’s answer corresponds to the Andean worldview. In all the Andean festivities I have attended the chosen *caporal* and *pasantes* are married people, husband and wife acting in all ceremonies as a couple, or persons. A single man or woman is not a person.
Juan addressed the point of method. At the beginning of planning an exhibition there is a brainstorm of ideas. Liliana recalled that the procedure was a tradition which was started by the first Director. After that, continued Juan, the curator of the exhibition takes the chair. When designing the permanent archaeological exhibition, *Arica Prehispana*, archaeologists' participation created controversy, old and young generations discussed some points fiercely. It is easier to work with only one curator, Juan said, as in the case of *Rock Art*\(^1\) or *Ayllu*.\(^2\) They provide the general scheme, and comprehensive texts. The text includes the ideas to work with, and according to that text the subject is subdivided. In *Ayllu* we chose the economic, social and ritual activities of Aymara people living on the high plateau.

For that ethnographic exhibition they also worked with a number of Aymara descendants living in Arica belonging to an organization of ethnic promotion, *Pacha Aru*. Mariela recalled that, as well as joining the discussion sessions and giving their opinions, Aymara people took the responsibility of asking the elders about some traditions that have almost disappeared, for example thread torsion in spinning. They also accompanied the EDT for mounting the windows.\(^3\)

The need to replace *Ayllu* with a new exhibition was the following subject. Juan said they needed to begin with the usual brainstorming to get ideas on that. Liliana commented on a cheap way of introducing technology, as she observed in the Navajo exhibition in the Museo Chileno de Arte Precolombino. Liliana gave details of display, being asked by Mariela about labels, the disposition of textiles and security

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*\(^1\) Luis Briones, rock art conservator, was the curator of that exhibition.*

*\(^2\) Héctor Gonzalez, social anthropologist, was the curator working with EDT.*

*\(^3\) In spite of Walter's opinions against the wedding display of the couple facing in opposite directions, as recounted above, the idea of the museum team prevailed.*
measures when objects are not protected by glass. I also commented on a cheap way of producing 3-D figures as observed in the Museu du Traje in Lisbon, 2001.14

Another discussion was the Olive Oil Mill exhibit that had been neglected for a long time. No solutions were offered, only suggestions without any consistency (see Plate 10). The seminar ended with a reminder of the schedule for the following sessions.

Comments. In this first seminar it became obvious that there was a favourable attitude towards the reflective methodology and appreciation of its practical results. This proves of what has been said above, that people at the DAM/MASMA have a willingness to participate and improve their practice.

At an advance discussion of their practice, it became clear that EDT/COP does not care much for visitors’ opinions. The existing surveys about visitors have not attracted their attention, and Juan proposed a simpler way of knowing about it: just looking into the visitors’ book, which is a biased reference source. Problems with Ayllu were detected, but no solution proposed. A discussion on their methodology confirmed the independence of EDT/COP from outside agents. For example, Juan valued working with one curator instead of the whole group, which might stimulate different views, and, even when EDT/COP included the Aymara’s advice in Ayllu they ignored the informant’s opinion of the wedding costume showcase. Finally, EDT/COP agreed on the need to renovate exhibitions. They concurred with curators’ view of the importance of incorporating human agency into exhibitions. As for the

14 The only visual aids are 2-D images, except in the case of the dioramas, see Plates 6, 7 and 8.
concern about seminar videotaping, I accepted and respected the participant's opinion. Consequently it is not included in this thesis.

*Disclosing the status quo. Second seminar session*

The purpose of second seminar session was to analyse EDT/COP's present practice, to diagnose problems and their causes and to look for strengths and potentialities. These topics had already been analysed individually by each member of the team during their personal interview, using a reference questionnaire to focus on topics which would be addressed in this seminar.

Individual interviews thoroughly coincided with findings in the second seminar, showing general consensus over the procedures of developing an exhibition at the DAM. Roles are taken according to individual capabilities, even if not expressed in written or oral form. There is a tacit structure of steps without names. Without being told, everybody understands and assumes their responsibilities according to their individual skills, and works towards reaching the proposed goals.

L. … and when it is said that such photos are required it is supposed that it is Raúl and not Mariela who takes that photo. (Section 1.4 Para 34)

I. Yes, yes, but when Raúl takes the picture is there an instance in which a person says 'Look! This photo is better than those others. This one represents better…' Who decides on that? (Section 1.4 Para 36)

J. Generally, all of us have a look at the alternatives and the group decides. (Section 1.4 Para 38)

... When there are problems on aesthetics, which are frequent, since if we were ten there would be ten different opinions, if twenty, twenty different opinions. If somebody totally disagrees we ask the person to work on an alternative proposition, otherwise we are left in limbo. This has worked well. (Section 1.4 Para 56)
Harmonious relationships among the team is a plus, as is the engagement of each member with the project in hand. They participate in a challenging project that demands their creativity, not only in the final product, but also during its development. For example, when exhibition products are not available locally or nationally, they have to create their own solutions, crafting aesthetic products, which comply with conservation requirements in order not to damage cultural objects but also to protect them from the frequent and strong earthquakes that characterise this seismic zone. All members of the team enjoy the opportunity of taking a break from daily responsibilities and devoting time to the aesthetics they were trained in.

Each exhibition is a challenge to surpass in the following ones, EDT/COP says. When they open an exhibition, they are satisfied only to a certain degree, because they are conscious that some aspects could have been better accomplished. Besides, the economic aspects always affect what is produced. They say that if a professional team were hired to produce the exhibitions some aspects would be improved, but because the DAM is always short of funds it is very unlikely that professional designers would accept the task.¹⁵

I told them that in the visitors’ interviews I had found that in general they were satisfied with the archaeological display. This means that in spite of the economic limitations and lack of professionalism, what is intended is somehow achieved. Perfection is unattainable, ideals exist as goals, and we strive to achieve them; we may get closer to or further from them but we can never reach the ideal. So it is nice that the effort of the group is appreciated, and still better that they can go beyond

¹⁵ The lack of expertise and the economic factor were indicated as negative aspects in all individual interviews.
what they have achieved. The only difference I noticed was in the participation of archaeologists and how archaeological research is integrated into the exhibitions.

Curators' impression of exclusion surprised EDT because they considered everybody to be involved in the discussion phases of the development.

L. ... ever since I can remember the archaeologists have decided on the subjects for the exhibitions. Then Julie said that it seems there is a contradiction concerning what the group thought about the origin of exhibitions. It seems we are seeing the subject from different views. We have different perceptions. (Section 1.9 Para 116).

M. Perhaps it is me who is wrong. I do not know. (Section 1.9 Para 118).

J. No, No. (Section 1.9 Para 120).

L. The fact that the subjects originated in the exhibition team was something new to me. (Section 1.9 Para 122).

J. No, No. It originates in the DAM. (Section 1.10 Para 126).

M. But from informal meetings. It has never happened that the idea has sprung from a specific curators’ meeting. It is not like that. For example there is a general feeling that the exhibition should be changed. We have thought of textiles, but this is not an idea presented by Ivan for example... (Section 1.10 Para 128).

All No, all of us!. It is a collective agreement. (Section 1.10 Para 130).

K. It is the result of a given situation. For example, it was thought that the next exhibition could be Chinchorro, but then we agreed that if there will be a special building for Chinchorro that subject would be repetitive. Then we thought of textiles. But this results from the need of change. It is a project that should be discussed. (Section 1.10 Para 132).

M. Yes, because now there is a need for change (Section 1.10 Para 134).

K. Now that the need is here we are gathering opinions, but this includes the whole Department. (Section 1.10 Para 136).

I told them that curators thought that EDT were misguided if they considered that archaeological research was well integrated in exhibitions because Juan, as an archaeologist and designer, could play both roles. Curators said that they would like
to be more actively involved. Liliana, as a researcher, sustained the curator’s position. Because EDT members participate in archaeological projects as assistant researchers, they feel they have fluid communication with curators. But divergences of thought occur. In the case of Ayllu, the original researchers were not included. Participation means different things for us, Liliana summarised. She has recently been reincorporated into the DAM after finishing her appointment as a member of the University Board.

Juan remarked that the DAM is seen from the outside as a coherent unit. There is a development plan written and agreed some ten years ago that is still functioning. Our goals and performance indicators are the ones we have agreed and kept. Best of all is the communication among the members of the Department, even if it is not overt and continuous, due to the individual engagement on specific projects. In the event of a big common task, such as an exhibition, everyone collaborates and communication with each is easy.16

Juan returned to the idea of subliminal exhibition messages. He recognised that several ideas are introduced in one window and are not clearly explained. An example is the carnival display, illustrating not only festivity, but also the Andean dual organization, expressed with elements of the membrillazo game.17 Mariela agreed that these are subliminal ideas that can be explained and understood only

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16 The DAM can be seen as another community of practice.
17 In this game a member of the high moiety challenges a member of the low moiety throwing quinces with a sling at each other. The quince is a seasonal fruit and makes a very hard projectile.
when a member of the DAM interprets the exhibition, but that not all visitors notice them if they are not aware of Andean traditions.18

Juan reflects that perhaps these ideas are not reaching the public. We are clear about our subject, archaeology and conservation. There is the archaeologists’ interpretation, and then we interpret for the public, and then the question is what is the public understanding!. Juan continues by explaining that the public is satisfied with their work, people are satisfied with the exhibition, the museum is nice, not dull, but do they understand the displays?. Mariela agreed with Juan but she adds that she feels that evaluation is not a concern of the design team. They could not invest time in researching peoples’ opinions, which would take them away from their main work.19 Liliana insists that evaluation of exhibitions is my work as museum educator.

I replied that it is not an individual job. When I finished the first visitors’ study with Cuadra and Pulido,20 I asked the Director at that time to discuss the findings so that they could serve as feedback. The opportunity was not seized; the report was published and I did not receive comments or questions from anyone in the EDT. Another visitor survey was presented at the Third World Congress on Mummy Studies, taking place in Arica, and I did not receive any questions from them either. I concluded that they had not thought before that feedback from exhibitions was necessary. It is good to know that now they may see it as part of the exhibition. I also

18 The idea of Andean moieties and quadripartition of space is also represented on the carpet of the floor, divided into two and each side divided into two again, to express the four Andean suyus (Andean spatial organisation, including people). Very rarely would a visitor notice or inquire about that particularity of the carpet division.
19 Mariela thinks that exhibitions are just about designing and mounting.
20 Quantitative research on a sample of visitors to the MASMA and non-visitors from Arica.
reminded Mariela of the course by Dierking and Falk21 on display evaluation, which we both attended, where they insisted that evaluation is part of the exhibition project.

I could carry out exhibition evaluation as a member of the DAM, which could contribute to better performance, but findings should be a matter of discussion among all members of the Department, especially the EDT. It is necessary to leave room for project feedback. Mariela said that they always want the new exhibition to surpass the previous one. I asked Mariela if that included better communicability as well. Evaluation is missing. Mariela agreed with the comment.22

The problem of training was discussed. All members of the team need training to improve production. Mariela had been accepted to attend an international course offered by T. Raphael23 on exhibition and lighting in Santiago. In general, everyone should take whatever opportunities may be available, for Chile has no permanent academic training programme on museum studies.

The problem of lighting in the museum was discussed at length, because nobody has the slightest idea about this aspect that is so central to an exhibition. A study of the museum electrics by the Energy Commission was appalling and required an immediate reassessment of the sources of power for the museum. Most of the immediate measures demanded were taken; security was attended to, said Jorge (Koke). Raúl, a member of the university security group, was not convinced. Discussion went on considering various possibilities for solving this problem; none were possible due to lack of a regular budget.

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21 Santiago de Chile, June 1998.
22 In their private interviews all members of the EDT recognise exhibition evaluation is needed.
Mariela addressed the problem of internal communication. She said that the efforts of training are lost if not shared, analyzed and multiplied. But usually we do not take time to discuss professional matters. Everybody is busy, we are producing things, but we do not know what project our colleague is working on or towards what objective. Everything is for the enhancement of research and communication in the museum, no effort is wasted, but a comprehensive project in which every contribution is clearly defined and integrated into the whole is missing, and sharing knowledge more so.\(^\text{24}\)

They asked me about Yatiqasiña.\(^\text{25}\) I explained to them that the first part was already finished; the Chinchorro period has been tested in four cities along the country. Because the files have so many images, it demands great computer resources, and Yatiqasiña has to be compressed and limited to one cultural period only. To address the remaining archaeological periods exhibited at the museum requires more funds and more people working in production. Raúl needs to be part of that project because his drawings cannot be imitated. When I decided to include another cartoonist who could imitate Raúl’s style it was a failure.\(^\text{26}\) But Raúl has so much work that the possibility of his involvement is small.

They talked about the museum web page and its possible resources. They also talked about publicizing the museum and of Koke’s efforts to print a large number of leaflets, very badly designed by someone who is not a member of the DAM. The leaflet included misleading information; Koke made the decision by himself and the result was a failure. The lesson was that EDT should be involved in all areas where

\(^{24}\) Vivien expressed a similar thought in her interview.

\(^{25}\) A museum education software about the local Chinchorro period 9000-4000 BP.

\(^{26}\) That cartoonist had worked with me, Alfaro and Aracena in another project, the Archaeological Ludo, a distributed game on Internet.
aesthetics are concerned. Publicity responds to the need of attracting more museum visitors. I said that we needed to openly seduce our own local community.

K. We have to work with SERNATUR\textsuperscript{27} because we need more people coming to the museum. If more people come to Arica, more people come to the museum. (Section 1.30 Para 616).

J. We have reached our ceiling. For about five years we are on the top figure of 30,000 visitors. (Section 1.30 Para 618).

I. Yes, and it is very difficult to attain a higher attendance based on tourists, because the number of tourists cannot increase. Arica is not prepared to receive more tourists. Now, what can we do to increase our audience? I think it is by seducing the Arican community, those who do not come to the museum. (Section 1.30 Para 622).

K. Then we need to change the exhibitions. (Section 1.30 Para 624).

I. We have to change exhibitions. We have to say... have parallel activities that say... (Section 1.30 Para 626).

R. Travelling exhibitions (Section 1.30 Para 628).

... Without the real objects; a photographic display so as to invite people to come to the museum, as we did before. (Section 1.30 Para 632).

L. That’s it. Photographs, yes. (Section 1.30 Para 634).

... And lectures as well, like the programme you organised with the City Council, in which people could also touch objects; working with old aged people, working with clay...(Section 1.30 Para 6138).

I. Yes, that’s the idea. (Section 1.30 Para 640).

M. Julie, you have lots to do when you come back. (Section 1.30 Para 642).

I. Yes, but I think we have to work with the local community. We want them to visit us, and that means also to change temporary exhibitions in shorter periods, or, do you remember the showcase of the month? Do you remember that? (Section 1.30 Para 644).

M. Ah! That’s right (Section 1.30 Para 646).

I. The showcase of the month was programmed in advanced; say to put on show the latest findings of archaeological research... (Section 1.30 Para 648).

\textsuperscript{27} SERNATUR, State agency for tourism
M. I have forgotten the showcase of the month. (Section 1.30 Para 650).

L. Why not do so? To revive the showcase of the month is a way of reviving... (Section 1.30 Para 652).

The session continued on that subject and ended by programming the third seminar and asking the group to think of possible solutions to the problems identified in the interview and in that particular session, e.g., detachment from the exhibition once launched, lack of evaluation, exhibitions addressed to museum people, training, security, future projects, and the like.

Comments. This session took place after the individual interviews discussing the same subjects. The decision of taking this double-checked approach proved to be appropriate. On the one side there was complete accordance between the opinions of the individuals and the group, which was an unmistakable confirmation that the group is a COP: they have a joint enterprise, they are mutually engaged with it, have shared a repertoire that is understood even without spoken language. On the other side, the supposition that not all the members of the group would have equal opportunity to express their opinion in the seminar session was correct. All members of the EDT/COP were present, all participated in the seminar, but some of them spoke and the others nodded approval.

Two main aspects were developed in this session: EDT/COP's methodology and the principal problems encountered. As to work methodology, once the project had begun roles were defined tacitly, according to individual skills. The group develops alternative exhibit propositions, if agreement is not reached more alternatives are requested. They recognise their limitations, due mainly to lack of training as
exhibition designers, but they are aware that the DAM cannot afford professional
designers, so they do their best. Once the exhibition is open they can notice its
shortfalls and think of improvements for the next exhibition, but that, the one that has
been finished, has no amendments nor they attempt exhibition following up.
Opinions varied about the inclusion of archaeologists in the exhibition process.

The main problems concern their lack of preparation for the task. For example
illumination is not part of the design, as aesthetics resource or serving a purpose.
EDT is not aware if the lights used to illuminate the exhibition might exceed the
power capacity of the museum gallery which would result in a security risk. Lack of
training in exhibition design also influences their lack of concern with visitors’
opinions. This contradicts their expressed intention of serving the public and of
improving their museum skills for the ensuing exhibition. Visitors’ feedback could
help them to achieve this.

EDT/COP recognises that they include too many ideas in each showcase without
clearly explaining them. This is also a contradiction with their expressed purpose of
explaining archaeology or anthropology to lay people through the exhibition. What
EDT/COP calls subliminal messages should be explained in face-to-face
interpretation, otherwise those ideas are not directly or subliminally perceived.

Marketing the museum is also a problem. Publicising the museum is taken bluntly.
But this discussion made the group realise that this question has more than one
aspect. Caring for tourists but neglecting the community is part of the problem. So
there is a need to make the museum more innovative and attractive to local people. I
completely agreed with Raúl and Liliana in the need to circulate more exhibitions around the community, and re-launch courses for the community.\textsuperscript{28}

At the same time there were some obvious strengths. The good relationship among the group, the easy flow of communication among them and with the rest of the members of the DAM is a plus that is noticed even by people outside this COP. In my view their willingness to cope with the task of solving The DAM’s financial problems should be emphasised.

\textit{On improving practice. Third seminar session}

In order to organise procedures in the third seminar, I made a synthesis of the current situation by listing projects to be developed in the near future, problems in the search for solutions, and actions to prevent shortcomings. The purpose was to have a framework for analysis and to make decisions if possible. This was a very long seminar session.

The first point was the number of exhibitions that were proposed for the near future. This information was gathered the day before, during the weekly Departmental meeting. What I understood was that there was the prospect of building a new gallery just for the Chinchorro period. In addition, there was the possibility of building a completely new complex for two other galleries, the permanent and temporal exhibitions, and research offices and laboratories for the present staff and visiting professionals. Moving the present exhibitions to new areas will allow the Spanish

\footnote{Community priority is a declared objective; practice is somehow different.}
colonial olive oil mill to regain its original aspect or house a colonial display. All this was intended for the long term, but the planning phase was immediate.

There were also a number of exhibitions at different levels of production: a travelling textile exhibition to be taken to Santiago, the capital city, and two one-showcase displays, intended to promote archaeological research downtown in the university campuses. There were also the change of the temporal exhibition proposed in the short term, and the permanent exhibition in the medium term. All these projects showed how the routine of the EDT was engaged in exhibition activity, and coincidently how this exercise on action-science was appropriate and would shortly produce its fruits.

EDT commented on the level of preparation each one of these projects had reached; most of them remained at the level of a general idea. However, a decision on effective work was required shortly, even though they could not yet provide a date of completion. I must remind the reader that action-science is a collective reflection in practice, analysis of problems, and decision-making. I served as an instigator of reflection to help them understand their own practice, but I could not impose any of my views or make them discuss matters relevant only to my thesis. Indeed, I wanted their involvement in planning, decisions and conclusions, but methodologically I could not force these on any of them; I had to follow their own rhythm and agency. They discussed the risk of losing exhibition panels in the travelling displays they mount.\(^\text{29}\) I insisted on dates for the upcoming exhibits, but dates were not important.

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\(^{29}\) The problem I detected was, again, EDT’s absence of a link with the exhibition they produce. Once the exhibition is launched, they cut off. If panels of itinerant exhibitions are lost it is because nobody in the EDT, or other members of the DAM, is in charge of their collection; panels without an owner are appropriated by somebody else.
for EDT on that occasion. Textiles had already been selected for the textile exhibition, some of them had already been mounted and the catalogue was in the design stage. Nestlé was the sponsor for the catalogue. But Liliana, curator and designer of the exhibition, was leaving the country in September to begin her PhD studies, so the exhibition needed to be staged before that date.

As for the temporary exhibition they had agreed to change, they allowed themselves the coming year for planning. They thought that the actual change could occur in April-May 2002, quieter months when visitors are less numerous. The subject of that exhibition became a matter for discussion. Juan thought that economic production, including farming, fishing, and animal husbandry, could be a possibility. Liliana reminded us that that was the subject of the Museo Antropológico.³⁰ I suggested taking each activity separately for different exhibitions, since each of them are highly comprehensive subjects and the gallery space is small. Besides, it is easier to ask for sponsorship from organizations devoted to each one of those activities. They agreed and discussion went on, taking the form of a brainstorming session, with no decisions being taken.

They complained about missing exhibition records; there are no complete sets of photographs, or catalogues of past exhibitions. This was because of the lack of financial resources. A printed catalogue is impossible since project resources are so tight that many exhibitions have no records at all. Raúl said that he had a complete

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³⁰ An exhibition gallery located in a downtown university campus, considered a political instrument of the dictatorship, consequently it was dismantled by the following elected university authority.
photo set of *Rock Art*, and they remembered the video I intended for Arica Prehispana.\(^{31}\)

For the new Chinchorro gallery, funds are available for the building and interior design, and air-conditioning, provided that the university authorities support the project. In the personal interviews I noticed that all members of the team are pleased with undertaking exhibition responsibilities, and the Director of the DAM gives top priority to exhibitions. The problem I noticed was about their normal responsibilities and the specific projects in which each one was engaged. If the forthcoming exhibitions were so numerous, it would take most of their time during the rest of the year. Exhibition responsibilities are not part of their work description. They confirmed this fact and I proposed that, as one of the results of this seminar, a resolution be adopted defining exhibition assignment in the job description for every member of the EDT.

M. That is not possible. There is no description of functions in our contract, no reference to conservation, nothing. We are professionals, full stop. (Section 1.5 Para 298).

J. The university does not describe the activities in relation to job positions... there is a list of grades for the payroll but they are not well defined, except in some cases, for example...(Section 1.5 Para 300).

G. A secretary, that is... (Section 1.5 Para 302).

J. But there is no description of functions, nothing. (Section 1.5 Para 306).

I. Then it would be appropriate for us to define your functions. (Section 1.5 Para 308).

J. We did but the university does not recognise that. (Section 1.5 Para 310).

G. I think that we should ask the University to create a museographer position. My impression is that our problems arise because our team is

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\(^{31}\) The videographer never gave me the results of the video, saying it had gone astray.
not strong enough without a knowledgeable museographer. We need to
treat the museum problems comprehensively, and if to work on
museography is necessary then we must do it. In fact museography
integrates registration, conservation... because we are doing exhibitions
in the absence of a museographer, but I think this should stop. The
museum must be defined as a unit which needs specialists in its different
areas.32 (Section 1.6 Para 350).

Juan said that he could not see museology as a discipline; he could only consider
conservation as an area of specialization.33

Then discussion centred on museology, the professionalism it offers and the
specializations required. But the EDT recognised that at the moment of designing an
exhibition all members have a say, since it includes registration and collection,
conservation and conditioning of the object, education and communication with the
public, even the history of the museum, since the museum has its own dynamics,
economic aspects, marketing and so on.

I returned to the crux of the seminar asking if, after the analysis of our current
practice, they had a new way of looking at the problems; if the routine adopted was
the proper one and should be maintained, or if they thought there was an option for
change and improvement.

Mariela answered that, since they are always trying to achieve a better standard, the
routine has been successful. The established work rhythm, though accelerated with
the approaching deadline, has not caused delays in opening exhibitions on the
announced dates. They did not know what was going to happen with the following

32 This was a very important point; the museum has no budget, it is a DAM parasite.
33 This opinion suggests to me that Juan is applying a positivist approach. While conservation uses
methodologies proper to physics and chemistry, museology is merely rhetoric in his view.
projects because each one is a new challenge. But the experience of incorporating people’s thoughts in the way they did with Ayllu, should be maintained.

Gustavo insisted that problems arise because we have had no perspective of the museum as an integrated body. We are few and we choose specialisation instead of growing as a common enterprise. I mentioned Calogero’s complaint about exclusion from the early stages of exhibition design. Mariela recalled that in Ayllu, the last big exhibition, all members of the DAM were invited to participate. Tuesday afternoon was established as the discussion day to analyse propositions and progress. The first Tuesday was well attended, but the second and rest of them were less so; not only the participation of the members of the DAM decreased but also the group of Aymara collaborating with the exhibition did so.

Liliana recalled the time when everybody participated. Tasks and dates were assigned, and the group discussed individual participation. There were many differences among the ideas discussed but it proved to be a sensible and constructive exercise. Raúl said that this is a work for consensus, besides we should be more open, allowing other specialists into our discussion group. Exhibitions belong to everybody, it is not a matter of the museum alone; he said he was not very happy with a feudal view of heritage management, especially in museography.

I used the metaphor of childbirth to compare the problem of exhibitions’ maintenance:

I. I have noticed that all that love put into the creation of the exhibition baby disappears once it is born; nobody wants to raise the child. (Section 1.9 Para 440).
M. Nobody wants to bring up the baby. (Section 1.9 Para 442).

K. We get exhausted. (Section 1.9 Para 444).

M. Even the baby’s potatoes grow uncontrolled... (Section 1.9 Para 446). What Gustavo and Juan said is true. We have multiple jobs, because who is going to prepare objects for display? Myself. And who is doing the museography? Also myself. Or Gustavo does both things, and then the opening date is fixed. Who makes the invitation cards? Ourselves. And who prepares the cocktails? Ourselves. And who guide visitors who come for the opening? Ourselves. Then it becomes madness, it is not only the museography, but while the opening is taking place I am sewing a piece of cloth, securing something that is falling down...(Section 1.9 Para 447).

Juan explained that all the extra work associated with the opening of the exhibition, from the design of invitations to entertaining visitors, etc. is related to the image we want to project. It is a kind of associated marketing, and, again, the same personnel are in charge of all the details.

During the interviews each person was of the opinion that exhibitions are addressed to the general public and not to archaeologists, so I asked them if they had considered incorporating the thoughts of the general public in future exhibitions.

Mariela agreed with this, taking into account the fact that EDT had already experienced working with the Aymara community, so various people from the community could be incorporated as well. Liliana thought that to make the Visitor’s book more visible and accessible would be an immediate way of incorporating their views. Mariela said that the future small displays at the university campuses could also stimulate students to give their opinion on the content and on the style of the exhibitions.
Liliana opined that a systematic enquiry covering a number of months is necessary. Juan recognised that our greatest problem is lack of evaluation. What people understand from the exhibitions remains a mystery. We know about the feelings of the people regarding the displays but not their interpretation, he added.

Raúl recalled the time when we [he and I] worked with some community groups, in collaboration with the City Council. I designed an evaluation form that was handed to the City Council monitors, asking them to help me with the task of evaluating the programme, but the forms were never returned, and I had no feedback.

In the previous seminar session Juan suggested that I look at the Visitor’s book for their opinions. The result was that in fourteen months – January 2000-March 2001 – there were 116 opinions. If we consider a total number of 34,000 visits during the period, this is insubstantial. 69 opinions included words such as congratulations, grateful, wonderful, excellent, interesting, good, beautiful, didactic, clean, orderly, well organised. 57 opinions include negative aspects such as illumination problems, maintenance problems (moths, sprouting potatoes), communication problems (monolingual labels, lack of documents and printed material, lack of information in the colonial mill), lack of publicity (posters, folders, postcards, calendars), poor services (cafeteria, toilets, little merchandise in the museum-shop) and expensive admission tickets. A long discussion followed analysing those problems. Juan said that whatever the number of negative problems, they had to be worked on to attempt to rescue the situation.34

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34 I thoroughly agree with this opinion. Unfortunately Juan is very happy repeating the word-of-mouth belief that the exhibition is pleasant and friendly, and he did not pay attention to any of the negative opinions recorded in the Visitor’s book.
The analysis went on to discuss the environmental sounds or music support for reinforcing messages. Liliana was of the opinion that at least in the display showing musical instruments there should be music to show how those instruments sounded. Then the discussion moved on to the technical aspects in terms of producing spot or background music. I recalled the experience we had at the Museo Antropológico when all the schoolchildren wanted to push the buttons to start the music and the description of the window, and the system jammed and finally collapsed. They agreed that a consultation with the music expert at the Museo Chileno de Arte Precolombino could help us with the design and implementation of an aural project.

I drew attention to the gap between the museum and schools, and asked their opinion on a solution this problem. Mariela thought that a large quantity of printed material is needed, but to produce this material involves time and effort that takes them away from their main tasks again. Juan said that they did not touch the problem of museum education. We have an education room, and Yatiqasiña in the computers, but the room is idle and Yatiqasiña is not functioning. As you [me] are in England, this subject has become difficult. With the Chilean educational reform we have too many children visiting the museum and we cannot cope with their demands, Juan said.

I told them that when I was at the DAM I had the same problem. Being just one person, I cannot speak and stand for more than two continuous hours; I need a rest. Because the University does not recognise my gallery service, and extension projects, which justify museum education, cannot be sustained for more than two consecutive years, when I take the education programmes I am doing something outside my responsibilities.
We need better understanding of our commitment from the university board as well as help from the school system. The same Education Department in our university that is the source of future teachers does not recognise the contribution of the museum to education. The local system of education is also disorganised. Teachers are asked to come to the museum with their students just for the sake of a visit, but there is no concern if the visit is related to the curriculum or means a fruitful experience, a change in their lives.

The discussion of the museum budget was hot. Without a budget sustainable progress is not possible, every programme is episodic, and negotiation is difficult, said Juan, who was the Director at that time. Jorge told us about a publicity project that in my opinion was a waste of resources. He bought a page in a tourist guide without a study of the publicity coverage it has, to whom it is addressed or the quality of its production. To invest in such a project was a risk.

The last subject addressed was security, a very big problem. There are no fire alarms; fire extinguishers expire before being replaced. Nobody knows how to use them in times of need. The only measure taken was refilling the fire extinguishers after the expiry date. We have no first aid equipment; we are far from the city, there are no measures taken for an accident occurring on weekends when the receptionist and shop attendants are by themselves. There are no precautions in case of earthquakes or robbery. Security guards are insufficient, only one for the whole building and surrounding farming research area belonging to the Faculty of Agriculture. The university does not understand the needs of the museum. The only solution to be
implemented by then was to refill the fire extinguishers and to adopt a practice of keeping a record of their dates in order to change them before expiry.

Comments: If seminar sessions were intense, this was particularly so. EDT/COP discussed different topics going back and forth to support ideas already expressed and introduce new aspects.

Problems were discussed for solutions, but no agreements were made, since without a budget, our decisions would be unrealistic. To make the University understand the museum's needs is a priority, and a consequence of that better understanding could be the allocation of a separate budget for the museum. Future projects were analysed in search of alternative solutions but final decisions also depend on financial support. Actions to prevent shortcomings were limited to EDT/COP working capacity, but, again, decisions taken outside the DAM/MASMA are immutable until the University recognises its needs.

The opportunity of these analyses was evident considering the approaching new developments foreseen for the DAM/MASMA. These are not projects imposed from outside but the result of the DAM/MASMA commitment with the museum and with the improvement of its conditions.

Integrating knowledge. Fourth seminar session

The purpose of this session was to evaluate findings, discuss propositions and make decisions for future actions. In this session the effectiveness of action-science was tested.
The session began with my apologies for the interviews tapes being badly transcribed by a young typist. She could not understand our language, and changed unfamiliar expressions heard to something more familiar, producing unreadable results. This fact exemplified how well a community of practice understands one another. Sentences do not need to be completed to have a sense; sometimes just a simple gesture, without any utterance, is perfectly understood by members of the COP.

I offered them a working synthesis of my understanding of the whole process, so that we could discuss these points, illuminate obscure aspects, add considerations that were left unnoticed and gain a general view of the facts. This reported synthesis is transcribed below in a dialogical way in conditions similar to the last seminar session and discussed by the group to arrive to conclusions.

What is transcribed here is my report modified according to EDT/COP opinions. Therefore it is the result of working together in summing up the alternatives to change the status quo of their practice in the light of their analysis.  

I reminded EDT/COP that action-science is characterised by a reflective community of practice with the purpose of taking action. We had visualized future projects, but plans for action had not been taken. What we had already devised was a theory of practice, which had to be tested. These procedures are described in the following subsections as: reflection on initial conditions or typical situation; construction of theories of practice including three aspects: a theory of action, a theory of practice, revealing the status quo; a theory of change for improvement. Attention is also paid

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35 Friedman 2001: 164-165, 169
to new projects and to the EDT's strengths. But before presenting this summary, some excerpts of the sessions follow may illustrate the discussions.

I. How do the actors perceive the problem? What I understood is that you regard it as a challenge to creativity, right? What are we aiming for? To produce attractive and informative exhibitions, yes? (Section 1.3 Paras 27-28).

M. Yes. (Section 1.3 Para 32). [All nodded in approval].

I. What strategy is used to obtain those results? It is working as a team, including all members of the department, correct? (Section 1.3 Para 34).

M. And also from outside. (Section 1.3 Para 36).

I. And also from outside. Do you mean members of the community? (Section 1.3 Para 38).

M. Yes, since from now on we will have a different vision, we'll incorporate people who do not belong to the department (Section 1.3 Para 40).

I. Are archaeologists excluded from the team? (Section 1.3 Para 46).

J. One curator is included. (Section 1.3 Para 48).

I. One curator. But in the last exhibitions, they were rather distant, they did not form part of discussions, Hm? (Section 1.3 Para 50).

M. Not in the design but in the subject, yes! (Section 1.3 Para 52).

K. The subject commands the whole thing. (Section 1.3 Para 58).

J. Ayllu used that methodology (Section 1.5 Para 118).

I. Then, where does this aspect go? (Section 1.5 Para 120).

G. In strategies, C or D. (Section 1.5 Para 122).36

I. Working in this COP allows you to employ personal conditions that normally are not used in daily routines of job responsibilities. (Section 1.4 Para 68).

L. What do you mean by normally? (Section 1.4 Para 75).

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36 Gustavo's reference to points C or D corresponds to the summary I had written for discussion in this session.
I. For example, in the case of Koke he is trained in plastic arts but his work is administrative, Gustavo is a registrar, Mariela... (Section 1.4 Para 77).

M. I do. Both things need creativity. In conservation there are guidelines for actions, but you still have to develop some others which correspond to your real needs. If I have to design a box that cannot be bought in downtown shops I have to do so. Raúl has the same problem. (Section 1.4 Para 79).

I. Then how this aspect could be worded?

M. That sometimes they are used and sometimes they are not. (Section 1.4 Para 87).

K. Also in the museum shop, when dealing with craftsmen... (Section 1.4 Para 89).

I. Would you change the word normally to not always? (Section 1.4 Para 91).

All. Yes, and nodding approval. (Section 1.4 Para 93).

.......... 

J. There is something I consider anecdotal. Some things we have done... [subliminal messages]... and when I have to interpret the exhibition I notice that those things need quite a lot of explanation, so I make things simpler. For example, in the showcase we were talking about, I refer to the supporting drawing. I explain the llama trails and the interchange of products, the use of llamas in trade, and then I escape the multiethnic problem, the different ecological niches, and the complex ideas around those subjects ... (Section 1.14 Para 338).

L. When I interpret Ayllu... Well, I did not participate in its mounting,... And then... the other day I listened to your explanation of Ayllu ... mine was quite a different interpretation. Because I did not know... you have never showed me Ayllu and told me the way you organised ideas about that. (Section 1.14 Para 344).

M. Well, we address the interpretation according to the person we are talking to. For example, the other day I interpreted the exhibition for an Italian architect, so I did not emphasise textiles but architectonic aspects, in order to talk about subjects that were relevant to the visitor, and then he could feel that his professional interest in ancient cultural periods was also important. ...(Section 1.14 Para 358).

J. If Héctor guides, he hastens along the pre-Hispanic world and coming to Ayllu he plunges into his subject, pooh!. If I guide, I address in detail the archaeological subject and in Ayllu [the final exhibition] I am already exhausted, pooh! 'And there the present day Aymara are!’ I make things simpler. (Section 1.14 Para 380).
**EDT/COP practice**

In this subsection there is a summary of the conditions of EDT/COP practice as revealed during the seminar sessions and the individual interviews. The dialogical method is chosen for this report.

*How does this COP perceive the problems around museum exhibitions?*

It is a challenge to creativity. It is an aesthetic challenge to create a pleasant atmosphere for visitors. Nevertheless, EDT does not consider visitors’ needs, impressions or expectations because its members are not aware of the published visitors’ studies, and they do not ask for exhibition feedback.

*What are the intentions of the exhibitions?*

To produce exhibitions that are attractive and informative for everyone, children and adults, professionals and laypeople. But they do not know exactly if these results are achieved for they have only isolated positive comments from related specialists and a few members of the public.

*What is the strategy used to achieve attractive and informative exhibitions?*

To work as a team, including all members of the department in the initial stages, but graphic design and exhibition mounting are the exclusive tasks of this COP. Mariela insisted that participation of the community should be included in the exhibition team; although this was their latest innovative experience, it was found to function well. From now on there is a new vision: EDT is looking forward to incorporating people that do not belong to the DAM in future exhibitions, such as members of the community connected to the subject to be put on display, and also technicians who
can improve present lack of professional conditions in all the aspects that an exhibition requires.

*What are the strategies really put into practice?*

Even though the design team acts independently on aesthetic aspects and exhibition mounting, a curator is required in the definition of its subject, as a reference in the selection of artefacts and as a producer of texts to build the exhibition’s story line.

*How are these strategies perceived?*

From outside the institution, there is word-of-mouth knowledge that exhibitions are attractive and recommended. From inside the institution, they are perceived as a contribution to our objective, that is, the communication of research, although curators would like a more intense participation from the early stages of planning the exhibition. From the COP point of view, exhibitions are perceived as an opportunity to exercise capacities that are not always developed in daily responsibilities, though artistic or aesthetic components are included in every aspect of life, at work or anywhere else. Producing exhibitions are stimuli to personal and group development (strengthening the community of practice).

*If what is intended is not achieved, what are the causes?*

They are mainly economic problems, but also lack of knowledge in exhibition design as a professional activity. Lack of communication between museums that could be help with getting inspiration from others’ working solutions to general problems or getting helpful information about where to find exhibition materials at low cost. The lack of evaluation of the results at the different stages of production has a negative influence, as does the lack of feedback from museum visitors. There is
never a pre-study, as a basis for discussing a project. A pre-study could disclose latent opportunities. Projects develop very informally.

As a result of analysing the existing conditions, some facts became apparent and facilitated the construction of a model of the present situation when an archaeological exhibition is required. EDT theories of practice and theory of development for improvement were also agreed. These theories are presented in the following subsections.

*Theory on practice: Action*

Based on the above summary we drew a model of DAM/MASMA responding to the need of a new exhibition. This model was not recognised until reflection on procedures allowed practitioners to visualise it. It reads like this:

- When the condition X is presented: designing a museum exhibition
- A strategy Z is adopted. The DAM decides on the subject and the information to be communicated, and the EDT takes responsibility for carrying it out, representing the ideas agreed on.
- The objective Y is reached, through informative displays with an organization and messages that attract public interest. See Figure 5.1

<table>
<thead>
<tr>
<th>Condition X</th>
<th>Strategy Z</th>
<th>Objective Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAM/MASMA has the need of a new exhibition, change of exhibitions or creating travelling displays</td>
<td>DAM decides on the topic. Curators give info &amp; texts. EDT develops the entire exhibition project</td>
<td>Organised, informative &amp; aesthetic displays, incorporating human agency, that attract public interest</td>
</tr>
</tbody>
</table>

Figure 5.1 Descriptive action at the DAM/MASMA in relation to archaeological exhibitions

37 Friedman 2001: 161
Theory in practice: Process

The metaphor to evaluate the exhibition process is a ladder of inferences, as a means of testing findings. Inference begins with observable data, progresses to levels of abstraction, including attributes and evaluation, and ends with theories. This analysis has a hermeneutical approach as well, even using the metaphor of a ladder, the process is circular: data and theories represent the part and the whole; the progressive levels of abstraction means the to-and-fro between these two, parts and the whole. Our first step was to find the words that provide the most clearly observable data: EDT seminar discussions, and literal interpretation of them; the sessions reported in the previous sections.

On the second step of the ladder of inference we, the members of the action-science endeavour, developed more progressive levels of abstraction such as evaluating group’s attributes and undertakings. EDT was identified as an episodic community of practice, within a permanent community of practice, DAM. Although museum exhibitions are intended to include all members of the DAM, in fact only those professionals qualified in plastic art are included in the EDT.

Nevertheless, there is fluidity of communication between both communities of practice: the EDT and DAM. Communication with curators is fluid, due to shared research work with various levels of participation. Hence, knowledge of the cultural materials that goes on display is familiar to the EDT. Besides, curators actively participate in the exhibition that conforms to his/her speciality, providing written information to back up the action and communication in exhibition texts.

Based on Friedman 2001: 162.
Communication with visitors is unstructured, since EDT does not have systematic feedback from visitors' opinions. Presently, visitors are peripheral to the EDT's interest. Subliminal messages in designing exhibitions are only addressed to people who already understand the concepts. Unless the exhibitions are explained visitors are unaware of the messages, they are not seen. Complacency about unsystematic favourable opinions from colleagues indicates that the expressed intention of exhibitions planned for the general public are, in reality, addressed to related professionals.

There is a desire to gain expertise in museum practice in order to obtain better results in an interesting and attractive activity. Some concrete steps have been taken to achieve this purpose. There is an unstructured engagement in museum practice that is characterised by a proactive feeling rather than imposed by job description.

Institutional (University) recognition of the museum is required; the museum should be seen as a centre of science and practice, requiring specialised professionals. The only member of the DAM originally hired for museum development was the museum educator, myself; changes in the university politics demand I undertake academic research rather than instigate museum education programmes.

A lack of professionalism is reflected in the absence of exhibition evaluation or interest in evaluation already done. That means limited understanding of the museum's social responsibility. The group, now aware of this limitation, is attempting to solve the problem of evaluation by asking the museum educator to contribute to these studies. Besides, they consider that the lack of technical expertise
could be alleviated through projects undertaken in conjunction with other museum experts.

Absence of exhibition maintenance reflects their distancing from the exhibition as their production, once the project is finished. This influences museum appreciation and public image.

Fluid communication with schools will be always difficult, because the regional education system is not proactive and museum education is under-staffed. An immediate solution to this problem is not foreseen in the short run.

They recognised freedom to interpret exhibitions. There are multiple ways to present exhibitions in face-to-face interpretations. They unveiled the fact that all of them organise interpretations according to their views and according to the visitor’s needs.

Theory in practice: Improvement

On the third step of the ladder of inference we found the theories that can be built, based on the phenomena already analysed. So we have:

- DAM theory of action is reflected in Figure 5.1.
- A theory of practice to undertake exhibition projects in typical situations. This theory of practice works provided that the conditions that originated it are maintained. See Figure 5.2.
- A theory of change for improvement that includes the suggested measures agreed to eliminate tensions and poor practice. This theory for improvement should not be considered the final stage, but a process that should be continued
in permanent introspection on the status quo, in order to promote the necessary changes. See Figure 5.4.

All the points presented above were discussed and accepted by the members of the action-science procedure as part of the fourth seminar session. To conclude the seminar, I asked for their decisions on immediate actions. EDT agreed on:

- Training in exhibition design, the immediate action was Mariela’s attendance to the course on exhibition and lighting.
- Improvements of practice such as: to continue with self-reflection on and in practice; find a moment for sharing individual new knowledge; pay attention to more inclusive practice within the DAM; pay attention to visitors’ studies; include the local community’s opinion in forthcoming exhibitions; include other experts’ assistance; negotiate with University authorities for better working conditions; negotiate with educational authorities and persuade them to collaborate with the museum education programmes; invent better ways to publicise the museum.

The fourth seminar session was one of recounting, summarizing and reflecting on findings in order to visualize practice in a theoretical way. Theories allow EDT/COP better control of their problems and thus better results.

The researcher’s discussion of findings.

In fact the fourth seminar session represents the concretisation of the action-science method applied in the case study. It reflects its features and its purpose. The EDT/COP became a community of inquiry to analyse the status quo, identify
strengths and deficiencies, discuss possibilities for change and improvement in the light of values freely chosen, test interpretation, and build the theories in practice.

We have followed each step described in the text until we reached the working report of the fourth session, a requisite of the method. I think that modelling the main issues of the process, the theories constructed, will now become clearer to the reader.

Figure 5.1 illustrates the DAM/MASMA theory of action, as an organised response to the problem of creating exhibitions. A tacit procedure creates the EDT community of practice whose purpose is to solve DAM/MASMA exhibition problems since there is no economic possibility of hiring professional designers.

![Diagram](image)

**Figure 5.2** Theory of practice reflecting present typical situation EDT/COP.

The theory of practice modelled in Figure 5.2 corresponds to the analytical situation within the present EDT/COP. This theory works provided the described conditions in the seminar are maintained. The model is based on Figure 2.1 by Etienne Wenger,\(^{39}\)

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\(^{39}\) Wenger 1998: 73
who describes the linking characteristics that construct a community of practice, i.e. joint enterprise, mutual engagement and shared repertoire, I have re-interpreted this figure to apply it to this case study.

Weaknesses, problems and strength emerging from self-reflection, and the critical analysis, of practice are illustrated in Figure 5.3. These are focused on the interpretation of archaeological materials and concepts that are conveyed to the public by means of EDT's negotiated practice with curators and economic-administrative limitations.

![Critical analysis of practice: main strengths, weaknesses and problems](image)

The next model corresponds to the theory of improvement as represented in Figure 5.4. This figure also takes account of three aspects, improvement on practice as reflected in weaknesses, problems and reinforcement of strengths.
Figure 5.4  Theory of change for improvement

Validation

The method generated the data that was expected to collect. There was coherence and consistency among the methods employed. Practice was inferred from observed behaviour by participant observation. Information was reinforced, using both individual interviews and action-science procedures. The theories espoused by the participants were confirmed and validated by asking the participants to articulate what they do in particular situations in order to achieve the outcomes they desire, and checking my understanding of their practice with their concurrent agreement on the outcomes. I also asked participants to produce their theories from the organised data, and reviewing with them my interpretation of their theories in order to adequately represent their reality. Besides I have observed their behaviour and my personal observation are indicated in footnotes in this report.
Integration of knowledge

Integrating all the knowledge produced by this method, I illustrate the case by applying Scholz and Tietje’s model.\textsuperscript{40} This model represents Brunswikian Lens’ model where multifaceted data-gathering provides sufficient information to get a more robust result. In our case the EDT research problem is deconstructed, analysed and interpreted in three different aspects: action, practice and improvement, which through the lens are transformed in synthesis, that is the new knowledge, the new conception of the case under scrutiny. Data gathering produced sufficient, saturated information to satisfy the principle that contains both analytical deconstruction and knowledge integration.

Figure 5.5 Integration of EDT’s theories of practice to produce a theory of knowledge

EDT/COP relationship with archaeology, curators and museum visitors

In addition to the theories constructed by EDT/COP, I want to address separately their relationship with archaeology, curators and museum visitors.

Archaeological interpretation within the group

Archaeology is the focus of the EDT’s daily interest. As registrar, conservators and photographer of archaeological materials, the members of this team have to analyse

\textsuperscript{40} Scholz and Tietje 2002: 39.
objects in relation to their technical aspects but also in relation to their socio-cultural meanings. As members of archaeological fieldwork teams, they become acquainted with the history of the findings; in addition, discussions with archaeologists in the field provide them with deeper knowledge of the material excavated. As assistant researchers in archaeological projects, they become aware of archaeological and anthropological literature, and can interpret the intertextual meanings of matter, technique and colour using art language. All these aspects do not transform the EDT into archaeologists, but facilitate their communication with curators, and with the handling of cultural objects. This familiarity with archaeological concepts and terms make them unaware that the general public has not such knowledge and introducing subliminal messages within the exhibition design does not function as intended.

On the other hand, there was an open declaration that archaeology means human action in the past and archaeological objects exhibited should show this human link.

Archaeological interpretation and exhibitions.

There is a slight discrepancy between the EDT and curators. The EDT assumers that curators are permanently consulted; curators are present at the meeting called by the Director to announce the beginning of a new exhibition project; their opinions provide the guidelines and their texts provide the material to organise the projected exhibition. EDT argues that curators are invited to discussion sessions during the project process. Curators decide on the selection of objects to be on show. They participate in the mounting phase and their directions are respected.

Interviewed curators have a different perspective. Calogero said that he feels there is a gap between the research and exhibition of cultural materials and he would like to
participate more permanently with the EDT. Vivien does not feel that she is ignored, but opportunities for her to participate have not been created. Liliana also would like a more direct engagement of curators with exhibition development. Even though, in general, curators agree that people like exhibitions and have some understanding of them.

The EDT’s explanations of curator’s occasional exclusion are due to being absent during the discussion period or arrive late to discussion sessions. Indeed Calogero is frequently outside the DAM on fieldwork; Vivien is a part-time academic, so she is not always present. Liliana joined the university directorate for a long period. My impression is that both sides are right in their view, and that in future projects curators should be more critically involved.

*EDT and museum visitors relationship*

There is a gap in the relationship between what is said and what really takes place in the relationship EDT-MASMA visitors. EDT said they wanted “to reach the public at all levels” – but in practice visitors are marginal. EDT is not concerned about visitors’ needs. EDT incorporated Aymara people in the design of Ayllu, but their suggestions on the awkward position of the married couple facing in different directions was not heeded. The relationship with the Aymara people was not equal, they were not considered authority on their own culture. In this example there is still an unequal relationship of museum power over the informant ‘source community’, as described by Peers and Brown.\(^1\) Besides, there was no interest in talking or reading about visitor studies, nor in asking visitors’ opinions systematically. And I have to

mention again those subliminal messages on which there is no research undertaken. I think this gap is produced due to their lack of expertise on exhibition design. Even though EDT wants to learn and their engagement is remarkable.

Frequent comments on the nice layout of the exhibitions are sufficient to make EDT content with their accomplishment, especially if those comments come from museum people or anthropologists. In this sense it is evident that exhibitions are addressed to museum people, including those hidden messages that will only be appreciated by visitors if presented in a face-to-face interpretation of the exhibition. This is a common feature in scientific museums;\textsuperscript{42} galleries are designed for exhibition developers. EDT imagines a public who is very similar to them. The standard visitor to whom exhibits are addressed is indeed an ‘ideal visitor’ who is expected to be able to interpret symbols that are rarely made explicit.\textsuperscript{43}

As a result of this seminar, visitors were understood in a different perspective. EDT realised that the gap exists, and even if they still do not take direct steps towards checking the receptivity of their exhibitions, they understand the relevance of feedback and asked me to take responsibility and integrate that knowledge into their commitments.

**Conclusions**

This chapter has reviewed the important contribution of the EDT/COP to the representation of archaeological research and the construction of visitors’ knowledge. They are the link between curators’ interpretation of the ancient past, the

\textsuperscript{43} ibid: 158-159.
institutional politics of communication, and the museum visitor who is the recipient of all the museum’s efforts.

By using the reflective method of action-science, we have arrived at the conclusion that EDT members have not defined their joint practice in any sense. They come together for the purpose of the project in a spontaneous way (to fill a need that is not covered due to MASMA financial problems), and disperse once the task has been completed. Due to the episodic nature of the activity, they have not established any responsibility for the maintenance of exhibitions or thought of evaluating their objectives once the setting up exhibits is completed. After their experience with action-science research to improve practice, these aspects will be considered in future projects.

All members of the Exhibition Design Team were present at all the seminar sessions; they participated with goodwill and commitment to accomplish the purpose of the project. They showed interest in the procedures and enjoyed the possibility of reflecting on their practice, as the opportunity to discuss professional matters in a joint enterprise is rare.

As a researcher applying action-science I was extremely pleased with their motivated collaboration. As a participant observer, my perception of the EDT was enriched, since, although daily analysis of action takes you very close to the facts, you can never achieve in-depth perception unless the participants can freely express their inner thoughts. Openness and genuineness of expression was facilitated by the friendly relationship existing among all the members of the seminar sessions. Despite
I am a senior person there is no distance among us, we respect and trust each other. I have no doubt about their sincere collaboration and that discussions of the problems evidenced their real inner thoughts.

Although practice is not perfect, reflecting on it is a big step forward to be conscious of weaknesses, problems and strengths, and allows the EDT to better control them. To know what to do to improve practice and to reach better outcomes will also have a beneficial effect on museum visitors.

I think that this method contributed positively to the improvement of practice. Findings will be integrated in the last chapter of this thesis, providing an overview of the wholeness of archaeological interpretation.
Chapter Six

MUSEUM VISITORS: MUSEUM HABITUÉS

Introduction

The principles governing the reproduction and analyses of visitors’ opinions are the same as in the previous chapters dealing with participants’ views. The aim is to reproduce their voices without intervention on my part except for footnotes and square bracket annotations. I recall Morrison’s remark that “an important aspect of qualitative research is that it is dense, rich and deep”.¹

Visitors participating in this research are organised into two groups for the sake of analysis but both groups correspond to regular visitors to the museum, attending the venue through their own decision. We have called these groups ‘museum habitués’ and ‘teachers’; but even teachers go to the museum volitionally. The two groups of visitors are analysed in this thesis in different chapters: museum habitués in this one and teachers, in chapter seven. Regular visitors were chosen for their greater knowledge of the MASMA² exhibitions, a clearer short and medium memory of the displays, so that they did not need to be in front of the museum cases to talk about their contents. All visitors were interviewed individually. They have no connection with one another, except in the case of the teachers Lili and Etna.

The methodology used for choosing these two groups was given in chapter three, as was the method used to select these individuals from the category to which they

¹ Morrison 2000.
² Museo Arqueológico San Miguel de Azapa.
belong. Although they were identified and introduced in that chapter I repeat here their individual characteristics.

Among museum habitués, I interviewed Nancy, a social worker, born in Arica within a family with Andean roots; her mother spoke Aymara but Nancy cannot. Maria Inés is a journalist, born in the north of Chile, some 1500 km south Arica, her family is originally Spanish. Diego was a student finishing secondary school when interviewed, and wanting to study engineering at the University of Tarapacá. Diego was born in Arica; into a traditional Arican family. Another interviewee was Balbi, a young architect born in Arica into a traditional Arican family who were closely connected to the political-economic development of the city. Sam was British student of Spanish in England who stayed in Arica in an exchange university programme; he taught English to Chilean university undergraduates.

The method used with museum habitués was the semi-structured interview, since they were unfamiliar with my method of free discussion and when asked to talked about the subject of interpreting museum exhibitions they expected a questionnaire. In order to avoid excessive repetition of individual questions and answers, I grouped the museum habitués’ opinions into selected subjects, which are organised following the interview guide and incorporating those participants’ ideas that were not asked in the dialogical encounter but emerged during the analysis process. These subjects concern perception of the past in the museum, the meaning of the past to present life, knowledge obtained by museum visiting, and a description of the knowledge obtained at the MASMA. These aspects can be found in the questions that follow, organised as subsections; the idea is to let visitors speak by
themselves. My opinions are indicated in the last paragraphs of each topic addressed.

Later I will discuss the findings on each selected topic, present the theory of cognition and interpretation observed among the participants, and conclude the chapter with a general appreciation of the museum habitués’ understanding of archaeological museum exhibitions at the MASMA.

**Topics discussed by museum habitués**

I must emphasise that the museum habitués’ opinions reproduced in this section correspond to separate interviews although they are put together under a single topic; they are not dialoguing with each other but with me.

**Do visitors gain a vivid impression of the past at the museum?**

D. Well, as it is now, I do not see it clearly, but the results are there. For example, there is a skull with a hole, then one notices that these people were violent sometimes, that is a result of living, but the daily life is not present. Technology, the artefacts they used are there, those are results; they are the heritage from those people, but everyday life cannot be appreciated from exhibitions. (Section 1.10 Paras 42-49).

Objects have an order; I do not mean to be destructive with my opinion, but no... I can pass from one window to another and I can see that the artefacts do not belong to the same culture; they change in some way... (Section 1.8 Para 28).

B. It is evident! I think so. You can greatly get it. (Section 1.7 Paras 30-34).

I think that visitors make that very clear at the museum. (Section 1.9 Paras 38-39).

MI I think so. I think visitors do. (Section 1.8 Para 34).

Well, it depends on the visitor’s interest. For a tourist with experience in museums this would be easy. If a tourist travelling in South America stops at Arica and asks what is of interest here or has previously been informed about the Chinchorro mummies, it will be easier for him [her] than for a person who knows nothing about the subject. (Section 1.23 Para 153).
N. It depends on the visitor. I would say that most visitors I take to the museum are professionals who are not living in Arica. They come from the south of the country or from abroad. They are social sciences professionals who are interested in the museum and read the museum using their background. (Section 1.5 Para 23).

S. I think so, I do so. I think that from the moment you see those mummies in the museum... from the first time I saw them I had that impression, at once, do you understand me? Because in front of me there was a human being! Drawings are not so eloquent. The bodies... they were living and doing the same things I do. (Section 1.6 Paras 44-56). But it also depends on the visitor’s interest and qualifications. If you study archaeology and go to the museum, the museum is going to be more vivid. In any teaching and learning situation if the place is connected to what you are studying ... [it is more meaningful], do you see what I mean? Because, you know, there are so many things you need to know before going there. (Section 1.16 Paras 109-117).

Diego can see only isolated products of ancient peoples, he noticed an evolution in the contents of the display cases, but he did not recognise the chronological order of the archaeological exhibition or what it meant. Balbi, María Inés and Nancy give their opinions in the third person, interpreting their views and those of their friends with whom they have shared the museum experience. They are positive about the way the museum communicates the past, though they recognise that previous knowledge and individual interest in the subject helps greatly. Sam speaks in the first person; he has been touched by the experience of seeing the real bodies of people who lived millennia ago, and everything else pales compared to that experience. (Plates 5 and 8). He also recognises that a personal involvement with the subject helps to understand the museum. The museum is not easy to read.

*How would you describe your perception of the past from the way the museum presents it?*

Balbi says that the sight of the mummies at the beginning is very impressive (Plate 5) then what follows is a gradual development of a good way of living. At the end
of the day, the cultural and the religious aspects of our roots is most important. Then comes the harmonious relationship with nature, and the extraordinary example of coping with the desert, which, in the way Andean people responded to it, provided them with everything, Balbi concludes. In this area there were not many conflicts or wars between cultural groups. Life developed slowly and peacefully, with peoples’ relationship was based on exchange of goods: fish for vegetables and the like.

Maria Inés reflects on ancient peoples living in this desert, one of the most arid places on earth, and finds that their achievements were extraordinary. She admires their culture in relation to the period when they lived, especially the complexity of their textiles, (e.g. Plate 10) ceramics and the technology they developed to cope with these adverse conditions. Moreover, they had a rich spiritual life, as seen in rock art – rock painting, geoglyphs, petroglyphs – delicate textiles, most with a religious connotation. They were spiritual societies, María Inés rephrases, and their relationship with the environment was paramount.

Nancy enjoys learning about textiles, shapes and colours, and how nature is included in them by the analogical combination of hues made from vegetable tints. Commenting on Ayllu, she is not very pleased, as she notices Isluga's influence in an exhibition that should represent mainly Arican highlands, if the exhibition is to be consistent with the cultural use of space.

Diego deduces, from a perforated skull, that these peoples could also be violent.

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3 Geoglyphs are drawn on the surface of the hills with stones or by scraping the surface. Since in this area it does not rain, these geoglyphs remains from time immemorial.
4 Ethnic group from the highlands of Iquique, some 600 km kilometres south of Arica
In this section we see that even when the perception of the past is conditioned to
previous knowledge or special interests, as stated in the previous section, museum
habitues can describe what understanding they gain from museum displays. They
see how ancient populations coped with the harsh environmental conditions and the
peaceful way they relate to each other and to nature. Museum habitues perceive a
religious idea as the source of the idealised peaceful relationships with the
environment, which is a abiding tradition among the contemporary Aymara
population in the high plateau, and could be introduced when the exhibition is orally
explained. These harmonious relationships are explained through the iconography
of materials, mainly in textiles, ceramics, wood, earth (geoglyphs) and rock
(petroglyphs). Diego, who could not perceive these traits, interprets the perforated
skull as the eventual violence practiced by these very old populations.

_Do objects speak for themselves?_

B. Well, one can analyse the object in the abstract, as an isolated item, but if
you are not a connoisseur you cannot say much more. The context of the
museum display helps to interpret the object. (Section 1.31 Paras 205-
211).

MI. According to the objects' conditions you can recognise if it is an authentic
piece or not; if it is old or a replica. I could admire its design and colours,
but I could not tell to what period it belongs, to what culture. No. I do not
think that an object can speak for itself. (Section 1.25 Para 168).

D. Yes, always; from childhood I have seen and heard that an object can
reveal an enormous amount of things, for example customs, since in the
water there are such and such minerals, or there are some breaks in the
objects, residues, that speak for the object, and many things can be
written about those characteristics. Then, it is clear, an object could tell
me something about a culture. (Section 1.26 Para 172).

N. No, because an object is not educative. (Section 1.31 Para 201). These
objects have a history, a related experience, and a given cultural moment.
Objects need their history, which should be promoted and reinforced.
Objects need a context. (Section 1.33 Paras 217-221).
An object in itself says nothing. (Section 1.33 Para 221).
S. I would like to make objects speak, yes, I would. I am not an expert but all the same I would like to know... Yes, I would like to create a story of my own, do you understand me? ... A basic archaeological knowledge would be enough. (Section 1.32 Paras 239-249).

Diverse aspects are mentioned in these opinions. Archaeological objects have aesthetic value, which is appreciated when there is no information related to them, but they cannot communicate their time-culture relations to lay people. They can also inspire stories apart from their own life history and, in this case, archaeological interpretation is not absolutely necessary. Another view is that an object is said to contain many clues but those are not easily grasped; they have to be studied scientifically and eventually linked to a culture. Archaeological objects need a cultural context to signify; otherwise they are isolated items with no educative objective. In these last opinions archaeological research is seen as essential.

So, in the view of museum habitués, objects are meaningful in history and when they are related to human experience. Museum habitués can perfectly distinguish that archaeological objects mean human agency and vitality in the past and in the present; they are there to be understood not passively but actively, not in isolation but in context. For museum habitués this context is the way in which the museum displays objects and relates them to a cultural period, or other supporting meaning, such as drawings and texts. Even in Diego’s view, objects are linked to culture

*Is there an object/concept relationship in the museum?*

Balbi thinks that the first showcases are very clear. Afterwards the display is a mess, he says, from the one that shows the regional development period onwards. (Plate 6) The last exhibition mounted, *Ayllu*, is very confused in his opinion. He considers
that there is too much space for the importance it has, because he supposes it is a continuation of the previous exhibition. He says he noticed the L shape disposition of galleries but he gets confused by the order of displays at the top right angle of the gallery.

María Inés' opinion seems contradictory with the one she expressed just before. She finds that objects speak for themselves, like a good photograph which does not need a text. But everything is important in the museum as an object’s complement, she adds. You cannot tell the period, the culture, the way it was used; additional information is required, she says. Objects and contexts have to blend. Catalogues are important, and the museum has them translated into 3 or 4 languages she recognises. And if it is interpreted by a good guide, the exhibition is 100% more effective, she says. But even without help, she goes on, if you look attentively, in a conscientious manner, concepts flow from the objects. She concludes that from her particular point of view, concepts are quite clear in the museum.

Nancy finds that hierarchy and power can easily be visualized from the beautiful textiles used as costumes. In her opinion, power is evident from object appreciation. She perceives division of labour and adds that weavers were certainly not ceramicists. But objects need a context, otherwise you can exclaim, “How old, beautiful or rare it is!” but if the object is 10, 100 or 1,500 years old it makes a difference. Objects have a history, a meaning, a given cultural moment, she insists. But these concepts are not so clear in the displays. According to nancy’s experience, the museum has been evolving, it has improved in the way it communicates with the public; from being just an archaeological display and very… (She does not end the
sentence) it has added a sense of life. It has become more ethnographic in projection.

Sam insists that objects and concepts are equally important. He does not think the object is more important than the concept. He says that to see what is behind the object is important, the history of the object.

Diego asked himself if the objects are more important than the concepts. He then concluded that the objects are not more important than concepts, adding that it would be materialistic to think so. He said that one needed to see what is behind the object; its history is important, as are the concepts that are linked to it.

This topic was addressed directly and indirectly. Balbi, Maria Inés and Nancy referred to the exhibition and the relationship between objects and concepts that can be grasped from them. Showcases organised linearly are considered to offer a clear message. When the disposition of showcases allows visitors some freedom to choose their own direction, the impression is that the time reference is lost and the exhibition becomes messy.\(^5\) (Plate 6). Displays of objects convey meaning to those who can read them. For example the beautiful textiles are not just astonishing but communicate the idea of religious or political power and division of labour. Sam and Diego referred to the topic generalising about the importance of setting a context for exhibiting objects so that they could tell its history. From museum habitués' words it became clear that exhibitions at the MASMA convey ideas when

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additional interpretation tools are incorporated: exhibition layout, catalogues, labels and dialogical interpretation.

*Can you appreciate values from museum exhibitions? If so, are those values important to contemporary society?*

MI First of all, it is necessary to understand how ancient people lived; if I want to know them I first need to know how they lived, the way they organised their lives, don’t you think so? (Section 1.19 Paras 105-105).

I can see friendship, solidarity, acceptance and respect for the other person who, in spite of being different from you, you accept with all that his [her] culture brings. Respect, isn’t it? (Section 1.19 Para 109).

I think that’s it. I think that the most important value is the respect for the other person he [she] stands for. (Section 1.19 Paras 113-114). The main problem in Chilean society –I speak of Chile because it is the country where I live– I think the basic problem is a lack of respect for others. If our philosophy of life were to respect the other, our society would be much better, in rightness and fairness. (Section 1.21 Para 123).

S. I think that to develop as members of the human race, we first need to understand ourselves, do you see what I mean? And for understanding ourselves we need to know our history, right?. (Section 1.24 Para 185). One of the ways to know ourselves is to learn what our ancestors did. (Section 1.19 Para 193).

And also respect for other people. Because obviously, their rituals were developed to show respect for others: friends, relatives. The family, group life, most probable was a basic life, hunting... but they needed a life together to satisfy their basic needs. They had to be super strong. When I went to the museum, that was what I saw, the value of the family and the social group. (Section 1.26 Paras 199-203).

I am speaking from the point of view of an Englishman, and I realise from the way we live there [in England] that we are losing respect for the family. All of us live and behave as individuals, without links. We struggle for ourselves. We are not part of something else, a family, a community... (Section 1.28 Para 213).

D. I could not see values. Perhaps we ignore about ancient populations values, because peoples in this area did not leave a written legacy. But it would be interesting to know what their values were. (Section 1.20 Para 126).

N. I see hierarchy and reciprocity in the museum displays. (Section 1.27 Para 171). Hierarchy is linked to order? ... respect... to power? I would
say that hierarchy is order, power and social roles. (Section 1.27 Para 173).

But I cannot see respect in the museum displays. If I think of myself, I can tell you that respect is a strong value that should be permanently revalidated. But I do not see that in the museum. (Section 1.27 Para 175)

In all eras and societies, hierarchy is important for organizing groups. And hierarchy confers power. (Section 1.29 Para 189).

If our history is so many thousand years old, that way of organizing could not be that bad. We are not talking of survival but artistic creativity... and the like. (Section 1.29 Para 193).

Respect among people in the ancient Andean populations is seen by museum habitués as a common value that can be gathered from the organization of burial traditions, although the Aymara descendants considered that this value, so very important among Andean people, is not sufficiently emphasised in the exhibitions. Solidarity and friendship were also mentioned in relation to coping with the harsh environment in which their culture flourished. Power, hierarchy, order and reciprocity were divined from cultural objects. Diego could not see values in exhibitions, since he thought that values should be expressed in words, and written texts do not exist for these populations; therefore he could not tell what values they might have. He did not consider material culture as the texts of ancient populations without a system of writing we could read today.

What surprised me was that museum habitués, except Diego, had no doubts about the values contained in the archaeological displays, although among EDT/COP’s discussions these values were regarded as subliminal messages that could not be perceived by visitors. Perhaps those Andean organic worldviews such as duality and quadripartition, are not perceived, but more common concepts such as solidarity and
respect can be noticed even if they are not emphasised in exhibition labels, 
catalogues, etc.

Is an appreciation of the past important for living and sharing a better life?

Balbi says that the past is a mirror for the present. It reflects ancient societies’ 
solutions into their present. We could learn from their environmental adaptation, 
internal and external collaboration. Arica was an axis for exchange of products and 
information in the surrounding areas. Balbi goes on reflecting on the fact that we are 
experiencing an economic collapse because we cannot understand the solutions we 
need to try. External collaboration is collaboration for our own sake, because 
benefits are mutual, he ponders. We should also imitate old Arican peoples’ 
harmonious use of space, he concludes.

Diego explains that we can learn from the ancient peoples’ experiences, just as you 
can learn from the wisdom of our grand parents. The past influences the present; 
some ancient technologies are still useful.

María Inés feels that the principal lesson from the old past is learning from their 
environmental adaptation; you can notice improvement in their clothes, utensils and 
other things, that made their living more comfortable. And she also mentions their 
internal and external collaboration, based on the acceptance of others and their 
cultural differences: mutual respect. María Inés refers to the Andean irrigation 
system, a model still used in present times; terrace irrigation is illustrated in one 
diorama but it is not clearly explained (see plate 9). Also, their fishing and hunting
technology is well in use today. The past sets the necessary foundation to construct the future, she says; it gives solidity and security to the future.

Nancy emphatically affirms that the past influences the present. Besides, to know one’s roots provides self-security and makes sense of your life: the deeper the roots the stronger the tree, she concludes.

Sam agrees that every person who lived before us contributed somehow to the world we are living in, no matter how small his/her contribution is; the past influences the present.

It was said in chapter two that the horizon of the past and the present fuse in our personal experience, and in this section we have a clear example of that concept. Museum habitués can interpret the past in terms of the present and recognise the contribution of the past in our solutions of present problems; Balbi thinks that if our local Government employed the Andean solution of reciprocity with our neighbouring countries, the economic depression we are suffering might be better managed.

*What new knowledge have you acquired by visiting the Museum?*

B. It has always been considered that Arica was part of the Inka Empire, a kind of subculture within the Inka culture; but now I know that Arica developed its own culture. (Section 1.9 Para 38).

S. I think that the kind of knowledge you can acquire is very basic. I wanted to go to the museum, but I did not get a strong, complex knowledge of the history of Arica, even though now I am better versed in it. (Section 1.12 Para 76).
A basic impression. What made the greatest impression on me were the objects of the past. But I did not go to the museum with the intention of obtaining a deep, detailed, knowledge of the past. (Section 1.14 Para 90).

D. Well, you can get an impression of the past more than knowledge at the museum. (Section 1.10 Para 45).
I can only see their technology, which is more or less complex, and objects, the result of their work. (Section 1.10 Para 53).

MI It is supposed that indigenous people have a rudimentary way of living: assassins of white people, warriors and cannibals, as seen in films. They are always depicted as violent. But at the museum I have also reviewed their technological achievements, the level of detail for example. The colour palette of their textiles, made from natural dyes. Their artistic sense is remarkable. (Section 1.29 Para 184).

Museum habitués are of the opinion that they could not get a deep or complex knowledge from the museum. They say that they got an impression\(^6\) and describe technology as the most remarkable achievement. Nevertheless, they also saw values and can speak about what they have seen, so they have acquired knowledge about the past. If this knowledge is not deep and complex, it is within the expected objectives of the museum. In the exhibition galleries the museum is provoking knowledge, with no pressure or goals to reach.

\textit{Which are the five words that best describe the MASMA?}

Balbi: informative, high quality, small in size, beautiful environment, highly provocative, everybody can find something of interest. Sam: informative, elemental, interesting, it lacks interactive opportunities for visitors, I do not mean children’s games, but more innovative presentations. Diego: good museum, very small, simple, important for Arica, not very different from other museums. Nancy: small, interesting, university museum perhaps too specialized. María Inés: educational, didactically organised, clear historical organization, a beautiful museum.

\(^6\) cf. Hein 2001: 8. ‘Visitors come primarily for an experience not an education…’
As a summary of museum habitués’ opinions I asked them to describe in five words what the MASMA is for them. Some of them did not have enough adjectives and one have more than five words linked to the museum. Table 6.1 provides a graphic account of the concepts mentioned and coincident impressions among museum habitués.

<table>
<thead>
<tr>
<th>Description</th>
<th>Balbi</th>
<th>Diego</th>
<th>Maria Inés</th>
<th>Nancy</th>
<th>Sam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informative</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>High quality</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small in size</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Beautiful environment</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Highly provocative</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting for everybody</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Elementary, simple</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack interactive options</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good museum</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important for Arica</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not different from other museums</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University museum</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Perhaps too specialised</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Educational</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Didactic, historic organisation</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beautiful museum</td>
<td>✓</td>
<td></td>
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</tbody>
</table>

Table 6.1 Summary of visitors’ descriptive terms of the museum

Analysis of topics discussed by Museum habitués

In most aspects the youngest visitor, Diego, had a different appreciation from the rest of this participant-group. He was still a schoolboy while the rest in this group were professionals and one an undergraduate student. Diego did not invalidate my research results; he gave variability to findings. In the museum all voices should be heard if we want a sound communication with our visitors. We are not concerned with building theories for generalizability of findings but with reflection on museum interpretation and paying attention to difficulties in order to improve existing conditions.
Museum habitués’ perception of the past as it is presented at the MASMA.

Diego could not see the past, he could only see objects organised in a given order. This order could suggest the passing of time because materials are placed in successive museum cases. The other visitors could trace the past from the first display case displaying Chinchorro mummies (Plate 5). From that point onward everything assumes a human dimension. But they recognised that the supporting information provided increases the possibility and quality of understanding, which would be better still if a face-to-face museum interpretation were offered. From these opinions I gather that the chronological order helps people to understand changes in the past, but to understand how those changes were produced and what they brought about additional information is required. The book format layout is useful for the diachronic organization of knowledge. People need to be introduced to the ancient past which, in their experience, is new, and they trust in the professionally trained to interpret the past. They look for the museum catalogue and any other help that the museum can provide.

Without the museum’s explanation of the social context, objects remain isolated items. An object out of context holds only aesthetic or technical values, but museum interpretation drapes it with its cultural importance. The ancient past, as brought to the present in museum galleries, has all the potentialities that our imagination and knowledge can construct.

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Meanings of the past into the present.

Nancy, the Aymara descendant, was opposed to the imaginative use of archaeological objects. She said that an object in itself, without a history, is not educative. I found this answer particularly interesting because I had never thought before about the educational dimension of Andean objects. Suddenly I realised the reinforcing messages transmitted through the ages by means of Andean crafts. Objects do not only reflect a way of doing things accepted by the group, or express their identity, but they also tell the story of the group in emic language.

In the opinion of the museum habitués, the past occurred peacefully and evolved slowly, allowing a harmonious exchange of products and culture. They expressed admiration for the way ancient populations accommodated themselves to the desert and developed a complex culture in difficult conditions. I was pleased to notice they did not use the concept of taming nature, subordinating it to their will but using it with respect, as in reciprocal benefit. They could also see the spiritual life that connected them with nature, through the drawings on earth and rock – geoglyphs and petroglyphs – and the reflection of the colours of nature in their textiles. On the other hand, Diego also noticed violence, expressed in the battered skull.

Visitors’ appreciation of an idyllic past can be connected to Shanks and Tilley’s discussion of the white-coated expert interpreting the past free from problems.

Presently Andean people do not rush for quick solutions, they carefully observe the

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9 This concept is still present among the Aymara population; before undertaking any modification of nature, such as ploughing, planting or harvesting they develop affectionate rituals addressed to the mother earth to ask for her permission to start the task, and share with the earth their drink, food and mirth.

10 Shanks and Tilley 1992: 90
problems and their responses, slowly produced, are efficient. Personally, when I first came to Arica I became annoyed with that slowness about urgent tasks; I could only appreciate their way of doing things when I verified the efficiency of the results. Perhaps this is the mood that floats around in the museum displays.

*Concepts and Cultural values*

When visitors were asked if they could see a relationship between objects and concepts, they said that the first gallery (organised in axial form) is clear. Once the layout allows more flexibility of movement it becomes disorderly in the eyes of one visitor, and, accordingly, *Ayllu* is very messy. Concepts are clear when supported by written or oral information, such as catalogues, wall texts and guides. Objects and concepts are equally important, they say.

Nancy discerns hierarchy and power in the beautiful textiles, and also division of labour. She notices reciprocity, the Andean concept linked to power, order and social roles, but misses the important value of respect, which is paramount among the Andean population, and, in her opinion, deserves more emphasis in the displays. Her perception contrasts with that of other participants who can see respect in ancient remains, but Nancy, who has a personal experience of Andean forms of respect, does not see it well represented. The rest of the group could not distinguish hierarchy and the concepts linked to it as Nancy did. None of these aspects are mentioned in labels or catalogues.
Among the ideas and values conveyed by the displays, visitors notice solidarity, acceptance and respect for the other, e.g. from their mortuary rituals, also friendship and family links. Again, these ideas are not openly addressed in the exhibitions. Diego could not see any values. For him values must be written, and pre-Columbian societies did not have a system of writing in his opinion. I figure that Diego has never had the experience of a museum tour with someone to direct his attention to the meaning of things, and, being so young, he is not yet accustomed to going deeper than the surface.

When visitors were asked if the past is important for the present, they said that the past is a mirror for the present; it reflects solutions to problems from which we can learn; for example, adaptation to environmental conditions, and internal and external collaboration. The axial location of Arica, used in the past as a point of exchange, could effectively inspire our depressed economy today. Currently local government has established economic and cultural regional ties with neighbouring countries, but they remain rhetorical rather than put into effective practice. Reciprocity and exchange of products were basic principles in ancient times.

The harmonious use of space was also considered inspiring for the present day economy, as it is the elaborated system of irrigating desert lands. Museum habitués affirm that every person who lived before us contributed something, no matter how small, to the world we live. In their view to know one’s roots provides self confidence, gives meaning to life and cements the future.
New knowledge at the MASMA

The depth and quality of knowledge attained by visitors at the MASMA were related to their perception of exhibitions contents and explanations. They could eradicate preconceptions, such as the rudimentary life of pre-Columbian peoples, and the Inka as the only ascendant culture existing in this area before the Spanish domination. They also learnt about technological achievements, artistic manifestation, but they insisted that the museum’s additional explanations greatly help visitors to make sense of the displays.

Sam, a foreigner, said that he was more knowledgeable about the history of Arica after visiting the museum. He said he had only a basic knowledge, but he has not gone to the museum to become an expert. His strongest impression came from the role that objects had in the past, as a means of communicating thoughts as well as having a function. Sam is right when he says that a visitor to the museum is not planning to become an expert, even after repeated visits. This contradicts the opinion that the museum tries to convince visitors that they can also be experts.¹¹

Most probably visitors’ opinions seem rather heterogeneous. The best way to organise those opinions is by constructing models of reference. In the following section the reader will find a theory of cognition and a theory of deeper interpretation of the past, based on data reported and summarised above.

¹¹ Shanks and Tilley 1992: 91
Museum habitués' theories of interpretation of the ancient past

Museum habitués’ theories of interpretations of the ancient past are based on two aspects: the way they come to know museum propositions (cognition), and the interpretation they construct from those propositions.

Cognition is the process involved in the act of knowing, including perception and judgement.\textsuperscript{12} It is constructed by the individual, the person-solo, instigated by personal engagement with the surrounding world, the museum galleries in this case, and/or influenced by social circumstances.\textsuperscript{13} The knowing person uses heuristics, driven by his/her personal needs, the questions he/she may ask to the museum exhibitions and the pattern of explanations he/she frequently adopts. The museum offers instruments of thoughts to the knowing person, such as the materials on displays, organised in a chronological order – so that the layout of the exhibition contributes to the individual’s perception – labels catalogues, face-to-face interpretations. If these resources are assimilated, the person becomes a person-plus, who can also discuss exhibits with the museum staff, friends or other visitors, distributing knowledge among each other.

Interpretation, thus constructed, could mean a superficial appreciation of facts and events occurring in the past, or a deeper interpretation of the meanings of things, which may cover a wide range of topics according to individual interest, from an aesthetic appreciation of objects, to general knowledge, to values, technical aspects, religious meanings, and so forth. There are also hidden meanings, unexplored,

\textsuperscript{12} Encyclopaedia Britannica 2000 CD 1.

\textsuperscript{13} Perkins (1993: 89, 93-94) calls ‘person-solo’ the cognitive mind and ‘person-plus’ the shared cognition of the individual with instruments of thought, such as language, social interactions, social facts, tools and the environment, which entails distributed cognition or a socialised system of cognition.
unexplained or cryptically explained by the museum’s propositions that stimulate visitors’ imagination. In fact, everything is open to the visitors’ imagination, but these visitors go to the museum to understand what they are looking at, and they trust the museum’s interpretation.

Two models have been designed to recount visitors’ experience, emerging from fieldwork data. Again I must emphasise that these models are descriptive of a phenomenon occurring at the MASMA, they do not correspond to generalizable theories, although similarities may be found elsewhere.

Model 6.1 represents the theory of cognition, i.e. how museum habitués come to know the past, how they approach the museum and what can they obtain from the visit. If the visitor comes to the museum to explore what is there, he/she may experience cognition as a person-solo. This means he/she can just visualise or perceive or construct meaning from the exhibition using personal resources of understanding. But if the visitor comes to the museum with the intention of learning something new – even if he/she has been there more than once – he/she has to look for additional information in written or oral forms; or, if visiting with family or friends, their comments and questions may create a learning environment which increases the visitors’ knowledge, and allows them to become a person-plus.

Cognition, as a way of knowing at the MASMA, is then represented in Model 6.1 as a two way process. The person-solo apprehends meaning by seeing, perceiving,

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14 The alternatives offered by the MASMA during the period of the research.
recognising, conceiving and reasoning, using heuristics, personal quest, modes of inquiry, pattern of explanations, in a personal contact with the material culture displayed in the museum cases. The person-plus apprehends meaning using knowing tools, such as labels, face-to-face interpretation, discussing and learning with others (family, friends, and so on). Because reasoning and judgement are included in the act of knowing, the natural next step is interpretation. In the case of the MASMA, interpretation includes, for example, understanding the prehistory of Arica in a linear order. Repeating with Hooper-Greenhill, interpretation in this context means developing and using one's knowledge in a broader framework.

Figure 6.1 Theory of cognition of the past at the MASMA: Museum habitués.

15 Process or method of discovering or learning by oneself.
16 Hopper-Greenhill 2002 pers. comm.
Once perceived, museum habitués could interpret the prehistory of Arica, ancient peoples' environmental adaptation to the harsh desert conditions, their technical achievements, artistic expressions or religious attitudes from MASMA exhibitions. Consequently at the MASMA the past can produce a holistic or superficial knowledge, according to personal interest. People can go to the museum for recreation or with a purpose, but going for recreation does not mean that they cannot get a deeper insight into the past, because the past is recognised to lay the foundations of the present and projects the future; it is necessary for self-confidence and for inspiration.

Figure 6.2 presents the model of a deeper interpretation, which means going from the part to the whole and vice versa. Museum habitués start from the objects in
context, represented in the MASMA exhibitions, and that which arises their interest. Then, their interpretation may construct personal or social meanings or an understanding of concepts and values which generate knowledge. All knowledge is gained within a context; therefore, in order to better understand the museum displays they may make a return visit to see the objects again and look for further meanings. Slowly, a peaceful coexistence with the desert appears, a social order where hierarchy and power can be appreciated, these are deeper interpretations of displays.

Collaboration, partnership, solidarity, reciprocity and respect can be ascertained from textiles, types of burial, instruments and the use of the space for living and communicating. So that the museum, considered small and elementary, could, by successive visits, become informative and highly provocative, etc.

Deeper interpretation of meanings are not clearly exposed, declared EDT/COP in the previous chapter, but these are constructed by visitors by means of a process of consciousness and their cognitive experiences. Hidden meanings are still more difficult to understand, but they represent challenges or puzzles that can motivate new quests. If meaning is always open to new perspectives, a perception of hidden meanings may be gained in the future.

**Conclusions**

In this chapter one selected group of visitors, called museum habitués, were interviewed separately, and selected parts of those interviews were reported, those which parts are directly related to the research question. They talked about their
perception of the past at the MASMA and about the perception of those with whom they visit the museum. They explained the kind of perception and knowledge they could obtain from museum displays. They also commented on shortcomings of museum displays, which were not reported here in toto because the concern of this thesis is interpretation of the past and not managerial aspects. But those impressions are very important to me as a member of the MASMA, to take account of for improving conditions, so I was specially keen on visitors' impressions in this aspect. Some shortcomings were mentioned in the five words with which museum habitués qualify the MASMA, for example as being highly academic, lacking activities to assist visitors' engagement in the displays.

I have also analysed museum habitués' communications, abstracted concepts from their thoughts and given a theoretical account of findings. I worked using my hermeneutic principles so going from participants' communication to theoretical thinking was a circular way of analysis, and the reader had noticed this process in the way that findings integrate thoughts at different levels. This circularity could some times become repetitive.

In chapter seven we shall listen to the other group of participant visitors: teachers. Teachers are not a different category from museum habitués; separating them in different reports is a practical matter, not a conceptual one,
Chapter Seven

MUSEUM VISITORS: TEACHERS

Introduction

Participants belonging to the teachers’ group are regular visitors to the museum by personal inclination. Most of them have visited the museum since childhood and take their relatives and friends to the museum when they entertain them as visitors to Arica, as they told us in chapter one when teachers were introduced. My special interest in teachers was because their views on the museum influence their students, as any of their particular ideas or attitudes do. Being in close and permanent contact with their students their opinions are, willing or not, transferred to their pupils.

The education programmes suggest teachers use the educational sources available in the community where the school is located in order to enrich their lessons and give students a sense of belonging to the place where they live. It is a suggestion, consequently it is not compulsory, and the museum is not the only educational resource of Arica, so using this venue is optional for teachers. Besides, some school Directors do not want their children away from the premises, due to the system of allocating the school annual budget. This depends on the effective number of students in the building when the inspector comes unexpectedly to count them, checking numbers. Furthermore, the museum is located in the Azapa valley, 13 km from the city; there is no public transportation except taxis to the valley, and the museum has no bus to take children there, so it is not easy for teachers to take their
students to the museum. Therefore I supposed that teachers who are regular visitors to the museum are really interested in the subject.

Teachers were introduced in chapter three, so I shall repeat only their names and the subject they teach. Etna teaches history and geography in a private school; Jorge teaches social sciences in a primary school; Lili teaches philosophy to 15-17 year old students belonging to third and fourth secondary grades; Roberto is in charge of the computer laboratory in a comprehensive public school; Victor teaches social sciences in a public evening school for adult education.

**Topics discussed by teachers**

The topics for this participant-group centred around teachers' personal impressions visiting the museum, but, as I said before, they were always connecting their individual experiences with those of their students. As data analyses are based not only on the proposed subjects but also on emerging issues from the interviewees, reported data about teachers' students and schools are also included. The selected topics for analysis in this subset are: Perception of the past in the museum, personal impression of the museum, the relationship between museum and school, concepts of knowledge and understanding at the museum and values suggested by museum exhibitions.

***Can visitors have a vivid impression of the past at the museum?***

L. Yes, the way the past is presented in the museum is appropriate, it is well detailed. (Section 1.8 Para 58).

I think that the idea is to reconstruct what the past was like, everyday life as well. That attracted my attention, I could search and find information I did not know. One always has the idyllic idea that pre-Columbian, aboriginal peoples lived in perfect harmony with nature, that they were
healthy, and then one realises that old days were not the paradise you thought. So in my opinion it gives an idea of daily life. You can even learn about religious traditions. (Section 1.34 Para 216).

R. You immediately have a panoramic view of how people lived, their traditions, customs, colour, life style... That always interests me (Section 1.6 Para 48).

E. The museum is a great help for teachers, to all those who wants to know ancient Arica, isn’t it? (Section 1.34 Para 176).
I was a schoolgirl the first time I was there, right? As a child I was told about the mummies and then all of a sudden to see them there... it was impressive for me, right? I remember in those days there were mummies with malformations, diseases... that surprised me since one always has the idea that those things did not occur in the past. Then you realise that those people really lived, they worked the land... lots of things. They lived by the sea... that impressed me. (Section 1.36 Para 182).
Then for me it has everything, techniques... the museum shows everything. (Section 1.10 Para 33).

V. In pedagogic terms, I would say no. The museum is not a pedagogic environment. I have not had the experience of using the room that was built for pedagogic purposes you told me about some years ago. (Section 1.16 Para 81). My students go to the museum for recreation, and they learn something, otherwise I would not take them there. They like going out to learn from real things. (Section 1.14 Para 75).
But for me this museum, as well as the San Pedro de Atacama Museum,1 is an expression of the artificial culture predominating in Chile; they are located in a given place but are foreign to the people of that place. (Section 1.12 Para 53).

J. I have brought tourists to this museum and they have enjoyed the experience, which generally surpasses their expectations. They always think it's a small museum, one proper to a small city, because Arica is a small city. (Section 1.14 Para 61).
I think that to visit the museum is something extremely important, this is something living, latent; the students immediately relate theoretical concepts to real life. (Section 1.6 Para 128).

Comment: Teachers appreciate the contribution of the museum to the general understanding of the ancient past in Arica. It puts people in contact with reality of ancient periods, and misconceptions can be adjusted. I consider that Victor’s concepts of the irrelevance of the museum to the community is related to the fact

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1 The reference is to Museum Arqueológico RvdO. Padre Gustavo le Paige, an archaeological museum located in San Pedro de Atacama, Antofagasta, some 1000 Km south Arica. It is also a university based mainly on research.
that the museum is not a subject of conversation subject in the community, yet, he also recognises that, when visiting the museum, something can be learnt, in spite of the lack of facilities the museum offers for personal understanding, because he thinks the museum lacks a pedagogic approach.

How can you describe the perception of the past in the museum?

The museum materials as well as the professionals who work there are excellent, says Lili. The lecture we attended was so instructive for all of us [presentation by Vivien Standen, interviewed as a curator]. My students at sixteen or seventeen are conceptualising, and because they have been introduced to more abstract concepts such as worldviews, they can see further the concrete objects on display, Lili says.

Jorge declares that museum display interpretation is sufficient for his needs as a teacher working with small children, and the visual devices are of paramount importance for them to learn about ancient populations. They could also see different levels of culture development in the way the windows are organized. The labels next to each showcase prevent confusion, he adds.

Roberto is of the opinion that interpretation depends on the individual interests and characteristics of the student. Some of them are absolutely indifferent, while others are interested and ask all kinds of questions; some questions Roberto says, go beyond his ability to answer them. Some students just want to know where the objects come from so that they can go and find their own. Compared with other museums Roberto has visited, this museum is easier to understand, because the developmental stages are well organised throughout the galleries, he says.
What is your impression of the museum?

L. The museum has much more information than expected. (Section 1.10 Para 176). It is such an important cultural resource that the city should be noted for it. This is my opinion. I mean that if one thing could identifies this city it should be ethnic culture. I have the impression it is not used to its fullest; it is somehow underestimated. (Section 1.12 Para 102).

E. I feel that the student learns everything there. For example, studying the pre-Hispanic peoples one goes there and learns from the displays, right? It is something didactic, different from the classroom abstract talking and writing, and more writing, boring classroom activities. (Section 1.10 Para 33).
Can you imagine if we didn’t have the museum how could we teach the students that which is written in paper? There would be no evidence, but there you find everything! (Section 1.34 Para 176).

R. This museum is different. I found it excellent and I always learn something new whenever I visit it. (Section 1.20 Para 169).
Even if you do not have a technical knowledge, the museum means something. I notice this especially when I take my relatives there, and I’m able to explain the museum’s content without a great deal of knowledge. My relatives understand, and they draw conclusions mainly about social values. I myself have visited the place several times, and each visit is different, I have never experienced a unique form of perception, each time is different, because of my mood or perhaps an object was changed... but every time is different. (Section 1.20 Para 165).

J. When I go to the museum with tourists I listen to their comments on the richness of the materials on show. They recognise that this is one of the most important museums in the north of Chile. I have not visited other museums south of Santiago, but I dare say that this museum is the most important museum on the subject of pre-Columbian Andean cultures at a national level. (Section 1.16 Para 67).

V. I think that this museum needs something playful, to be more interactive. Games, interactivity, more creativity to engage children with the subject is needed. The fact that I guide my students around does not guarantee that they will engage with the subjects. I need to establish a link in order that students can understand what is on display. This is something that I am always concerned about when visiting the museum. (Section 1.28 Para 223).

Comment: Again teachers cannot think of their experience without referring to the shared cognition of museum visiting, either with their students, with visitors or working as a tourist guide. They recognise effective communication of the museum
content, which is good enough for their purpose, but suggest increasing its relevance as an exemplar of this multicultural the city. Lack of interactivity in the displays was also noted as something that is missing and would greatly improve the objective of communicating the ancient past to present populations.

Museum and school relationship

Lili thinks that the relationship between the museum and schools is already established. The teacher of history at her school has incorporated the museum into her pedagogic activities. The museum is one of her cultural resources to visit every year. Lili has the impression that children visit the museum at least once in their life, during their primary or secondary school cycle. Nevertheless she thinks the museum should be more intensively used.

Jorge says the relationship is welcome. As a teacher, he feels the museum partnership is necessary. Then he emphasizes that the museum has helped him for years\(^2\) when he takes his school children to the museum, and that turns the visit into a rewarding experience for them. He comments on the difficulties he faces when taking his children to the museum: his school is at the farthest end of the city, so to get the money needed to hire a bus and come to the museum is rather difficult. The school is located in an area of deprivation, the students have very limited resources, but when there is the will, goals are achieved, he says.

Víctor complains that the museum is foreign to the community; it is difficult to get there. The school system imposes too many restrictions on field trips. If something

\(^2\) Before going to the museum he asks for face-to-face interpretation and free entrance for his students.
happens outside school the teacher is responsible. It is a bureaucratic nightmare to take students to the museum he says. He has to organise the course to raise money to go to the museum since it is far from the city. We have to organise the tour, he says, it is like going to Mars! To go to the museum is like going to Mars! he repeated. And when they get ‘to Mars’ nobody in the museum can help him. ‘Someone to help me to take a rest!’ he claims. He says that his methodology is to divide the group of about 40 into smaller groups and show the museum to each group separately, so he loses his voice.

Etna wants to thank the museum for the facilities she is offered whenever she visits it with students. She mentions that other teachers in her school have experienced the same welcome. They like to use the museum as a cultural resource, as much as the archaeological trail.³

Roberto thinks the link is very subtle in spite of the connection made in the history curriculum. ‘Foreign traditions in this area were imposed by the system. That is why our children have no perspectives, they have no roots, I would say some 45% of them are ashamed of their roots’ says Roberto. He considers that the connection of school to the museum is a problem at technical level as well: the middle management in charge of curriculum and technical programmes has no clear idea of the type of person they want their students to become; they know their subject but not the way to make it real. He hopes that the New Educational Reform will bring more regional connection to plans and programmes. If so, he thinks that the school will pay more attention to our environmental heritage.

³ Archaeological sites situated in the Azapa valley, along the old road leading to the museum.
Comment: In this subsection we have noticed the difference between private and public schools. While teachers in private schools declare that the relationship between the school and the museum already exists and is functioning well, the teachers from public schools explain the difficulties they have in taking their students there. Those difficulties concern the distance of the museum from the city, the lack of free or public transport, which is a limiting factor particularly to students belonging to unemployed families or those with very low incomes. Besides, the school system which encourages the visits sets constraints upon implementing them.

Museum education

Lili’s first experience with museum visiting was rewarding. The school group was divided in two, and she stayed with the group which attended a lecture by the physical anthropologist, and then worked with Yatiqasiña, the museum’s software in the education room, before going to visit the galleries. The lecture was illustrated with slides, and the lecturer linked her presentation with the object of the school visit. So Lili speaks positively about the facilities the museum offers to school groups.

Etna’s group could not do as Lili’s did because when they finished visiting the galleries another party was occupying the education room. She says that her students understood the displays because they read the labels by each window with no problem since students in her school have a rich vocabulary. Unknown meanings of words were discussed back at school [archaeo-anthropological specialist language]. Etna explains that even if the students on that occasion could not use Yatiqasiña, she knows about its educational potentialities, because the day before
they took students to the museum, she was introduced to the use of the software, and she thinks it is a great motivation for students. So the next visit to the museum will include that experience as well, she says.

Víctor finds no pedagogic intention in the museum displays. He has not had the opportunity to use the education room, so the museum has not helped him any help, he complains. Labels next to the showcases do not have enough information; the displays need someone to explain them. Once there was a computer in the exhibition room but it did not work, and that is not pedagogic, he insists. Víctor refers to Yatiqasiña software as fascinating. It is more creative than museum displays in its communication capacity, but he criticises the compression system. Besides there are not enough images, and they can’t be moved around, in his experience.

Jorge finds that the dioramas are appealing to his students and encourage their reflection and questions. He also refers to his experience with Yatiqasiña and a small group of his pupils, as a pilot trial. He found the experience greatly entertaining. Students liked games and they learnt still more when they had to choose the appropriate costume for different cultural personages, he says. ‘I saw their little faces light up with joy when they succeeded or just played’, he recalls. That small group of students enthusiastically shared their experience with their mates, and it was a pity that the other students could not have the same opportunity. He says he expects this experience to be more widespread, but he is aware the conditions are not right yet; the place cannot hold a great number of students. Visitating requires a more organised schedule, Jorge concludes.
Roberto refers to Yatiqasiña as a virtual museum. In pedagogic terms, he thinks that students need a guide, otherwise they get lost. One interface leads to another and that one to three others, so the student cannot find the way back. This is an internet oriented environment, so internet users find it easy but it is difficult for children who has not that practice because they do have computers. In Roberto’s opinion the games are linked to sex roles. Girls are not interested in catching fish, and they soon give up. Girls prefer the game of building the house, especially dressing the naked figure. Roberto thinks the potentiality of the software is related to different courses, according to different objectives. In 4th year secondary school it could be linked to complex questions, e.g. related to school work. The games appeal to 5th and 6th year primary students; they can have an idea of what the work was like in the old days. But the reading interfaces are for higher grades, he thinks.

Comment: According to their experiences, teachers appreciate the educational instruments offered by the museum. Teachers who call the museum before going there and ask for educational assistance, such as Edna, Lili and Jorge, are pleased with the resources on offer. Victor can only go to the museum on Saturdays, so nobody is there to help him, and he feels that the museum has no interest of making exhibitions more relevant to its visitors. Roberto has never taken his students to the museum; he has accompanied another teacher on the visit but with no responsibility over explaining the museum’s contents. Roberto instead refers to the Yatiqasiña software, the virtual museum as he calls it, which he has used with his students. He distinguishes levels of interests and gender affinities with the games. I have never thought about that since in my experience, both genders use the same resources, but
Roberto always observes his students’ attitudes to software, so his comments are important.

Following up the visit

L. The visit ended with a report and a presentation by the students of what they saw. They discussed their experience considering the positive and negative aspects, and reached a common conclusion. There is an evaluation of the visit. (Section 1.18 Para 132). The negative aspect was that we did not pay attention to the time we spent in the education room. It was nearly two hours and a half, and a girl fainted. It seems that the room has no ventilation. I noticed the air conditioning system and I thought it was functioning, but it seems it was not. (Section 1.20 Para 138).

E. After the visit the students comment on their experience. In fact all students agree that the experience is enjoyable. Nobody says that it was ugly or the like. (Section 1.20 Para 90). They say this in their reports on their experience. They find they learn more from the museum and the archaeological trail than from reading books, listening to classroom presentations or watching educational videos. And because our classes are not large, everyone has the chance to recount their impressions. (Section 1.56 Para 386).

J. When the visit ends there is a general conversation, and they begin to talk about what impressed them most, what they learnt at the museum. It is a kind of co-evaluation, then it becomes a self-evaluation and then we come to conclusions. (Section 1.8 Para 34).

R. Well, they pose more questions, but we do not provide the answers, only motivate their curiosity, excepts in some aspects... (Section 1.12 Para 135).

Comment: It is clear that there is some evaluation of the museum experience back in the classroom, either through conversation or in more structured way. I was astonished with Lili’s reference to the student fainting after two and a half hours of great concentration. Lili explained that possibly the air conditioning was not functioning, but she did not notice that the lecture and working with the software immediately was too long for the students, whether the air conditioning was
functioning or not. A pedagogic hour is 45 minutes; the maximum children stay in a
classroom is one and a half hours. The teacher did not notice that.

*Interpreting, understanding, knowing in the Museum*

Lili says that in her view knowing is penetrating another world, something new; it is
to grasp some things that were not in one’s dominion before. Understanding in the
museum is situating the students and the teachers in the line of that culture or social
system, she says. It is to become engaged with the subject. Understanding is to
suspend for a moment value judgements and become engaged emotionally as well
as intellectually with the subject, no matter how hard it is to escape from judging; in
Lili’s opinion, it has an affective and emotional component. While interpreting is
like judging from the present viewpoint she says. We interpret the life of ancient
inhabitants of the area with all the elements we have nowadays. But we cannot
understand their world if we do not know about their worldview or their religious
rites. Human remains merely provide some hints on these aspects, she says.

Etna thinks that we achieve erudition through science; we can gain environmental
consciousness, and that is what we are passing on to our students. Knowing is
progressive; the kind of awareness we call personal knowledge, or general
knowledge, is what is not taught and you are grasping it as you live. To get
cognition on something is a more precise kind of knowledge, it involves those
things that you are taught through systematic education, formal education or
teaching; cognition allows you to have a commanding on a subject. To know and to
learn are not the same. Knowing is more general, learning is making that knowledge
part of yourself. When visiting the museum, students can get only a general
knowledge; this is acquired when they are listening to explanations and looking at
the displays. They are learning concepts, everything is related and linked with ideas,
and that is what we call general knowledge. Knowing is the first stage; when
knowledge is put into practice we have reached the learning stage, Etna punctuates.

Victor says that knowledge is everything, from theory to what he perceives and
touches, everything. The difference between knowing and cognition is the
possibility of trying. He thinks that he begins to cognize when he starts making
knowledge palatable. He says that in the museum there is no possibility of getting
cognition, because cognition is something personal, and learning cannot be achieved
in the museum, because it is not a pedagogic environment. At the museum you can
get only a general knowledge. Learning, in Victor’s view, is a pedagogic term. It
means to transfer knowledge to the cognition level, according to a structured path.

Jorge thinks that knowledge is the possibility of grasping what is around us; to
achieve a consciousness of what is inside and around our bodies, and this process
lasts a lifetime. There is a basic knowledge common everyone and is grasped while
becoming a member of a given cultural world. Knowledge is necessary for all
human beings, to be a better individual but also to be prepared to face life’s
contingencies. I need to know my children when I bring them to the museum. My
students come from deprived homes; the way they look at the exhibitions is
absolutely different from the students who come from homes with a sound
economic base. The experience for my pupils is something fantastic, it enhances
their lives and some of them even ask their families to bring them again, Jorge says.
Roberto is of the opinion that knowing is everything that can be incorporated in the mind, an activity, anything that can be apprehended.

*Comment:* These abstract and related concepts are not easy to define impromptu and it was surprising to me that there was no hesitation among teachers to establishing differences among the terms. Except Roberto who could not address the subject due to a time constraint (the school bell announced the beginning of the next class period and the interview had to end), teachers expressed clear views about these terms even though those views differed among teachers. What is important to this research is that teachers think that learning is not possible in the museum. Only a general knowledge can be obtained, some hints about the ancient past. In their view, learning is not constructed but introduced using classroom strategies.

However, Lili recognises that the kind of understanding visitors get at the museum, puts them in touch with ancient culture, including its intellectual and emotional components, and she adds that we interpret ancient cultures with elements we have nowadays. To me, Lili’s words are closer to the hermeneutic approach discussed in chapter two; understanding requires a sympathetic attitude to be engaged with what is unknown, and we approach the past only when we fuse our present horizon with that of the past. Similarly, Etna’s description of knowledge as environmental consciousness and progressive awareness that is grasped through lifetime and is passed on to the students can be read in hermeneutic terms, if the knowing person is considered engaged with the world-at-hand, and the progressive understanding of what construct his/her life. Jorge hints at similar interpretation when he refers to the common knowledge grasped while becoming a member of a given culture and that
is enlarged through lifetime as an individual achievement as well as a social influence. Even if these teachers are using hermeneutic concepts they are not aware of them.

*Is cultural identity a subject to talk about?*

L. We are working on this subject. We are discussing tolerance, so naturally the subject of cultural identity arises. In fact, the students are not aware of the concept. They belong to families of different ancestry, then... Many of the students are not from Arica; their families have migrated from other cities, mostly from Santiago, and then they cannot progress on this matter.\(^4\) Multiethnic problems arise in this school the same as in other schools. Here we have the indigenous people of the area with their facial traits, which make them easy target for discriminating attitudes. That is a problem; there is discrimination. (Section 1.50 Para 323).

It is not open, but bullying stigmatises people. (Section 1.50 Para 327). Acceptance of the other is difficult because the concept of multiethnicity is not clear. We think we are a tolerant society, but we are not. The museum opens our eyes to understand that native people had not those discriminating traits that we were taught about: they were not lazy, ignorant, slow, and did not possess all those negative attributes that prejudice attributes to them. (Section 1.50 Para 357).

J. Students have to understand that we have the Chilean nationality. There are different cultures within our country, in the present just as it was in the past, and the contribution of the ancestors is responsible for our present development. Children clearly understand this view from the museum displays. There is no one culture more important than another, or more valid because of its characteristics. (Section 1.50 Para 397).

V. Clearly, it is evident! That is basic. I am going to explain you why. It is because in this continent, above all in the Chilean society, the indigenous ancestry is not recognised, and in failing to do so we are ignoring part of our own identity; all of us have Indian blood, but in this country we have falsified everything. Our history is a falsification and that is why we cannot see further than our own limitations. Arica is a meeting place, a mestizo place,\(^5\) not only genetically but culturally as well. I feel solidarity with local people, but also with the indigenous people of the south. If I didn’t I could not be a teacher of social sciences. (Section 1.6 Para 30).

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\(^4\) Chile has a political history of cultural openness, acceptance of all creeds and peoples, etc. Chile was the first country to abolish slavery at the beginning of the XVIII century. Unfortunately, there has been a growing intolerance from the second part of the XX century, especially in Santiago.

\(^5\) We call mestizo the offspring of an European and a native couple. Originally it indicated a person of Spanish and a Latin American ancestry, but now it includes other countries as well, any local and foreign mixture.
E. Looking at the museum exhibition showcases, noticing the passage of time, cultural identity cannot be put aside, right? The Aymara ancestry is a fact within our culture. It can be appreciated in their costumes and festivities, their relationship with the economy and economic activities: commerce, animal husbandry, and agriculture. (Section 1.14 Para 65). Prejudice is a complicated subject; we are dealing with it just now in the school pedagogic unit on Regional Community. Two children discriminate against Peruvians, due to their skin colour and strong body smell, but they have to discuss the subject in the same way the rest of the students do; they have to think over their prejudice. They may change or maintain their views, since adults [parents] reinforce prejudices. Adults also understand the differences among cultural groups, but they are intolerant. These children need more time to achieve tolerance. Perhaps the museum displays are coloured by their views, and explanations may take on a different implication for them. (Section 1.50 Para 352). I personally like pre-Columbian culture. I enjoy appreciating different cultures, but small children who visit the museum just have fun. We, as teachers, give them the tools to research and appreciate material culture from different perspectives, to change the idea that the museum is just about mummies and morbidity. (Section 1.50 Para 360).

R. No. At least I do not talk about that subject. I tell the students about culture not about cultural identity... (Section 1.14 Para 141).

I raised this topic because I noticed that in my country there is discrimination against indigenous people, and I wanted to know what teachers’ opinions on the subject were. When asked about their children they could answer for both themselves and their children. All, except Roberto, recognised the problem and said the museum helped to discuss the subject. That was a nice discovery, since I consider that the point should be discussed at all levels, and the museum should offer grounds for awareness and reviewing misconceptions.

Can students perceive values?

Etna says that first she asks the student to develop the capacity of observation, so that they could judge facts through keen observation and develop an inquisitive mind. Children are far more curious than adults; adults look without taking time to think about what they see. Values belong to philosophy, says Etna, but we can see
how ancient peoples cared for nature, because they depended on the environment. She uses that example with her students and stresses the need to take care of their environment. So values are related to geographical location, group identification, solidarity, in the sense of helping the other with their task, respect among themselves and with nature. A person acquires values in the process of learning, Etna says. The Maya, Aztecs, Inka developed empires with the idea of working as a community, and they are remembered for their great achievements. Values have to be induced; they also form part of history. Students can also draw values from travellers’ narratives, chroniclers, oral traditions as well, she concludes.

Lili says it is the teacher’s task to identify values in practice. Reading a book, analysing judicial or health systems, everything has supporting values, so we are always searching for those values. If students have problems in identifying them she offers stronger guidance. They can do it by themselves, but if she asks them guiding questions to give them a clue, it is easier for them to find their way, says Lili. In the case of the Chinchorro mummies there are some features providing clues, the type of interment for example, and adopting a comparative method she contrasts them with the Selknam\textsuperscript{6} population, who having a subsistence living, developed a rich spiritual life. ‘I think ancient populations had a more comprehensive religious perception. I think so because Chinchorro people mummified unborn children, foetuses,\textsuperscript{7} which indicates a strong sense of community.’ From the moment of conception, before being born, a child was a dignified and respected member of the community, Lili notices.

\textsuperscript{6} Indigenous population of southernmost Chile, ethnographically described, who became extinct some fifty years ago

\textsuperscript{7} See Plate 5.
Jorge affirms that he discusses values such as respect and tolerance with his students.

Roberto has more questions than answers. He wonders how students could incorporate values from museum displays, how could they filter, perceive or acquire them. Some people have more humanitarian feelings than others. The same message may be received very differently throughout a group. Values are the screen of understanding, he reflects. The screen is like the sieve where you put messages and knowledge. It is about the kind of message that you allow to be incorporated or rejected, because you can also reject information completely, as a result of the set of values you have, Roberto says. What is perceived may be accepted or rejected. You screen with degrees of acceptance as well, you respect but do not share, forgive but not forget, be just but not rough, loyal but not a partner in crime. In this way the values you have are managing the degree of knowledge you acquire, he concludes.

**Analysis of the topics discussed by teachers**

Teachers’ topics concern their personal and students’ museum impressions and understanding, although sometimes they also report impressions from visitors they take to the museum. I think that teachers always have a distributed cognition of the museum. Most of them narrated said they had visited the museum since childhood, and all of them recount their experiences at the museum in relation to someone else.

In their teachers’ role, the frequency of visits is linked to a school programme; nevertheless they reported the difficulties they have with the same school, because of administrative regulations imposed when taking students away from the school
premises. Schools from the private sector have more flexible regulations, but not all private schools visit the museum with the regularity reported by Etna and Lili. This means that interviewed teachers, both from the public and private sector, take special care to provide their student with a more lively and richer education. We have learned that they not only go to the museum because of a school programme but to expose their students to a real formative experience, including awareness of their environment and the acquisition of values that could be translated into respect for others.

Although the museum is small, it covers 10,000 years of local native history. Every showcase is extremely informative. One problem I have noticed is that teachers want their students learn everything on their first visit, foreseeing perhaps that there will not be another opportunity for them, but the experience becomes exhausting for children. After listening carefully at the first four or five windows, students soon tire. Teachers who carefully plan their lessons at school, with objectives and activities distributed in a pedagogic hour, forget their objectives, activities and time in the museum. Very few of them concentrate on one or two aspects; they aim at covering everything at once. Then objectives are diffused and only the strongest and most motivated children can follow them to the end of the galleries, through the complete tour.

Teachers say that the information presented in the museum is sufficiently detailed for the level they require. They recognise that the museum tries to reconstruct the everyday life of ancient peoples, and give a panoramic view of traditions, customs and life styles. Dioramas re-enact everyday situations, and artefacts are displayed in
the subsequent cases, reinforcing ideas with real evidence of the past. Students can learn by looking at museum windows and talking about their subjects. Most teachers, except Víctor, say the museum has a didactic presentation. We can conclude that teachers appreciate the museum’s effort to illustrate the interpreted past, and find support in the museum for increasing students’ understanding of the ideas they want to put across. Nevertheless, more friendly learning devices could produce greater engagement of students when constructing their knowledge at the museum.

The perception of the past is supplemented by educational activities organised by the museum at teachers’ requests, e.g. a lecture, or the use of Yatiqasiña as acknowledged by Lili, Jorge, Roberto and Etna. Víctor, visiting the galleries on weekends, has not received that additional help and he very much resents it. Museum education resources are not permanent; the museum is under-staffed and cannot offer education programmes on weekends. Being in charge of education at the museum, I think that I should try to solve this problem in the future.

Teachers who ask their students leading questions so that they can discover the answer from a more careful look at a display, are teaching the students both how to question stimuli, and also look for further facts. Some teachers use the museum for its discovery potential, something that the museum has not developed yet.

Although Roberto finds that interpretation depends on the students’ individual interest and their personal characteristics, this particular museum is easier for them

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8 Museum education software on the first four museum showcases, the Chinchorro period.
to understand, because the showcases are well-ordered. With the exception of Víctor, his remark echoes the other teachers' opinion. So we can understand that the book-like, telling-a-story display makes more sense to visitors than other exhibition layouts.

Museum habitués said that the museum helps to correct misconceptions, and this idea is confirmed by the teachers. Lili said that it has more information than expected. It is the resource that best characterises Arica, an idea also shared by museum habitués. Therefore, it should be better promoted. The museum is a great help for teachers and all those who want to learn about the ancient history of Arica. Lili and Etna say that they had an idealised vision of the past, and in the museum they realised that the ancient population were people like us, struggling in their daily life, suffering from the same diseases, and the like. I can conclude that the museum is communicating with the visitors in some way. Though this was not very clear from the EDT analysis, now there is confirmation. This does not mean that every part of the exhibition achieves the same results.

Jorge, Roberto and Víctor agree on the various potential readings of archaeological material on display. I share their opinions in that understanding is never finished, no matter how often one visits the museum; there is always something new to learn. The importance of the information provided is such that the museum could be seen as outstanding among others of its kind. One visit is not enough; being there increases the appetite to see more, a perception shared by the museum habitués.

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9 Similar expressions were found in the Visitors’ Book, mentioned in chapter five.
As for the relationship between the school and the museum, teachers in private schools say that the museum is one of the cultural resources they visit every year. They thank the museum for its facilities. In their opinion it should be more intensively used. Back at school students have to write a report and present it to the rest of the class. Learning, although not openly recognised, is richer, and students prefer this method to normal lessons.

In the public schools the relationship with the museum depends on the teachers’ effort to obtain the administration’s consent and organise the visit. Follow-ups to the result of the visit are not systematic, a conversation as co-evaluation may be the case, and sometimes students and their teacher can arrive at conclusions. Frequently students put more questions than the teacher can answer.

Concerning a deeper appreciation of the past, teachers say that some values are apparent in the museum displays, e.g. care and respect for nature, group identification, solidarity in the sense of contributing to a common task, tolerance and respect for others. Students discover values at the moment of learning, Lili says, and the teacher’s task is to trace values in practice, so when visiting the museum they are searching for values as well. Some are ready to be grasped others need to be induced through questions. Values are the screen of understanding, says Roberto, and the members of a school party may receive the same message very differently. You can incorporate or reject information, depending on the set of values you have. Information can be screened with degrees of acceptance as well, but some are able to see more than others.

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10 They ask for special attention and reduced entrance fee.
Solidarity, cooperation in common tasks and respect for nature are values easily understood from museum displays, since the desert harsh conditions require cooperative efforts to make it inhabitable. The same is true for fishing activities in the Pacific Ocean, which is replete with marine life, but not pacific.\footnote{In this latitude the Humboldt cold current that bathes the Chilean coast, turns to the west causing unpredictable sub-currents. This allows warmer waters from the north to make cyclical paths to the surface, damaging the habitat of cold-water marine life. The beautiful northern beach is the most dangerous. Towards the south the coastal mountain range reaches the sea, forming high cliffs. There is a rich marine life among the rocks but mollusc-gathering is, again, dangerous.}

Identity was also discussed, revealing the unstable condition of students belonging to indigenous families. They are ashamed of their origin, so to learn that ancient native people were so brilliantly adaptive to the environment gives them a reason to be proud of their ancestors. Private school teachers discuss the subject of plurality of cultures with their students, because multiethnicity and the acceptance of the other are not clear concepts for them, and some of them have not recognised the Aymara ancestry as part of the Chilean nationality. The museum helps to improve their appreciation. Some students accept it readily, others more slowly. Most of the students of the public school system belong to ethnic minorities, and the Aymara group is reinforced by the museum exhibition. Jorge and Víctor coincide in their explanations of an egalitarian perception of cultures. Roberto skips the subject. Indeed, when I began to work at the museum, indigenous culture had a very low profile; today Andean people are self-confident, proud of their culture and want to regain the Aymara language that became almost extinct when the education system prohibited them from speaking it at school. Local anthropological studies and the museum have played a part in this ethnic revival.
Teachers’ theory of interpretation of the past

In order to summarise teachers’ interpretation of the past at the MASMA I constructed two models, corresponding to a theory of cognition and a theory of interpretation. Cognition, in this case, is always distributed, since it is gained not individually but by using the museum instruments of communication, and by sharing experiences with students, relatives or other visitors. Teachers who have received personal attention in one visit are satisfied and want the scheme to continue.

On request, a member of the museum staff agrees to receive the group and guides them around the galleries or gives them a lecture in the education room. Consequently the way they come to know the past is through face-to-face museum interpretation and, failing to get that help, teachers make intense use of the museum cognitive tools: catalogues, labels and Yatiqasiña software, for example. There is a permanent feedback between students and their teachers. Students ask about those aspects they cannot understand, and the teacher tries to answer the questions. Some of them cannot be answered with the information at hand. Knowing at the museum is participative, for them and their students and is reinforced by recounting the experience after the visit.

The museum teaches through didactic, expository displays and lecture-type guided tours. According to Hein’s model, this is a didactic, expository museum quite in agreement with the general educational approach in Arica. This explains why it is so well understood by teachers who want their students to follow the method.

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12 Hein 1998: 27-28
At the time of the interview, in the education room there were ten computers with the software Yatiqasina to be used when the room and a responsible person were available. Yatiqasina offers a constructivist environment of learning. Students can choose to read about the Chinchorro period or play some instructive games, organised with the stimulus-response method, so that if their input is wrong they cannot complete the game; conversely when it is completed, they receive applause. They can also do some research on archaeological objects available in the database and save the file to continue researching when they get more information. A writing environment using the interface of a typing machine, allows the user to create a tale about fishing and mollusc gathering, which can be illustrated with figures available in its database. Yatiqasina and the educational programmes have not been functioning well during my absence from the museum.

Figure 7.1 summarises data from the field and theoretical concepts. It depicts teachers' cognition at the museum and their views on how their students learn about the past from museum exhibitions, since teachers cannot separate their experience from that of their students. Cognition at the MASMA is based on three aspects: the situated condition or how teachers know about the past at the MASMA; distributed cognition or how they come to know the past, and what methods or strategies they use for helping students The situated environment is the MASMA, an orderly museum, offering a sequence with a beginning and end. Teachers and their students come to know through distributed cognition: from the museum's educational tools—exhibitions, dioramas that re-enact daily life in the past, and additional information. From these sources teachers have a panoramic view of traditions,

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13 Experience reported by teachers.
customs and life style in the past. The methods are the strategies used to get into knowledge.

Teachers synthesise knowledge and share experiences with students – also with relatives, visitors or clients – discuss subjects on display, develop their capacity of observation and questioning. Based on the museum didactics and the personal interest and teaching responsibilities, cognition at the MASMA is for a teacher a distributed way of knowing, in other words, the museum has a socio-cultural meaning.

Concepts of interpretation and the importance of museum experience are modelled in Figure 7.2. The past is interpreted with elements of the present. But teachers have the idea that learning is not possible in the museum; they can only get a general
knowledge of the past. A deeper understanding requires a deeper museum interpretation, so that they recognise the curators’ expertise.

Considering that teachers go to the museum as part of their teaching responsibilities, the learning methods they apply for their students are based on those that the museum facilitates: didactic/expository exhibitions, discovery activities through leading questionnaires, and task-sheets, \(^{14}\) and a constructivist approach using Yatiqasiña software.

On the other hand, the meanings teachers derive from the past to the present are coincident with those of visitors and curators, sameness and otherness, self-identity and respect for the other; solidarity and collaboration in common tasks; care and respect for nature, which in the Aymara worldview is a Being to be a partner with.\(^ {15}\)

Teachers’ theory of interpretation is presented in Figure 7.2. It is built on six aspects which summarise their ideas, organised in a circular process of interpreting and understanding the ancient past at the MASMA. These are: exhibition organisation, personal and social meanings, perception of the past, knowledge acquired, and concepts and values.

The exhibition organization is conceptualised as helpful for acquiring knowledge and encouraging reflection about the local ancient societies; consequently it is relevant for the school curriculum. Teachers think that the deeper the interpretation gains the deeper the understanding of the past. Relevance has a personal as well as a

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\(^{14}\) See for example Hein 1998: 31; Hooper-Greenhill 1996: 28-29

\(^{15}\) See for example van Kessel 1992a and 1992b.
social meaning; among these is an awareness of the multiethnic constitution of 
African social environment and African socio-cultural roots. This encourages self-
confidence among indigenous people as well as recognition and respect for those 
with a different origin. To know one’s socio-cultural roots was also interpreted as 
the basis for the present and, from this secure point, projecting into the future. So 
they think that the museum is the locus that best identifies the city, consequently 
should be better known and used. Other personal and social meanings have a 
practical application. They found that the museum has more information than they 
expected, and, consequently, it is always presents new aspects to see and think 
about. They also welcome the museum’s collaboration with the educational system, 
including the teacher’s opinion about MASMA lacking a didactic approach. He still 
uses the venue for education purposes.

Perception of the past at the MASMA is not uniform. It depends on the visitor’s 
interest. Interest in the subject allows an understanding of the horizon of the past 
with elements of our present horizon in a historical perspective. This is not difficult 
in the museum because the exhibition facilitates interpretation and reflection, so that 
people can see further than the physical objects; they can appreciate social concepts 
and values from the museum displays. In the process of interpretation and 
understanding teachers say that they can get at the museum a comprehensive 
information on Chilean pre-Columbian societies, understand cultural systems and 
correct misconceptions.

The circularity of this process is re-enacted whenever the museum is visited, 
producing a better awareness and understanding of the whole process. The visit is
the part and the process of understanding is the whole, they feed each other and grow together.

Conclusions

I will now put together the conclusions of chapter six and seven, since both concern to visitors to the MASMA. Visitors have no relationship with each other except their interest in visiting the museum regularly, but their visits are not coincident. Teachers belong to different schools and have different specialities; they do not meet each other except in the case of Etna and Lili who work in the same school. Nevertheless all visitors, museum habitués and teachers, agree in that the museum not only exhibits ancient archaeological objects, but the way exhibitions are
organised and additional the information provided allow them to make sense of what is on display.

Consequently the past is present at the MASMA through its museum exhibitions. Visitors can understand the interpretation the museum has prepared for them, first through archaeological research, and afterwards through the exhibition designers’ team which interprets local archaeology. Visitors interpret these exhibitions with various degrees of depth, according to personal interests.

Visitors understand exhibitions at the MASMA by putting themselves in the horizon of the past but thinking in accordance with their own present. They consider the difficulties ancient groups overcame in order to settle and develop into organised societies in a hostile natural environment. They think that one of the strategies employed was to develop solidarity, reciprocity when facing natural and social contingencies. A peaceful coexistence signifies respect for the other who is different, and visitors wish this example could be imitated nowadays. Visitors also consider the rational use of space in a desert land, so that the place ancient societies inhabited turned into their 'mother earth' whom they respected, developing a religious relationship with her.

Museum habitués and teachers think that the museum is an important place in Arica; it represents the city and its multiethnic composition and should be better known and used. Both groups understand that the museum provides comprehensive information of pre-Columbian peoples in this area and that the knowledge of socio-cultural roots offers grounds for self-confidence in the present as in the future.
These conclusions are new to me. After working for years at the museum, this is the first time I have obtained an understanding of how exhibitions are received and incorporated into visitors' lives. Nevertheless, this is not the end of the analysis, these findings are open for further questions.

A comprehensive analysis of these findings, as well as those of curators and EDT, concludes this thesis in the following chapter.
Chapter Eight

INTERPRETATION OF THE ANCIENT PAST IN
A MUSEUM OF ARCHAEOLOGY

Introduction

The reader has found in this thesis a search for understanding of how the ancient past is interpreted in a museum of archaeology, both in theory and practice. The answers came from inside the museum in the voices of curators and exhibition developers, and from the community through the information provided by regular visitors to the museum. All participants conceptualised this subject for the first time, including myself.

In this research everything was new to me, since the way of understanding the whole problem was through philosophical hermeneutics, a world with which I have only recently become acquainted. Difficult to grasp at the starting point it nevertheless became illuminating in the progressive stages of understanding it. In search of the hermeneutic theoretical framework I read Gadamer with pleasure and Heidegger with difficulty, but as he gave sense to a great part of Gadamerian thought, to read Heidegger was essential. Then I compared some critical studies on both authors in order to widen my perspectives. Those formative readings considerably increased my analytical understanding of social reality through dialogical interpretation. The hermeneutic principles adopted for this research are found in chapter two.
Qualitative inquiry was the methodology chosen to generate data, while my methods were in-depth interviews and action science. Grounded theory helped me to analyse data and make meaning from its emerging concepts. The software NVivo assisted me with managing the enormous amount of data obtained from fieldwork and facilitated making connections among participants’ opinions.

Each part of the research was in perfect agreement with another and with the whole, lending trustworthiness and authenticity to the process, as explained in chapter three. Due to the complexity of the research, the best way to apply observation systematically and get a coherent understanding was the case study method, as was explained in chapter two. The case study was the San Miguel de Azapa Museum of Archaeology, MASMA, from which I selected the participant-groups.

How I collected the information and analysed data was described in chapter three. Chapters four, five, six and seven report the results obtained with curators, exhibition designers and visitors, who were analysed as museum habitués and teachers separately just as a practical procedure, since both groups belong to the local community and are not part of the museum organisation. Each participant, like each research-group, represents parts of the whole in this research, in successional levels of interpretation, so the hermeneutics that helped me to frame and understand the problem also aided me in explaining the problem as a social reality, because in understanding the parts we can approach the whole. Research results will be integrated into a general theory in the following sections.
In search of an answer to the main research question

The researcher proposed the subjects and asked the questions to be discussed, but participants with their answers provided consistency to this research. Within a friendly and dialogical relationship in which the researcher did not hold a privileged position, participants expressed their thoughts freely; they were not interrupted or forced to answer any question in particular. Verbatim transcriptions of interviews began during fieldwork so that participants could check their opinions if they wanted.

Those verbatim transcriptions were analysed following sequential levels of abstraction using the hermeneutic circle of understanding. Analysis started from the coding process to organise analytical concepts emerging from data, which were provided by each individual case. This first coding was the initial stage of analysis. When each case belonging to a research-group –curators, EDT/COP or visitors– was analysed, they were put in a research working set, which included all the opinions of that particular research-group, and the first coding was refined to arrive at a more general understanding of concepts. This was a second level of coding and analysis.

At this point concepts were related to my research question and selection of analysed categories of concepts was made, based on the relevance of those concepts to answer the research question. This was a third level of analysis. Once the selection was made, concepts were modelled into trees, in order to see the relationships between them.¹ Then a further selection followed, analysing how the

¹ See example of tree model in Figure 3.4.
parts fit into a still more general understanding. This was a fourth level of data analysis. The next level of abstraction is found in the selection of those participants’ thoughts to produce a report directly connected to the research question. At this level all concepts are data-based, illustrating a sequential hermeneutic process where the analysis followed a logical circular argument. The problem was analysed in its components, and by understanding each part from the initial data, the whole became clearer. Each successive level of analysis was providing an enlarged whole, which affected the individual parts and produced a better understanding of the problem.

But we still need another reduction of data just to focus on the way each research-group interprets the past and transforms it into meaningful knowledge. This step follows below.

*The meaningful past at the MASMA*

Curators declare that they conduct archaeological research to uncover and share a common past. For that purpose they use models, theories and scientific methods. Research is first presented to peers for validation, and then to the general public, mainly through the museum that is a permanently open book, telling a story of sequential events in the past. The social meaning of all their efforts is understood in time relation in which the past becomes present, with potential extension into the future. The social meaning of the past is also expressed in the identification of different cultures through the centuries, having the same cultural valence among them. Polyvalence of cultures contains ethical values that curators think should be considered more sensitively today.
The exhibition designers' team believes that their task is to represent curators’ interpretation of the past in exhibitions that are pleasing to the senses and appealing to the public. In order that visitors could understand the past, EDT use visual and verbal elements of the present, which contextualise the archaeological remains and provide information about them. For that reason EDT works with curators in the discussion of the subjects to be shown, and asks them to write the texts which document the project of the exhibition.

To that practice, EDT adds visual supporting elements and symbolic figures to convey ideas provided by ethnographic research, which the team calls subliminal messages because they are not clearly explained but are supposed to impact the viewers’ minds and give them a clue to something deeper. These messages are expressed by using colours, exhibition layouts, and other components. The group thinks that archaeological objects should be placed in a cultural context, and the presence of human beings constantly appreciated. EDT says that the exhibitions are addressed to the general public, with no exclusion, but the members of the team recognise that people who are not cognisant of local native traditions cannot grasp those added symbolic elements.

Up to the present time, word-of-mouth comments on the excellence of the exhibition has been sufficient to make EDT happy with their results, especially if those opinions come from people working in the anthropological field. Divergent opinions have not the same weight for EDT, and are ignored, as they always think that the next exhibitions will be better. Better means more attractive, more inclusive, especially if they invite members of the community to participate with
ideas but not better in public response if they ignore how the public is interpreting exhibitions. However, all intentions of improvement are restricted by the availability of economic support.

EDT members do not acknowledge curators’ perception of being somehow segregated from the discussion and decision-making phases in exhibition projects. They think that such a gap does not exist, and the breach is a matter of personalities. This is a point to bear in mind in future exhibitions.

Museum habitués comment that people with whom they visit the museum, and they themselves, find the exhibitions understandable with additional help, such as labels, catalogues, and still better, with live guidance. The past can be appreciated in relation to elements of the present, mainly when mummies of the real people who were the producers of the cultural material on display, lie there in their mortuary apparel. They can understand the past in the orderly way presented at the MASMA. Museum habitués can appreciate that there is a story line between the showcases and trust the interpretation because they know it is based on scientific research. But they can also find their own meaning in the objects of the past. Dialogically, they can interpret objects of power and hierarchy. Contextually, museum habitués can also understand abstract ideas such as partnership, solidarity, reciprocity, respect for the other and peaceful coexistence with the desert, but also some violence. Nevertheless, they say that the knowledge they can get in the museum depends on the interest of each one, and the levels of understanding run from holistic to superficial.

2 Chronology is based on carbon dates, species are given their popular and scientific names, diseases are identified in medical terms and explained in popular language.
Teachers also find the exhibitions comprehensible. They have been there with their students, and also with their visitors, friends, relatives and clients when working as tour guides. Going to the museum is recreational, even for their students. Most teachers have visited the museum since their school days. They find that the exhibitions are sufficiently clear, well organised and have additional information that allows them and their students to get the information they need to understand local history in the remote past, as suggested by the curriculum. They prefer to be guided around the exhibits by a member of the staff rather than to read the catalogue to the children and answer their questions, because sometimes they do not have enough knowledge to give the student the appropriate answer.

Teachers experience the knowledge on show as the product of academic research, and students can understand the language used on labels, or the teacher can explain to them the concepts involved. Teachers say that students prefer learning at the museum rather than at school, but the amount of time is not considered and the children may become exhausted during the visit. Teachers and students can learn facts from exhibitions but can also experience a deeper level of meaning. The museum cases can motivate discussion about subjects that are not frequently analysed: identity, respect for the other, collaboration in shared goals, solidarity, care for nature, and the technological contributions from the past.

*Integrating results found among participants*

The four research-groups are linked by the common interest of understanding the ancient past from the remaining cultural objects of pre-Columbian societies. Nevertheless, the purpose of their interpretation differs. Among curators and EDT
who belong to the same museum, and have the same institutional political compromise with the community, we find that while curators’ practice is addressed to archaeological science, EDT’s practice is art-oriented. Among visitors who regularly visit the museum galleries, museum habitués go to the museum for pleasure or to present the museum as an interesting place for visitors, colleagues, relatives or friends. Teachers have similar reasons, but as pedagogues, their interest originates mainly in the school curriculum and is devoted to their students’ development.

The four research-groups share some ideas about the interpretation of the archaeological past. I think this is possible because the subject allows this intertextuality; consequently I can synthesise and read data with few words or concepts, arriving at one all-embracing research answer.

*Access to understanding the past.* All participants clearly distinguish between the past and present dialectics; the past is attainable with elements of the present. Although participants were not conscientious of the hermeneutic fusion of horizons and its application in interpretive archaeology, I understand their perceptions on this point as an illustration of the rightness of those theoretical principles. Past and present belong to each other.

All the members of the research-groups appreciate the contribution of social, physical, natural and technological sciences to grasp the past from cultural remains. Curators explain that they access the past supported by social theories and models of data collection and interpretation, and aided with methods provided by hard
sciences and scientific instruments. EDT says they access the past by handling cultural material and integrating archaeological research projects, but when developing exhibitions they are more likely to be guided by aesthetic principles than by thoughtful and theoretical considerations. So that EDT offers museum visitors access to the past through exhibitions which draw their attention for a neat presentation in a pleasant environment rather than by being explicitly theoretical or educational.

Museum habitués and teachers recognise that the past is attainable at the MASMA from the display of mummies who transfer life to all the cultural objects with which they are related. They trust museum exhibitions, which are supported by scientific interpretation. Eventually they can meet and talk with the specialists who could provide them with more comprehensive and deeper interpretations of Andean civilizations.

*Dialogical perception.* All members within the four research-groups are interested in appreciating a historical perspective of human agency when interpreting the past. Curators interpret the past to identify social facts, explain cultural variability and to tell a story with sequential events. The human being is the centre of research. EDT is similarly engaged in telling a story of the past with sequential events, where human beings are actors and actresses within a historical perspective.

Museum habitués interpret the past in pursuit of learning from ancient generations. Teachers want to have a panoramic view of the past, its traditions, customs and life styles. Both these groups do not see the past as foreign to their lives.
This point can be linked to the hermeneutic historicity of the reflective being (I) who wants to know the world-at-hand (thou), which cannot be separated from previous stages of human reality. The past is attainable through dialogue with those meaningful remains left by ancient societies in readable contexts.

*Social meaning of understanding the past.* All participants value the polyvalence of cultures. Curators see their contribution to present day understanding of the past as discovering human roots and revealing social identities; also by disclosing social plurality and providing the basis to develop respect for the other. While doing so, they contribute to the social sciences and stimulate reflection on the future. EDT transforms scientific interpretation of the past into representations in the present, in order to facilitate the contemporaneous layperson’s understanding of past cultures. When doing so, they want to put human action in evidence. Culture belongs to human beings in the past, but also in the present; exhibiting cultures has ethic connotations. Despite this spite EDT does not care to stress the importance of respect for the other who is culturally different, museum visitors can notice this intention., which is a clear demonstration that meaning is constructed by the viewer.

Museum habitués identify lessons from the past that should be practiced in the present: the harmonious coexistence with the desert, social order, partnership, solidarity, reciprocity, and respect for the other. Teachers explain the social meaning of the past as learning self-identity and respect for the other, solidarity and collaboration in shared goals and care and respect for nature. The past contributes to the present. Similarities in perception of the social meaning of the past between these two groups of visitors are evident.
My hermeneutic reading of this point is that participants' interpretation is active and dialogical within a sympathetic approach, trying to understand others instead of pointing out their weaknesses. In this way they gain multileveled interpretations, understanding and meanings from the ancient past in this museum of archaeology.

Comparing results among participants we have arrived at common ideas, shared by all members of the research-groups. Access to the past is based on scientific approach and social theory developed in the present, so that there is a fusion of the horizons of past and present whose purpose is to see human agency in a historical perspective. Interpretation of the past is gained through dialogue with the remains of human action, which brings about the polyvalence of cultures. This dialogue has no final closure, since in progressive interpretations new perceptions are integrated. The social meaning of the whole process is to become engaged with the past in a way that knowledge can be shared with colleagues, museum visitors, friends and the like, in multilevels of interpretation, understanding and meaning.

*Analytical generalization in the case study*

After analysing each research-group and their components, formulating a theory of practice and interpretation of the past for each of them and forming an image of the way they function in models of related concepts, it is time to put data together and read their meaning within a unifying focus, so that the main research question of this thesis can reach a single comprehensive answer.

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To illustrate this process I turn again to the Brunswikian model adapted by Scholz and Tietje. See Figure 8.1. This is a lens model where the ‘distal objects’ (case problem) –archaeological cultural materials, and museum’s means of interpretation– emit energy that creates ‘proximal cues’ (decomposition). The more multifaceted the process of data gathering, the more sufficient the cues (preceptors). The lens transduces the cues into a central focus (synthesis) or unified perception (new conception). In our case, the new conception is that archaeological objects and events are perceived at this museum as integrated human endeavours occurring in the past but linked to the present, and eventually projected into the future. Visitors can perceive these facts through dialogical interpretation and distributed cognition, with different levels of consciousness, understanding and meaning-making.

![Diagram of data integration in MASMA case study.](image)

**Figure 8.1** Integration of data in MASMA case study (based on Scholz & Tietje 2002: 39)

Data collection was based on different types of methods. The process was followed by data interpretation with different types of transformational processes, to arrive at

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4 Scholz and Tietje 2002: 36-43. Also Brunswick 1952; Leary 2000: 481.
a new perception of the problem, a new knowledge, which describes multilevels of interpretation, understanding and meaning-making at the MASMA. This new conception sounds very familiar to interpretive archaeology and hermeneutic interpretation of the past, but it is the result of a complex generation of data and analysis following hermeneutic principles, applied to a museum in a case study. This was not a hypothesis to test. It resulted from data emerging from fieldwork and their subsequent analysis using grounded theory and hermeneutic principles as they has been presented in this thesis.

Knowing together in the case study

As a museum educator, I was also interested in finding out how these research-groups construct their knowledge of the past in the museum. Before concluding this thesis I want to draw the reader's attention to these findings. All processes of consciousness are found in the case study: perceiving, recognising, conceiving and reasoning. We now know that these processes happen in the museum because all participants made judgements, reported concept building, and representations that stay in their memories in the way their intelligences\(^5\) and distributed cognitions\(^6\) facilitate them.

Curators

Cognition among curators is seen as the relationship of the individual with social artefacts and archaeological tools, which are considered as vehicles of thoughts.\(^7\)

\(^6\) See for example Salomon 1993: 111-135. In short, distributed cognition means coming to know with the other, others (students, family, teachers, etc) and/or with cognitive tools (exhibition labels, computer software, etc).
\(^7\) Knowing within a system of relationships, peers, artefacts as material culture and as vehicles of thought. cf. Pearce 1990, 1992; Shanks and Hodder 1995, 1998.
Tools are models, theories and instruments that mediate the contact between curators and the cultural material for dialogical interpretation. Besides, cultural material also signified within the cultural communication system that produced it. Curators’ distributed cognition depends also on the institutional frame in which it occurs. Old traditions are persistent, and modifications of the status quo develop slowly. Expert knowledge is validated among peers, and curators expressed the need to work continuously in an interdisciplinary way. This desire accounts for distributed cognition as an activity system.

Curators did not analyse together with the exhibition designers’ team the way in which they could build an understanding about the selected objects for display or the way representations convey social meaning. Curators said they could provide information and help select objects, but a more integral communication between the two parties at the MASMA was not explored. I did not insist on this topic since it was difficult to elaborate a deeper thought in the absence of the other party involved. I think this aspect is also a subject for future discussions, and is a finding of this research which contributes to the museum’s improvement.

Generally, museum visitors interact with curators’ interpretation of the past indirectly, being mediated by the EDT and the museum educator. Curators and visitors very rarely construct knowledge together, although curators can sometimes offer lectures and face-to-face interpretation to visitors. The language curators often use to convey their interpretation of the past builds a barrier to understanding.

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8 Pearce 1992: 24-35.
9 Cole and Engleström 1993: 42.
between them and the inexperienced visitors.\textsuperscript{11} But archaeology is not primarily devoted to constructing knowledge with visitors, and the museum provides other resources with which users can construct their knowledge.

\textit{Exhibition Developers Team}

Cognition among EDT members corresponds to an interaction of individual and distributed cognition. We have seen that EDT becomes a circumstantial community of practice in which each member contributes to the group knowledge with a different kind of expertise. While working on the joint enterprise of an exhibition project, they influence each other and learn together, along with the exhibition curator. Their individual cognition of archaeological research and exhibition development is affected reciprocally, although the group does not affect their individual artistic gift.

When engaged in the exhibition project, EDT develops activities that require construction of an interpretation together and become involved into a spiral of common actions where individual input affects the whole activity and vice versa. The joint performance affects them individually as members of a COP but not as an artist. With the opening of the exhibition this community of practice is dissolved. Even so the group has learned together during the project, and internalised the experience. The acquired expertise remains a personal asset, which will be ready for use in the next joint project.\textsuperscript{12} In another aspect, EDT emphasises the decision of incorporating experts from the local community in future projects, which implies also learning together with them.

\textsuperscript{11} see for example Bal 1994: 33
\textsuperscript{12} Salomon 1993b: 124.
Visitors: Museum habitués

Museum habitués go to the museum to enjoy themselves or entertain their friends, relatives and acquaintances and to develop a perception of the past. Museum habitués never considered learning at the museum, but after some reflection, they noticed that indeed this is the case. It may not be a deep knowledge of African prehistory, but they did discover different styles of living through the ages. If they appreciated this, it follows that they learnt something about cultural differentiation. If afterwards they can qualify the various meanings of multi-culturalism, more than a little was learnt. Museum habitués are not necessarily accompanied during their visit, but when they are and also share the devices and programmes offered by the museum, including face-to-face assistance, their cognition travels from individual perception to collaborative cognition.

Museum habitués are not thinking of knowledge in a given structure, they are not accountable to anybody for the quantity or quality of their learning, they are free to learn, or resist learning. They come to know as a heuristic process using their own pattern of knowing, asking their own questions, and because of that, whatever they learn is much more than expected. This research has provided me with the points of view I needed. Learning for pleasure is more rewarding; museum habitués go to the museum again and again.

Visitors: Teachers

Teachers, as museum habitués, go to the museum for their own interest as well as taking their relatives, acquaintances and students there. But when teachers analysed

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13 Compare Macdonald 2002: 219-220
knowledge acquired in the museum, they had in mind their students' experience. Teachers had the opportunity to think about the difference between concepts such as interpretation, cognition, learning and knowledge. They described knowledge as the most general of these terms, and knowledge is produced in the museum only in that most general sense. Knowledge, meaning learning, was not seen as a gain in the museum, considering that the pedagogic aspects of instructions are not present there, in spite of the congruence between the didactic methods of the school teachers and the didactic-expository style of the museum, and the recognised authority of this university museum.14 Some teachers recognised that the museum exhibitions are connected with their school curriculum and enrich it, providing a dynamic learning environment.15 It seems that teachers think of learning as existing outside the learner; the passive mind that absorbs knowledge already digested, which includes evaluation of the learning act, by the students' repetition of the contents that have been poured into their empty heads.16

After listening to teachers' opinions my conclusion is that visitors—all visitors, museum habitués as well as teachers and their students—go to the museum for recreation and to learn something. Nevertheless they gain a deeper knowledge than they realise. Real learning occurs, since they construct new ways of thinking each time they visit the museum. But they are not aware of these facts because they had never before analysed their experience in the museum. They did not visualise the museum as a real educational centre. Teachers take their students to the museum to learn from real situations, and then they forget their purpose. As I said above, they set vague objectives; they go to the museum to see everything at once. They do not

15 cf. Re:source 2001: 39. This situation is especially noted in Renaissance in the Regions.
consider the students' attention span, and the students become exhausted to the point of fainting. It is not surprising that in these conditions the museum can only serve as a superficial stimulus for learning.

However, teachers also said that students talk about the displays and ask questions, which means there has been engagement, interest, and a way of learning. After the visit, some of them give an account of the experience, which is discussed by the rest of the class in a clear process of constructing an interpretation together, a distributed cognition of facts and a construction of new knowledge.

Consequently, teachers went to the museum with an educational purpose, to teach their students about the Arican ancient past, and then they denied that methodological learning was possible at the museum; it is a contradiction that has to be discussed with them in the future. In my opinion this is due to the highly structured Chilean system of education. There is no space for diversity, the various appropriation of knowledge, acknowledgement of different intelligences, or distributed cognition — recognition that the knowing person can learn with others and the museum artefacts as vehicles of thought in a system of relationships. Teachers cannot yet see the opportunities the museum offers, both as a reflective scenario for a more personalised way of learning and as a stimulant opportunity for participative discussion, in which teachers and students construct a new knowledge together. The only way I see to change this situation is to work collaboratively, that is museum staff and teachers, analysing the theories of learning, and emphasising the quality of the educational experience the museum offers as a holistic environment that not
only includes facts but the synthesis of complex ideas, and facilitates the
development of individual and social cognitive skills.

Therefore, the present museum exhibitions create spaces for learning, which visitors
actively appropriate to construct their own meanings. Their meanings do not include
all the multiple messages the exhibitions project nor do they necessarily reflect the
museum’s interpretation of facts and events. This is not something to complain
about or feel let down by since, paraphrasing Macdonald, new audience studies lay
stress on the diversity of individual interpretation, and the acknowledgement that
there is rarely a single uniform response to any particular cultural product.17

As a conclusion of cognition in the museum we have to accept that among the
thousands of stimuli it offers, only some are selected, interpreted and stored in the
visitor’s memory, so that in subsequent visits he/she can find new aspects to make
sense of, although they were present at the time of the previous visit. It is
impossible to capture every stimulus and interpretive message involved, not even
following the most conscientious and learned interpretation offered by a
knowledgeable member of the museum staff. If some of these infinite possibilities
are captured it is positive, and participants confirmed that it is possible.
Archaeological, aesthetic, ethical, educational – whatever interest takes visitors to
the museum – can find an answer. But this answer is never the same for all of them,
as we have learnt from museum habitués and teachers, and it is never the unique and
correct answer. As a museum educator I now know that I can enhance the visitor’s
perception but I could never make him or her understand the past as I do. This

finding provides me with a great relief, but it does not mean that I will forget my ethical responsibilities or theoretical postures.

Research

In conclusion we must recognise that cognition in the museum environment is found within the institution and among visitors. In the four research-groups we could find personal and distributed cognition. The significance of this is that if we construct our world individually—not everybody thinks in the same way, has equal intelligences, and so forth—we need to reciprocate with members of our community of practice or knowledge, in order to gain deeper understanding, better levels of achievements and reinforcing levels of meaning. There is circular influence among all groups, and all of them share cognition.

Cognition is related to interpretation of what is known. Both processes implicate engagement and consciousness, though with quite different levels of depth. There is a natural link between cognition and interpretation; one cannot interpret what has not been first apprehended.

In developing this research I have also experienced personal and distributed cognitions. I have learnt about hermeneutic ontology and epistemology, qualitative approach and its methods for data generation and analysis. I have shared knowledge and learnt with participants, my Supervisor, and bibliography all of them interpreted as vehicles of thought.
The hermeneutic approach to the past in the case study

The ontology of this research is philosophical hermeneutics. This means that in developing this study I have made a conscious effort of interpretation to understand others, facts and events. I started as a knowing person who needed to create an instance of reflection, and a conscious effort to interpret other people, facts and events. Nevertheless, my reflection and efforts were not ends in themselves. They were intrinsically linked to another person, the participant, who willingly communicated to me his/her thoughts on the subject of interpreting the past in a museum of archaeology. The participant shared with me his/her experiences, which are different from those of anybody else, and in that very moment we were constructing an interpretation together, we were really exposing each other, presenting and representing ourselves to the other through the topic under discussion. To get to this point, my interviewee and I had to be sympathetic with one another, open, critical and understanding; consequently, we were constructing a characteristically hermeneutic dialogue as well.

This participative and conversational understanding was expressed in different kinds of languages, but mainly in spoken language to transmit the freely exposed thoughts of participants. Verbatim transcriptions of those discourses led to a dialogical interpretation, in written form, of concepts expressed by interviewees during the analytical stages of the research. Interpretation went from the identification of a single concept to put that idea into a larger context, and reading it again in search of new possibilities of interpretation. Thus meaning was negotiated within that hermeneutic circle which interprets understanding as going from the part (initial concept) to the whole (the problem), enlarging perception of the whole with
the information obtained, and analysing the parts again in the light of the new perspectives reached. Thus the parts and the whole grew together to reach a more comprehensive understanding.

This circularity of hermeneutic understanding, and the concepts that have been analysed using this principle, have been explained several times in this thesis in different contexts. They may become repetitive for the reader, but they are exactly the kind of examples of circular repetition in which I got involved. The temporal closure of the research, to conclude this thesis, does not mean that the circle is closed; it is permanently open to further analyses if the situation arises.

Considering that human actions are meaningful, I looked into the practice of participants, to see how significant those actions were within the system to which they belonged. I found that there was coherence among the meaning of action of curators who try to find human agency in the ancient past, organising knowledge in a historical perspective; EDT members who try to show human action in historical perspective through exhibitions, which are not self-contained but aim at the communication of ideas; and visitors\textsuperscript{18} who come to the museum for recreation but also to gain an understanding of human action in a historical perspective.

I found that understanding among interviewees is also participative, a social construction full of meanings. Curators share findings with their colleagues in a theoretical negotiation, observing joint standards of evaluation and recognising

\textsuperscript{18} From now on visitors include the two subunits segregated for analyses: museum habitués and teachers, except when especially indicated.
equality of intellectual authority.\textsuperscript{19} EDT members create a community of practice; even if sporadic, it functions as such. The meaning of their social construction is represented in authoritative, didactic displays, with a beginning and an end, which are appreciated by visitors who see these exhibitions as an understandable representation of the past.

Visitors construct their knowledge of the Arican archaeological past by empathetic interpretation of the representations on display. They negotiate their previous knowledge with that on display in the museum showcases, additional texts, and live interpretation. They can eradicate preconceptions or accommodate them to new perceptions. They are also sharing their knowledge with other visitors, either through questioning the past, or explaining it with the elements at hand or elaborating the past in joint reflection so that they transform personal cognition into a new social construction. What they obtain is, again, a personal knowledge of the local past, which is not a social rule or a universal truth, but differs from another’s experience and knowledge, and it will be the basis for the construction of new interpretations in the future.

Social constructivism is not free of values. The curators’ purpose is human understanding, and while disclosing a diversity of worldviews through the ages, they are implying, openly or not, a range of perceptions. Worldviews deserve egalitarian acceptance among human beings, and should not be qualified as primitive or inferior because they are different from ours. Diversity of responses occurring in the past corresponded with the systems of meanings, made by tradition

\textsuperscript{19} Schwandt 2000: 199.
and innovative forces that functioned then. They cannot be worse than our efforts to come to terms with our own problems.

EDT’s construction of the social world is guided by two forces: one is to make the past understandable, and offer more than just an opportunity for visitors to see antiques on show; the other is the museum’s compromise with the community as part of the university’s political agenda. Neither line of thought is clearly defined at the MASMA. On the one hand, there is an expressed intention declared by members of the team to make a vivid representation of the past, though they were not interested in knowing if that purpose was accomplished. On the other hand, the actual museum engagement with the region is limited, since EDT members are happy with positive comments, mainly from colleagues in the field with whom they share opinions. This makes exhibitions a showcase for the university’s achievements, and attracting a diverse audience is part of their public relations.

The museum becomes an example of the scholarship developed at the University of Tarapacá. The central authorities, as well as the academic units, use it as a synthesis of research standards to impress their visitors. But the museum is not incorporated into the academic enterprise of any other university unit, either for research or education. All interdisciplinary projects with the University of Tarapacá units start from the DAM, and they are infrequent. Interdisciplinary projects are more common with other national or foreign universities or research centres. In spite of this, the museum is a centre of attraction for the city and the region. As a result of the present research, EDT members expressed their intention to strengthen community

\[21\] Kelly 2001: 7.
links and make exhibitions more participatory, more relevant to the public’s expectations, while incorporating the local community’s knowledge.

The fact that MASMA is a university museum provides a strong support for anthropological research, which is valued. At the same time the museum requires additional support to fulfil its responsibilities to cultural regional development, which cannot be met due to economic restrictions, shortage of qualified personnel and a general misunderstanding of the potentialities of the museum. Such problems cannot be solved in the short term.

As for the construction of the social world among the teachers’ group, attention should be paid to how teachers make the regional past meaningful to their students, which is ignored by traditional education and school textbooks. At the same time social values, such as human dignity and collaboration in common tasks, are called to their attention and distinguished as a contribution from the past. In both groups of visitors, museum habitués and teachers, the past is time-related, brought to the present in the moment of constructing it. Besides, the sense of futurity is there, for knowledge is a durable asset that might be utilised in the future when it is required.

There is also a hint of how intellectual power influences each group. Knowledge is produced and reproduced in a circle of influence that starts at the academic level and is recognised and accepted by subsequent levels of interpretation. Though discourses are never the same, curators feel there is a gap between exhibitions and their recent perspectives; they would like to see their knowledge on display. EDT organises knowledge in exhibitions but there is no feedback, so they do not know
what visitors need; they impose their vision. Teachers control the boundaries within which texts can be understood by their students, so they exert power over their students as well. General visitors organise knowledge according to their own needs, recognising that they cannot make meaning from the exhibition unless they acquire academic information by means of catalogues, wall texts, etc. This is the circle of intellectual power at work in the museum, but visitors understand it as beneficial.

Closing this section, we arrive at the conclusion that interpretation of the past is produced in the case study through distributed cognition within the circle of common understanding, but also by empathetic understanding of the past in terms of the present. While actively constructing the past in the present, participants also aggregate values and accommodate their significance, filling with meaning from the past the gaps in their daily life.

In answer to the methodological 'why' question, why is there a relationship with the ancient past in the case study? we found that it is because archaeology is connected with life, not with death. It is because the past becomes real with the sight of human remains and their cultural production. It is because the past represents the roots of our lives, which in turn is a link to the future.

**Archaeology in the case study**

If we listen to the curators’ analyses of the facts, archaeological research at the MASMA is not theoretically interpretive. However, if we follow Hodder’s analysis

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22 Reference to Yin’s explanation that ‘why’ questions are better answered using the case study strategy, as indicated in chapter two in this thesis.
of the archaeological process, it is evident that hermeneutic procedures are included
in our case study as well, even though they are not identified as such. 23

The whole of the archaeological site is understood in relation to its parts, as Hodder
states,24 because data provide information that is integrated into the whole, and it
cannot be any other way; integrating data into the whole is a common practice
among curators in the case study as well. Besides, as Hodder says, data is
approached with a set of prejudgements, which in the case study correspond to the
traditional local chronology based on ceramic typology, stratigraphy and carbon
dating. Archaeology sits astride the humanities and natural sciences, says Hodder.
Curators at MASMA, whilst recognising the scientific method to read data, also
state that their central focus is explaining human action in the past. I think that the
theoretical posture with which they express their ideas is what makes the difference
but the Gadamerian ‘speech between the speeches’, indicates that meaning can be
extrapolated from both viewpoints, the humanities and natural sciences.

Santoro’s discussion of Hodder’s multivocal interpretation of data in contexts –
meaning that different people will see different relationships when linking data
together, as well as multiple scales and contexts – and his implication that
interpretation can only be momentary, proves that archaeological narratives are
permanently subject to further interpretation therefore, they have potentially
different readings. This is another characteristic of the hermeneutical circle that

23 e.g. Hodder 1995: 89.
24 e.g. op cit: 184.
Hodder prefers to call a spiral, due to the progressive stages of understanding that it implies.  

There is also coincidence in recognising that the narratives archaeologists construct are addressed to different audiences. Hodder\textsuperscript{26} says that the construction of narratives is part of the public responsibility of archaeologists, which was clearly stated by both curators in the interviews.

The conclusion is that even there is no overt declaration that curators use interpretive archaeological procedures for data analyses, they are engaged in interpretation. The very nature of archaeology is interpretive since it is the product of human action. Interpretation cannot be avoided. Nevertheless, it is the conscious theoretical approach of research and practice that makes the difference. Hence, the question to be posed in a future study is how, and what kind of interpretation is sought. Is it of a philosophical order? or interpretive in phenomenological aspects? or a social constructivism? or some other approach?. As Pearce indicates, a consciousness of the type of interpretation they are pursuing will also affect the way in which archaeology is displayed in museum exhibitions.\textsuperscript{27}

This research has disclosed aspects that have never been touched upon before at the MASMA. In general, we undertake tasks to fulfil an immediate requirement, a project, research or the like, but we miss the overall perspective of our work. To arrive at a good conclusion I think that it is not by working individually that this

\begin{itemize}
\item \textsuperscript{25} For example, Hodder 1995: 215-216
\item \textsuperscript{26} Hodder 1999:56.
\item \textsuperscript{27} e.g. Pearce 1990:143-169.
\end{itemize}
wholesome perspective can be achieved but by working together, sharing our skills, knowledge and sense of community.

Finally, I would like to say a few words about the university museum of archaeology. A university museum facilitates research and the construction of knowledge, but also sets constraints on the application of that knowledge, being permanently under-funded. A university museum is expected to be the summit of museums, integrating scholarship and new knowledge with art, novelty and tradition. The university develops the professionals of the future; consequently, in having collections from the past their representation should be the future. Indeed, university museums could do all this and more if only they had the money! In our particular case, with no chance to impress by spectacular representations, we offer a magnificent collection, well documented and explained according to the methods employed.

The responsibility that a university museum has in forming museum professionals should be promoted; museum practice should be broadened with theoretical thinking. This research aims to achieve that aim. I wanted to understand how the past is interpreted at the MASMA in order to improve visitors’ understanding and offer a better service, but I also wanted to do research on epistemology and the philosophy of understanding. I think the effort was worthwhile. In this sense this study can appropriate the guidelines given by Renaissance in the Regions when it suggests that local university museums could act as hubs for museum improvement in the region that hosts them.

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28 Re:source 2001
Museology in the case study

This study is essentially linked to museological research in theory and practice. It focuses on a museum problem of collection interpretation using hermeneutic theory from the researcher’s standpoint. It is based on a museum as a case study, in order to theorise on internal procedures as well as external reception of those procedures; the concluding practical implications are intended to improve museum education practice.

All efforts are addressed to answer the question of understanding how the ancient past is interpreted in a museum of archaeology; everything in that pursuit is related to museum interpretation and presentation. Everything means discussions within the museum, on archaeological research and exhibition of archaeology –which in the case study corresponds to Andean pre-Columbian societies– and about the museum, on understanding of the ancient past by museum regular visitors.

Museums have no single way of theorising, interpreting or speaking to the public. In this case study there is a circular epistemology. Curators produce knowledge that is reinforced by peers’ critical analysis and the feedback produces a deeper meaning of their research and a progressive search for more comprehensive understanding of their particular research project. Curators’ research sheds light on the objects that are exposed in narrative exhibitions, interpreted by EDT/COP as a story written in the book of the showcases’ layout. At the same time EDT/COP loads the displays with symbolic elements, which is a discourse not always clearly understood. So EDT develops their own circular epistemology: fed by archaeological research, they

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reinterpret archaeological concepts, their views are reinforced among the members of the EDT/COP and expressed through a visual storytelling in the exhibition project, which will be reviewed and enriched in future projects, thus generating a further circular movement.

Visitors' circular epistemology is understood in the way they see the MASMA exhibitions' narrative as foreign to their knowledge and experience, unlike the museum insider – the one who knows or withholds the knowledge– the presenter or interpreter of the displays; so that they look for assistance in texts, labels, face-to-face communications and the like. Nevertheless there is no guarantee that visitors absorb all that they receive from museum interpretation in written, symbolic or spoken forms; they are critical and admit what they consider acceptable. Opinions may vary greatly. So the circular movement goes from the pre-existing visitors’ knowledge to the new propositions offered by the museum narratives, the new reflection on the past, and the newly constructed knowledge, which will be reviewed in the following visit, starting the whole process over again.

The museum syntax deals with the past, but it is intended to signify in the present, and, in spite of deficiencies detected during the analysis of data— and explained in the development of this thesis— the intention is accomplished, according to the deeper interpretation that regular visitors make from the exhibition displays. The museum employs a scientific discourse, which is accepted, understood and trusted by visitors. This scientific discourse is perceived as part of the expertise visitors expect in a museum of archaeology, but it does not attempt to eradicate visitors’

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30 Visitors, museum habitués and teachers, said in the interview that no matter the times they visit the museum there is always something new for them there.
ideologies. The MASMA displays become a reflection on perception of otherness, the acceptance of other cultures as contributing to our own traditions. Instead of dissociating past and present, there is a continuity of historical perspective. Visitors explained that they altered their preconceptions of the other, as being inferior or less important than our civilisation. Exhibitions enabled them to see the continuity of cultures as a natural process, which does not mean a linear irreversible improvement from the past but that the past can teach the present population, because its solutions are still considered wise and practical.

This thesis has contributed to museology with a corpus of approaches to understand theory and practice in a university museum of archaeology. As for museum education, I explored how distributed cognition can influence understanding, not only among visitors but also among the producers of knowledge who become visitors' stimuli of learning. This thesis can also be considered as a contribution to promote understanding in situations similar to the case study. Theories applied and developed can be replicated, reviewed or modified. The case study is rich in emerging subjects for research, and the research line now partially concluded is to be analysed in the future to see how the findings evolve. Ideas and conclusions can stimulate further research and replicability of the methodology. They enact knowledge to improve museum practice, since it is reflexivity that can transform practice.31

31 Kreps 2003: 157
Practical implications of the research

The research has produced the expected results. Now I know how curators construct their interpretation of the past, how EDT/COP construct theirs, and how frequent visitors understand MASMA propositions to explain the past in the Arican region.

Now I know how to relate to curators and to establish a better and more resourceful understanding of their theoretical posture; consequently I can get deeper interpretation of their texts and raise more relevant questions about the past that have a bearing on today’s culture. Curators’ spoken and written texts at the MASMA provide the framework of museum exhibitions, which originate a number of subsequent interpretations within and about the museum.

Now I know that the members of the Department of Archaeology and Museology, who construct museum exhibitions in the galleries and outside the museum site, is a well organised team that works and acts as a community of practice, shaping its own personality and creating similarities and differences with the rest of the Department. The joint enterprise gives the EDT/COP authority to act independently of outside influence, because the community negotiates its enterprise and creates mutual accountability. The production they achieve, and the rhythm they impose on it, is part of their own dynamism. Knowing all this, I can better understand their aesthetic language—including metaphors—motivation and ways to persuade visitors to become engaged with exhibitions. But I also came to know that the acknowledged communication fluency between curators and EDT/COP still needs improvement. Realising the problem of curators’ wanting greater participation in
exhibitions, I can bridge the gap revealed by curators in this otherwise good relationship.

Visitors provided me with great satisfaction knowing, for the first time, that the museum’s efforts to bring the ancient past to life in the present are appreciated by its visitors. I have listened to their spontaneous, free opinions; they were not answering a long questionnaire that had to fill in a given time. There were no multiple choices to shape their thoughts or intensity scales to measure degree or emphasis of opinion, as in quantitative research. Unstructured opinions were the kind of answers I was looking for, visitors’ impressions in their own words, wandering among thoughts, feelings and recollection of experiences. Now I know how they react to the museum interpretation of the past and how they construct their own interpretation. Consequently, I can organise my museum presentations of the museum not by guessing what might be useful to visitors but by understanding the different meanings they might derive from them. And, clearly, I bear in mind that these findings are not final results but provisional answers to my research question. Yet, I am also perfectly aware that visitors addressed in this research are a fraction of the totality.

To sum up, the practical implications of this research is a better understanding among all the components of the museum. This reflective exercise should be shared with all the members of the museum, so that the dialogue I started as I and thou with participants, could be open to include all in-house personnel and all visitors as well, since they are an important component of the museum family.
My expository method in presenting the museum exhibitions will change to a more
dialogical interpretation, and actively include the visitors’ view. It will also include
the social dynamics that shapes historical interpretation of the past in the
hermeneutic approach, since archaeology is able to teach visitors about the roots of
contemporary life.\(^{32}\)

Many research projects arise from this thesis to be developed in the future beyond
merely updating the results of this study. For example, I would like to work with
curators and EDT together, using action-science method, to discover how
communication between them functions and how could it be improved. A second
project could be to find out if any visitors are puzzled by the hidden messages
introduced by EDT in their exhibitions. Another topic is to discuss with teachers is
the kind of knowledge they can assess from a museum visit, using the findings of
this research. Enjoyment was mentioned several times by the interviewees, curators,
EDT and visitors. I think this is also an interesting matter to research in the near
future; I can use the hermeneutic metaphor of play in relation to the museum
context. And, of course, asking different types of visitors, such as occasional
visitors, museum and archaeological professionals, age-related groups, ethnic
groups, and so on.

**Conclusions**

In this thesis I have addressed the problem of interpretation of the remote past in a
museum of archaeology. To do so, I have considered the wholeness of the museum
as directly engaged with this purpose—curators, exhibition developers and visitors—

\(^{32}\) Leone et al 2000: 470.
thinking that the more multifaceted the process of data gathering, the more robust would be my understanding of the results.

Since my ontological standpoint was hermeneutics, I was always questioning data in a dialogical and circular way, going from the parts—the concepts emerging from data—to the whole—the research question—and from the whole to the parts, in order to re-interrogate data in order to get a deeper understanding of participants' thoughts. The research-groups are related by their common interest in understanding pre-Columbian societies and, while exercising their separate practice of knowing about the past, they also influence each other in a circular way.

The results of this research are thoroughly grounded in the data, and show a holistic account of events and social relationships, which strengthen each other. The intellectual power that some research-groups exert on one another is not perceived as detrimental. Most important, the research drew attention to aspects that have been rarely, if ever, discussed. The tacit became explicit. Reflection on the problem alerted participants to the possibilities of museum interpretation. Inquisitiveness was also awoken among the members of the EDT, and theoretical approaches to practice became something to continue in the future.

The validation criterion of the study was consistency throughout all stages of research, from the theoretical framework to qualitative inquiry and to hermeneutic interpretation of data in order to locate research within the openness of social action and its polysemy and multivocality. This search looked for authenticity within the
case and not for generating truths in this changing world. My ethics involved understanding other people's standpoints and truly representing their reality.

This inquiry cannot be replicated with the same participants as it would in an experimental case, because, ideally, this research should modify future outcomes with a positive effect. If experience does teach, my participants no longer have the same relation to museum interpretation. What is possible and desirable is the recursive application of the method within the next spiral of the hermeneutic circle, and to see why and how things could change from the present stage onward. In a way this research could be contrasted with the impossibility of replicating of archaeological digging, because once the evidence is taken from the context, the site is destroyed. In our case, unconscious situations of interpreting museum displays reified in awareness, and any future discussion of the subject will be taken from that new stage of consciousness, because the original situation has been permanently changed.

In a museum there are innumerable questions to answer and problems to solve, but they cannot be taken as a whole; they have to be addressed one by one. I dealt with a circumscribed problem and tried to give it the most thorough answer I could build by now. But I recognise it is not the only answer to the problem, and this answer is open to new analysis, or to a broader context; so there are many motivations to undertake future research. I focused on one small, local museum of archaeology, and, since I was dealing with abstract thinking – in-depth interpretation of the past – the participants addressed were adults.
Placing this thesis among other studies of the kind, I found that in the museum literature many children’s experiences are reported and analysed; figures and studies of general museum visitation are providing important information, but few of them are addressed to adult and regular visitors. Re:source reports that, in the UK, a third of adults visited a museum in 2000, and between 20 to 30 per cent of adults are regular visitors. I have always thought that this segment of the population needed more attention than it has previously received. It is a robust sector that influences many others through reflective thinking, and helps others make their museum experience worthwhile. It is most important that regular adult visitors are catered for and their inner thoughts known, not only in order to fulfil a museum’s obligation to serve the public, but also for its own benefit. Adult regular visitors are consciously or unconsciously potential museum advocates and eventually helpers.

Paraphrasing Duncan in her explanation of what her study was not, I cannot give more answers than I have addressed in this research. No first time visitor, or child, or conservationist, or historian or engineer has been interrogated. The limits of my research were clearly established. It is by aggregating experiences, information and research, that knowledge is constructed. The thesis can stimulate other professionals to answer the various missing questions.

Hermeneutics has oriented me to solve the research problem through conscious acts of reflection and thought, asserting the importance of asking meaningful questions and interpreting and conceptualising data; choosing a type of performance among many possibilities, and arriving at provisional conclusions and closure of this

33 Re:source 2001: 6
34 Duncan 1995: 3
critical analysis. Conclusions are open due to the plurality of meanings, taking account of the potentiality of interpretation and the polysemy of human action, objects, texts and events.
## Appendix I. Archaeology. Linking research questions to methodology

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources and methods</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeology</td>
<td>Open-ended interviews + relevant literature + desk work</td>
<td></td>
</tr>
<tr>
<td>How is archaeology defined within the social sciences?</td>
<td>• Archaeologist</td>
<td>Interview will provide a personal and professional view on the subject. Relevant literature will provide various theoretical and academic definitions</td>
</tr>
<tr>
<td>What is the special contribution of archaeology to the present?</td>
<td>• Archaeologist</td>
<td>Interviews will provide an experiential position on the question as well as the professional view Literature will provide the interpretivist, constructivist view.</td>
</tr>
<tr>
<td>What are the procedures used by archaeology to find out about the remote past?</td>
<td>• Archaeologist, Physical anthropologist</td>
<td>The archaeologist's epistemology and resources will explain this point. The physical anthropologist may have a different answer interesting to find out. Literature will provide the academic position</td>
</tr>
<tr>
<td>What are the means used to interpret archaeological evidence?</td>
<td>• Archaeologist, Physical anthropologist, Review of their published articles for methodology</td>
<td>The interviewee will provide a personal answer about methods and resources. The physical anthropologist may have a combined view of biological and social sciences Check interviewees' published works against their personal opinions</td>
</tr>
<tr>
<td>How can archaeology test reliability of interpretation?</td>
<td>• Archaeologist, Physical anthropologist</td>
<td>The interviewee may have his own methodology or the standard established at the DAM Physical anthropologists may have a combined methodology</td>
</tr>
<tr>
<td>Can a single object from the ancient past tell a story or make connections to social events?</td>
<td>• Archaeologist</td>
<td>It would be interesting if this question is answered affirmatively. If so, reference to methods will be indispensable.</td>
</tr>
<tr>
<td>How can embedded meanings of archaeological remains be communicated to contemporary people?</td>
<td>• Archaeologist, Physical anthropologist</td>
<td>Embedded meanings of archaeological remains are difficult to obtain without the expertise of the archaeologist or physical anthropologist; a further difficulty is communicating them. The interviewees' opinions are valuable</td>
</tr>
<tr>
<td>Who is the audience of archaeological research?</td>
<td>• Archaeologist, Physical anthropologist</td>
<td>This answer will also be related to the cryptic information provided by curators to museum services. It would be interest to know what audience they have mind when writing their texts</td>
</tr>
<tr>
<td>What language should be used to convey attributes, meanings, and values of archaeological objects?</td>
<td>• Archaeologist, Physical anthropologist</td>
<td>This question will lead to further development of the previous one; it includes personal strategies to make the information available at different levels and media to standardised aural/written language</td>
</tr>
<tr>
<td>What is the relationship between archaeology and museum science?</td>
<td>• Archaeologist</td>
<td>The archaeological literature I have read has never mentioned museum science. Authors refer to museums as a social fact. What would be the answer to this question?</td>
</tr>
<tr>
<td>Is archaeology meaningful without museums?</td>
<td>• Archaeologist, Physical anthropologist</td>
<td>Considering the close relationship between archaeology and museums the answer is obvious, but are there other ways to conserve archaeological collections, meaningfully communicate them and receive a feedback?</td>
</tr>
</tbody>
</table>
Appendix II. Public Interpretation. Linking research questions to methodology

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources and methods</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitors</td>
<td>Semi-structured interview + relevant literature + desk work</td>
<td></td>
</tr>
</tbody>
</table>
| Is it possible for a museum visitor to obtain vivid appreciation of the past? | • Five adult museum visitors  
• Five teachers | I want to know if the archaeologist's appreciation is powerfully transmitted through museum display. |
| If it is possible how can that appreciation be described? | • Five adult museum visitors  
• Five teachers | A personal experience, alternative considering next question Reflection can bring empowerment to the visit |
| If it is not possible, what kind of knowledge can be conveyed in the archaeological museum? | • Five adult museum visitors  
• Five teachers | A personal experience, alternative considering the previous question Reflection may give a sense to the visit |
| How can visitors know they have learned something in the museum of archaeology? | • Five adult museum visitors  
• Five teachers | There is a general notion that museums are places for learning. It would be interesting to know how people relate their own experience in the museum |
| How can the knowledge derived from the archaeological museum be described? | • Five adult museum visitors  
• Five teachers | Holistic versus partial experience. The museum offers the possibility to learn using different styles and capabilities. |
| Is there a scale of any kind to rank concepts of interpretation, learning, understanding, and knowledge in the archaeological museum? | • Five adult museum visitors  
• Five teachers | Concepts connected to these terms can be confusing. If they are distinguished and organised there should be a clearer perception of what can be achieved in the museum experience. |
| Is an appreciation of the past important for living and sharing a better life? | • Five adult museum visitors | Appreciation of the past implies inclusion of other cultures, so the word “sharing” that follows is in tune with the conception of inclusion |
| Are those peoples long passed away important in the construction of the present? | • Five adult museum visitors  
• Five teachers | This question contains several implications: a philosophical connection between past and present, an environmental economical view, technological evidence via effective instruments through ages, and so forth. |
| Can values be appreciated from other peoples’ social organisation? | • Five adult museum visitors  
• Five teachers | Looking deeper into the meaning of material culture |
| Are those values important in any sense for the contemporary population? | • Five adult museum visitors  
• Five teachers | Archaeology is valuable as a science of past and present |
| What is more valuable in this museum, objects or concepts? | • Five adult museum visitors  
• Five teachers | This is not a choice. There are no concepts without the object, but a visitor could think differently and it is proper to have his/her voice represented |
| Can concepts be easily grasped from the museum displays or they are evident only after deep thinking? | • Five adult museum visitors  
• Five teachers | There is a combination of sources in the question A fact: the accessibility of conceptualisation offered by the museum displays; a circumstance: the mood or the visitor's capability to conceptualise from a museum display. |
**Appendix III. Museum communications. Linking research questions to methodology**

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources and methods</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exhibition Design Team</strong></td>
<td>Semi-structured interviews + relevant literature + desk work</td>
<td>The education area is not included</td>
</tr>
<tr>
<td>How are museums displays designed and carried out?</td>
<td>• Display designers</td>
<td>The interviewees will provide information about the procedures</td>
</tr>
<tr>
<td>How are archaeological research and interpretations of the past represented in the museum displays?</td>
<td>• Archaeologist • Display designers • Review some written productions</td>
<td>Degree of integration and communication among the archaeological research and the design team over general production, exhibition guidelines, scripts, exhibition catalogues</td>
</tr>
<tr>
<td>Who decides the main ideas supporting the museum displays?</td>
<td>• Archaeologist • Display designers</td>
<td>The interviews will provide information on the intensity or main responsibility over the display policy and contents</td>
</tr>
<tr>
<td>Who decides what archaeological objects are going to be spotlighted among others of same cultural value?</td>
<td>• Archaeologist • Display designers</td>
<td>It has always puzzled me why some objects are spotlighted without any obvious reason; I would like to know what it means to stress singularity in contextually meaningful objects, and who decides over that.</td>
</tr>
<tr>
<td>Are exhibition designs effective means of communication i.e. easily understood by museum visitors?</td>
<td>• Archaeologist • Display designers</td>
<td>Personal views of interviewees are substantive to understand the whole procedure</td>
</tr>
<tr>
<td>Is there a target-group for each exhibition and communication programmes? If so, how is it possible to know if it succeeded?</td>
<td>• Archaeologist • Display designers</td>
<td>These are core questions leading to a better public understanding of these museum displays</td>
</tr>
<tr>
<td>Is there a compromise between cultural interpretation and effective communication</td>
<td>• Archaeologist • Display designers</td>
<td>The answer to these questions would provide information about the real concern of passing on archaeological information to the museum visitors</td>
</tr>
<tr>
<td>How can effective communication in the museum be described?</td>
<td>• Archaeologist • Display designers</td>
<td>Objectifying the problem would lead to better appreciation of the process</td>
</tr>
<tr>
<td>How can the interface between the visitor and the museum propositions be described?</td>
<td>• Archaeologist • Display designers</td>
<td>This question is concerned with unobtrusive and unstructured designer observation or summative exhibition research</td>
</tr>
<tr>
<td>Is there any underlying tension between what is taught at school and the museum discourse?</td>
<td>• Archaeologist • Display designers</td>
<td>This is a typical educational question. To what extent are designers and archaeologist-anthropologists involved in this issue? It is interesting to find it out.</td>
</tr>
<tr>
<td>Is communication and learning a museum compromise or the visitor’s choice?</td>
<td>• Archaeologist • Display designers • Museum Director</td>
<td>This question points to the general museum policy and involves all the museum staff</td>
</tr>
</tbody>
</table>
Appendix IV. Archaeological studies of the ancient past. (Based on Renfrew and Bahn 2000, Cha.1-12)

<table>
<thead>
<tr>
<th>Representative/Approach</th>
<th>Quest/Problem</th>
<th>Objective/Explanation</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Before archaeological science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early societies</td>
<td>Origin of the society</td>
<td>Foundation myths</td>
<td>Epic</td>
</tr>
<tr>
<td>Ethnic groups</td>
<td>Parental roots</td>
<td>Ancestors' search</td>
<td>Kinship</td>
</tr>
<tr>
<td>Wealthy societies</td>
<td>Antique objects</td>
<td>Curiosity</td>
<td>Inquisitiveness/knowledge</td>
</tr>
<tr>
<td>II Pioneers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1784 Thomas Jefferson</td>
<td>Meaning of Virginia mounts</td>
<td>Burial sites</td>
<td>Test ideas/logical deduction</td>
</tr>
<tr>
<td>1785 James Hutton</td>
<td>Stratigraphy of rocks</td>
<td>Uniformity of geological process</td>
<td>Past much like the present</td>
</tr>
<tr>
<td>1848 C.T. Thomsen</td>
<td>Class Danish Museum antiquities</td>
<td>Age system: stone, iron, bronze</td>
<td>Evolution</td>
</tr>
<tr>
<td>1859 G.A. Pitt-Rivers</td>
<td>Evolution of artefacts</td>
<td>Chronological &amp; develop</td>
<td>Methodological typology</td>
</tr>
<tr>
<td>1870s E. Tylor</td>
<td>Human evolution</td>
<td>States: savagery, barbarism, civilization</td>
<td>Ethnographic comparison</td>
</tr>
<tr>
<td>1870s H. Morgan</td>
<td>Old soc. way of living</td>
<td>Ethnographic description</td>
<td>Communism of resources</td>
</tr>
<tr>
<td>1880/90s Old &amp; New world great civilization expeditions</td>
<td>Access to lost or unknown great societies. Bible reference</td>
<td>Museum and private coll. Appropriation of the past</td>
<td>Periodization of world history</td>
</tr>
<tr>
<td>III Traditional archaeology</td>
<td>Definition of cultures</td>
<td>Traits: Occurrence/stratigraphy</td>
<td>Culture-historical approach</td>
</tr>
<tr>
<td></td>
<td>Typology/classification</td>
<td>Change: Migrat/ diffusion</td>
<td>Dating by comparison of traits</td>
</tr>
<tr>
<td>1930/40s G. Childe</td>
<td>Culture chronological sequence</td>
<td>Recurring assemblage of artefacts</td>
<td>Neolithic &amp; urban revolution</td>
</tr>
<tr>
<td>1930/40s F. Boas</td>
<td>Explain culture in its own terms</td>
<td>Information from the field</td>
<td>Cultural relativism</td>
</tr>
<tr>
<td>1950s G. Clark</td>
<td>Environmental adaptation</td>
<td>Ecological &amp; dietary reconstruction</td>
<td>Ecological approach</td>
</tr>
<tr>
<td>1958 G. Willey &amp; P. Phillips</td>
<td>Regularities in culture-historical methods</td>
<td>Processes at work in culture history</td>
<td>C-14 freed explanations from description</td>
</tr>
<tr>
<td>IV New Archaeology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1968 L. Binford &amp; followers</td>
<td>Culture as system &amp; subsystems</td>
<td>Subsistence, technology, ideology, etc</td>
<td>Science to counterbalance history</td>
</tr>
<tr>
<td>Processual archaeology</td>
<td>Answer specific questions</td>
<td>Cultural process leads to generalization</td>
<td>Theoretical/nonmetrical explanation</td>
</tr>
<tr>
<td>Functional-processual</td>
<td>Testing &amp; validation cultural meaning</td>
<td>Quantitative data analysis</td>
<td>Deductive reasoning</td>
</tr>
<tr>
<td>Cognitive-processual</td>
<td>Symbolic &amp; cognitive aspects of societies</td>
<td>Facts are theory laden</td>
<td>Theory should be tested against facts</td>
</tr>
<tr>
<td>V Postprocessual</td>
<td>Role of the individual in history</td>
<td>Mat culture reflects action &amp; thoughts</td>
<td>Ideological &amp; symbolical aspects of societies</td>
</tr>
<tr>
<td>Marxist perspective</td>
<td>Shift from egalitarian to ranked societies</td>
<td>Power attained by conflict/kept by force</td>
<td>Clash of interests among classes/exploitation</td>
</tr>
<tr>
<td>Structuralism</td>
<td>Structure of thoughts/ideas in material culture</td>
<td>Categories in one sphere reflect others</td>
<td>Synchronism in a cultural tradition</td>
</tr>
<tr>
<td>Critical/Interpretive theory</td>
<td>Objective knowledge is illusory</td>
<td>Facts = view of the world &amp; theory</td>
<td>Hermeneutic approach</td>
</tr>
<tr>
<td>Neo-Marxism</td>
<td>Ideology as causal change in old societies</td>
<td>History is written for class purpose</td>
<td>Ideological superstructure not subject to economy</td>
</tr>
<tr>
<td>Agency in archaeology (Brumfiel 2000)</td>
<td>Individual &amp; group in culture change</td>
<td>Humans make choices, hold intentions &amp; take actions</td>
<td>Effects of a single variable on individuals differently located in the social system</td>
</tr>
</tbody>
</table>
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