2. Methodology of Studying Landscape Research in Crete

2.1 Introduction
Archaeological landscape research projects in Crete represent archaeological work over many decades and have been realised within different traditions and therefore theoretical and methodological frameworks. In order to understand and compare relevant work, I created two relational databases, which allowed the structured study of landscape projects. The first and principle one (Surveys database) collects information on the theory and methodology that has guided landscape research, and seeks to explore relationships between theoretical background, aims, methods and results in terms of site interpretations. The second (Interpretations database) is a brief study of the interpretative process that observes the relationship between data observed and site interpretations, for a sample taken from different Landscape Traditions. The structure of the databases designed for such an analysis and the classes of information believed crucial for intra-project understanding and inter-project comparisons are discussed below. Each project is entered into the ‘Surveys’ database and discussed in a relevant text analysis (chapter three). In the process, I have had the chance to discuss with most major investigators who undertook archaeological landscape research on the island and whose work I have studied, and I have incorporated their valuable advice in the database and texts. The data collected are used for an inter- and intra-project analysis, that helps construct a historiographical overview of landscape research in Crete.

The fields or values, which comprise the ‘Surveys’ database, have been part of a dynamic process, guided by experience as the study of the various projects progressed. There was of course, an initial structure based on project attributes, which were considered crucial, however, values were being added, omitted or changed until the last project. The tables have been completed according to the information published, and when possible the information obtained from my personal contact with the researchers, but insufficient publication and the lack of publication standards has been a great obstacle to complete, accurate and consistent records. However, even though there might be omissions, and published information is not always clear so as to allow undeniable and consistent documentation, it is believed that the databases allow a clear picture of projects and traditions and highlight problems of comparability. Both databases were created in Microsoft Access.

2.2 ‘Surveys’ Database Structure and Presentation
It consists of sixteen (16) tables, which collect a variety of information for each of the 35 projects analysed and provides a detailed insight into the theoretical and methodological frameworks within which research was produced. The information collected concern principally aims, questions asked, methods used, interpretations, interpretative themes favoured, variability etc. Its purpose is to understand and assess projects, but also to allow inter-project and traditions’ comparisons at various levels. Overall, the database proposes a methodology for the study of landscape research projects and highlights the information we need to know so as to understand what has been achieved by different researchers and how possible it is to integrate their data and interpretations. Below follows a basic description of the tables; fields are discussed in appendix two.
Table Names:

i. Surveys
ii. Data Observed
iii. Field Methods – Sampling
iv. Multidisciplinarity
v. Presentation
vi. Theoretical / Interpretative Framework
vii. Interpretations
viii. Chronology / Functions
ix. Integrability
x. Total site counts
xi. Chronological Variability
xii. Functions Variability
xiii. References
xiv. References of Influence
xv. Sitia sites
xvi. Sitia sites summary

Table ‘Surveys’
This table collects general information about landscape research projects in Crete. Its focus is on the classification of aims and traditions, but it includes information regarding periods and site-types favoured, dates of the projects, approaches to the environment etc.

Table ‘Data Observed’
The aim of this table is to obtain a picture of the variability of the observations researchers made. The data people are interested in and try to collect elucidate the theoretical background within which their questions and interpretations are formulated. Depending on whether observations were consistent or not we can understand how important these observations were considered. This relates to the methodology that is regarded as proper within epistemological paradigms, but also to the interpretations suggested. When fields are empty, they usually reflect a negative value, or a ‘not known’ value. Jennifer Moody (pers.comm) suggested that there should be a distinction between data observed during on-site recording and those observed during off-site walking. This distinction is indeed very important; however, this information is not available for most of the projects. Recording forms are hardly ever published, and observations of the physical landscape are often made as a separate part of the project and not during material collections. There can be observations at 3 levels: a separate environmental study based at large scale extensive fieldwork, observations gathered consistently and in a standard form during field-walking, and ones made at site level. Ideally, analysis and interpretation should be based on a combination of all three.

Table ‘Fieldmethods-Sampling’
This table relates primarily to intensive surveys and collects information needed for the quantitative comparison of their results. It seeks to provide an in-depth understanding of the field methodology adopted, which defines results and allows their analysis. The fields draw attention to the information needed for inter-project comparisons. The variability of methods used highlights the importance of publishing methodology in a structured way.
Table ‘Multi-disciplinarity’
It collects information about the operational framework of landscape research projects in terms of influences and cooperation with other disciplines. Multidisciplinarity is an integral part of archaeological landscape research and elucidates methodological patterns within traditions. It also defines levels of comparability between projects.

Table ‘Presentation’
This table aims to inform us about the level and kind of information disseminated by each project. Presentation could be considered as the connective media between field and production of archaeological knowledge, but in fact it expresses a more complex relationship among the variable and multiple fields at a continuous interplay in the archaeological process (Witmore 2004). It reflects research interests that are mainly tradition dependent and epistemological paradigms created in specific socio-political contexts, but it also expresses variances according to personal interests, time, money and technology available. It shows what is considered important to be visualised and illustrates landscape perceptions. E.g. some may present general low-resolution pictures, others give importance to high-resolution, sites may be presented in relation to general environmental characteristics or in their spatial inter-relationship and in connection with topography etc.

Table ‘Theoretical / Interpretative Framework’
It aims to explore the influential role that various theoretical approaches have had on archaeological landscape research. The fields of this table describe concepts researchers have used in order to explain material culture observed. These may have a principal role in interpretation, or be only touched upon. On the whole, Culture-History and humanist ‘Greek archaeology’ have shaped the framework within which archaeological research in Crete has developed; however, theoretical developments, distinctive of other traditions are apparent and here we can observe the interplay between traditions and theoretical approaches. The table is not very well suited for urban surveys, as they mainly record periods of abandonment and settlement, they look for in-site structure, the character of buildings and the interpretation of sites nearby.

Table ‘Interpretations’
Here we have a summary in text form of descriptions or historical narratives presented for the main chronological periods.

Table ‘Chronology / Functions’
This table contains the researchers’ interpretations in terms of chronology and functions assigned to each site. It provides a classificatory system that can be used for possible comparisons of intensive survey results, and stresses the importance of distinguishing between different site interpretations regarding function and chronology, including categories with question marks as viable classes. It seeks to identify trends of interpretations favoured in various traditions, and relates to the necessity of knowing what we compare so as to refrain from a vague notion of ‘site’. Comparisons based on site numbers with no further information on a site’s character are extremely weak in providing meaningful interpretations; in this respect integration of site information from different projects should make clear if we compare areas of occupational character, religious, unknown, find-spots, etc. paying respect to the differentiations made by each researcher, including differentiations between certain and non-certain sites.

It has to be noted that the above classifications fit an investigation of a very large body of information both time and space wise. It is assumed and suggested that in projects where data integration is required,
classes should be more refined according to questions asked, however it is proposed that a similar approach is adopted, which acknowledges the importance of differences in classes of data and interpretations and studies this differentiation in a structured manner.

Notes on classification decisions

1) Classifying interpretations: Researchers have used and are using many chronological and function divisions and characterisations. Given the fact that it would be almost impossible to work with a classificatory system containing all categorizations used, this table’s fields represent a broader chronological system (widely used by archaeologists working in Crete), based on periods of relative cultural homogeneity and times of transition. These, in turn, contain broad categories of functions. However, it should be stressed that chronological classes used, have the inherent ambiguity of the chronological terms used by researchers. For example, the R/LR class corresponds to relevant terms, which, however, are usually not defined. In fact, LR might partly overlap with the term ‘early Byzantine’ depending on region and researchers’ preferences in terminology; however, this thesis does not attempt a re-evaluation of chronological data, and since the same researcher may use both terms of LR and early Byzantine, their terminology is respected and their interpretations classified in the relative fields. Ambiguity is actually embedded in most chronological interpretations, and as stated above, the ‘chronology / functions’ table studies interpretations in a medium resolution. It is stressed again that if somebody wants to use other researchers’ interpretations for a specific period, one would need to construct a relevant table with finer classes and preferably assess and ‘interpret’ people’s interpretations, if possible by accessing some primary data (e.g. when a researcher says ‘Classical or Hellenistic’, which of the two periods should we really use?). Furthermore, the decision to classify each site into one of the ‘function categories’ has been even more difficult, as researchers’ interpretations are not always straightforward; e.g. sometimes the same site may be discussed as of both a ‘certain’ and ‘possible’ function. Most difficulties arose with multi-period sites where there is usually no distinction between known and unknown function per period. In the occasions where interpretation is not specific, the characterisation of the site had to be inferred from descriptions and connotations and when this was not possible the site was classified as of ‘unknown function’ for the periods that researchers did not discuss its function.

2) Inhabitation classes: When both ‘habitation’ and another function are stated, priority is given to settlement activity as it is not uncommon that where people live they also perform burial and religious practices. Therefore, places of ritual and burials are more than the relevant sites quoted in the database, which usually are exclusively ‘burial’ or ‘religious’; however, differences are not great. The priority given to the question ‘where people live’ is subjective, but it is considered as the most important, since places of occupation are richer in social practices and they have been given priority in archaeological research worldwide. The function stated in the fields of broad periods e.g. ‘PH’, also give priority to the characterisation ‘settlement’ even if there are different functions in sub-periods. The above decisions were taken in the context of the present work, however, classes of chronology and function should certainly be more refined depending on research questions. E.g. someone might be interested in all places of ritual character, and why these occur where they do (in, near, or far from settlements); in this case, one should look for evidence in settlements as well as purely ritual sites.

3) Question marks: Sometimes researchers use question marks after their chronological or functional designations, in other cases uncertainty is inferred from hypothetical tenses or the general style of writing where doubt is implied. ‘Probably’, ‘might’ and similar expressions are taken as if expressing doubt. Certainty of chronological attribution is also relevant to precision e.g. when a period is ‘Turkish or Venetian’ the site would have a question mark for both of these periods, but for the BVT category it wouldn’t. Typical descriptions of sites with question marks: ‘the site could be a Minoan farm’; ‘a pithos burial (a find) is said to have been found at xx location; Roman remains were noted by xx(previous researcher), but not observed by us (however, if someone quotes a site and the interpretation of a previous researcher without expressing doubt even if he did not visit the site himself, the interpretation quoted is taken as an accepted one and therefore it is
entered in the relevant field without question mark. Periods with question marks are included in the respective PH(?), GR(?) or BVT(?) fields, unless it is obvious that researchers are certain that a site is e.g. PH but not sure if e.g. pre-palatial. Then the site is classified in ‘pre-palatial?’ and ‘PH’ fields.

4) Urban surveys: there should be a finer classification of functions and chronological periods for urban surveys, but this has not been possible in the present database of landscape surveys. Surveys and sites of a different level of precision, however, can not be compared satisfactorily. For example many ‘sites’ could be parts of the same extensive settlement (Hood Knossos, Sphakia etc).

5) General: dash (-) between periods is taken to imply duration e.g. V-T is from Venetian to Turkish. Slash (/) is either one period or another. In reality it is possible that dash may also be used when researchers are not sure about the chronology.

Table ‘Integrability’
This table refers to the 26 projects that have provided a site-database, even though information from the rest of the projects can of course also be integrated to a certain extent. However, this table aims to give a general idea of how successful integration of site characterisations might be, as site numbers per period and function can be used in social reconstructions. The general assessment of integrability is based on the confidence, precision and variability of function and chronological interpretations, provided by researchers. These have been calculated, rather than estimated roughly (see appendix 2) and relocatability is also taken into account as it is an important factor to know if we want to combine site data into meaningful spatial interpretations. The table is a rough assessment of how easy and valid it is to integrate not suggestions about how societies were, but the site-characterisations used for such reconstructions. It has to be stressed again, that integrability is assessed in terms of interpretations provided; the table does not assess the accuracy of these interpretations.

Table ‘Total Site Counts’
All fields are the results of a relevant query from the table ‘chronology/functions’. It should be stated that site numbers in the Culture-History tradition are not exactly equal with the sites people found due to classification and categorisation problems. Quite often a site name in a report contains many findspots that would be treated as separate sites in the Landscape Tradition, and when different toponyms were given or when distances among them were quite substantive these were entered in the database as separate sites. However, although consistency was much pursued, it has not been possible to always keep it at the desired level.

Table ‘Chronological Variability’
(All chronological terms may be used in combination with dashes (-) or slashes (/), showing lack of confidence or continuity). When a site catalogue is published with specific chronological characterisations, which may group together finer classifications of pottery, the table follows the catalogue. However, in cases that a site is presented by name and pottery found, with no further comments, the table refers to all the periods mentioned. This table gives us an idea of the variability and precision in the chronological terms used by the various researchers, but it is not an accurate representation of site chronological classifications.

Table ‘Functions Variability’
Some of the categories are also used in combination for the same site, especially when data observed are presented instead of an interpretation e.g. scatter and walls. Sometimes there is not a clear distinction between data and interpretations and usually when data is given instead of an interpretation the site has not been given a specific function.
Table ‘References’ & Table ‘References of Influence’
The role of these two tables is to acquire a picture of the influential background of research projects. It is of course obvious that the work of contemporary colleagues has always influenced researchers in all levels. Also, interpretations of archaeologists who previously worked in an area are taken into account (and concern mainly chronological issues), since the history of research of an area is always studied.

Table ‘Siteia Sites’ & Table ‘Siteia Sites Summary’
These two tables consist of site interpretations of chronology and function for the eparchy of Siteia, so as to serve the purposes of chapter six. The first table uses a very detailed classification of chronological periods; the second has summarised site interpretations into sections of time, which are considered as the most important for the history of human evolution.

2.3 The Sample
Landscape exploration researches in Crete are numerous; the priority has been to include all archaeological projects since the 70’s, namely intensive surveys, but also an adequate and representative sample from the other traditions. The ‘Travellers’ tradition includes of course many more studies, but they do not have major differences and cannot be analysed at the same level with the rest of the surveys. The table below (2.3) presents the projects included in each tradition:

<table>
<thead>
<tr>
<th>Survey id</th>
<th>Tradition</th>
<th>Survey id</th>
<th>Tradition</th>
</tr>
</thead>
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<td>Ayiofarango 77</td>
<td>Landscape Archaeology</td>
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<tr>
<td>Ayiofarango 75</td>
<td>Culture History</td>
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<td>Culture History</td>
<td>Praisos</td>
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<td>Culture History</td>
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<td>Culture History</td>
<td>Vrokastro</td>
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<td>Culture History</td>
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Table 2.3 Surveys Database: The sample
2.4 Survey Text Analysis: Structure of the Analytical Text, which Examines Each Landscape Project

A text discussion is provided for each landscape research project, based on the data acquired in the Survey Database. This section may be partly considered as a short project review. The themes discussed aim to provide a clear picture of the relevant projects and help to exemplify differences but also similarities between traditions.

2.4.1 Problem Orientation: Aims and Methods

A general picture of researchers’ theoretical and methodological framework is obtained by describing declared aims and methodology followed. Questions asked and methods followed to study the landscape are characteristic of archaeological Landscape Traditions and the text aims to provide an adequate description so that the relationship between problem orientation, methodology and results is better understood.

2.4.2 Presentation / Relocatability

This section discusses the kind of data that are presented, including maps and map-scales, which are often related to the way the archaeological landscape is perceived. The visualisation methods used and the extent to which we may be able to relocate sites are important information regarding the usability of the data presented by researchers. Site location may often be presented through text descriptions, while map visualisation may be very poor, but in other occasions relocatability seems to be an important objective.

2.4.3 Density Per Area/Period

The relevant table presents the number of site characterisations and the estimated densities for the four major temporal slices (PH, GR, BVT, MOD, as well as the class of ‘unknown period’), presented for both target and sampled populations, when these differ. The first row includes both certain and uncertain chronological characterisations while the alternative lower densities in the second row include only certain interpretations. For projects in which area researched is not explicitly stated, density estimates are based on the map-area calculated from the GIS maps. It should be noted that usually the areas represented on the maps are quite larger than the areas actually researched, as map precision has rarely been pursued. Target, map and sampled areas can be seen in the database. The aim is to obtain an idea about the extent to which the different periods were studied and we are thus most familiar with and also the degree of certainty in chronological attributions. Site definition is also discussed.

2.4.4 Interpretative Framework

The interpretative framework of each project is discussed within a descriptive and analytical perspective. Examples of proposed results are linked to interpretative approaches in an effort to understand how obtained data are interpreted and used. This section discusses also the project’s relationship to Landscape Traditions and the influential role of previous research.

2.4.5 Summary Assessment

This section discusses strengths and weaknesses so as to allow an evaluation of data and interpretations and assess the knowledge acquired. A major issue it tries to deal with is an understanding of what we can ultimately do with the results of the relevant projects.
2.5 ‘Interpretations’ Database Structure and Presentation

In order to understand survey results and interpretations it is of great importance to try and understand what various site terms mean for different people and what their relationship with surface data might be. The problem of what we should call a site has been addressed from the beginning of intensive surveys, and a straightforward answer does not exist, quite understandably. The major obstacle, however, to integrating surface data and using people’s interpretations, is not that we may not agree on what a site is, but that we do not know what people mean when they use specific terms, and whether their definitions are in accordance with those of other researchers, so that we can treat landscape interpretations as unified information. For this reason the ‘Interpretations’ database tries to follow the interpretative process by separating raw data observed and interpretations used to explain them, the term *interpretation* referring to the function and chronology assigned (or not) to a material entity at a specific location. The aim is to search for any clear links between data and interpretations in order to understand meanings of the various chronological and functional terms used, but also in order to assess whether interpretations are plausible or not. Below follows a short description of the tables used in this database. Documentation of fields is presented in appendix 4.

Table names:

i. Data Observed
ii. Sherd Quantities
iii. Chronology – Functions

Table ‘Data Observed’
This table consists of data the researchers report for every site. Data are classified in different categories and reveal what researchers observe in the landscape and what kinds of information have been used in order to arrive at specific interpretations. Data observed include archaeological material, topographical/environmental and landuse observations.

Table ‘Sherd Quantities’
Sherd Quantities table deals with pottery descriptions as used by the observers, since pottery has been the most important criterion used in interpreting whether a find-spot is a site or not, and of which date and function. The chronology fields used are the same as in the table ‘Chronology / Functions’ in the surveys database.

Table ‘Chronology – Functions’
This table contains the interpretations (of function and chronology) that researchers assign to each site and has to be studied in relation to the data they observed and the pottery quantities they report. The three tables allow us to follow the interpretative process and understand what type of quantitative and qualitative criteria have been used for specific interpretations. The approach is proposed as a prerequisite to understanding what interpretations mean for different people and assess whether e.g. everybody’s ‘settlements’ could indeed be used as such in a settlement pattern model or not. It also enhances understanding of landscape approaches and relevant traditions, and highlights weaknesses in the presentation of site interpretations. Assessment comments do not intend to cancel proposed site interpretations, but to evaluate understanding of the relationship between data and interpretations, so that we can have an opinion on whether specific interpretations are credible or not. The table consists of site interpretations, classified in the same way as in the ‘Chronology / Functions’ table of the ‘Surveys’ database, therefore, the documentation of the fields, remains the same.
2.6 The Sample

Culture History Tradition (survey id Hood 67)
All of his sites have been used. Descriptions of ‘apparently’ or ‘appear to be’ are treated as expressing doubt, therefore put in chronology fields [sherds table] with question marks.

Landscape Tradition (survey id Vrokastro)
Burial sites were not used because they are usually known, previously excavated, or with distinctive pottery and sometimes human bone. In most cases we wouldn’t doubt the site’s function.

Survey id: Vrokastro

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Table 2.6 Interpretations Database: the sample
2.7 GIS Tools and Visualisation
Maps produced and presented in chapters four and six, aim to allow the visualisation of the spatial spread of archaeological landscape research over time. They offer the possibility to picture project information such as the area researched by projects of different traditions, as well as their overlap and hence regions of more intense interest. At the same time GIS tools have been used in order to calculate the area explored by projects, which do not publish relevant information, and therefore extract their site-densities. In this framework, project maps were scanned, geo-referenced, and linked to relevant data. Most of the images (project maps) were geo-referenced by Leiden university students during their course of Map-Info, under the guidance of Tjaco Mast and Hans Kamermans. M.Spyridakis was also very kind to help in this extremely time-consuming process. Some maps that could not be geo-referenced I created in Arc-Gis, the programme I also used for editing and the construction of maps showing the spatial spread of projects per tradition. On the whole, the following software programmes were used for image processing and registration, the construction of GIS maps and their linkage to the relevant databases: Adobe Photoshop, Map-Info, Arc-GIS, Microsoft Access and Excel.