

A Little Handbook of Stratigraphic Exercises:
Mastering the Harris Matrix



A Little Handbook of Stratigraphic Exercises

Mastering the Harris Matrix

Adonice-Ackad Baaklini

ARCHAEOPRESS ARCHAEOLOGY



ARCHAEOPRESS PUBLISHING LTD

13-14 Market Square

Bicester

Oxfordshire OX26 6AD

United Kingdom

www.archaeopress.com

ISBN 978-1-80583-227-0

ISBN 978-1-80583-228-7 (e-Pdf)

© the author and Archaeopress 2026

All rights reserved. No part of this book may be reproduced, or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

This book is available direct from Archaeopress or from our website www.archaeopress.com

I dedicate this book to my family.

CONTENTS

LIST OF FIGURES	iii
FOREWORD	v
HOW TO USE THIS BOOK	vi
CHAPTER 1. INTRODUCTION	1
1. What is archaeological stratigraphy?.....	1
1a. General definition.....	1
1b. History.....	2
2. The rules of stratigraphy.....	3
2a. Superposition.....	3
2b. Original horizontality.....	3
2c. Original continuity.....	4
2d. Stratigraphic succession.....	4
3. Stratigraphic units (SU).....	4
3a. General definition.....	5
3b. The different kinds of SU.....	5
4. Analysing and presenting stratigraphy: the matrix.....	6
4a. The ‘prehistory’ of the stratigraphic matrix.....	6
4b. The ‘standard’ matrix: the Harris matrix.....	6
4c. Phasing the stratigraphic matrix.....	8
4d. Other possibilities and developments.....	9
5. References.....	9
6. Selected bibliography (in chronological order, by most recent).....	10
Online resources.....	11
CHAPTER 2. EXERCISES	12
Exercise 1: Simple succession of layers.....	12
Exercise 2: Simple succession of layers 2.....	12
Exercise 3: Large pit.....	13
Exercise 4: Large pit 2.....	13
Exercise 5: Posthole.....	14
Exercise 6: Postholes.....	14
Exercise 7: Foundation wall and wall with backfill on one side.....	15
Exercise 8: Foundation wall and wall with backfill on either side.....	15
Exercise 9: ‘Trench build’ foundation wall and wall.....	16
Exercise 10: Collapsed wall.....	16
Exercise 11: Canalisation.....	17
Exercise 12: Arabian-style earth architecture.....	17

Exercise 13: Mesopotamian-style architecture	18
Exercise 14: Prehistoric settlement	19
Exercise 15: Multi-period site	20
Exercise 16: Traditional houses: reuse and conservation.....	21
Exercise 17: North American pit house	22
Exercise 18: Artisanal area.....	23
Exercise 19: Pottery kiln	24
Exercise 20: Mediterranean mountainous site.....	25
Exercise 21: Prior unsupervised interventions at an archaeological site	26
Exercise 22: Anglo-Saxon building.....	27
Exercise 23: Multi-period rural site	28
Exercise 24: Industrial archaeology	29
Exercise 25: Building archaeology.....	30

CHAPTER 3. EXPLANATIONS AND COMMENTS ON THE EXERCISES..... 31

Exercise 1 (explanation): Simple succession of layers	31
Exercise 2 (explanation): Simple succession of layers 2	31
Exercise 3 (explanation): Large pit.....	32
Exercise 4 (explanation): Large pit 2.....	32
Exercise 5 (explanation): Posthole	33
Exercise 6 (explanation): Postholes	33
Exercise 7 (explanation): Foundation wall and wall with backfill on one side	34
Exercise 8 (explanation): Foundation wall and wall with backfill on two sides.....	34
Exercise 9 (explanation): ‘Trench build’ foundation wall and wall	34
Exercise 10 (explanation): Collapsed wall.....	35
Exercise 11 (explanation): Canalisation	36
Exercise 12 (explanation): Arabian-style earth architecture	36
Exercise 13 (explanation): Mesopotamian-style architecture	38
Exercise 14 (explanation): Prehistoric settlement	39
Exercise 15 (explanation): Multi-period site	40
Exercise 16 (explanation): Traditional houses: reuse and conservation	42
Exercise 17 (explanation): North American pit house	43
Exercise 18 (explanation): Artisanal quarter	44
Exercise 19 (explanation): Pottery kiln	45
Exercise 20 (explanation): Mediterranean mountainous site	46
Exercise 21 (explanation): Prior unsupervised interventions at an archaeological site ...	48
Exercise 22 (explanation): Anglo-Saxon building.....	48
Exercise 23 (explanation): Multi-period rural site	49
Exercise 24 (explanation): Industrial archaeology	52
Exercise 25 (explanation): Building archaeology	52

LIST OF FIGURES

CHAPTER 1. INTRODUCTION

Figure 1: The different possible relationships between two stratigraphic units.....	7
Figure 2: Physical versus stratigraphic relationships	7
Figure 3: Example of a phased matrix.....	8
Figure 4: Example of a Beirut-style matrix	9

CHAPTER 2. EXERCISES

Figure 5: Exercise 1	12
Figure 6: Exercise 2	12
Figure 7: Exercise 3	13
Figure 8: Exercise 4	13
Figure 9: Exercise 5	14
Figure 10: Exercise 6	14
Figure 11: Exercise 7	15
Figure 12: Exercise 8	15
Figure 13: Exercise 9	16
Figure 14: Exercise 10	16
Figure 15: Exercise 11	17
Figure 16: Exercise 12	17
Figure 17: Exercise 13	18
Figure 18: Exercise 14	19
Figure 19: Exercise 15	20
Figure 20: Exercise 16	21
Figure 21: Exercise 17	22
Figure 22: Exercise 18	23
Figure 23: Exercise 19	24
Figure 24: Exercise 20	25
Figure 25: Exercise 21	26
Figure 26: Exercise 22	27
Figure 27: Exercise 23	28
Figure 28: Exercise 24	29
Figure 29: Exercise 25	30

CHAPTER 3. EXPLANATIONS AND COMMENTS ON THE EXERCISES

Figure 30: Exercise 1: matrix	31
Figure 31: Exercise 2: matrix	31
Figure 32: Exercise 3: matrix	32
Figure 33: Exercise 4: matrix	32
Figure 34: Exercise 5: matrix	33
Figure 35: Exercise 6: matrix	33
Figure 36: Exercise 7: matrix	34
Figure 37: Exercise 8: matrix	34
Figure 38: Exercise 9: matrix	34
Figure 39: Exercise 10: matrix, version 1	35
Figure 40: Exercise 10: matrix, version 2	35
Figure 41: Exercise 11: matrix	36
Figure 42: Exercise 12: matrix	37
Figure 43: Exercise 13: matrix	39
Figure 44: Exercise 14: matrix	40
Figure 45: Exercise 15: matrix	41

Figure 46: Exercise 16: matrix	42
Figure 47: Exercise 17: matrix	43
Figure 48: Exercise 18: matrix	44
Figure 49: Exercise 19: matrix	45
Figure 50: Exercise 20: matrix	47
Figure 51: Exercise 21: matrix	48
Figure 52: Exercise 22: matrix	48
Figure 53: Exercise 23: matrix	50
Figure 54: Exercise 24: matrix	52
Figure 55: Exercise 25: matrix	52

FOREWORD

This is an excellent book for the field archaeologist on the most important parts of the archaeological process which is of excavation and recording.

Stratigraphy and excavation by layers of datable deposits is the key to the door of understanding a site and the recording of artefacts and deposits with unique codes, drawings and photography is essential to the post-excavation work of recording and dating a site.

A site can be a simple deposition or can be more complex with later intrusive features as postholes or pits and in some cases burials cut into earlier deposits.

The understanding and dating of a site can only be achieved by due process and this book is essential to explain that process and is to be recommended to all archaeologists.

Paul Wilkinson

Dr Paul Wilkinson MCIfA., FRSA

HOW TO USE THIS BOOK

This book falls conveniently into three chapters: Introduction, Exercises, and Explanations.

Chapter 1 focuses on the presentation of the Harris matrix and the concepts and tools needed to understand it, while Chapter 2 offers 25 stratigraphy exercises. The latter are organised by degree of difficulty, from easiest to hardest, and centre on the creation of Harris matrices based on a drawing of a section from an imaginary site with the stratigraphic units highlighted. The exercises are resolved in Chapter 3 (Explanations) with comments on the salient points.

Chapter 1 is by no means exhaustive but is rather intended to give the reader the basic understanding necessary to start creating matrices. The concept of Chapter 1 will be explained within the context of each example as we go along – there is no need to memorise or fully understand the basics from the first read.

The exercises that make up Chapters 2 and 3 need really to be taken in isolation: it is highly recommended you check the explanations after each exercise, and not wait until you have finished a group of them. The comments in Chapter 3 will often refer to the theories in Chapter 1, so hopping from Chapters 3 to 1 will become a natural thing to do.

Paper and a pen are all you need to tackle the exercises, but the geeks among you could, of course, use any design software.