

**WEIZAC: An Israeli Pioneering
Adventure in Electronic Computing
(1945–1963)**

Raya Leviathan, Leo Corry

Tel Aviv University

Contents

PREFACE AND ACKNOWLEDGMENTS	3
1 INTRODUCTION	7
2 CREATING A TOP-RATED SCIENTIFIC INSTITUTION IN REHOVOT AT THE DAWN OF THE DIGITAL AGE	12
2.1 EDVAC AND THE STORED-PROGRAM ARCHITECTURE – THE EARLY YEARS OF ELECTRONIC COMPUTING	12
2.2 CHAIM WEIZMANN: DISTINGUISHED SCIENTIST AND ZIONIST LEADER	22
2.3 CREATING AN INSTITUTE IN REHOVOT (1934–1949)	29
2.4 PEKERIS, APPLIED MATHEMATICS, MATHEMATICAL BRAINS	41
3 WEIZAC: BUILDING AN ELECTRONIC BRAIN IN REHOVOT	52
3.1 PROMOTING AN UNLIKELY TECHNOLOGICAL PROJECT	ERROR! BOOKMARK NOT DEFINED.
3.2 BUILDING A TEAM	67
3.3 BUILDING A LAB AND ACQUIRING THE COMPONENTS	75
3.4 THE MAGNETIC CORE MEMORY	83
3.5 BUILDING AND OPERATING THE WEIZAC	87
3.6 ASSESSING THE IMPACT OF WEIZAC	93
4 CONCLUDING REMARKS: WEIZAC AS A ZIONIST SUCCESS STORY	104
6 APPENDICES	120
6.1 APPENDIX 1: SCIENTIFIC PUBLICATIONS BASED ON CALCULATIONS WITH EARLY COMPUTERS	120
6.2 APPENDIX 2: SCIENTIFIC PUBLICATIONS BASED ON CALCULATIONS WITH WEIZAC	120
6.3 APPENDIX 3: TIMELINE OF EVENTS	129
7 BIBLIOGRAPHY	131