Contents

1 Introduction 1

2 The Main Theorem: Cyclic Algebras 5

3 The Paper: Dedication to Hensel 9

4 The Local-Global Principle 15

4.1 The Norm Theorem 15
4.2 The Reductions 16
4.3 Factor Systems 19

5 From the Local-Global Principle to the Main Theorem 25

5.1 The Splitting Criterion 25
5.2 An Unproven Theorem 27
5.3 The Grunwald-Wang Story 29
5.4 Remarks 31
5.4.1 The Weak Existence Theorem 31
5.4.2 Group Representations 31
5.4.3 Algebras with Pure Maximal Subfields 33
5.4.4 Exponent = Index 34
5.4.5 Grunwald-Wang in the Setting of Valuation Theory 35

6 The Brauer Group and Class Field Theory 37

6.1 The Local Hasse Invariant 37
6.2 Structure of the Global Brauer Group 41
6.3 Remarks 45
6.3.1 Arithmetic of Algebras and Hensel's Methods 45
6.3.2 Class Field Theory and Cohomology 48

7 The Team: Noether, Brauer and Hasse 51

7.1 Noether's Error 51
7.2 Hasse's Castles in the Air 54
7.3 The Marburg Skew Congress 57

8 The American Connection: Albert 61
8.1 The Footnote 61
8.2 The First Contacts 62
8.3 Albert's Contributions 68
8.4 The Priority Question 71
8.5 Remarks 75

9 Epilogue: Käte Hey 79

References 83

Index 91