

# Contents

List of Figures	ix
About the Author	xi
Preface to the Fourth Edition	xiii
<b>1 What is Social Network Analysis?</b>	<b>1</b>
The data used in social network analysis	3
Is there a network theory?	6
An overview	8
<b>2 The History of Social Network Analysis</b>	<b>11</b>
The sociogram and sociometry	13
Balance and group dynamics	16
Informal organisation and community relations	20
Matrices and cliques	25
Formal models of community and kinship	29
Formal methods triumphant	34
Getting by without the help of your friends	35
Entry of the social physicists	37
<b>3 Data Collection for Social Network Analysis</b>	<b>41</b>
Asking questions	42
Making observations	44
Using documents	45
Boundaries in relational data	46
Positional and reputational approaches	48
Does sampling make sense?	50
<b>4 Organising and Analysing Network Data</b>	<b>57</b>
Matrices and relational data	59
Matrix conventions	63

An analysis of directorship data	64
Direction and value in relational data	66
Computer programs for social network analysis	69
<b>5 Terminology for Network Analysis</b>	<b>73</b>
The language of network analysis	74
More than joining up the lines	76
The flow of information and resources	79
Density of connections	81
Density in egonets	84
Problems in density measures	85
A digression on absolute density	87
Community structure and density	89
<b>6 Popularity, Mediation and Exclusion</b>	<b>95</b>
Local and overall centrality	96
Mediation and betweenness	99
Centrality boosts centrality	100
Centralisation and graph centres	101
The absolute centre of a graph	105
Bank centrality in corporate networks	107
<b>7 Groups, Factions and Social Divisions</b>	<b>113</b>
Identifying subgraphs	114
The components of a network	115
The strength and stability of components	117
Cycles and circuits	119
The contours of components	122
Cliques within components	127
Intersecting social circles	130
Components and citation circles	132
<b>8 Structural Locations, Classes and Positions</b>	<b>137</b>
The structural equivalence of points	138
Clusters and similarity	140
Divide and CONCOR	142
Divisions and equivalence	148
Regular equivalence in roles and functions	150
Corporate interlocks and participations	152

<b>9 Social Change and Development</b>	<b>157</b>
Structural change and unintended consequences	158
Small-world networks	160
Modelling social change	161
Testing explanations	162
<b>10 Visualising and Modelling</b>	<b>167</b>
Taking space seriously	168
Using multi-dimensional scaling	170
Principal components and factors	174
Non-metric methods	177
How many dimensions?	180
Worth a thousand words?	183
Elites, communities and influence	184
Business elites and bank power	188
Notes	195
References	207
Index	225