

Contents

Prologue.....	1
Introduction: Scope and setting.....	3
Theoretical framework	5
Requirements from HCI	5
The generative paradigm: language as string-manipulation.....	5
The logical paradigm: language as reasoning.....	7
The European structuralist paradigm: language as creation of meaning.....	9
Back to Hjelmslev: a re-appraisal of glossematics	11
Characterstic features of glossematics.....	11
Criticism of glossematics.....	13
Rehabilitation.....	14
The present work: glossematic field-work	16
Computer semiotics: an emergent research field.....	18
A tentative map of computer semiotics.....	18
Signs as knowledge: sign usage in decision making.....	21
Signs as behavior: phenomenology and speech acts.....	22
Signs as tools and artifacts: on blind spots.....	25
The structure of the book.....	26
Empirical coverage	27
Acknowledgements.....	27
PART I THEORY.....	28
1.1.The structuralist heritage	29
I.1.1. Empirical characteristics of two work languages	29
The car repair shop.....	29
The Postal Giro.....	34
Summary.....	38
Technological and organizational change at the Giro.....	39
I.1.2. Other work languages.....	40
I.1.3. Adapting the structuralist framework	41
1.2. Adapting and extending structuralist methods.....	65
I.2.1. Basic Concepts for describing symbolic acts	65
I.2.2. Adapting and extending the concepts.....	84
I.2.2.1. The work process.....	85
Car repair revisited.....	86
Process units.....	89
Tasks and actions	90
Logical task structure: goals and and preconditions.....	90
Practical task structure	93
Invariant and variant structure	94
Cases.....	100

I.2.2.2. Perspectives - selection, articulation and role.....	106
Building a computer system.....	108
Investigating working conditions.....	110
I.2.2.3. Organizational change.....	111
I.2.2.4. Functions between work context and language	112
I.2.3. Computer systems	120
I.2.3.1. The concept of system in linguistics.....	120
I.2.3.2. The concept of system in computer science	123
I.2.3.3. Differences between the informatic and linguistic concept of system.....	127
I.2.4. Interface and register	138
I.2.4.1. Formal and real meaning	138
Formal meaning primary.....	140
Real meaning primary.....	145
I.2.4.2. Comparing interface and work language	152
The manifestation dimension.....	152
The semiotic dimension.....	159
I.2.4.3. Design as language politics	164
I.2.5. Computers as media.....	168
PART II. COMPUTERS	173
Introduction.....	174
II.1. The basic means of expression.....	176
II.1.1. computer-based signs	176
II.1.1.1. Handling, transient, and permanent features.....	176
II.1.1.2. Objects as signs	188
II.1.2 Analysis of computer-based signs	198
II.1.2.1. A typology of computer-based signs	198
II.1.2.2. Genres	212
II.1.2.3. Direction and scenography of computer-based signs	214
Dance.....	215
Theater.....	217
Computer systems	218
Graphical aspects of concurrent chains.....	220
II.1.2.4. Using the concepts	223
Means of abstraction	223
Design methods	229
Interaction styles	235
II.1.3. Semiotic aspects of programming	237
II.1.3.1. Programming as a meta-semiology.....	237
II.1.3.2. Levels of description: handling features.....	242
Form-related description: semiology	243
Substance-related description: meta-semiology.....	244
II.2. Composite computer-based signs.....	248
II.2.1. The structure of composite computer-based signs	249
II.2.1.1. The glossematic analytical procedure.....	251

II.2.1.2. Sequential syntagms	258
The task (periods).....	258
The action (sentences)	263
The indicator	270
Narrative structure.....	271
II.2.1.3. Concurrent syntagms.....	274
The Scene.....	277
Subview, view and focus.....	280
The nature of subviews	283
II.2.2. Styles	287
II.2.2.1. Are objects or actions most important?	288
II.2.2.2. Who controls the work process?	294
II.2.2.3. Cast-iron illusions?	299
II.2.2.4. Computer stylistics	307
PART III. LANGUAGE, WORK, AND DESIGN.....	309
Introduction	310
III.1. Language as interpretation. Semantic fields in the Postal Giro.....	317
III.1.1. Perspective differences at the Postal Giro.....	317
III.1.2. Definition of semantic fields.....	327
III.1.3. Using semantic fields for analysis	333
III.1.3.1. Systems specification.....	333
III.1.3.2. Changes of semantic fields	338
III.1.4. Using semantic fields for design.....	339
III.2. Language as action. Language games in the Postal Giro	346
III.2.1. A psychological definition of language games	346
III.2.2. A linguistic definition of language games.....	350
III.2.3. Using language games for analysis	360
III.2.3.1. Language games at the Postal Giro	360
III.2.3.2. Language game changes.....	366
III.2.4. Using language games in design.....	375
III.2.4.1. Support for problem-solving.....	377
III.2.4.2. Presence is not enough.....	378
The involved perspective	379
The detached perspective	380
III.2.4.3. Support for mystery-solving: logging the past.....	382
Object style	384
Verbal task-like style	386
III.2.4.4. Support for forecasting: simulating the future	389
III.2.4.5. Support for internal reporting.....	390
III.3. Task analysis. Controlling control	394
EPILOGUE	403
References.....	404
Index.....	413