Contents

1	Background	Concents	and	Goals	1
_	Dackyi Guilu	Concepts	aliu	Guats	1

Keeping Animals 1
Affective Neuroscience 5
Motivation Psychology 6
Animal Behavior 6
References 8

2 Is Wild Animal Behavior a Proper Template for Captive

Proximate Versus Ultimate Drivers of Behavior - A Note

Animal Behavior? 11

References 18

3 Investigating 19

on Terminology 19
Investigation 22
Why Investigate? 22
Proximate Drivers of Investigation 25
Animals Under Human Care Retain Their Drive for Understanding 27
References 34

4 Acquiring Reward 37

Why Acquire Rewards? 38

Proximate Drivers of Reward Acquisition 40

Acquiring Rewards Supports Welfare of Animals in Human Care 41

References 46

5 Exerting Control *51*

Why Exert Control? 52
Proximate Drivers of Exerting Control 53
Opportunities to Exert Control for Supporting
Well-Being in Captive Animals 56
References 60

6 Balance: Good Welfare Through Psychological Resilience 63
References 69

7 Animal Personality: For Every Animal, All Needs Are Important, but They Are Not Equal 73

References 77

8 Assessment. Asking Animals, "Are Your Needs Met?" 85

The Balance Sheet Approach Using Direct Observation 86
Developing Observation Methods 87
Developing a List of Behaviors to Look for 90
Assessing the Data 91
The Balance Sheet Approach – Using Caretaker Interviews 95
Summarizing the Interview 99
Direct Tests and Probes for Mood-Like State 101
Anticipatory Behavior 101
Cognitive Bias 103
Novel Objects 104

Assessing the Opportunities 105 References 106

9 A Practitioner's Guide to Meeting the Needs 109

Supporting Investigation 110

Supporting the Acquisition of Rewards 117

Supporting Exerting Control 118

Availability of Opportunities 122

Relevance of Opportunities 124

Ability to Engage 125

Surrogate Behaviors, Surrogate Behavioral Sequences, and Cross-Domain

Carryover of Opportunity Effects 126

References 128

10 Exceptional Cases: Geriatric, Chronically and Acutely Ill, and Injured Animals 133

Does the Animal Experience Themself as Physically Healthy? 136

Does the Animal Experience Positive Psychological States? 138

Individual Variation and Ability to Experience Positive Welfare 138

A Note on Psychiatric Drug Use In Animals 139

Other Sources of Variation in Ability to Experience Positive Welfare 140

Does the Animal Experience Independence? 141

Action-Driven Agency 142

Caveats 143

Competence Building Agency 144

Mitigating Negative Competence Experiences and Providing

Positive Ones 146

Does the Animal Experience Appropriate Social Interactions? 146

Does the Animal Experience a Complex, Appropriate Environment? 149

Balance Among Domains 150

Applying the Balance Model to Assess Exceptional Cases 151

Justifications for Scoring 152

Change Over Time 154

References 156

11 Scenarios *161*

Scenario 1: Rock Hyrax 161

Scenario 2: Parrot 162

Scenario 3: Rhino 163

Scenario 4: Guinea Baboon One 163

Scenario 5: Guinea Baboon Two 164

Scenario 6: African Painted Dog 165

Scenario 7: Reticulated Python 166

Data Collection - General 166

Data Collection 167

Scenario 1: Rock Hyrax 167

Scenario 2: Parrot 169

Scenario 3: Rhino 176

Scenario 4: Guinea Baboon 1 181

Scenario 5: Baboon 2 187

Scenario 6: Painted Dog 187

Scenario 7: Python 187

Data Interpretation and Suggested Management Changes 190

Scenario 1: Rock Hyrax 190

Scenario 2: Parrot 192

Scenario 3: Rhino 192

Contents

Scenario 4: Baboon 1 194 Scenario 5: Baboon 2 195

Scenario 6: African Painted Dog 196

Scenario 7: Python 196

References 197

Index 199