Full Dissertation Formatted Document

[Title Page]

ABSTRACT OF THE DISSERTATION

Baptizing Meanings for Concepts

By IRIS OVED

Dissertation Director:

Jason Stanley

Most people find it *obvious* that concepts like APPLE, DOG, WATER, CACTUS, SWIM, CHIRP, FURRY, and SMOOTH (i.e., lexical concepts) are acquired from perceptual experiences along with some kind of inferential procedure. Most models of how these concepts are inferentially acquired, however, force the acquired concepts to be representationally complex, built from, and composed by, the more primitive representations (e.g., GOLD is built from perceptual representations of yellowness, shininess, malleability, and so on). Since at least the time of Plato, philosophers and psychologists have struggled to find complex sets of representations that have the same meanings, definitionally or probabilistically, as these concepts. For example, to think about the property-kind *being gold* is not the same as to think about the complex property-kind *being (probably) yellowish & (probably) shiny & (probably) malleable....* I call this Fodor's Challenge: Find an acquisition process that is genuinely inferential and yields a concept that genuinely is one of these lexical concepts. Rather than continue the pursuit of a complex representation that has the same meaning as our concept GOLD, I propose we explore what it would take for an agent to inferentially acquire these concepts as new representational simples. I offer a model on which many lexical concepts are acquired from perception and inference, without being built up from, and composed by, the representations involved. The model, Baptizing Meanings for Concepts (BMC), is inspired in part by Saul Kripke's (1970) baptism process for assigning meanings to linguistic terms and in part by the Artificial Intelligence question of what it would take for *any* entity to have a concept. Many lexical concepts, according to the BMC model, are acquired as the result of inferring the presence a new property-kind on the basis of perceptible features, picking out the property-kind in terms of those perceptible features, and then assigning a simple mental term, a concept, for that (purported) property-kind.

DEDICATION AND ACKNOWLEDGEMENTS

For my mom, Anne Oved

My most special thanks goes to John L. Pollock, my life's inspiration and mentor. Working with you has been my life's greatest honor. I thank Jason Stanley for turning my half-baked ideas into a dissertation, and for his persistent and faithful support. I also thank Matthew Stone for showing me how to crystalize my philosophical questions about representation in terms of Artificial Intelligence. Barry Loewer and Brian McLaughlin have also played key roles in supporting my philosophical ambitions. Special thanks to Jerry Fodor and Brian Loar, whose works have profoundly influenced the development of my views. Thank you to my brother, Robert G. Oved, for always being there, and giving me a 'home base'. Finally, thank you to my intellectual and personal friends, for blurring that distinction: Saba Bazargan, Chris Brown, Mike Bruno, LeeSun Choi, Joshua Cowley, David DeVault, Kate Devitt, Mercedes Diaz, Richard Dub, Kenneth Ellison, Spencer Frohwirth, Jeff and Kristy Glick, Adam Goldstein, Angie Harris, Joshua Howard, Joshua Knobe, Keith Lehrer, Ed and Susan Levinson, Alex Perlis, Andrew Sepielli, Ken Shan, Martin Sodomsky, Pär Sundström, Susan Viola, and Tom Walsh.

## Table of Contents

**Title Page**……i

**Dissertation Abstract**.....ii

**Dedication and Acknowledgements**……iii

**Table of Contents**……..iv

**List of Figures**……v

**Part I: Introduction**……...1

1 **The Topic of Lexical Concepts**……..2

1.1 What are Lexical Concepts?.....2

1.2 Who Cares?.....6

2 **The Contributions and Plan of the Dissertation**…….....8

2.1 Three Primary Contributions of the Dissertation…….....9

2.2 Chapters and Sections……14

3 **The Set-up**……17

3.1 Representation/Aboutness/Intentionality……...18

3.2 Concepts as Computational Representations ……24

3.3 How I'm Using Some Terms…….....28

*3.3.1 Variations on 'Subject S has the concept APPLE'*.....31

*3.3.2 Other Terms and Distinctions*.....32

**Part II: Baptizing Meanings for Concepts (BMC)**……....37

4 **The BMC Framework and its Motivations**…….....38

4.1 Sketch of the BMC Process……...38

4.2 Discovery of Diseases from Symptoms…….…45

4.3 Inferences about the World are Both Rational and Informative……....49

4.4 Naïve Essentialism/Psychological Essentialism…….....50

4.5 We Revise our Carvings…….....52

4.6 How Linguistic Terms Get Their Meanings…….....53

4.7 Concept Acquisition for Robots…….....57

4.8 The BMC Easily Resolves Tensions between Other Views…….....63

5 **Details of the BMC**……...65

5.1 Non-Conceptual Perceptual Demonstratives……65

*5.1.1 Two vision-concept inferential links*.....66

*5.1.2 Visual Object Representations*.....70

*5.1.3 Visual Property and Relation Representations*.....73

5.2 Contingent A Priori Inferences…….....75

5.3 Refining the Reference-Fixing Description…….....77

5.4 The Existence and Uniqueness Conditions on Descriptions…….....84

5.5 Natural Kinds, Artifact Kinds, Social Kinds……..89

5.6 The Innateness of EXPLANATION and KIND…….....92

5.7 Acquiring Concepts through Language…….....94

5.8 Core Claims of the BMC……...96

**Part III: Other Major Theories of Lexical Concepts**……....98

6 **The Building-Blocks Framework**……...99

7 **Lexical Concepts as Composite**…….....105

7.1 Complex and Acquired by Composing Definitional Inferential Relations….....105

7.2 Complex and Acquired by Composing Non-Definitional Inferential Relations..108

7.3 Complex and Acquired by Composing All Inferential and/or Causal Relations.109

8 **Lexical Concepts as Primitive**…….....111

8.1 Simple and Innate…….....111

8.2 Simple and Acquired Brute-Causally…….....112

9 **Two-Dimensional Semantics**…….....116

**Part IV: Defense of the BMC**……120

10 **Why Lexical Concepts have to be Simple**……121

10.1 Observations Best Explained by Representational Simplicity……..…121

*10.1.1 Almost No Definitions have been Found*.....121

*10.1.2 Compositionality*.....123

*10.1.3 Lack of Conceptual Priorities*.....127

*10.1.4 Error / Misrepresentation*.....128

*10.1.5 Concepts without Knowledge*.....130

*10.1.6 Circularity of Concepts as Beliefs* .....131

*10.1.7 Shared Meanings vs. Shared Beliefs (Publicity)*.....132

*10.1.8 Mental Twin Earth Cases (Putnam's WATER/TWATER*.....133

*10.1.9 Processing isn't faster for MARRIED than for BACHELOR*.....134

10.2 Problems with Arguments Against Simplicity……135

*10.2.1 (Rationality of) Recognition and Prediction*.....135

*10.2.2 Typicality Effects*.....139

*10.2.3 Necessity Intuitions can't be explained by Complexity*.....140

*10.2.4 Co-referring Mental Terms (Mental Frege Cases)*.....142

*10.2.5 Can't Type Concepts by Meanings*.....144

*10.2.6 Rigid Descriptions / Actualism*.....145

11 **Why Lexical Concepts have to be Rationally Acquired**……148

11.1 Observations Best Explained by Rational Acquisition…….....148

*11.1.1 Adaptibility*.....148

*11.1.2 Error/Misrepresentation*.....149

*11.1.3 Fissioned Meanings*.....150

*11.1.4 There is Room for Inference between Perception and Concept*.....151

11.2 Problems with Arguments against Rational Acquisition……151

*11.2.1 Circularity of Hypotheses about Meanings of Concepts*.....151

*11.2.2 Neither Rupert nor Margolis Meets Fodor's Challenge*.....152

*11.2.3 Fast Word Learning and Fast Locking from Stereotypes*.....154

*11.2.4 Un-learnability of Simples*.....155

12 **Why Lexical Concepts have to get their Meanings by Baptism**……....157

12.1 Observations Best Explained by Baptism……....157

*12.1.1 Baptism allows for Rationally Acquired Simples*.....157

*12.1.2 Discovery of Diseases from Symptoms*.....158

*12.1.3 Inferences About the World are Rational and Informative*.....158

*12.1.4 Naïve/Psychological Essentialism*.....160

*12.1.5 We Revise our Carvings*.....160

*12.1.6 How Linguistic Terms Get Their Meanings*.....160

*12.1.7 Concept Acquisition for Robots*.....160

12.2 Problems with Arguments against Baptism…….....*160*

*12.2.1 Easy Knowledge / Latitudinarianism*.....161

*12.2.2 We Know What we are Thinking About* .....164

*12.2.3 Concepts like JADE and ARYAN Seem Meaningful* .....165

*12.2.4 There is no Room for a Semantic Science of Cognition*.....166

**Part V: Concept Acquisition and Artificial Intelligence**…….....167

13 **Artificial Intelligence and the Representation-Making Relation**…….....168

13.1 Functional Role Theories.....169

13.2 Causal Theories.....170

13.3 Teleological and Nomological Theories.....171

13.4 Biological Theories.....173

13.5 Other Theories.....174

**Appendix: Further Considerations on the Rationality of Concept Acquisition**.....178

**Bibliography**…….....203

**Curriculum Vitae**……...209

**List of Figures**

Figure 3.1 …….....17

Figure 3.2.....19

Figure 4.1.....38

Figure 4.2.....40

Figure 4.3.....42

Figure 5.1.....81

Figure 9.1.....118

Figure 9.2.....119

Figure 10.1.....139