Types and Tokens: On Abstract Objects

Linda Wetzel

The MIT Press
Cambridge, Massachusetts
London, England

© 2009 Massachusetts Institute of Technology

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

MIT Press books may be purchased at special quantity discounts for business or sales promotional use. For information, please e-mail special_sales@mitpress.mit.edu or write to Special Sales Department, The MIT Press, 55 Hayward Street, Cambridge, MA 02142.

This book was set in Stone Sans and Stone Serif by SNP Best-set Typesetter Ltd., Hong Kong and was printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Wetzel, Linda, 1951–.
Types and tokens : on abstract objects / Linda Wetzel.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-262-01301-7 (hardcover : alk. paper)
1. Type and token (Linguistics). 2. Language and languages—Philosophy.
I. Title.
P128.T94W47 2009
111′.2—dc22

2008043056

10 9 8 7 6 5 4 3 2 1

Index

Abstract entities, 30, 47. *See also* Abstract objects
Abstract objects, xi–xii, 3, 5–6, 11–12, 16, 29–34, 40–41, 49, 51, 53–56, 70, 73, 80, 85, 93, 99, 123–124, 130, 136, 140–141, 151nn2,4, 152n2, 156n15, 157n2, 158n1
 alleged trouble with, 23, 30–32, 101
 causal relations to us, 23, 34, 43–45, 101–102, 155n15
 causal requirements on knowledge and, 32–40
 characterized, ix, 114
 criteria of identity for, xi–xii
 knowledge involving, xii, 23–24, 34, 40, 44, 101, 123
 spatiotemporal relations to us, 47–50
Abstract spaces, 132, 140, 149, 161n2
Aesthetics, 2
Allophones, 9, 23, 26
Alston, William, 154n3
Alternations, 9
"Amphibians," 146–148
"Analyze away," xii, 4, 14, 53–54, 129, 133, 155n7
A priori knowledge, 35–36, 39
Armstrong, David, xi, 94, 100, 130, 135, 137–138, 144, 161n1
Artifacts, 15–18
Asher, Nicholas, 77–81, 151n4
Avant-garde interpretation, 120
Average, 76–77, 82
Average property interpretation, 119
Axiom of Foundation, 140

"Being at" relation, 45–46
Benacerraf, Paul, xii, 31–32, 37–40, 43, 118, 130, 141, 156n15
Bigelow, J., 161nn1,5
Biology, biologists, 4, 10–15, 29, 32, 74, 76, 83, 92, 107–111, 116–117, 123, 159n3
Black, Max, 136
Block, Ned, 70, 157n10
Boolos, George, 31, 36, 161n9
Bromberger, Sylvain, 38, 67, 106, 159n2
Burgess, John, 36, 39, 41–43, 156nn10,17

Cantor, Georg, 43
Carlson, Gregory, 83
Carnap, Rudolf, 30
Cartwright, Richard, 98, 151n2, 154n3
Castañeda, Hector-Neri, 35
Causal relations. *See* Abstract objects, causal relations to us
Causal requirement on knowledge, xii, 23–24, 32–43, 101, 118, 150, 155n10
 no. 1, 32–35
 no. 2, 35–39
 no. 3, 39–40

Causal theories of reference, 123
Causal theory of knowledge, 24
Characterizing property interpretation, 119
Characterizing sentence or statement, xii, 54, 71, 73, 77–81, 86, 119
Chess, 16–17, 26, 134
Chihara, Charles, 154n3
Claddistic approach to species. *See* Lineage approach to species
Classes, 5, 88–92. *See also* Sets
Collective property interpretation, 119
Composition, compose, 128, 133, 138, 140, 143–145, 147
Computers, 15, 23
Concrete signs, 56
Criteria of identity, xi–xii
Criterion of application for 'word', 116
Criterion of identity for occurrences, 149–150
Criterion of object commitment, 25–27, 155n7, 158n1
Criterion of ontological commitment, xi, 25–26, 154n3

Dancy, Jonathan, 2
Darwin, Charles, 107
Davidson, Donald, 155n10, 156n11, 161n10
Davies, Stephen, 2, 16
Davis, Wayne, 157n11
Default reasoning analysis, 80
Definite descriptions, 26, 50–51
DeSousa, Ronald, 107
Distinguishing property interpretation, 119
Dummett, Michael, 27, 151n2, 158n1
Dupre, John, 107–110, 114, 151n2

Einstein, Albert, 19
Eliot, T. S., xiii, 125–126
Embryology, 74
Empiricists, 30
Environmental biology, 4, 11–12
Epistemological motivation, xii, 23
Epistemological problem
 for nominalism, xi–xiii, 51, 93, 96–103
 for realism, 23, 30–32, 36–37, 44–51, 53, 93, 101, 118–123
Essentialism, 107
Ethics, 2
Etymology, 116–117
Evolution, 75, 108
Expressions, 1, 32, 37, 56, 125–133, 141, 154n5
Extension, 91
Extensional, 79–80, 86, 89

Façon de parler, xii, 2, 23, 28–30, 53, 86–87, 92, 156n1
Family resemblance, 109, 124, 160n5
Faraday, Michael, 18–19, 24
Feynman, Richard, 20–21, 152n6
Fictionalism, fiction, 29, 30, 149, 155n9
Field, Hartry, 24, 29–32, 37–51, 56, 93, 150, 156nn14,17
Fields (electromagnetic), 19
Firth, J. R., 112
Flags, 82, 85–86, 131–134, 142, 144
Football, 17–18, 23
Forces, 18, 26
Formalism, 56
Forrest, P., 161n1
Frege, Gottlob, xi, 25, 26–27, 129, 153n2, 158n1
Frege's criterion, 26–27
Fudge, Erik, 8–10
Function, 56, 91, 128, 130, 149

Generic operator, 80–81
Generic sentence. *See* Characterizing sentence or statement
Genes, 4, 12–13, 23, 26
Genetic approach to species, 107–109

Genetic code, 108–109
Genetics, 4, 10, 12–15
Goldbach's conjecture, 101
Goldman, Alvin, 32–35, 156n13
Goodman, Nelson, ix, xiii, 31, 37, 53, 54–57, 60–61, 71, 83–87, 92–103, 112, 156n1, 157n6, 157n7, 158n3, 159n4
Grice, Paul, 1

Hale, Bob, 26–27, 34–36, 151n2, 154n5, 156n13
Halle, Morris, 67
Hanks, Patrick, 117
Hart, W. D., 24, 32, 36–37, 40, 156n16
Heisenberg, Werner, 19
Higher-order types, 14, 126
Hilbert, David, 56
Historical linguistics, 4, 5–6
Hodes, Harold, 37–40, 56
Hull, David, 74–76, 107
Hume, David, 89–90
Hume's law. *See* Hume's principle
Hume's principle, 36, 149

Identity, 89–90
Identity conditions, xi–xii
 for expressions, 128
 for occurrences, 129–133, 136, 149–150
 for possibilia, 90
 for words, 58, 60, 66–69, 105–106, 116–117, 122, 159n1
Identity of indiscernibles, 136, 149
Identity theory of mind, 1, 2
Indexicals, 50–51
Inferential semantics, 114
Inscriptions, 57, 61, 94–100
Instantiation, 123–124, 135, 138, 146, 148
Intensional, 79, 86, 154n3
Intention hypothesis, 68–71
Intentions, 68–71, 106, 111
Internal comparison interpretation, 120
Isomorphisms, 135, 142, 148

Jubien, Michael, 154n3

Kalderon, Mark Eli, 155n9
Kaplan, David, ix, 68, 71, 111
Katz, Jerrold, 152n2
Kinds, 83, 88–89, 106–112, 118–120, 159n3. *See also* Natural kinds; Real kinds
Kind statements, 81
Kitcher, Philip, 129–130, 141
Krifka, Manfred, 81, 119–120
Kripke, Saul, 1, 107, 153n1

Languages, 5–6, 23, 26, 55, 61, 63, 65, 67, 83, 114, 116, 152n2, 157n7
Leibniz, Gottfried Wilhelm, 46
Letters, 7, 61–65, 99, 114, 157nn7,8
Lewis, David, xiii, 125, 130–131, 138–146, 159n3, 161nn1,4,6
Lexicography, lexicographer, 107, 111–112, 115–117, 119
Lindblom, Björn, 67
Lineage approach to species, 107, 110–111
Linguistic objects (linguistic entities), 37–40, 44, 55, 93–103, 114–115, 123, 156n16
Linguistic role, 70
Linguistics, 1, 4, 5–10, 29, 32, 41, 73, 81, 83, 92, 100–101, 103, 118
Linguistic theory, 95–96, 102, 113–114, 116, 121, 124
Locke, John, 55
Loeb, Louis, 156n13
Logic, 1, 42, 100
Loux, Michael, 70
Ludlow, Peter, 64

MacMahon, M. K. C., 6–8
Malament, David, 46

Markosian, Ned, 157n9, 158n12
Mathematical objects (mathematical entities), 37–41, 50, 55–56, 149–150, 155n9, 156n16
Mathematics, 29–32, 35, 41, 56, 155n10
Mayr, Ernst, 13–15, 41, 87, 109, 160nn3,6
McArthur, Tom, 114, 116
Meaning, 114–115, 121. *See also* Senses
Membership relation, 137–138
Mereological composition, 138, 143–145, 161n6
Metaphysics, xiii, 90
Mill, John Stuart, 2
Modal conditionals, 80
Morgenbesser, Sidney, 159n3
Morpheme, 114–116
Morphological approach to species, 107
Murdoch, Iris, 2
Murray, J. A. H., 117

Naturalized epistemology, 24, 32, 40–43
Natural kinds, 11, 106–107
Newton, Isaac, 46
Nominalism, nominalist, xii–xiii, 30–31, 37, 41, 43, 53–56, 66, 80–81, 86–88, 112–113, 125, 149–150, 159n4
 and characterizing statements, 77–81
 class, 73, 88–92, 137–138
 definitions of, 30–31, 37, 55, 158n3
 epistemological difficulties for, xi–xiii, 51, 93, 96–103
 Field's, 31, 37, 42, 56
 Goodman and Quine's, xiii, 31, 37, 56–57, 84–87, 93, 99–102, 157n7
 motivation for, xii, 30–32
 ostrich, xi, 100
 and paraphrasing, 1, 41, 53, 83–88, 156n1 (*see also* Paraphrase)
 predicate, 94
 trouble with, 93–103
Normal, 74–77, 82
Numbers, 31, 37, 39–40, 47, 49–51, 56, 132, 136, 141, 149, 151n3, 153n3, 158n1
Number theory, 36, 155n10

Occurrences, xiii, 125–150
Old Glory, x, 73, 82, 85, 86, 132, 134–136
Ordered pairs, 129–130, 141, 161n3

Paraphrase, xii, 1, 4–5, 23, 28–30, 41, 51, 53–54, 57–58, 71, 73, 83–85, 87–88, 93, 99, 156n1
Particulars, 144–145, 152n2
Parts, 138, 143–145
Peirce, Charles S., ix, 58, 125, 151n1
Pelletier, Francis Jeffry, 77–81, 83
Perceptual knowledge, 36
Person, concept of, 114
Philosophy
 of language, 1
 of mathematics, 23, 50, 55–56
 of mind, 1
Phonemes, 8–10, 24, 65–67, 106, 114–115, 133
Phonetics, 6–8, 66
Phonological hypothesis, 65–68
Phonology, 8–10, 65–68, 114
Phylogenetic criterion. *See* Lineage approach to species
Physicalism, physicalist, 45, 48
Physical relations, 44–48
Physics, 17–21, 29, 32, 92
Pinkard, Terry, 160n5
Place, U. T., 1
Platonic heaven. *See* Platonic realm
Platonic objects, 46–47
Platonic realm, 31–32, 43, 87
Platonic relationship principle, 38
Platonism, 31, 36, 40–41, 155n10. *See also* Realism, realist
Platonistic sentence, 84, 156n1

Pluralities, 39–40, 151n3
Points (in space), 46–48, 149–150
Population approach to species, 107, 109–110
Positions, 129, 132–136, 145–146, 149
Possibilia, 90, 99, 102, 156n15, 157n2
Possible worlds, 91, 140, 155n9
Possible world semantics, 80
Pragmatics, 106
Predicates, xi, 49, 82, 94, 100–103, 119, 155n7
Problem of reference, 49–50
Problem of universals, 94
Pronunciation, 38, 58–60, 66, 68, 105, 112, 114–116, 118, 121–123
Proof theory, 56, 100–101, 157n7
Properties, x, 5, 31, 57, 81–82, 105, 107, 111–112, 117–124, 135–138, 151n2, 157n11
Prototype, 80
Putnam, Hilary, 107–108

Quantification, 12, 54–55, 73, 80, 84, 87–88, 92
Quantifiers, 26, 28, 32, 78–80, 153n1, 155n7
Quine, Willard Van, xi, xiii, 30, 37, 51, 61, 116, 129, 141, 157n7, 159n5
 criterion of ontological commitment, xi, 11, 25–26, 28, 54, 153n3, 155n7
 kinds, 88–89, 117
 mistrust of the intensional, 79, 86, 90, 102, 154n3, 159n7
 need for paraphrasing, 28, 54, 84–88, 99, 156n1, 159n4
 as a nominalist, 31, 37, 55–57, 93–94, 99–102
 occurrences, 126–127, 129
 universals, xi, 54, 94

Realism, realist, 31, 51, 93, 95, 98–99, 101–102, 124–125, 157n1
Realistic pluralism, 114
Realist semantics, 55, 96, 98–99
Real kinds, 106–109, 111–112, 159n3
Received pronunciation (RP), 59
Referring, 49–50
Relations, x, 30, 45. *See also* Membership relation; "Being at" relation; Spatiotemporal relations; Physical relations; Tokening relation; Instantiation; Parts; Causal relations
Replicas, 97–102
Representative object interpretation, 120
Ross, W. D., 2
Ruse, Michael, 107
Russell's paradox, 31
Russell's theory of definite descriptions, 155n7
Rutherford, Ernest, 20, 24

Searle, John, 154n3
Second-order logic, 36
Sellars, Wilfrid, 53–55, 57, 70, 83
Senses, 58, 59, 105, 112, 116, 127, 158n1
Sentence formation rules, 41
Sentences, 24, 92, 99–100, 115–116, 122, 125, 143, 152n2, 158n1
Sets, 56, 88, 92, 138, 140–141, 144, 158n3, 161n3
Set theory, 43, 139–141, 159n3, 161n6
Shapes, 61, 113, 157n8
Shape theory of letters, 61–65
Similarity, similar, 53, 61–64, 97, 109, 112–113, 118, 157n6
Simons, Peter, 125–127
Simple universals, 139–140
Simplicity, 42
Simpson, G. G., 110–111
Singular terms, xi, 4, 11, 26–27, 101–102, 124, 154nn5,6, 155n7, 158n1
Situation semantics, 80
Skyrms, Brian, 33–34, 156n13
Smart, J. J. C., 1

Spaces, 56, 132, 149–150
Space-time regions, 46–50
Spatiotemporal relations, 45–50
Species, 11–14, 23, 24, 26, 29, 74, 78, 88–92, 105–114, 116–117, 119–121, 124, 152n4, 158n1, 159n3, 159n3, 160nn5,6,7
Spelling, 38, 58–61, 74, 105–106, 111–112, 114–118, 120–121
Spelling theory, 60–61, 65
States of affairs, 144, 146, 151n4
Steiner, Mark, 34, 37, 155n10
Stereotypes, 80
Strawson, Peter, 152n5
Structural properties, 136–138, 146
Structural types, xiii, 133. *See also* Structural universals
Structural universals, xiii, 130–131, 135–149
 linguistic conception of, 139–142, 143
 magical conception of, 139
 occurrence conception of, 131, 134, 139, 142, 146, 148–150
 pictorial conception of, 139, 142–145
Surface structure, 4–5
Syllables, 7, 23, 26

Teller, Edward, 20
Tokening relation, 45–46
Types of actions, 2
Type talk, xii, 3, 14, 15, 20–22, 29–30, 71, 73, 84, 103, 150
Type–token distinction, ix, 1, 3

Universals, ix–xi, 53–55, 57, 94, 124, 130, 137–140, 144–150, 160n5
Utterances, 8, 10, 57, 61, 93, 95–100, 121–122

Variables, 25, 124, 148, 160n5
Vowels, 7–8, 23, 26

Wetzel, Linda, 27, 39, 56, 109, 130, 141, 151n3, 159n8, 161n3
White, Heath, 134–136
Wittgenstein, Ludwig, 160n5
Wollheim, Richard, x, 2, 16
Wolterstorff, Nicholas, 2, 16, 125
Words, xii–xiii, 5–7, 38, 49, 53, 55, 57–61, 65–71, 82–83, 95–103, 105–127, 143, 158n1, 159n3, 160nn5,7, 161n8
Works of art, 2, 15–16
Wright, Crispin, 27, 36, 154n6, 155n10

Ziff, Paul, 58