

INDEX

- Abstract painting, 43
Acheulian cleaver, 66, 71
Aesthetics, 33, 45
 duality of, 50
 and ethics, 169–170
 and value formation, 170
Aging, views of, 12–13, 17, 25–26, 145–147, 163
America, A Prophecy, 67, 74
Animals
 communication of, 93
 metaphorical world of, 102
Anna Karenina, 141, 156
Antony and Cleopatra, 77–78, 101, 103
Approach to Venice, 144, 148
Aquinas, Thomas, 29
Architecture
 fusion of art and science in, 56
 nature of, 47
 revolutions in, 51–52
 as schizophrenia, 53
Art
 act of recognition in, 127, 140
 architecture as, 47
 balance of values in, 163, 165
 as carrier of knowledge, 59–61
 conflict of values in, 161, 162
 content and style in, 75
 as experiment in living, 159
 freedom expressed in, 49, 51
 limitations in, 53
 as metaphor, 16
 pure, 43
 qualities of, 133
 and reality, 153
 and values, 147
Artifacts, 63, 64
 of birds, 93
 in human history, 67–68
 power of, 65–66, 75
 primitive, 65
 work of art as, 169
Artists, 23
 creations of, 68
 inspiration of, 48
 sharing with, 155
 vocabulary of, 125
Astronomy, discovery of red shift
 in, 28–29
“Auguries of Innocence,” 115
Baboons, language of, 94
Baudelaire, Charles, 86–87
Beauty, 34. *See also* Aesthetics
 as freedom of choice, 55
 nature of, 48
 and value formation, 170
Bees, language of, 7, 12
Behavior, animal vs. human,
 33–34, 47, 63
Bell, Clive, 43
Bernini, Giovanni Lorenzo, 52
Bilivert, Jacopo, 109
Biology, imagination in, 86
Bird Garden, 105, 112
Blake, William, 3, 22, 100, 106, 114
 America, A Prophecy, 67, 74
 “Auguries of Innocence,” 115
 geometric style of, 99
 imagery of, 133, 134
 “Infant Sorrow,” 98–101
 “London,” 106
 poetry of, 4–5, 154
 Songs of Innocence, 100, 101
 “The Tyger,” 69–70, 106, 113
 verbal art of, 102
Book of Common Prayer, The, 94
Botticelli, Alessandro, 46
Brain, animal vs. human, 82
Bramante, Donato, 52
Brancusi, Constantin, 40
Braque, Georges, 35
Bruegel, Pieter (the Elder)
 The Fight between Carnival and Lent, 123, 128
 The Massacre of the Innocents, 166, 176
 Peasant Wedding, 123, 128
Bridge building, breakthroughs
 in, 36
Brunel, Kingdom, 35
Brunelleschi, Filippo, 51, 52
Bruno, Giordano, 30
Burns, Robert, 87

- Campion, Thomas, 96–97
 Cavafy, C. P., 162
 Cellini, Benvenuto, 104
 Censorship, 138
 Cézanne, Paul, 153
Le Château Noir, 145, 149
 Chagall, Marc, *Midsummer Night's Dream*, 105, 113
 Chartres, stained glass window at, 66, 72
Château Noir, Le, 145, 149
 Child
 imagination of, 20
 thought development of, 8–9, 21–22
 Children's books, 134, 135, 143
 Coleridge, Samuel Taylor, 18
 Color, in poetry, 76–77, 78–79
 Communication, language of, 7.
 See also Language
 Conscience, 140, 141
 Copernican system, 30, 105
 Craft, 51. *See also* Artifacts
 Cranach, Lucas, *A Princess of Saxony*, 145, 151
 Critic, role of, 1
 Criticism
 literary, 2, 3
 social, 116
Crucifixion, 124, 130
 Culture
 and artifacts, 65–66
 and knowledge, 63
 Cummings, E. E., 163, 164

 Dali, Salvador, *The Sacrament of the Last Supper*, 166, 174
 Dante, 154, 155
 Darby, Abraham, 35
 Darwin, Charles, 63
 Davy, Humphry, 33, 47
 Debussy, Claude, 97
 Delacroix, Eugène, *Liberty Leading the People*, 165, 172
 Design
 breakthrough in, 35
 in industry, 39
 Designers, and technicians, 37

 Dickens, Charles, *Oliver Twist*, 138
 Discovery, 24
 creative, 63
 of red shift, 28–29
 Donne, John, 134
 Doppler, Christian Johann, 29
 Drama, 141
 Duccio di Buoninsegna, *Crucifixion*, 124, 130
Duino Elegies, 118–119, 167–169

 Eddington, Arthur, 30
 Education, imagination in, 22
 Eidetic imagery, 80
 Einstein, Albert, 30, 31, 61, 164, 165, 170
 Electricity, impact of, 36–37
 Eliot, T. S., 46, 67, 75–76, 154
 “Emily, John, James, and I,” 156–157
 Empson, William, “To an Old Lady,” 25–26, 27, 28, 30
 Epistemology, 5
Equatorial Jungle, The, 145, 149
 Erastus, Thomas, 83
 Ernst, Max, *Oedipus Rex*, 124, 131
 Ethics, 144. *See also* Values
 and aesthetics, 169–170
 and life strategies, 161
 Evolution, human, 34, 48, 62, 64
 Experience
 and decisions, 157
 poems of, 100
 solutions in, 158–159
 and symbols, 9
 universal vs. private, 32
Experiment (magazine), 25
 Experiment
 art as, 153, 169
 imagination as, 142
 Experimentation
 with animals, 80–81
 imagination in, 22

Face of Violence, The, 139–140; 143
 Fairy tales, 135, 140, 143
 Faraday, Michael, 46

- Fatata te Miti*, 85, 87, 92
 Fermi, Enrico, 164
 Ficino, Marcilio, 98
Fight between Carnival and Lent, The, 123, 128
 Fire, imagery for, 107
 Fludd, Robert, 105
 Nature and Art, 104, 110
 Folk tales, 134, 135, 143
 Franklin, Benjamin, 35
 Freedom
 in art, 49, 51
 nature of, 50, 55
 Frost, Robert, "Provide, Provide," 17, 25

 "Game of Chess, A," 75–76
 Games, nature of, 49
 Ganesa, 84, 88
 Gaudí, Antonio, *Sagrada Familia Cathedral*, 85, 90
 Gauguin, Paul, *Fatata te Miti*, 85, 87, 92
 Generalization
 in art, 126
 scientific, 133–134
 Gilbert, W. S., "Emily, John, James, and I," 156–159
Ginevra de' Benci, 85, 91
 Graves, Robert, 1
Guernica, 125, 132

 Halley, Edmund, 52
Hamlet, 161–162
 History
 artifact in, 67–68
 in traditional industries, 40
 Homer, 16
 Hooke, Robert, 52, 53, 54
 Housman, A. E., 2, 94, 95, 96
 Housman, Laurence, 2
 Hubble, Edwin Powell, 28
 Human beings, language of, 10.
 See also Language
 Human specificity, vii, 62
 Hunter, Walter, 80–81
 Huxley, Aldous, 114, 115

 Imagery
 of Blake, 133, 134
 eidetic, 80
 of T. S. Eliot, 76
 of William Empson, 25–27
 of Robert Frost, 17–18
 of Picasso, 126–127
 of Alexander Pope, 76
 of Rainer Maria Rilke, 119, 120, 121
 of William Shakespeare, 77, 103
 of Dylan Thomas, 119, 120, 121
 Images
 emblematic quality of, 87
 in poetry, 13
 in science vs. art, 21
 words as, 9, 82, 87
 Imagination, vii, 20, 62, 142
 as experimental process, 21
 nature of, 11, 14, 79
 and recall, 82
 unity of, 75
 Imagists, 79
 Impressionists, 43, 86, 96, 145, 153
 Industrial Revolution, in poetry, 107
 Industries, traditional vs. pioneer, 38
 "Infant Sorrow," 98–101
Inferno, 155
 Information, language of, 7
 Instruction, language of, 7
 Intellectual revolutions, 55
In the Matter of J. Robert Oppenheimer, 165
 Invention, 34. *See also* Discovery
 artifact as, 65
 buildings as, 54
 Inverse squares, law of, 61
 Iron tower, fallacy of, 38, 40

 Jakobson, Roman, 98–101, 103, 158
 Jones, Inigo, 52

 Keats, John, 21
 Kepler, Johannes, 60
 Kipphardt, Heinar, *In the Matter of J. Robert Oppenheimer*, 165

- Klee, Paul, *Bird Garden*, 105, 112
Knight, Wilson, 102
Knight in falcon headdress, 104, 110
Knowledge, 5
 in art, 140
 conscience as, 141
 nature of, 36, 59
Koenig, Hertha, 167
- Lady Anabella Ward*, 145, 151
Language, 62
 of baboons, 94
 of communication, 7
 evolution of, 10
 of insects, 6
 mathematics as, 42
 nature of, 13
 personal manipulation of, 12
 and thought, 117
Last Supper, The, 166, 175
Lawrence, D. H., 100
 "Morning Work," 78–79, 82
Leavis, F. R., 1
Le Corbusier, 50
Liberty Leading the People, 165, 172
Literature
 images of, 75
 philosophy of, 2
 raw material of, 6
Logic, in pioneer industries, 40
 "London," 106
Love's Labour's Lost, 103
Lowell, Robert, "The Old Lady's
 Lament for Her Youth," 146–147
Lutyens, Edwin, 46
- Macbeth*, 103, 155
MacCarthy, Desmond, 2
McClelland, D., 134
Machines, and human freedom,
 35
Madame Amedée, 145, 152
Magic, of memory, 83
Magic rites, 45–46
Magritte, René, *Time Transfixed*,
 124–125, 131
Malraux, André, 49
- Manesse Codex*, 104, 110
Massacre of the Innocents, The, 166,
 176
Mathematics, as language, 42
Memory, power of, 82–83
Merchant of Venice, 141
Metaphors, 15, 28
 art as, 16
 elaboration of, 120
 universal, 101, 102, 123
Michelangelo, 46
Midsummer Night's Dream, 105, 113
Milton, plate from, 85, 92
Milton, John, 27
Model T Ford, 67, 73
Modigliani, Amedeo, *Madame
 Amedée*, 145, 152
Monet, Claude, 84–85, 96, 153
 Rouen Cathedral, West Facade, 84,
 90, 96
Moore, Henry, 40
 A Tilbury Shelter Scene, 124, 129
 "Morning Work," 78
Mother of Us All, The, 136–137
Muir, Edwin, 2
Music
 in poetry, 96
 popular songs, 102
 of spheres, 97
Mythology, in Blake, 106
- Napoleon Crowned with Laurels*, 166,
 173
Nataraja, 67, 74
National character, measurement
 of, 135
Nativity, 84, 89
Nature and Art, 104, 110
Neumann, Balthasar, 52
Newton, Isaac, 31, 61, 77, 114, 116
 Principia, 114, 116
- Oedipus Rex*, 124, 131
"Old Lady's Lament for Her
 Youth, The," 146–147
Oliver Twist, 138
Oppenheimer, J. Robert, 164–165
Othello, 141–142

- Paine, Tom, 35, 101
 Painting, 34
 cave, 45, 46, 48, 49
 images of, 75
 modern, 43
Parapluiies, Les, 167, 177
 Participation, in art, 24
 Pascal, 46
 adding machine of, 66, 72
Peasant Wedding, 123, 128
 Philosophy, nature of, 4
 Picasso, Pablo, 125
 Guernica, 125, 132
 imagery of, 126–127
 Saltimbanques, paintings of, 167, 178
 Plan, imagination as, 142
 Play
 of children, 11
 importance of, 21–22
 nature of, 49
 Poe, Edgar Allan, 86
 Poems
 musical, 96
 tone, 97
 Poetry
 art of recognition in, 122
 color in, 76–79
 comic, 157
 images in, 13, 75
 imagination in, 86
 nature of, 1, 16
 philosophy of, 4
 and style, 94
 weeping through, 95
Poet's Defence, The, 2, 4
 Pope, Alexander, 3, 60, 76, 135
 Portraits, 147
 Pound, Ezra, 67
Princess of Saxony, A, 145, 151
Principia, 114, 116
 Problem solving, 159, 160
 "Provide, Provide," 17
 Pythagoras, 16, 97

Queen Zenobia Addressing Her Soldiers, 171

 "Rape of the Lock, The," 76
 Raphael, 33, 47
 Reality, and art, 153
 Reasoning, 21, 62
 Recognition, act of, 122, 138
 Recreation, of works of art, 68, 154, 155
 Reflection, language for, 8
 Reformation, 83
 Relation, in science, 40–41
 Relativity, theory of, 30, 31
 Rembrandt, *Self-Portrait*, 145, 150, 153
 Renaissance, 143
 Renoir, Pierre August, *Les Parapluiies*, 167, 177
 Rhesus monkeys, 9, 93
 Richards, I. A., 1
 Riding, Laura, 1
 Rilke, Rainer Maria, 118, 120, 125
 Duino Elegies, 118–119, 167–169
 Romney, George, *Lady Anabella Ward*, 145, 151
Rouen Cathedral, West Facade, 84, 90, 96
 Rousseau, Henri, *The Equatorial Jungle*, 145, 149
 Rubin, S. A., 135
Rue des Moulins, 123, 129

Sacrament of the Last Supper, The, 166, 174
 Sagrada Familia cathedral, 85, 90
Scene from Roman History, A, 165, 171
 Science, 12
 art vs., 19
 fear of, 56
 freedom in, 51
 ideas of, 28
 imagery of, 24
 vs. imagination, 21
 knowledge carried by, 61
 language of, 27
 participation in, 24
 philosophy of, 4
 preoccupation of, 40
 view of, 160

- Scientific theory, 31
 Scientists, 23, 24
 Scott, Gilbert, 53
 Self-portraits, 144, 145, 150, 153
 Shakespeare, William, 77, 141
 Antony and Cleopatra, 77–78, 101, 103
 Hamlet, 161–162
 imagery of, 102–103
 Love's Labour's Lost, 103
 Macbeth, 103, 155
 Merchant of Venice, 141
 Othello, 141–142
 Troilus and Cressida, 103
 The Winter's Tale, 77
 Shape, 40, 41
 Shebna Yahn, grave of, 66, 71
 Siamese twins, 156, 161
 Sight, and sound, 87
 Signals, 8
 "Significant form," 43
 Silliman lectures, vii
 Sitwell, Osbert, 26
 Snow, C. P., *The Two Cultures*, 137
 Society, artists in, 48
Songs of Innocence, 100, 101
 Speech, 34. *See also* Language
 human, 6
 metaphorical figures of, 15
 and visual discrimination, 84
 Spells, 83, 97
 Sphinx of Hat-shepsut, 84, 88
 Spurgeon, Caroline, 102
 Star, as symbol, 84–85, 87
 Statesmanship, 55
 Stein, Gertrude, 143
 The Mother of Us All, 136–137
 Structure, 40, 41, 50
 Style, 133
 in art, 68, 75
 and content, 93, 103–104
 nature of, 107
 in poetry, 94
 Sumerian ideograms, 104, 109
 Surrealists, 125
 Symbolism, 10, 34
 Symbolists, 86
 Symbols, 9. *See also* Images
 in cave paintings, 45
 star as, 84–85, 87
 universal, 126
 Szilard, Leo, 164

 Taste, 42, 49
 Tate, Allan, 5
 Technicians, role of, 37
 Technology, of Western world, 37
 Tension, 50, 55
 Theory, nature of, 31
 Thomas, Dylan, 14–15, 16, 25, 122, 135, 163
 imagery of, 119, 120, 121
 poetry of, 12–13, 117–120, 125, 154
 Thought
 development of, 8–9
 and language, 117
 "Three Bushes, The," 157–158
 Tiepolo, Giovanni Battista, A
 Scene from Roman History, 165, 171
Tilbury Shelter Scene, A, 124, 129
Time Transfixed, 124–125, 131
 "To an Old Lady," 25–26, 27, 30
 Tolstoy, Leo, *Anna Karenina*, 141, 156
 Tools
 animal use of, 63
 as artifacts, 66 (*see also* Artifacts)
 and human freedom, 35
 Toulouse-Lautrec, Henri de, *Rue des Moulins*, 123, 129
Troilus and Cressida, 103
 Truth, and poetry, 2–3
 Turner, J. M. W., *Approach to Venice*, 144, 148
Two Cultures, The, 137
Two Poets and a Revolution, 3
 "Tyger, The," 69, 101, 106, 113

 Unity
 of content and style, 75
 and design, 43
 of imagination, 75

 Values, 147
 conflict of, 162

Values (continued)

- and life strategies, 161
- play of, 169
- Vanbrugh, John, 48
- Van Gogh, Vincent, 156
 - Self-Portrait*, 145, 150, 153
- Victorians, aesthetics of, 41–42
- Villon, François, 146, 147
- Vinci, Leonardo da, 49, 50, 85
 - drawing of a mortar, 105, 111
 - Ginevra de' Benci*, 85, 91
 - The Last Supper*, 166, 175
- Vocabulary
 - of artist, 125
 - of Rhesus monkeys, 9–10
- von Frisch, Karl, 7

- Waterhouse, Alfred, 46
- Watts, George, 46
- “Why Should Not Old Men Be Mad?” 121
- Wilkinson, John, 35
- Winter's Tale. The.* 77
- Words, 20. *See also* Language
 - magic of, 83
 - uses of, 8
- Wordsworth, William, 48
- Wren, Christopher, 48, 52, 53, 54

- Yeats, William B., 2, 61, 121, 125, 147, 157–158
 - “The Three Bushes,” 157–158
 - “Why Should Not Old Men Be Mad?” 121

- Zhinkin, Nikolay, 93–94
- Zola, Emile, 153