

Index

- Aaron, P.G., 123–124
 Abagis, T.R., 121
ABC Book of Invertebrates (paintings), 172
 Abell, Arthur, 56
 Abraham, A., 88
 abstract thought, synesthesia and, 92–93
 Acheulean handaxes
 aesthetics of, 64–65
 as social display, 65
 communication skills required for, 65
 acting, empathy as vital in, 51–52
 Adams, Anne Theresa, 93, 168, 171–173
 Adams, Douglas, 14
 ADHD
 overview, 9, 118–119
 author's experience with, 4–5
 daydreaming and visualizations, 120–121
 eminent people with, 119–120
 hyperfocus, 121
 low brain arousal, 121–122
 symptoms of, 118
 Adler, Alfred, 38
 African Middle Stone Age, Middle Paleolithic
 equivalent, 67
 Alhazen (Hasan Ibn al-Haytham), 38
 Allen, Mariette Pathy, 33–34
 Allende, Isabel, 57
 Alzheimer, Alois, 164
 Alzheimer's disease
 Campbell, 163–164
 de Kooning, 165–166
 Hayworth, 164–165
 Murdoch, 162–163
 neurological markers of, 162
 prevalence of, 161
 Rockwell, 165
 signs and symptoms of, 163
 Utermohlen, 165, 166–168
 and visual artists, 165
 visuospatial perceptions altered by, 167–168
 Amaducci, L., 170
 Amâncio, Edson, 22
 American Psychological Association, definitions
 of trance, 13
 Amitabha Buddha, 185
 Anderson, Marian (contralto), 16, 100
 Angelou, Maya, 112
 animal handling facilities, empathic design,
 50–51
 animal tracking, 30, 74
 animals (cave paintings), 73
 aphasia, 170
 Archimedes, 14
 Armagan, Esref, 152–153
 Arrau, Claudio, 51
 art
 as destiny, 138–139
 painting. *see* painting
 Paleolithic. *see* Paleolithic art
 parental outlook on, 52
 visual. *see* visual art
 artistic projection, 46–47
 Asperger's syndrome, 143
 Atkinson, G., 29
 Atomist Doctrine, 188
 attention deficit/hyperactivity disorder. *see*
 ADHD
 attractors
 overview, 100
 dissipative structures and, 101–102
 examples of, 101
 Auden, W. H., 14
 audience creative trance
 active surrender in, 19
 audience/participant line blurring, 21–22
 extent of, 7
 extraterrestrial, 160
 healing response, 22–23
 Stendhal syndrome, 22
 and viewer synchronization, 20–21
 Augustine, 38
 Austen, Jane, 27

Australian Aborigines
 animal tracking, 30, 74
 Dreamtime, 3, 16, 18
Australopithecus afarensis, 63
 automated behavior, 39
 automatic self-transcending meditation, 95
 Avalokiteshvara, 185
 Azé Prehistoric Cave, 74

Bak, P., 103–104
 Balanchine, George, 27
 Baldwin, James, 97
 Ballard, Robert, 115
 Bambach, Carmen, 127
 Banner, Robert Bruce, 177
 Bannister, Roger, 2, 12, 18, 132
 Bargh, J.A., 43, 44, 182
 Barrett, D., 15
 Barriquand, L., 74
 Barron, F., 7, 13, 31, 52
 Barušs, Imants, 31
 bat guano deposits, cave painting damage
 from, 74
 bathtub role in creativity, 14–15
 Bayley, John, 163
 Beaty, R.E., 83
 Beaux, Cecilia, 144
 Beeman, M., 86–87, 88, 176
 Beethoven, Ludwig van
 composition periods, 140
 deafness of, 9, 130, 139–141
 dreams of, 15
 hearing loss diagnosis, 139
 hearing loss technology, 141
 isolation of, 139–140
 Ninth Symphony, 140
 volume of work, 140
 work methods, 88
 Beghetto, R.A., 32
 Bell, Alexander Graham, 8, 51
 Benacerraf, Baruj, 113
 Bennett, Lucy, 147
 benzene molecule structure, envisioned in
 hypnagogic state, 16
 Berekhat Ram, 66–67
 Bernheim, Hippolyte, 38
 Black, James, 8, 82, 83
 Blake, Blind, 159
 Blake, William, 11
 blind African American musicians
 lineage of, 157–160
 success of, 157–160
 Blind Boy Fuller, 159
 Blind Boys of Alabama, 159
 blind children, music and, 157

Index

blind visual artists, 152–154
 Blind Willie McTell Blues Festival, 159
 blindness
 and brain remapping, 154–155
 and musical careers, 155–156
 and sense of touch, 154
 from untreated eye problems, 156
 Blombos Cave
 artifacts from, 67, 69
 ochre-processing art workshop, 68–69
 Boas, F., 68
 Bocelli, Andrea, 155
 body-mind state sharing, 21
 Bohr, Niels, 114
Bolero, 10, 170–171
 Boller, F., 170
 Bonheur, Rosa, 113, 115, 116
 bottom-up information processing, 88–89
 Bouché, Louis, 17
 Bourke-White, Margaret, 144
 Boyle, Tom, Jr., 177, 186
 Brahms, Johannes, 17
 brain
 overview, 8
 anatomical markers for dyslexia, 113
 disabilities remapping, 155
 punctuated evolution of, 104
 regions of, 8, 82
 brain changes with meditation, 96 *See also* neural
 signatures
 brain hemispheres, 85–86
 brain sites
 for ADHD, 118, 121–122
 for creativity, 83–84
 for dyslexia, 113
 for exceptional abilities, 114
 for insight, 86, 176
 for meditation, 94–95
 for poetry, 85
 for synesthesia, 92–93
 thought patterns and, 87
 for visual art, 84–85
 brain waves, thought patterns and, 87–88
 Brando, Marlon, 51
 Braun, A.R., 82
 breakthrough bifurcations, 100
 Britten, Benjamin, 15
Broadway Boogie Woogie (painting), 93
 Broca, Paul, 85
 Buddhism
 artists, 14
 meditation, 95–96
 Tibetan. *see* Tibetan Buddhism
 Burchfield, Charles, 99
 butterfly effect, 103

- Campbell, Glen, 163–164
 Candoco Dance Company, 147
 cathartic memories, 105–106
 cave art
 bat guano damage, 74
 figurative art, 65–66
 figurines, 66
 imagery/religious elements of, 74
 paintings, 73
 placement of, 75–76
 religious otherworldly response conveyed by, 18
 caves
 Altamira, 65, 73
 Azé, 74
 Blombos, 67, 68–69
 Chauvet, 73
 hallucinations and out-of-body experiences in, 75
 Lascaux, 65, 73
 Niaux, 65
 Qafzeh, 71, 72
 shamanistic rituals in, 74–75
 Skhul, 69
 Central Executive Network (CEN), brain regions in, 83
 ceremonial dances, 59–60
 Ch'en Jung (painter), 17
 Chang Tsai, 188
 chaos theory, 9, 98
 chaos, creativity and, 9, 111
 Charcot, Jean-Martin, 38, 85
 Charles, Ray, 155, 158
 Chauvet cave (France), 73
 Chewa people (Africa), 59
 childbirth pain, 77
 childhood abuse, 103
 children, wheelchair dancing, 149–150
 Chinese philosophy, empathy and, 50
 Chippewa dream images, 7, 16
 Christie, Agatha, 9, 27, 113, 117
 Clift, Montgomery, 51
 Clift, S., 81
 climate change, 142–143
 clinical psychology, 37–38
 Clottes, Jean, 13, 73, 74–75
 cognitive psychology, 37–38, 39
 cognitive unconscious, 39
 coincidentia oppositorum, 61
 Coleman, E., 76
 Coleridge, Samuel Taylor, 89
 collective effervescence, 21–22
The Color Purple (Walker), 26
 Coman, Charlotte Buell, 141–142
 Combs, A.L., 25, 60, 78
 communication, standards for, 53
 complexity theory, 98
 Congreve, William, 131
 conscious/unconscious functioning, blurring of, 42
 consciousness
 overview, 24–25, 187
 altered states of, 5, 13, 25–26, 53, 74–75, 180
 creativity theory and, 7
 fractals in, 100–101
 as shared experience, 35–36
 core object recognition, 75–76
 Cosmides, Leda, 14
 Cramond, B., 126
 creative arts therapies, 130–131, 164
 creative dissociation, 55–56, 58
 creative people
 as “incorrigible disturber of the peace,” 97
 problem-solving/finding, 104
 and thunderstorms, 99
 creative trance
 overview, 24, 30, 78
 absorption and depth of, 29–30
 adaptive interchanges, 102
 altered states of, 74, 138, 174
 as analgesic, 131–133
 audience. *see* audience creative trance
 and the brain, 80–81
 in clinical work, 34
 as creative chaos, 97
 daydreaming, 3–4
 definitions, 13–14
 and dementia, 162
 dialectic in, 40
 dissociation and inspiration, 7, 56–57
 diversity of, 2–3
 dynamics of, 8
 emotional and physical pain addressed by, 130–131
 empathic projection, 52
 empathy and, 7, 51–52
 everyday creativity, 30
 facets of, 17–19
 and human evolution, 8
 insight and analysis in, 86, 88
 Insightfuls and Analysts in, 86–87
 interruptions in, 89–90
 leaky sensory gating (noise distractions), 90
 lifesaving. *see* lifesaving creative trance
 multifaceted, 7, 11
 multiple depths of
 lighter states, 26–27
 medium states, 27–28
 neural signatures of, 80
 of observation, 125–126

- creative trance (cont.)
 - personal view, 4–5
 - relinquishing control in, 26
 - ritualized states of, 59–60
 - self-organized criticality, 105 *See* self-organized criticality
 - shared, 35–36
 - social isolation ameliorated through, 81
 - synesthesia and, 90–91
 - time frame of, 16–17
 - as transformation pivot, 33–34
 - unconscious as central to, 45–46
 - unconscious influence/control in, 38, 44–45
 - unconscious origins of, 7
 - as valued, 5
- creativity
 - overview, 1–2, 6, 7, 10
 - brain hemispheres and, 85–86
 - brain sites for, 84
 - chaos of, 9, 97–99, 111
 - conscious/unconscious control in, 45
 - continuous inspiration, 57–58
 - criteria of, 12–13
 - as culturally mediated experience, 30–31
 - and default mode network (DMN), 82
 - divergent and convergent thinking in, 83–84
 - evolution of, 78
 - gifts of the trance, 44
 - healing and, 130–131
 - hominin construction and use of tools, 62–63
 - and neuroscience, 81
 - optimal, 54
 - in Palaeolithic era, 77–78
 - positive controlled dissociation in, 56
 - right-brain hemisphere activation and, 87
 - rule malleability, 53
 - as synthesis, 41
 - top-down versus bottom-up information processing, 88–89
 - unpredictability of, 99–100
- creativity theories
 - Big-C/little-c, 7, 32
 - Five Factor Model of Personality, 7, 31–32
 - habitual response and divergent thinking, 31
 - levels and insights, 32–33
 - Pro-c, 32
- Csikszentmihalyi, Mihaly, 2, 26–27, 31, 121
- cultural interchange, 78
- cultural norms, 59
- Dali, Salvador, 14
- dance among Kalahari Bushmen, 35
- dance for the differently abled
 - overview, 146–147
 - able bodied integrated with, 148
 - supporting organizations, 148
 - with wheelchairs, 147–148
- dance therapy, 133–135
- Dark Was the Night – Cold Was the Ground* (song), 159–160
- Darwin, Charles, 89
- David Copperfield* (Dickens), 52
- David, A.R., 60
- Davis, Reverend Gary, 158
- daydreaming
 - ADHD and, 120
 - of Leonardo da Vinci, 127
 - of creative people, 3, 18, 120
 - timing/frequency of, 82
- de Kooning, Willem, 10, 99, 165–166
- de Larrocha, Alicia, 131
- Dean, James, 51
- default mode network (DMN)
 - activity of, 84–85
 - brain sites of, 83, 84
 - creativity and, 82
 - openness to exploration, 82–83
- Dehaene, S., 38
- dementia
 - AD. *see* Alzheimer's disease
 - creativity enhancements from, 168
 - frontotemporal. *see* frontotemporal dementia
 - mixed, 166
 - prevalence and symptoms, 161
 - stages of, 162
 - types of, 10
- Democritus, 188
- Descartes, René, 38
- designs
 - meaning of, 72–73
 - ongoing traditions of, 72
 - symbolism of, 68, 71
 - visual experiences originating from, 75
- Devlin, Joe, 20
- Dickens, Charles, 52, 106–107
- Dickinson, Emily, 109, 110–111, 112
- Diepkloof shelter (South Africa), 70–71
- differently abled
 - overview, 9, 145–146
 - athletes, 150–152
- disabilities
 - advocacy for, 137–138
 - and brain remapping, 154–155
 - creative trance and, 3
- Disney, Walt, 120
- Dissanayake, E., 65, 67
- dissipative structures/systems, 101–102, 103
- dissociation
 - overview, 55
 - consciousness enhanced by, 58

- and creative trance, 55–56
- as defense mechanism, 55–56
- empathy vs., 49, 60
- dissociative disorders, 55–56, 58–59
- Doctorow, E.L., 99
- Dodge, Robert Wagner (Wag), 10, 174–176
- Donald, M., 65
- doodling, as light creative trance, 27
- dopamine, psychological plasticity from, 83
- dorsal stream, 182
- Dostoevsky, Fyodor, 22
- dream incubation, 15–16
- du Pré, Jacqueline, 143–144
- Duchamp, Marcel, 44
- Duncan, Isadora, 51, 131
- Dürer, Albrecht, 144
- Durkheim, Émile, 21–22
- dysgraphia, 114, 119, 122, 123
- dyslexia
 - overview, 9, 113
 - and authors, 117–118
 - brain characteristics of, 113–114
 - and choice of profession, 114–117
 - developmental, 113, 123–124
- educating children with, 117
- and musicians, 116
- primary, 113
- scientists with, 113–114
- trauma caused by, 115–116
- and visual artists, 115
- visualization enhanced by, 116–117
- ecstasy, definition, 60–61
- Edison, Thomas Alva, 3, 16, 113, 119
- education, for dyslexic children, 117
- eggs, symbolism of, 70–71
- ego state therapy, 47–48
- Ehrenzweig, Anton, 46
- Einstein, Albert, 1, 3, 12, 31, 113, 114, 119
- Ekai, 96
- electronic media, reach of sacred settings, 23
- Elegy for Iris* (book), 163
- Elgar, Edward, 89
- Ellamil, M., 81, 84
- empathic projection
 - across creative domains, 50
 - in acting and sports, 51–52
- empathy
 - connection provided by, 49
 - as creative trance, 52
 - dissociation as opposite of, 60
 - kinesthetic, 20
- English Longitudinal Study of Ageing (ELSA), 81
- engraved ostrich eggshells, 70
- epileptic seizures, 85
- Epistles of Saint Jerome* (Erasmus), 27
- Erasmus, 27
- Ernst, Max, 29
- escape fires, 175
- ethnic heritage, healing and, 135
- exploration urge, neurological basis for, 83
- expressive arts therapies, 133–134
- external storage devices, 79
- extraordinary human strength
 - overview, 10, 174, 176–178
 - clinical aspects, 183
 - and cultural correlates, 188–189
 - dissociative aspects of, 180–181
 - dorsal system and ventral system, 182
 - and energy source, 186–187
 - fear response to, 181–182
 - Heffelmire, 178–179
 - in altered state of conscious, 180
 - as inspiration for Hulk, 177–178
 - Kornacki, 178–179
 - open mind and, 185
 - problem-solving creativity, 179–180
 - and singularity, 185–186
 - stimulants and forces, 182–183
 - Tibetan Buddhist mantra, 184–185
 - and yoga philosophy, 183–184
- Eye Movement Desensitization and Reprocessing, 19
- Farrelly, Bernard “Midget,” 18
- Fatna (woman in Rabat), 23
- Feliciano, Jose, 155
- female figurines (Venuses), 65–66
- Ferenczi, Sandor, 38
- fertility totem, 66–67, 76
- Feynman, Richard, 51, 92, 101, 114
- figurative art, prehistoric, 65–67
- figurines, prehistoric, 65–67
- final illnesses
 - of du Pré, 143–144
 - of Turner, 144
- The Firebird* (ballet), 93
- firefighting, 10, 175–176
- Fisher, M.P.A., 187
- Fitzgerald, F. Scott, 9, 117
- Five Factor Model of Personality, 31–32
- flint plaquettes, 71–73
- focused attention (meditation), 95
- Ford, Paul, 117–118
- fossils, as objects of beauty, 64–65
- Foundation for Art and Healing, 81
- fractals, 100–101
- Frankenstein* (novel), 16, 99
- free will, 42–43
- Freud, Sigmund, 38, 52, 58, 126

- Freudian mental topography, 38–39
frontotemporal dementia
 Adams, 171–173
 biological basis for, 168–169
 brain changes in, 172–173
 creativity enhancements from, 168
 Ravel, 169–171
 and savant capacities, 172–173
Frost, Robert, 119
Fuchsian functions (mathematics), 33
functional equivalence, visualized/physically
 activated movements, 149
functional magnetic resonance imaging (fMRI
 scans), 80, 84
- Gabora, L., 78, 107
Galaburda, A.M., 113
Galen, 38
Gambaro, Retha Walden, 45
Gardner, Howard, 5
The Gateless Gate (koan), 96
gate control theory, 132
Gazzaniga, M.S., 85
Geesink, H.J.H., 187–188
gender variance advocate, 33–34
genetic elements, mobility of, 12
Ghiselin, B., 14
Glisky, M.L., 29
G-Major Concerto, 170–171
Goethe, Johann, 17, 90
Goldberg, Whoopi, 120
Goodall, Jane, 28
Goodwin, D.L., 149–150
Gourfink, Myriam, 21
Gourmon, Remy de, 86
Gowan, J.C., 14
Goya, Francisco, 141, 142
Graf, Conrad, 141
Grandin, Temple, 50–51
Grandma Moses, 54
Grassi, E., 170
Gregoire, C., 83
Grosbras, M.H., 20
Gross, T., 104
Grosso, M., 27, 58
- Hagerty, M.R., 96
half-awake times, 16
Hall of the Bulls (Lascaux Cave), 73
Hamamoto, Marissa, 148–149
Hameroff, S., 187
Han Kan, 3, 14
Harmand, S., 63
Harris, Julie, 51
Harrod, J.B., 64, 72
- Hayworth, Rita, 164–165
Healey, Jeff, 156
healing
 overview, 9
 African and African American, 136–137
 creativity and, 130–131
 ethnic heritage and, 135
 rituals for, 131
hearing loss
 Beethoven, 139–141
 and visual artists, 141–142
Heffelmire, Charlotte, 178–180
Henshilwood, C.S., 68
heroism, lifesaving, 10
Hesse, J., 104
Hibbler, Al, 158
hierarchy of power, 47
high density electroencephalography (EED), 80
High Renaissance in Italy, 69, 124
Hindu religious practices, 60
Hippocrates, 38
Hirschfeld, Al, 15
Hoffman, Dustin, 120
Homo erectus, 64, 65
Homo habilis, 63
Homo heidelbergensis, 66, 67
Homo sapiens, 67
Horowitz, Vladimir, 99
Hourigan, R.M., 116
Hovers, E., 68–69
Howe, Elias, 2, 12, 15
Hubbard, E.M., 92–93
Hultsch, D.F., 163
human cognition benchmark, 68
human consciousness, 25
human sensitivity to initial conditions,
 103
Hunt, H.T., 24
hunter-prey psychological connection, 70
hunting scenes (cave paintings), 73
Hupfeld, K.E., 121
hyperscanning, 36
hypnosis
 ego state therapy, 47
 induction of, 13
hysterical strength. *see* extraordinary human
 strength
- I Remember Better When I Paint*
 (documentary), 165
The Idiot, 22
illness, creative trance and, 3 *See also* final illnesses
implicit memory, 40
Indigenous cultures
 Australian. *see* Australian Aborigines

- Chewa and Luvale people, 59
 Native American Kwakwaka', 59
 trance experiences in, 59
 information-encoding devices, 72
 initiation rites, 71, 73–74
 inspiration sources, 56–57
 interaction adaptation theory, 20
 Iwanicki, Piotr, 147–148
- Jackson's Dilemma* (book), 10, 163
 James, William, 5, 34
 Janet, Pierre, 38, 85
 Japanese textiles and kimono designs, 135–136
 Jefferson, Blind Lemon, 158–159
 Jhanas (meditation), 95–96
 Johnson, Blind Willie, 159–160
 Jola, C., 20
 Józsa, L.G., 76
 Jung, Carl, 2, 9, 34, 39, 40, 84, 97, 112
 Jungian psychology, 2, 57
- Kafka, Franz, 14, 58
 Kahlo, Frida, 132
 Kaimala, G., 27
 Kalahari San hunters, hunter-prey psychological
 connection, 74
 Kandinsky, Vasily, 91
 Kant, Immanuel, 90
 Kapchan, D., 14
 Kaufman, J.C., 32
 Kaufman, S.B., 32, 78, 83, 107
 Kedar, Y., 75
 Keeling, Ida, 132
 Kekulé von Stradonitz, Friedrich August, 16
 Keller, Helen, 106
Kenyanthropus platyops, 63
 Khan, Yasmin Aga, 164
 Kihlstrom, J.F., 39
 King, Carole, 44
 Kirby, Jack, 177–178
 Klee, Paul, 44
 Klein, Melanie, 46
 Kohn, M., 65
 Kornacki, Lauren, 179–180
 Kounios, J., 86–87, 88, 176
 Krippner, S., 25, 55, 58
 Kris, E., 46–47
 Krohn, J., 149–150
Kublai Khan (Coleridge), 89
 Kubota, Itchiku, 4, 135–136
 Kuhnle, A., 149–150
- Langton, C., 108
 language, evolution of, 65
 Larsen, S., 123–124
- Lascaux cave, 65, 73
The Last Supper (mural), 127
 Leakey, Mary and Louis, 63
 Lee, Stan, 177
 Leibniz, Gottfried Wilhelm, 38
 Leonardo da Vinci
 art education, 124
 artwork of, 18, 124
 challenges of, 122–123
 daydreaming of, 3, 18
 depression/lack of self-esteem, 128–129
 dyslexia and ADHD, 9, 112, 113, 126–127
 dyslexia and dysgraphia, 123–124
 education of, 69
 instructions for visual artists, 45, 126
 inventions, 127
 music as background, 122
 observations of, 124–126
 out-of-wedlock birth, 128
 self-image, 115, 116
 tangential thinking of, 127–128
 on wall stains morphing into paintings, 75
 Lerner, B.H., 164
 Lewis, Maud, 133
 Lewis-Williams, David, 13, 74–75
 Li Kung-lin, 133
 Libet, B., 42–43
 Library of Congress, National Recording
 Registry, 160
 lifesaving creative trance, 174–176
 Ligeti, György, 91
 Limb, C.J., 82
 limit cycles, 108
 Liu, S., 85
 Loiotile, R., 155
 Lomekwian stone tools (Kenya), 63
 loneliness, counteracting, 81
 Lorenz, Edward, 103
 Lu Chiu-yuan, 188
 Lujano, Bob, 152
 lung-gom-pa monks, meditations of, 17
 Lutz, A., 95
 Luvale people (Africa), 59
- Mach, Elyse, 131
 Madhill, D.V., 14
 Magherini, Graziella, 22
 Magritte, Rene, 17
 Makapansgat cobble, 66
The Making of a Poem (Spender), 87
 Mallett, Ronald Lawrence, 101
 Mälzel, Johann Nepomuk, 141
 Mann, Sargy, 152, 153–154
 Mantel, Hilary, 97–98
 manuports, definition of, 66

Margulis, Lynn, 7, 12, 25
 Marks-Tarlow, Terry, 101
 Marshack, A., 72–73
 Maslow, A.H., 34
Mathematical Creation (Poincare), 33
 mathematical formulas, 2, 15
 Matisse, Henri, 138
 Matloff, Greg, 25
 Mayseless, N., 84
 Mazzuola, Francesco, 28
 McClintock, Barbara, 2, 12, 25, 50
 McTell, Blind Willie, 159
 meditation
 Buddhist, 95–96
 multiple modes of, 95
 neuroscience of, 94–95
 as path of transcendence, 96
 Meijer, D.K.F., 187–188
 Melzi, Francesco, 123
 Merkabah mystics (Judaism), 96
 Messiaen, Olivier, 91
 Method Acting, 51
 Michelangelo, 52, 69
 Middle Stone Age, patterned pieces, 67–68
 Miller, B.L., 169, 173
 Milsap, Ronnie, 156
 mimetic culture, as forerunner to syntactic
 language, 65
 mind wandering, 82
 mind-universe connection, 188–189
 mirror neuron system, empathy and, 50
 mirror script, 123
 mirror-touch synesthesia, 90–91, 94
 Mitamirri, 31
 Mitchell, Joan, 7, 46
 Mithen, S., 65
 Mizuguchi, N., 149
 Mondrian, Piet, 93
 Monroe, Marilyn, 91
 Montuori, A., 78
 Morris, Stevland Hardaway. *see* Wonder, Stevie
 Morrison, I., 81
 Moss, Dean, 114, 116
 Mozart, Wolfgang Amadeus, 18, 88, 120
 multifaceted creative trance, 6–7, 11–12
 Munch, Edvard, 52, 109, 111
 Murdoch, Iris, 162–163
 music benefits, 81
 music composition, 17

 Nabokov, Vladimir, 91, 92
 naming as power, 109
 Native Americans
 escape fires used by, 175
 Kwakwaka'wakw story tellers, 59

traditions, 137–138
 Navajo sandpaintings, 3, 14, 22
 Neanderthals, 70
 negative dissociation, 55–56
 Nelson, K.P., 116
 neural challenges, learning disorders, 112
 neural criticality hypothesis, 104, 105
 neural signatures
 overview, 8, 80
 of creative trance, 80
 of meditation, 95
 of thoughts, 80
 neurons, subsymbolic microfeatures, 107
 neuropsychological anomalies, 44
 neuroscience
 overview, 80
 Catholic Carmelite nuns, 95
 of creativity, 81
 of insight and analysis, 176
 of meditation, 94–95
 Nietzsche, Friedrich, 45, 86, 97
No arms, no legs, no problem, 152
 nonlinear dynamics, 97
 Nthala, Grant M., 59–60

 O'Keeffe, Georgia, 53, 102, 131
 Oldowan stone tools, 63–64
 Olduvai Gorge, 63
 Olukun (deity of Benin), 3, 16
On Noise (Schopenhauer), 89
 open monitoring (meditation), 95
 Openness, creative trances and, 32
 original work, chaos/complexity leading to,
 98
 Orloff, J., 50
 ostrich eggshells, as water containers, 70
 Overy, K., 117
 Ozturk, Mehmet Sefa, 147

 pain modulation, 131–133
 painting
 directions from the work in progress, 46
 and implicit motor memories, 40
 Japanese, 53
 personal preferences and rituals, 54
 during thunderstorms, 99
 work style, 17
 paintings, empathic projection into, 50
 Paleolithic art
 figurative art, 65–66
 flint plaquettes, 71–73
 shell beads, 69–70
 Paleolithic tools
 Acheulean handaxes, 64–65
 Oldowan, 63–64

- panic attacks
 creative chaos from, 108–109
 energy states of, 108
 naming as power over, 109
 in poetry, 109–111
 poetry and visual arts benefit from, 109–111
 and self-organized criticalities, 107
 in visual art, 111
 in writers, 110–111
- paradoxical functional facilitation, 168
- parallel distributed processing (PDP) theory, 41
- Paralympic athletes, 150–152
- parietal art, 73
- Parkinson's disease, dance/mobility
 improvements for, 148
- Parmigianino. *see* Mazzuola, Francesco
- parts work, definition of, 47
- Pascual-Leone, Alvaro, 153
- Pasteur, Louis, 63
- Patanjali, 10, 184, 185
- Payton, Marie (Bootsy), 177, 186
- Penrose, R., 187
- Penrose-Hameroff formulation of orchestrated
 objective reduction (Orch OR), 187
- Pepion, Ernie Eewok, 137–138
- performances, metaphorical synesthesia in, 93
- Pfeiffer, J.E., 64
- Phillips, S., 123–124
- physiological experience synchronization, 20
- Piano Concerto for the Left Hand*, 170
- Picasso, Pablo, 113, 115
- Piero da Vinci, 124, 128
- Pinker, S., 114
- Pippin, Horace, 18–19
- placebo analgesia, 77
- plaquettes, 71–73
- Pliocene-era
 carvings, 66
 tools, 63
- Plotinus, 38
- poetry
 brain sites for, 85
 panic attacks and, 109–111
 as response to trauma, 109–111
- Poincaré, Henri, 33, 98
- possession trances, 59–60
- preconscious mind, 107
- prescriptions
 for free museum admission, 81
 for music, art, dance, 81
- Pretz, J., 32
- primary progressive aphasia (PPA), 161, 169,
 171–172
- primate use of tools, 62–63
- problem-solving approaches, 86–87
- projective identification, 46
- Proust, Marcel, 89, 105
- psychotropic substances, ingestion of, 75
- Puccini, Giacomo, 17, 56–57
- punctuated evolution, 103
- Qafzeh Cave, 68, 69, 71
- quantum brain process, 187–188
- Quneitra site, 72
- Ramachandran, V.S., 92–93
- Ramanujan, Srinivas, 2, 15
- Raphael, 69
- ratchet-effect, 78
- Rauschenberg, Robert, 115, 116
- Ravel, Maurice, 10, 168, 169–171
- readiness potential (RP), 42
- relativity theory, 2, 12
- religious practices, trance experiences in, 59
- religious traditions, chaos of, 98–99
- The Remembrance of Things Past* (novel), 105
- Remen, Rachel Naomi, 135
- Reynolds, Joshua, 141
- Rhapsody in Blue* (painting), 172
- Richards, R., 14, 78
- Ride of the Valkyrie* (Wagner), 93
- Ring Cycle* (opera), 16
- Ringshout* (dance from Africa), 136–137
- risk taking, 99
- Rockwell, Norman, 165
- Rockwell, Norman, Conference on Alzheimer's
 Disease, 165
- Rodin, August, 115
- Root-Bernstein, M., 51
- Rossol, Monona, 92
- Roux, St. Paul, 15
- Rowden, Terry, 157
- Rubik Cube, 52
- Rubik, Erno, 52
- Rubinstein, Ida, 170
- Ruffner, Ginny, 104–105
- Rumpelstiltskin, 109
- Ryder, Albert Pinkham, 138–139
- salience network (SN), DMN and CEN
 mediation, 83
- Saraoa dream images, 7, 16
- Schiller, Friedrich, 14
- Schnitt, D., 114–115
- Schopenhauer, Arthur, 89–90
- Schuur, Diane, 156
- The Scream* (painting), 111
- Seely, William W., 172–173
- Selberg, S., 164
- self-organization, 102, 103–104

self-organized criticality
 and avalanche behavior, 104
 and catharsis/creative trance, 105–106
 and insight, 106
 negative, 106–107
 and panic attacks, 107
 and punctuated evolution, 103–104
 and pursuit of excellence, 104–105
 self-transformation, 102
 sensitivity to initial conditions, 103
 Serlin, Ilene, 133–135
 sewing machine invention, 2, 12, 15
 Sforza, Ludovico, 127
 Shah, P.T., 121
 shamanism, 74–75
 Shear, J., 95
 Shearing, George, 156
 Shelley, Mary, 16, 99
 Shelley, Percy Bysshe, 57
 shells
 shell beads from Blombos Cave, 69
 shell beads from dispersed sites, 69–70
 symbolism of, 70
 Shostakovich, Dmitry, 18
 Siegel, B.B., 185
 Sikstrom, S., 122
 Simone, Nina, 19
 Singer, Isaac Bashevis, 42–43
 Skhul cave, 69
 sleep, creativity derived from, 15–16
 Smart, A., 122
 Smith, Tony, 29
 Snow, Jack, 28
 social change, evolution of, 78
 Soderlund, G., 122
 spacetime properties, 58, 101, 185–186
 spectator response, physical response as
 measuring, 21
 speech center, 85
 Spender, Stephen, 87, 88
 Sperry, R.W., 85
 Spinoza, Baruch, 38
 sports performance, 17–18
 Stanislavski, Constantin, 8, 51
 Stefanatos, G.A., 118
 Steinbeck, John, 15
 Stendhal syndrome, 7, 22
 Stewart, E.G., 99, 166
 Stewart, J.S., 27
 Stopgap Dance Company, 147
 storytelling, 117–118
 Stravinsky, Igor, 93
 structure of the creative process
 as personal preference and habits, 54
 delineation and rules, 52–54

Index

Subramaniam, K., 87
 Sufi tradition (Islam), 96
 Sullivan, Annie, 106
 Surrealism, 58
 survival instincts, 181
 Suzuki, Takayuki, 151
 Swanson, J.M., 118
 swimmers, 151
 symbiosis, 7, 12
 symbolic thought, 71
 sympathetic magic, 73
 synchronized behavior, 20
 synesthesia
 across domains, 93–94
 spontaneous vs., 93
 synesthetes
 creative trance and, 90–91
 creativity of, 91
 grapheme-color, 92
 synesthetic brains, connectivity/capacity for
 metaphor, 92–93
 Syphilis Study at Tuskegee, 156

 Tamil Hindu dances, 60
 tangential thinking, 127–128
 Tan-Tan, 66, 67
 Taoist energy through the meridians, 96
 Taoist painters, 14
 Tatum, Art, 158
 Tchaikovsky, Pyotr Ilyich, 57
 Tellegen Absorption Scale (TAS), 29
 Tellegen, A., 29
 Terry, Sonny, 158
 Theory of Mind, 50
 thought patterns, brain waves and, 87–88
 Thunberg, Greta Tintin Eleonora Ernman, 9,
 142–143
 Tibetan Buddhism
 contemplative practices, 23
 meditative runners, 2
 monks, 59, 94
 sand paintings, 14
The Time Machine (Wells), 101
 Titian, 69
 Tooby, John, 14
 tool making, 63
 Toole, David Vincent, 146–147
 Top-down information processing, 88
 Torke, Michael, 91
 Torres, Andres, 120
 Toulouse-Lautrec, Henri de, 132
 trance
 overview, 58–59
 definitions of, 13–14
 destigmatizing, 5

Index

241

- induction before creativity, 14–15
- meaning of, 5–6
- origins of, 3
- types of, 19
- unconscious mind, 7
- trance and possession disorder (TPD), 59
- transcranial magnetic stimulation, spectator
 - reaction measured by, 20
- transforming illness, 4, 9, 135, 139, 168
- trauma in creative work, 109–110
- Travis, E., 95
- Tureck, Rosalyn, 2, 26, 29–30
- Turner, Joseph Mallord William, 52, 144
- Twle (Kalahari Bushman), 35
- twice born human being, as religious concept, 71
- Tymoszuk, U., 81
- unconscious mind
 - overview, 37–38
 - automatic actions of, 7
 - dialectic in, 40
 - history and structures, 38–39
 - illusions of control, 43–44
 - parallel processing, 41
 - unconscious functioning as dominant, 42
- uncontrived spontaneous great compassion, 94
- Unravelling Bolero* (painting), 93, 171
- Utermohlen, William, 165, 166–168
- utilitarian magic, 73
- Valéry, Paul, 88
- Van Campen, C., 91, 93
- Vartanian, O., 89
- Vasari, Giorgio, 124, 126
- ventral stream, 182
- Venus of Willendorf sculpture
 - overview, 65, 76
 - as talismanic figurine, 76–77
- Vermeij, Geerat, 154
- Verne, Jules, 9, 117
- Vernon, M., 67
- Verrocchio, Andrea del, 124
- Victoria Longitudinal Study (cognitive
 - decline), 163
- virtual brain capacity, 79
- visual ambiguity, 66, 76
- visual art
 - brain sites for, 84–86
 - panic attacks and, 109–110, 111
- visual artists
 - Alzheimer's disease and, 165
 - blind, 152–154
 - visual thinkers, 113–114
 - visualization, 149, 176
 - Volkow, N., 118
 - von Helmholtz, Hermann, 38
 - Voyager probe, Johnson's song on, 159
 - Wagner, Lindsay, 120
 - Wagner, Richard, 16, 93, 140
 - Walker, Alice
 - The Color Purple*, 2, 26
 - gestation/writing time, 18
 - on creativity, 14
 - Wallas, Graham, 7, 32–33
 - Wasserstein, J., 118
 - Watkins, H.H., 47
 - Watkins, J.G., 47
 - Watson, Arthel Lane (Doc), 155
 - Watts, Andre, 131, 170
 - Wegner, D.M., 43
 - Wells, H.G., 101
 - Werther* (novel), 17
 - West, T.G., 113
 - Wheatley, T., 43
 - wheelchair dancing, 147–150
 - wheelchair rugby, 152
 - White, E.B., 27–28, 57, 103
 - White, H.A., 121
 - Williams, Robin, 120
 - Wise, J., 181
 - Wittgenstein, Ludwig, 170
 - Wittgenstein, Paul, 170
 - Wolfradt, U., 32
 - Wolfram, Stephen, 108
 - Wonder, Stevie, 26, 57, 157–158
 - wordless singing, 159
 - Wordsworth, William, 86
 - workshop tradition in artist education, 69
 - The Wrath of God* (film), 164
 - Wright, Frank Lloyd, 9, 19, 119, 120
 - Wu Chen, 50
 - Yarde, Richard, 136–137
 - Yeats, William Butler, 9, 113, 117
 - Yoga
 - concentration on chakras, 96
 - philosophy of, 10, 21
 - Yoga Sutras*, 184, 185
 - Zabelina, D.L., 90
 - Zorn-Hudson, Trischa, 151