

## Index

Note: Page numbers in *italic type* refer to figures and tables.

```
attachment, 133-134, 143
action schemas, 37
active intermodal mapping (AIM), 12, 27,
                                              attention
    188–189, 193, 195
                                                 awareness of, 106, 128-129
Adamson, L., 7, 93, 112, 146
                                                 decrement and recovery of, 149
adualistic stage, 77
                                                 language and sharing of, 145–146
affect exchange, 189-190, 193, 196
                                                 see also coordinated attention
affect mirroring, 130, 132, 135-136, 187
                                               auditory perception, 26, 28, 29, 85
  and concept of self, 137-138
                                               auditory stimuli, 43
  lack of, 138, 139-140, 141
                                               autism, 26, 33, 78, 113
affect sharing device (AFS), 30-31, 33,
                                               Bahrick, L. E., 83
    189-190
affect sharing/attunement, 13-14, 30, 31,
                                               Bakeman, R., 7, 93, 112, 146
    32, 33, 35, 58, 131, 141–142
                                               Baldwin, J. M., 57
  definition, 189
                                               Barillas, Y., 64, 94, 115,
  experimental evidence, 191-194, 192,
                                                   180-181
       194, 195, 195-197
                                               Barna, J., 162, 177
  impact of, 183-184
  lack of, 138-142
                                               Bayley, N., 149
  theoretical approaches, 186–190
  see also maternal affect sharing/
      attunement
affective awareness, 30, 31
                                              beliefs, 2
affective communication, 189-190
                                               Bellagamba, F., 63
                                              bio-social theory, 78-79
affective interactions, 92, 103, 132
Ainsworth, M. D. S., 133, 143
                                               block tasks, 120-122
Anderson, D., 84-85
                                               Bowlby, J., 133
animate/inanimate distinction, 70-71
                                               Brentano, F., 91
                                               Brooks, R., 1, 27, 31
  alternative factors, 55-58
  at 10 months, 63-70, 67, 68, 69
                                              Brooks-Gunn, J., 82
  definition, 47-48
                                               Bruner, J., 89, 145
  during first 6 months, 58-60, 61
  theories of, 48, 50
                                                      106, 109, 156
    contingency theory, 52-55
                                              brushing task, 69, 70
    materialist theory, 60-62
    motion theories, 51-55
                                               Carpenter, M., 112, 128
    Piaget's theory, 48-51
                                               Chomsky, N., 144
animism, 49, 62
as-if theorists, 6, 7
associative learning mechanism, 56
Astington, J. W., 36
```

Baron-Cohen, S., 12, 39, 100–103 behavioral categories, 150-152, 165, behaviorism, 11, 38-39, 198 intentions and attention, 4, 35, 91–92, cognitive structures, approaches to, 37-42 cognitive theories, 3-5, 10-11, 37-38, communicative development, 6-7

225



communicative development (cont.)	theoretical interpretations of, 180–182
see also dyadic interaction; triadic	desires, 2
interaction	developmental orientations, 10–16
conceptual awareness, 77	discontinuous development, 4, 5, 33
conceptual differentiation, 38	discrepant-focus scenario, 172
conceptual knowledge, 52, 77	discrimination, assessing, 42-43
conceptual methods, 74–75	domain general mechanisms, 46
conceptual self-awareness, 75–76, 80	domain specific mechanisms, 47, 55
constraint, 13	domains, 39
constraint constructivism, 13–14, 41–42,	Down syndrome, 49, 50, 146, 147
81, 130	Dunham, P., 54
constructivist theories, 58	Durgin, F., 55–56
see also constraint constructivism	dyadic interaction, 24, 93, 134
contingency detection module (CDM), 52,	and origin of mental states, 91–93
131, 187–188, 193, 195	eye-detection, 100–103
contingency learning, 94	intention as relationships, 106–108
contingency theory, 52–55, 130, 138–142	learning to perceive, 94–99, 95, 96, 97
continuous development, 33, 106	object of attention, 106
coordinated attention (CA), 112–113, 126,	dyadic skills, maternal factors influencing,
127, 144	143–144 <b>,</b> <i>147</i>
at 5.5 months, 116–120, 118, 119,	dynamic systems theories, 6, 7–8, 14–16,
120–122 <b>,</b> <i>121</i>	41, 131, 134–135
at 7.5 months, 122	
development of, 146	ecological self, 79
factors affecting development, 147,	ecological theories, 79–80
149–152, 156	EDD (eye direction detector), 40, 101
and gaze monitoring, 154	Emde, R. N., 36
social obstacle tasks, 120–122, 121	emotional awareness see affective awareness
theoretical controversies, 114–116	emotional expression see desire reasoning
Corkum, V., 94, 180	(experiments)
cross-modal matching, 27–28, 29, 30, 31,	emotional referencing, 118
33, 185	emotional sensitization, 135
see also active intermodal mapping	emotions
cued habituation study, 167–169, 168,	sharing of see affect sharing/attunement
170–172 <b>,</b> <i>175</i>	see also desire reasoning
	emulation, 64
declarative pointing, 94, 96, 96, 181	endogenous factors in ToM development, 24
depression, 132, 140–141, 146	affect awareness and sharing, 30–36
Descartes, R., 3–4, 72, 73	continuity of, 154–157
desire reasoning	interaction with exogenous, 24, 30,
development of, 178–179	36–42, 135
experiments, 162–163	"like me" mechanism, 25
cued habituation study, 167–169, <i>168</i> ,	epistemic intention, 106, 156
170–172, 175	exogenous factors in ToM development,
familiarization study, 169–170,	24, 36
170–172	interaction with endogenous, 24, 30,
gaze following study, 172–176, 178,	36–42, 135
180–181	see also social interaction
general method, 163–167	eye contact see gaze following; gaze
with 9-month-olds, 171, 178	monitoring; gazing
with 12-month-olds, 162–163,	face recognition 25 24 92 95 94
171–172	face-recognition, 25–26, 82–85, 84
in 18-month-olds, 161	facial expressions, 124–125, 126, 179
precursors to, 160	familiarization study, 169–170, 170–172
research on, 160–161, 176–177	Field, T., 140, 189



```
Flavell, J. H., 1, 33, 200
                                               imitation, 64, 107-108, 195
Fogel, A.
                                                 and development of self, 81, 86
  on concept of self, 78
                                                 as innate skill, 26–30, 29, 57, 188–189
                                               imperatives, 96
  on environment, 33
  on intentionality, 7
                                               incongruent focus study, 172-176
                                               infant controlled familiarization study,
  methodology of, 45
  on relationships, 15, 41, 106-108, 109,
                                                    169–170, 170–172
       134, 156, 189
                                               infant prosocial behaviors, 139–140, 151,
                                                    165, 166
Gallup, G. G., 82
                                               inference, 14, 60–62
gaze following, 12, 93, 94, 111, 112
                                                 see also self-inferential processes
                                               innate factors see endogenous factors in
gaze following studies, 94, 95, 115,
     162-163, 172-176, 178, 180-181
                                                    ToM development
gaze monitoring, 113, 122-123, 124-125,
                                               innate inter-subjectivity theorists, 6-8
    126, 154
                                               instrumental intentions, 106
                                               integrative approach, 8
gazing
  by adults, 92
                                               intelligence measures, 149
  by infants, 92, 152-153
                                               intentional imitation, 64
  mutual, 103, 106
                                               intentionality, 90, 111
                                                 and affective sharing, 141, 142
Gelman, R., 47, 55-56
                                                 in animate/inanimate distinction, 63-70,
Gelman, S. A., 47
Gergely, G., 60–62, 114, 187–188, 193,
                                                      67, 68, 69
                                                 Baron-Cohen's theory, 12, 39-41
    195
Gibson, E.J., 80
                                                 Bruner's theory, 91, 106
give and take tasks, 116-120, 118, 119,
                                                 cognitive view of, 3-5
    120–122, 122–124, 126–128
                                                 integrative view of, 8
                                                 nativist theories, 11, 12
  see also tease and give tasks
goal detection, 113-114, 126-127
                                                 as relationships, 106-108
  at 5.5 months, 116-120, 118, 119,
                                                 and social interaction, 158, 177-178
       120–122, 121
                                                 social view of, 5-8
  at 7.5 months, 122
                                                 see also desire reasoning; goal detection
  with people and objects, 122
                                               intentions, as precursors to Theory of Mind,
  social obstacle tasks, 120-122, 121
  teasing experiment, 124-125, 126,
                                               interaction
                                                 with people and objects, 47
  theoretical controversies, 114-116
                                                 see also social interaction
goal-directed behavior, 35, 62, 111
                                               intermental knowledge, 6
Gopnick, A., 161, 188-189
                                               interpersonal awareness, 30, 81, 135
Gotleib, S. J., 35
                                               interpersonal self, 79
                                               interrater reliability, 165-166, 170,
habituation techniques, 43-44, 115, 149,
                                                    175 - 176
                                               inter-subjectivity
  desire reasoning, 167-169, 168,
                                                 primary, 6, 142
       170-172, 175
                                                 primitive, 110
Hains, S., 40
                                                 secondary, 7
Harlow, H. F., 133
                                                 and sharing of emotions, 31, 35
helplessness, 138
                                               intramental knowledge, 5
Heyes, C. M., 198
                                               Izard, C. E., 189
higher order consciousness, 76
Hobson, R. P., 15, 72, 78, 109
                                               Jaffe, J., 147, 158
Hsu, H., 45
                                               Johnson, S. C., 63
human stimuli, preference for, 25-26
                                               joint attentional behaviors, 111, 128-129,
IBQ (Infant Behavior Questionnaire), 150
                                                 see also coordinated attention; goal
ID (intentionality detector), 40, 101
                                                      detection
```



Karmiloff-Smith, A., 13, 39, 86-87	mimicry, 64
Kaufman, L., 55-56	mirror studies, 75, 77, 82–83
Kuhl, P., 28	mirroring see affect mirroring
, ,	mock tasks, 120–122, 121
language development, 144	modular theory, 11, 12, 100–103
and sharing attention, 145–146	modules, 39
see also prelinguistic communication	Moore, C., 94, 180
Legerstee, M.	Moore, M. K., 27, 30, 31, 193
animate/inanimate distinction, 6, 50,	Moses, L. J., 172, 182
54–55, 59, 64, 115, 180	mother–infant interactions, 131
desire reasoning, 162, 177, 180–181	dysfunctional, 132
emotion sharing view, 13–14	historical perspectives, 132–137
endogenous and exogenous factors, 36	impact on desire reasoning, 162
habituation study, 44	see also maternal affect sharing/
imitation, 28	attunement
impact of maternal affect, 15, 138, 143,	motion theories, 51–55
146, 148	Muir, D., 40
intentionality, 94	
self-recognition, 84–85	narrative structuring, 145
Lewis, M., 82	nativism, 6, 11, 13, 39–41, 87, 130
"like me" mechanism, 25, 34, 57, 183,	Neisser, U., 79–80
184–186	neuro-cognitive mechanisms, 39, 40,
	100–103
maintaining attention, 150–152, 165	non-nutritive sucking paradigm, 43
materialist theory, 60–62	nonverbal referencing phase, 7, 93
maternal affect mirroring, 135–136,	nonversus referencing primes, 1, 23
139–140	object permanence tasks, 42
	object-oriented phase, 93
maternal affect sharing/attunement, 16,	
159, 178, 191–194, 195–197	objects see animate/inanimate distinction;
enduring impact of, 147–154	desire reasoning; triadic interaction
impact on dyadic and triadic skills,	ontology, 4
143–144, <i>147</i>	other, 72, 77
impact on prelinguistic communication,	1 / 1 /
145	people/object distinction see animate/
operationalizing, concept of, 150–152,	inanimate distinction
165, 166	perceptual awareness, 77
maternal depression, 132, 140–141, 146	perceptual differentiation, 38
maternal scaffolding, 149, 153, 156	perceptual knowledge, 52
Meltzoff, A. N.	perceptual methods, 49, 74–75
on cross-modal perception, 27, 28, 30,	perceptual self-awareness, 75-76
31, 185, 188–189, 193	Perner, J., 180
on intentionality, 1, 63, 115	personal effectance, 157
nativist approach of, 12-13	Phillips, W., 113, 162, 177
mental schemas, 37	physical domain, understanding of, 9, 36,
mental self, 86	46–47, 90
mental states, 4–5, 9	physical self, 81–82
awareness of see Theory of Mind	Piaget, J.
origin of, 91–93	on animate/inanimate distinction, 46,
eye-detection, 100–103	48–51
intention as relationships, 106–108	on cognitive development, 10–11, 27,
learning to perceive, 94–99, 95, 96, 97	37–38
object of attention, 106	methodology of, 42
methodology, 49, 74–75	theory of self, 76–77
experiments see desire reasoning; triadic	
skills	pointing, 94, 96, 96, 181 Poulin-Dubois, D., 51, 56
SKHIS	rounn-Dubois, D., 51, 50



prediction, 1	sequential loglinear analysis, 44
preferential looking paradigms, 25, 42	similarity, recognition of, 25, 29, 34, 57,
prelinguistic communication	183, 184–186
development of, 144	Skinner, B. F., 11
impact of affect attunement on, 145	smiling, 152
Premack, D., 11, 114	social biofeedback model, 187–188
prepared learning theory, 5, 94–99, 95, 96,	social cognitive development, study of, 200
97, 184	social domain, understanding of, 36, 46–47
primary consciousness, 76	social expectancy, 139–140
primary inter-subjectivity, 6, 142	social influences see exogenous factors in
primitive inter-subjectivity, 110 primordial sharing, 104	ToM development social interaction
prosocial behavior see infant prosocial	analyzing, 44–45
behaviors	deprivation of, 132–133, 134
psychoanalytic theory, 132–133	importance of, 12, 24, 36, 158–160
put in task, 67, 70	in Fogel's view, 15, 41, 106–108, 109,
put in tusis, or, to	134, 156, 189
Rakinson, D. H., 51, 56	innate motivation for, 154–157
Ramey, C. T., 53	and intentionality, 177–178
re-enactment paradigm, 63, 64–70, 67,	role in development of self, 78–79, 79–80
68, 69	see also affect mirroring; affect sharing/
Reddy, V., 103–106, 109, 124, 127, 156	attunement; desire reasoning;
referential awareness, 172-176, 178	mother-infant interactions
see also desire reasoning	social interactionists, 5–8, 131
referential communication, 93	social learning, 107
see also triadic interaction	see also associative learning mechanism;
Repacholi, B. M., 161	contingency learning
representational redescription, 87	social learning theory, 58
representational thought, 86-87	social obstacle tasks, 120-122, 121, 127
	social responses, 26–30, 29, 50, 57
SAM (shared attention mechanism), 40,	social responsiveness (maternal), 151, 165
102	social self, 86
scaffolding, 103, 106, 145, 147, 149, 153,	social understanding, studying, 44
156 Schoffen II D 25	socio-cognitive view, 3–5
Schaffer, H. R., 35	speech (infant directed), 109
Schaffer, M., 84–85 secondary inter-subjectivity, 7	speech perception, cross-modal matching in, 28
self	Spelke, E., 47
and affect mirroring, 137–138	Spitz, R., 186
concept of, 72–73	statistical analysis, 44
consciousness of physical, 81–82	Stern, D., 33, 132, 189
consciousness of social and mental, 86	stimulus enhancement, 64
as representational agent, 86–87	stranger–infant interaction, 147–152, 153
as unique mythical entity, 88	, , , , , , , , , , , , , , , , , , , ,
self-awareness, 87–88	Tager-Flusberg, H., 36
face and voice, 82–85, 84	take out task, 68, 70
and gazing, 92	tease and give tasks, 121, 124-125,
perceptual and conceptual methods,	126–128, 127
74–75	teasing, 113, 124–125, 126, 127, 129
philosophical theory, 73–74	temperament, measuring, 149
theories of, 75–81, 103	Theory of Mind, 197
self-inferential processes, 30, 135	defining, 2–3
self-organization, 8, 15, 107	factors in development of, 16–17, 197
Seligman, M. E. P., 138	see also endogenous factors; exogenous
sensori-motor period, 37	factors



## 230 Index

Theory of Mind (cont.) teasing, 124-125, 126 and intentionality, 3, 4, 8-10 Theory of Mind mechanism (ToMM), 40 Tomasello, M., 3, 9, 34, 63, 90, 115 transfer effects, 53-54 Trevarthen, C., 35, 78, 130, 145, 189 triadic interaction intention and attention, 89-90, 94 nature of, 24 progression from dyadic, 93 triadic skills, 128-129 development of, 111-112 coordinated attention, 112-113 goal detection, 113-114 experiments, 116, 126-128 193, 195 CA and goal detection, 116-120, 118, 119 goal detection with people and objects, 122 - 123social obstacle tasks, 120-122, 121 Zeedyk, S. M., 8