## Index

NOTE: Page numbers in italic type refer to figures.

| AbbVie website, 197–200 | Barad, Karen, 35, 39–41, 87, 217 |
| see also Takeda Abbot Pharmaceuticals | Bayley, N., 176 |
| activism | behaviour |
| and resistance, 212–15 | environmentalist accounts, 12 |
| and support for parents, 210–11 | risk-taking behaviour, 178–90 |
| actor network theory (ANT), 32 | Belkin, Lisa, 2, 128, 157–8, 160–1 |
| Adams, Vincanne, 48 | Bellis, Mark, 119, 183–4 |
| adolescence | Belluck, Pam, 104, 143 |
| historical concepts of, 52–8 | Belsky, Jay, 151–8 |
| meaning and difference, 229 | Berkson, D. Lindsey, 11–13 |
| photographic images of, 228–9, 229–31 | bio-psycho-social relations, 232, 235–7 |
| see also puberty | and causation, 160–6 |
| adoption | entanglements, 86–90, 123, 160–6 |
| in Belsky’s work, 153 | foldings, 192–6 |
| international, 147–9 | and treatments, 195–6, 236–7 |
| affect see feelings | see also psycho-social explanations |
| age | biomedical approach, 232–3 |
| and defining normality, 96–104, 204 | politics of, 238–40 |
| measuring, 111 | see also scientific understandings of |
| agential cuts, 87 | puberty |
| agential realism, 40 | biomedicalisation, 131, 200–1 |
| Ahmed, Sara, 41–2 | Biro, F.M., 103–4, 115–16 |
| Aksglaede, L., 103–6, 115, 136–7 | BMI see weight |
| alcohol use, 183 | Boas, Franz, 60 |
| Almerisa, photographs of, 229–31 | bodies |
| American Psychological Association (APA), 16–17 | bio-psycho-social entanglements, 86–90, 123, 160–6 |
| Andrusiak, Tania, 15 | feminist theories, 35–41 |
| anthropological approach, 154 | historical discourses of female, 54–5, 56 |
| apparatuses, Barad’s concept of, 39 | bodies-in-the-making, theorising, 32–5 |
| attachment theory, 149–50 | Boepple, P.A., 232 |
| auxology, 58–61 | Bogalusa Heart Study, 101, 135 |
| Avon Longitudinal Study of Parents and Children (ALSPAC), 106–7 | Bohr, Niels, 39 |
| Bachrach, Laura, 143 | Bowker, G.C., 193–4, 235–6 |
| Bailey, Reg, 19 | Breakthrough Breast Cancer, 173–4 |
| | Breakthrough Generations Study (Morris), 107, 108, 118, 131–2, 136 |

279
breast cancer
  toxins, puberty and, 171–4
  see also Breakthrough Generations Study
Breast Cancer and Environment Research Center (BCERC), 103, 115–16, 173
breast development, 94, 97–8, 103, 105–8
  assessment of, 100–1, 109
  and obesity, 100–1, 135
  Tanner Scale, 76, 78–9
British Society for Paediatric Endocrinology and Diabetes (BSPED), 223–4
Brooks-Gunn, Jeanne, 179, 187–8
Brown, J., 157
Brumberg, Joan Jacobs, 57
Buckingham, David, 17–19
Burman, E., 47
Buyken, A.E., 137

causes of early onset puberty, 128–30
  bio-psycho-social entanglements, 160–6, 191
direct physical causes, 130
  environmental toxins, 10–13, 139–45, 148, 171–4
genetic factors, 130–4, 154, 232–3
  obesity, 12, 114–15, 118, 134–9
psycho-social explanations, 146–7
  early experiences, 148–60
  international adoption, 147–9
Child Growth Foundation, 210–11

childhood experiences
  adversity as mediator of puberty, 190–1
  as factor in early onset puberty, 148–60
  as research subjects, 71, 81–6
  of treatment, 207–10, 222, 224–5
children
  measurement techniques, 64
  as research subjects, 59–60, 62–4, 153
  Tanner and Whitehouse study, 64–8, 71–5, 79–86
transgender, 219–25
Clarke, Adele, 35, 131, 200–1
  class see social class
  Cohen, Tamara, 179
  Colborn, Theo, 10–11
  Coleman, Rebecca, 164
  Congenital Adrenal Hyperplasia (CAH), 207
  consent, 63–4, 68
  consequences of early onset puberty, 170
  cancer, 171–4
  and concept of folding, 192–6
  height, 175–8
  mediated by adversity, 190–1
  risk-taking behaviour, 178–90
consumption
  and adolescence, 57–8
  and sexualisation, 14–18
contemporary scientific research, 91–3, 204
defining limits of normal, 96–104
  enacting social class, 117–21
  feminist engagement with, 124–7
global variance, 105–9, 119
  measurement tools and methods, 109–12
  measuring and materialising race, 112–17, 119–20
  on normal puberty, 93–6
  sex categorisation, 121–3
Corley, Kevin, 7
corporeal feminism, 35–41
Creighton, Sarah, 84–5
crisis
  concept of, 23–6
  discourse of, 1–2, 52–8, 104
  as gendered, 2–4
Index

critique, 35–7, 125–6
cultural studies, 45–8
data, 42–3
davis, Noela, 42
davis, Peter, 200
davison, K.K., 136
derdorff, J., 157
deleuze, Gilles, 193
demerath, E.W., 137
depression, 185
    medication for, 216–18
diethylstilbestrol (DES), 205
difference-inclusion paradigm, 112
dijkstra, Rineke, 228–9, 229–31
downing, Jennifer, 119, 183–4
Draper, Patricia, 151–8
drugs
    illegal, 183
    medication see hormonal treatment
dumanoski, Dianne, 10–11
Dumit, Joseph, 200, 203
eye on set puberty
    changing definition of normal and,
        96–104, 204
    changing patterns, 95–9
    implications of, 4–5
    feminist theory, 21–3
    loss of childhood, 5–9
    loss of reproductivity, 9–13
    sexualisation, 13–21
    subjective experience of, 190–1
    use of term, 4
    see also causes of early onset puberty;
        consequences of early onset puberty;
        contemporary scientific research;
        historical concepts of puberty;
        treatment
Eckert, Lena, 123
ecology, use of term, 163, 165
egan, Danielle, 120–1, 164
Elks, C.E., 132–3
Ellis, Bruce, J., 154–8, 161
embodiment, 162, 165
emergence, 162
Endocrine Society, 224
endocrine-disrupting chemicals, 10–13,
    139–45, 148, 171–4
estedocrinology, 56
Endometriosis Research Center, 213
entanglements, 39, 86–90, 123, 160–6
    see also bio-psycho-social relations
    environmental context, and responsibility, 234
    environmental toxins
        cancer and, 171–4
        as factor in early onset puberty, 10–13,
        139–45, 148, 171–4
    environmentalism, and loss of reproductivity, 9–13
Epstein, Steven, 112–13
ethics
    and child research subjects, 63–4
    and scientific photography, 68, 85
    ethnographic approach, 33–5, 41–5,
        92, 130, 194
euling, Susan, 80, 103, 109–11, 115–16
    experience see childhood experiences
father absence, 154–5, 157–9
Fausto-Sterling, Anne, 34–5, 122–3,
    162, 175, 233–4, 237
feelings
    and concept of puberty, 31
    see also childhood experiences
Fels Longitudinal Study, 137
female bodies
    historical discourses of, 54–6
    and hope for future, 48
female puberty, focus on, 3–4
    feminism
        engagement with science, 35–45,
            124–7, 239–40
        first wave discourses of puberty, 56
        and implications of early onset puberty, 21–3
    and Pinto’s work, 192
    feminist science studies, 32–5, 92–3
    feminist theory
        of biological bodies, 35–41
        of bodies-in-the-making, 32–5
        corporeal feminism, 35–41
        and critique, 35–7, 125–6
        and figurations of childhood, 45–8
        new materialist feminism, 35–41
        and sexualisation, 20
    figurations, and concept of puberty, 31
    findings, 43, 125
    and concept of puberty, 31
folding, 192–3
puberty as form of, 193–6, 232, 235–6
Fonagy, Peter, 216
foster care, 184
see also institutionalised children
Fraser, Suzanne, 215
Freedman, D.S., 101, 135
FSH (follicle-stimulating hormone), 94
future
discourses of hope, 47–8
see also reproduction
Gabe, Jonathon, 200
Galton, Francis, 67
Garry, V.F., 140
Gender Identity Disorder (Gender Dysphoria), 219–25
Gender Identity Research and Education Society, 223
gendering
of concerns about toxins, 143–4
of crisis discourse, 2–4
in figurations of childhood, 47
genetic factors, 130–4, 154, 232–3
girlhood, and hope for future, 48
glandular model, 52–3
global variance in pubertal timing, 105–9, 119
GnRH (gonadotropin-releasing hormone), 94
GnRH (gonadotropin-releasing hormone) analogues see hormonal treatment
Graber, Julia, 179, 185, 187–8
Greenspan, Louise, 197
Greulich, W.W., 176
Grosz, Elizabeth, 36–8
growth
eyear science of, 58–61
Tanner and Whitehouse see Harpenden Study
see also height
growth charts, 79, 176
see also Tanner Scale
Hall, G. Stanley, 53–6
Hall, Stephen, 79
Halpern, Carolyn Tucker, 181–3
Haraway, Donna, 32–3, 40, 124–5, 162, 165, 31
Harpenden Study (Tanner and Whitehouse), 61–4
criticism of sample, 79–81
measurement issues, 70–1
participants, 71–5, 150
participants’ experiences, 81–6
photography and measurement, 64–70
pubertal sequence and variation, 75–8
use of Tanner Scale and charts, 78–81, 96–7
Harris, Anita, 20, 120
Hawkes, Gail, 164
health education, 56–7
Healy, David, 202
height
hormonal treatments relating to, 208
impact of early onset puberty on, 175–8
as measure of treatment effectiveness, 204
height charts, 176
height predictions, 175–6
heritability, 134
Herman-Giddens, Marcia
on bio-psycho-social relations, 160–1
PROS study, 97–8
BMI, 133–6
crisis discourse following, 1–2, 104, 142
criticism and defence, 100–3
racial differences, 113–16
on study of male puberty, 3
Hess, Alfred, 60
Hiatt, R.A., 167, 173
Hirsch, H., 202
historical concepts of puberty, 51–2
bio-psycho-social entanglements, 86–90
eyear science of growth, 58–61
nineteenth and twentieth centuries, 52–8
Tanner and Whitehouse study, 61–4
criticism of sample, 79–81
measurement issues, 70–1
participants, 71–5, 150
participants’ experiences, 81–6
photography and measurement, 64–70
pubertal sequence and variation, 75–8
use of Tanner Scale and charts, 78–81, 96–7
hope, discourses of, 47–8
hormonal treatment
access to medication, 222, 225
actions, 201–2
analysing and understanding, 215–19
criticisms of, 212–15
effectiveness of, 204, 208–9
evaluating, 225–7
medical research on, 202
parental views of, 202–3
prescribing practices, 204–5
for transgender children, 219–25
US and UK approaches, 197–8
uses and impact of, 205–12
hormonally active products, 145
see also endocrine-disrupting chemicals
hormones
link with cancer, 171
link with thought styles, 152
measurement of, 110–11
obesity, puberty and, 135–6
role in puberty, 94–5
Howard, Philip, 81–6
HPG (hypothalamus-pituitary-gonadal) axis, 94
Hughes, Christine, 163
Hughes, L.A., 177–8, 180
hurried childhood, 5
Imperato-McGinley, Julianne, 122–3
indeterminate sex see intersexuality
infertility, 93
institutionalised children
as research subjects, 59–60, 62–4, 153
Harpenden Study, 64–8, 71–5, 79–86
and stress, 184
see also adoption
inter-uterine experience, 150
international adoption, 147–9
intersexuality, 84–5, 122, 206–7, 210
intra-action, 40, 217
Jacobson, J.D., 101–2
Jampert, Christian, 58
Johansson, Therése, 178, 180–1
Jordan-Young, Rebecca M., 207
Kaltiala-Heino, R., 192
Kaplowitz, Paul
on BMI, 135–6
on decision to treat, 177, 204–5, 211–12
in defence of PROS study, 100–3
and defining normal, 80, 99
on height predictions, 176
on lack of research, 97
neglect of cancer, 174
on psycho-social causes, 156–7
on racial difference, 114–15
Karkazis, Katrina, 207
Keller, Evelyn Fox, 34–5, 128, 133–4, 238–9
Kelty, Christopher, 44–5
Kinsey Reports, 57
Kirby, Vicki, 42
Kolata, Gina, 100
Koselleck, Reinhardt, 23–6
La Nauze, Andrea, 15–16
Lamprey, J.H., 69
Landecker, Hannah, 44–5
Lazar, L., 134
Leclerc, George, Comte de Buffon, 58
Lederer, Susan, 59–60
Lee, J.M., 137
Lemonick, Michael, 1, 8–9, 178
leptin, 136
Lesco, N., 74
LH (luteinising hormone), 94
Lien, L., 186
Lupron (leuprolide acetate)
AbbVie website, 197–200
actions, 201–2
cost of, 204
opposition to, 212–15
for transgender children, 221–2, 224
Lupron Victims Hub, 212–15
Lury, Celia, 163
Ma, H.M., 107–8
Maehle, A.-HL, 67–8
male puberty, minimal attention to, 3–4, 96, 104
Mantovani, A., 141
Marriage, 159
Marshall, W.A., 96
McGarth, Roberta, 70
Mc'Charek, Amade, 44, 117
McRobbie, Angela, 167–8
measurement
and early science of growth, 58–9
of male and female puberty, 3
of race, 112–17
Tanner and Whitehouse see Harpenden Study
tools and methods, 64, 109–12
twentieth-century understandings, 54
media
on crisis of pubertal timing, 1–2
on environmental toxins, 141–5
on loss of childhood, 5–9
misrepresentations of research in, 182–3
on obesity–puberty link, 137–8
and sexualisation, 7–9, 15–17, 160–1
medical research, sponsors of, 202
medicalisation, 199–201
see also biomedicalisation
medication
anti-depressants, 216–18
hormonal see hormonal treatment
menarche
average age of, 19, 98–9, 103, 106–9
and breast cancer, 172–3
data collection, 110
genetic influences, 132–3
and race, 107
and risk behaviour, 180–1
and socio-economic status, 105, 107–8, 118
and weight, 135–6
menstruation
age of onset see menarche
discourses of, 52, 54–5, 56
mental health
and early onset puberty, 186–8, 192
see also depression; stress
Midyett, L.K., 101–2
migration, 148
Millican, Lynne, 212–15
Mitchell, Claudia, 22
mixed heritage, 115
Mol, Annemarie, 33–4, 87–9
molecular biomarkers, 140
Moore, W.V., 101–2
Moorhead, Joanna, 23
motherhood (teenage), 167–8, 195–6
Mouritsen, A., 144
Mul, D., 177–8, 180
multiplicity, 87–9
Muybridge, Eadweard, 68–9
Myers, John Peterson, 10–11
National Children’s Home (NCH), 62, 73
see also Harpenden Study
National Women’s Health Network, 213
new materialism, 35–41, 88–9
NHANES III (National Health and Nutrition Examination Survey), 98–9, 116
obesity, 12, 114–15, 118, 134–9
online parenting forums, 137–8
online video blogs (vlogs), 222, 224–5
ontology, and multiplicity, 87
orchidometry, 3
orphans, 59
see also institutionalised children
O’Sullivan, E., 202–3
O’Sullivan, M., 202–3
Palmert, M.R., 232
palpation technique, 100–1
Papadopoulos, Linda, 18
Parent, A., 105, 119, 148, 233–4
parents and parenting
and environmental toxins, 141–5
as factor in early onset puberty, 151–9
and obesity, 137–8
and pharmaceutical industry, 199–200
support for, 210–12
views of hormonal treatments, 202–3
parental investment theories, 154–5
Patton, Cindy, 168
Pediatric Research in Office Settings see PROS
Penny, Laurie, 21
Index

pharmaceutical industry
  AbbVie website, 197–200
  advertising, 197–200, 203, 205
  discourses of, 199–201, 203
  as research sponsors, 202
  TAP misconduct, 213
pharmaceuticalisation, 200, 226
Philip, M., 134
photography
  Dijkstra’s images of adolescence, 228–31
  impact on participants, 84–6
  scientific, 64–70, 84–6
physical causes of early onset puberty, 130
Pilcher, Lesley, 56–7
Pinneau, S.R., 176
Pinto, Kristina, 2, 190–2
Posner, Rachel, 188–9
Postman, Neil, 5–7
precocious puberty
  use of term, 4
  see also early onset puberty
prescribing practices, 204–5
PROS (Pediatric Research in Office Settings) study (Herman-Giddens), 97–8
BMI, 135–6
  crisis discourse following, 1–2, 104, 142
  criticism and defence, 100–3
  racial differences, 113–16
  psycho-social explanations, 146–7
  early experiences, 148–60
  international adoption, 147–9
  psychological development, and
  Tanner’s work, 71, 73–5
pubertal timing
  changes in, 95–9
  and discourse of crisis, 1–2, 52–8, 104, 191
  gendered research on, 2–4
  global variance in patterns of, 105–9, 119
  measurement tools and methods, 64, 109–12
  see also early onset puberty
puberty
  as bio-psycho-social, 232, 235–7
  conceptualising, 30–1
  as form of folding, 193–6, 232, 235–6
  see also scientific understandings of puberty
pubic hair growth, 98, 102, 106–7
  assessing, 109, 116
  and obesity, 135
  Tanner Scale, 76, 78–9
public debate on sexualisation, 13–21
Pyle, S.I., 176
queer debates, 46
Quetelet, Adolphe, 58–9
race
  and discourses of child health, 59
  and discourses of puberty, 55–6
  and discourses of risk, 168–9
  and environmental toxins, 141, 144
  in figurations of childhood, 47
  measuring and materialising, 112–17, 119–20
  and pubertal timing, 97–9, 103–4, 107
  and risk behaviour, 187
  and scientific photography, 69
  in Tanner and Whitehouse study, 80
Reid-Walsh, Jacqueline, 22
Reist, Melinda Tankard, 14
Renold, Emma, 164
reproduction
  and discourses of hope, 48
  environmentalist discourse of loss, 9–13
  see also teenage motherhood
reproductive strategy, 151
Reprogen Consortium, 132–3
research subjects see children
Ringrose, Jessica, 164
risk, race and discourses of, 168–9
risk-taking behaviour, 178–90
Ritzén, E. Martin, 178, 180–1
Roberts, Celia, 138, 215
Roen, Katrina, 206–7, 224
Rose, Nikolas, 44
Rosenfield, Robert L., 100
Rubin, Carol, 79–80, 106–7, 115–16
Rush, Emma, 15–16
Savage, J., 57–8

science
engagement with, 238–40
feminist engagement with, 35–45, 124–7, 239–40
science studies approach, 32–5, 88–9, 92–3, 226
scientific photography, 64–70, 84–6
scientific understandings of puberty, 51–2, 91–3, 204
bio-psycho-social entanglements, 86–90
defining limits of normal, 96–104
eye science of growth, 58–61
enacting social class, 117–21
feminist engagement with, 124–7
global variance, 105–9, 119–23
measurement tools and methods, 109–12
measuring and materialising race, 112–17, 119–20
nineteenth and twentieth centuries, 52–8
on normal puberty, 93–6
sex categorisation, 121–3
Tanner and Whitehouse study, 61–4
criticism of sample, 79–81
measurement issues, 70–1
participants, 71–5, 150
participants’ experiences, 81–6
photography and measurement, 64–70
pubertal sequence and variation, 75–8
use of Tanner Scale and charts, 78–81, 96–7
see also biomedical approach
Seaman, Barbara, 206
Seaton, Elizabeth, 22–3
sex education, 56–7
sexual abuse, 7, 15, 97, 157
sexual activity, 179–83, 188–9, 195
sexual ambiguity see intersexuality
sexual development
as problem, 167–70
see also puberty
sexual difference
categorisation in scientific research, 121–3
and hormonal accounts of puberty, 94–5
nineteenth- and twentieth-century discourses of, 54–5
and response to toxins, 144
see also intersexuality
sexualisation, 7–9, 13–21, 120–1, 161, 163–5
sexually transmitted infections, 168
Sherwood, Laurelle, 93–5
Shostak, Sara, 140
Shuttleworth, F.K., 70
side effects, of Lupron, 212–13
Smiley, L., 219–22
social class
classing of children, 47
in discourses of puberty, 55
enacting in scientific research, 117–21
and pubertal timing, 107, 108
and risk-taking behaviour, 183–4, 187
and teenage motherhood, 168
SSRIs (selective serotonin reuptake inhibitors), 216–18
Stacey, Jackie, 234
Stahel, Urs, 231
Star, L., 235–6
Steinberg, Laurence, 151–8
Steingraber, Sandra, 11, 163, 171–3
Stoller, Johann, 58
Strange, Julie-Marie, 52
stratification
and endocrine disrupters, 141
see also race; social class
stress
as cause of early onset puberty, 152, 156–7, 160
as consequence of early onset puberty, 185–8
as mediator in puberty experience, 190–1
see also trauma
Tagg, John, 67
Takeda Abbot Pharmaceuticals (TAP), 197, 213
Tanner, James M., 176
see also Harpenden Study
Tanner Scale, 76
use of, 78–81, 96–7
Index

technology, and ‘loss of childhood’, 5–7

technoscience, politics of, 238–40

teenage motherhood, 167–8, 195–6

thought styles, link with hormones, 152

Throsby, Karen, 138

transgender children, treatment for, 219–25

trauma

as factor in early onset puberty, 149–50

see also stress

treatment

access to, 222, 225

analysing and understanding, 215–19

bio-psycho-social dimensions of, 195–6, 236–7

children’s experiences of, 207–10, 222, 224–5

criticism and resistance to, 212–15

effectiveness of, 204, 208–9

evaluating, 225–7

hormonal actions, 201–2

implications of defining normal for, 96–104

medical research on, 202

medicalisation, 79, 199–201

parental views of, 202–3

pharmaceutical industry discourses of, 199–201, 203

prescribing practices, 204–5

relating to height, 177–8

support for parents, 210–12

for transgender children, 219–25

US and UK approaches, 197–8

and use of growth charts, 79

uses and impacts of hormonal, 205–12

Truran, P., 140

tween-agers, 20, 22, 120

Tyler, I., 168

valentine, kylie, 215

victimisation, 186–7

Visser, Hripsime, 228, 230

vlogs (video logs), 222, 224–5

Walkerdine, Valerie, 120

Wang, Carol, 7, 9

Warren, Michelle, 179, 187–8

Wasserman, R., 102–3, 114

weathering model, 188

Wehkalampi, K., 132

weight

as factor in early onset puberty, 134–9

and international adoption, 148

and stress, 186

see also obesity

Weil, Elizabeth, 141–3, 179, 184–5

Whitehouse, Reginald H., 176

see also Harpenden Study

Wiegman, R., 49

Williams, Simon, 200

Wilson, Elizabeth A., 36–9, 42–3, 216–18

World Professional Association for Trans Health (WPATH), 222–3

x-rays, 71, 83–4, 110, 176