

原注および参考文献

Chapter 2

- [1] Ellen MacArthur Foundation (2016) “The New Plastic Economy: Rethinking the Future of Plastics,” World Economic Forum (accessed 4 March 2017: <https://www.ellenmacarthurfoundation.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics>)
- [2] <https://myplasticfreelife.com/>

Chapter 3

- [1] 近年、リサイクル可能な新型の熱硬化性プラスチックに関する研究も行われている。
J.M.Garcia et al. (2014) “Recyclable, Strong Thermosets and Organogels via Paraformaldehyde Condensation with Diamines.” *Science* 344(6185): 732-735.
Qipeng Guo (2014) “Recycling the ‘Unrecyclable’ : a New Class of Thermoset Plastics.
TheConversation.com
(<http://theconversation.com/recycling-the-unrecyclable-a-new-class-of-thermoset-plastics-26594>).
- [2] The New Plastic Economy: Rethinking the Future of Plastics, p.10
- [3] The New Plastic Economy: Rethinking the Future of Plastics, p.10
- [4] The New Plastic Economy: Rethinking the Future of Plastics, p.12
- [5] J.Zalasiewicz et al. (2016) “The Geological Cycle of Plastics and Their Use as a Stratigraphic Indicator of the Anthropocene,” *Anthropocene* 13:4-17
- [6] S.Goldenberg (2011) “Himalayas in Danger of Becoming a Giant Rubbish Dump,” theguardian.com
(URL:<https://www.theguardian.com/environment/blog/2011/sep/12/himalayas-waste>)
- [7] L.C.Woodall, et al. (2014) “The Deep Sea is a Major Sink for Microplastic Debris,” *Royal Society of Open Science* rsos.140317
(URL: <http://rsos.royalsocietypublishing.org/content/1/4/140317>)
- [8] 英ガーディアン紙のインタビュー記事 R.Mckie (2016) “Plastic Now Pollutes Every Corner of Earth,”
(<https://www.theguardian.com/environment/2016/jan/24/plastic-new-epoch-human-damage>)
- [9] P.L.Corcoran., C.J.Moore and K.Jazvac (2013) “An Anthropogenic Marker Horizon in the Future Rock Record,” *GSA Today* 24(6):4-8
- [10] モア船長自身の手記は『プラスチックスープの海』（チャールズ・モア、カッサンドラ・フィリップス著、NHK 出版刊）として刊行されており、その活動はプラ

スチック汚染の研究に今も多大な影響を与えている。

- [11] M.Eriksen, et al. (2015) “Plastic Pollution in the World’ s Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea,” *PLoS ONE* 9(12):e111913
- [12] E.Van Sebille, et al. (2015) “A Global Inventory of Small Floating Plastic Debris,” *Environmental Research Letters* 10(12):124006
- [13] J.R.Jambeck, et al. (2015) “Plastic Waste Inputs from Land into the Ocean,” *Science* 347(6223):768-771
- [14] The New Plastics Economy: Rethinking the Future of Plastics, p.14
- [15] UNEP and GRID-Arendal (2016) “Marine Litter Vital Graphics,” United Nations Environment Programme and GRID-Arendal, p.41
(https://wedocs.unep.org/bitstream/handle/20.500.11822/9798/-Marine_litter_Vital_graphics-2016MarineLitterVG.pdf.pdf?isAllowed=y&sequence=3)
- [16] The New Plastics Economy: Rethinking the Future of Plastics, p.14
- [17] Ocean Conservancy and McKinsey Center for Business and Environment (2015) “Stemming the Tide: Land-Based Strategies for a Plastic-Free Ocean” 2 Ocean Conservancy and McKinsey & Company, p.11
(<http://www.oceanconservancy.org/our-work/marine-debris/stop-plastic-trash-2015.html>)
- [18] TEDX: The Endocrine Disruption Exchange (2011) “Endocrine Disruption Fact Sheet,” <https://endocrinedisruption.org/interactive-tools/fact-sheet>
- [19] L.N.Vandenberg, et al. (2012) “Hormones and Endocrine-Disrupting Chemicals: Low-Dose Effects and Nonmonotonic Dose Responses,” *Endocrine Reviews* 33(3): 378-455; F.S.vom Saal and C.Hughes (2005) “An Extensive New Literature Concerning Low-Dose Effects of Bisphenol A Shows the Need for a New Risk Assessment,” *Environmental Health Perspectives* 113(8): 926-933
- [20] TECX List of Potential Endocrine Disruptors
(<https://endocrinedisruption.org/interactive-tools/tedx-list-of-potential-endocrine-disruptors/search-the-tedx-list>)
- [21] L.N.Vandenberg et al. (2010) “Urinary, Circulating, and Tissue Biomonitoring Studies Indicate Widespread Exposure to Bisphenol A,” *Environmental Health Perspectives* 118(8):1055-1070
- [22] Statistics Canada (2010) “Bisphenol A Concentrations in the Canadian Population, 2007-2009,” Canadian Health Measures Survey
(<http://www.statcan.gc.ca/pub/82-625-x/2010002/article/11327-eng.htm>)
- [23] S.Lunder, D.Andrews and J.Houlihan (2010) “BPA Coats Cash Register Receipts,” EWG.org (<http://www.ewg.org/research/bpa-in-store-receipts>)
- [24] A.M.Hormann, F.S.Vom Saal, S.C.Nagel et al. (2014) “Holding Thermal Receipt Paper and Eating Food after Using Hand Sanitizer Results in High Serum Bioactive and Urine Total Levels of Bisphenol A (BPA),” *PLoS One* 9(10):e110509

- [25] J.R.Rochester (2013) “Bisphenol A and Human Health: A review of the literature,” *Reproductive Toxicology* 42:132-155
- [26] J.Peretz, L.Vrooman, W.A.Ricke, P.A.Hunt et al. (2014) “Bisphenol A and Reproductive Health: Update of Experimental and Human Evidence, 2007-2013,” *Environmental Health Perspectives* 122:775-786
- [27] H.A.Tilson (2012) “ Bisphenol A: Collection,” *Environmental Health Perspectives* January 2007-December 2011
- [28] J.R.Rochester and A.L.Bolden (2015) “Bisphenol S and F: A Systematic Review and Comparison of the Hormonal Activity of Bisphenol A Substitutes,” *Environmental Health Perspectives* 123(7):643-650 (<https://ehp.niehs.nih.gov/doi/10.1289/ehp.1408989>)
- [29] S.H.Swan et al. (2005) “Decrease in Anogenital Distance among Male Infants with Prenatal Phthalate Exposure,” *Environmental Health Perspectives* 113(8):1056-1061
- [30] ユニリーバ社は 2018 年までに洗面用品の香料成分の詳細を開示する予定だと発表している。
- [31] U.S.Centers for Disease Control and Prevention (2016) “Biomonitoring Summary: Phthalates Overview: Di-2-ethylhexyl Phthalate,” National Biomonitoring Program (https://www.cdc.gov/biomonitoring/DEHP_BiomonitoringSummary.html)
- [32] E.P.Hines, A.M.Calafat, M.J.Silva, P.Mendola and S.E.Fenton (2009) “Concentrations of Phthalate Metabolites in Milk, Urine, Saliva and Serum of Lactating North Carolina Women,” *Environmental Health Perspectives* 118(1):86-92
- [33] U.S.Centers for Disease Control and Prevention (2015) “National Report on Human Exposure to Environmental Chemicals: Updated Tables, Feb 2015 ,” Fourth National Report on Human Exposure to Environmental Chemicals (<https://www.cdc.gov/exposurereport>)
- [34] U.S.Department of Health and Human Services (2016) “Phthalates,” ToxTown, U.S.National Library of Medicine, National Institutes of Health (https://toxtown.nlm.nih.gov/text_version/chemicals.php?id=24)
- [35] U.S.Department of Health and Human Services (2016) “Di(2-ethylhexyl) Phthalate, ” Report on Carcinogens, Fourteenth Edition, National Toxicology Program, National Institutes of Health (<https://ntp.niehs.nih.gov/ntp/roc/content/profiles/diethylhexylphthalate.pdf>)
- [36] Endocrine Disruptors Action Group (2016) “Toxic by Design: Eliminating Harmful Flame Retardant Chemicals from Our Bodies, Homes, & Communities,” White Paper (<https://endocrinedisruptorsaction.org/2016/10/11/toxic-by-design>); L.Feng et al. (2016) “Levels of Urinary Metabolites of Organophosphate Flame Retardants, TDCIPP, and TPHP, in Pregnant Women in Shanghai,” *Journal of Environmental and Public Health* 2016:9416054

- (<https://www.hindawi.com/journals/jeph/2016/9416054>)
- [37] Endocrine Disruptors Action Group (2016) “Why Flame Retardants Don’t Stop Fires,” (<https://endocrinedisruptorsaction.org/2016/11/15/why-flame-retardants-dont-stop-fires>)
- [38] R.J.Witorsch (2014) “Critical Analysis of Endocrine Disruptive Activity of Triclosan and Its Relevance to Human Exposure Through the Use of Personal Care Products,” *Critical Reviews in Toxicology* 44(6):535-555; H.Huang et al. (2014) “The in vitro Estrogenic Activities of Triclosan and Triclocarban,” *Journal of Applied Toxicology* 34(9):1060-1067
- [39] K.Lah, M.M.Williams and M.Mergel (2016) “Triclosan,” Toxipedia (<http://www.toxipedia.org/display/toxipedia/Triclosan>); E.MacDonald and K.Mitchell (2016) “Canada is Behind the Times on Triclosan,” Ecojustice (<https://www.ecojustice.ca/canada-behind-times-triclosan>)

Chapter 4

- [1] S.Sundar and S.Chakravarty (2010) “Antimony Toxicity,” *International Journal of Environmental Research and Public Health* 7(12):4267-4277
- [2] P.Westerhoff, P.Prapaipong, E.Shock and A.Hillaireau (2007) “Antimony Leaching from Polyethylene Terephthalate (PET) Plastic Used for Bottles Drinking Water,” *Water Research* 42(3):551-556
- [3] L.Sax (2009) “Polyethylene Terephthalate May Yield Endocrine Disruptors,” *Environmental Health Perspectives* 118(4):445-448
- [4] M.Greifenstein, D.W.White, A.Stubner, J.Hout and A.J.Whelton (2013) “Impact of Temperature and Storage Duration on the Chemical and Odor Quality of Military Packaged Water in Polyethylene Terephthalate Bottles,” *Science of the Total Environment* 456-457:376-383
- [5] C.Z.Yang, S.I.Yaniger, V.C.Jordan, D.J.Klein and G.D.Bittner (2011) “Most Plastic Products Release Estrogenic Chemicals: A Potential Health Problem That Can Be Solved,” *Environmental Health Perspectives* 119(7):989-996,
- [6] A.Guart, F.Bobo-Blay, F.Borrell and S.Lacorte (2011) “Migration of Plasticizers Phthalates, Bisphenol A and Alkylphenols from Plastic Containers and Evaluation of Risk,” *Food Additives & Contaminants: Part A* 28(5):676-685; J.E.Loyo-Rosales, G.CC.Rosales-Rivera, A.M.Lynch, C.P.Rice and A.Torrents (2004) “Migration of Nonylphenol from Plastic Containers to Water and a Milk Surrogate,” *Journal of Agricultural and Food Chemistry* 52(7):2016-2020
- [7] G.R.McDonald et al. (2008) “Bioactive Contaminants Leach from Disposable Laboratory Plasticware,” *Science* 322(5903):917
- [8] 磯部友彦、中田典秀、間藤ゆき枝、西山肇、熊田英峰、高田秀重 (2002) “プラ

- スチック製食器等からのノニルフェノールの溶出”、「環境化学」、12, 621-625.
(https://www.jstage.jst.go.jp/article/jec1991/12/3/12_3_621/_article/-char/ja/)
- [9] M.Belliveau and S.Lester (2004) “PVC Bad News Comes in 3s: The Poison Plastic, Health Hazards and the Looming Waste Crisis,” Center for Health, Environment and Justice & Environmental Health Strategy Center (<http://chej.org/polyvinyl-chloride-pvc>)
- [10] S.Lester, M.Schade and C.Weigand (2008) “Volatile Vinyl: The New Shower Curtain’s Chemical Smell,” Center for Health, Environment and Justice (<http://chej.org/polyvinyl-chloride-pvc>)
- [11] S.Verstraete, I.Vanhorebeek, A.Covaci, F.Guiza, G.Malarvannan, P.G.Jorens and G.Van den Berghe (2016) “Circulating Phthalates During Critical Illness in Children are Associated with Long-Term Attention Deficit,” *Intensive Care Medicine* 42(3):379-392
- [12] M.Ahmad and A.S.Bajahlan (2007) “Leaching of Styrene and Other Aromatic Compounds in Drinking Water from PS Bottles,” *Journal of Environmental Sciences* 19(4):421-426
- [13] Agency for Toxic Substances and Disease Registry (2012) “ToxFAQs for Styrene,” U.S.Department of Health and Human Services (<https://www.atsdr.cdc.gov/ToxProfiles/TP.asp?id=421&tid=74>)
- [14] U.S.Department of Health and Human Services (2016) “Styrene,” Report on Carcinogens, Fourteenth Edition, National Toxicology Program, National Institutes of Health (<https://ntp.niehs.nih.gov/ntp/roc/content/profiles/styrene.pdf>)
- [15] Rochman, C.M., Manzano, C., Hentschel, B.T., Simonich, S.L.M., Hoh, E. (2013) Polystyrene Plastic: A Source and Sink for Polycyclic Aromatic Hydrocarbons in the Marine Environment, *Environmental science & Technology*, 47, 13976-13984.
- [16] 磯部友彦、中田典秀、間藤ゆき枝、西山肇、熊田英峰、高田秀重 (2002) “プラスチック製食器等からのノニルフェノールの溶出”、「環境化学」、12, 621-625.
- [17] D.Bello et al. (2007) “Skin Exposure to Isocyanates: Reasons for Concern” *Environmental Health Perspectives* 115(3):328-335
- [18] H.Turan et al. (2011) “Polyurethane Toilet Seat Contact Dermatitis,” *Pediatric Dermatology* 28(6):731-732; S.Hellig et al. (2011) “Persistent Allergic Contact Dermatitis to Plastic Toilet Seats,” *Pediatric Dermatology* 28(5):587-590; R.Nguyen and A.Lee (2012) “Allergic Contact Dermatitis Caused by Isocyanates in Resin Jewelry,” *Contact Dermatitis* 67(1):56-57; K.Arisu et al. (1992) “Tinovin P in a Spandex Tape as a Cause of Clothing Dermatitis,” *Contact Dermatitis* 26(5):311-316,
- [19] H.Wallace (2008) “Should You Ditch Your Chemical Mattress?” *Mother Jones*, March-April 2008 (<http://www.motherjones.com/politics/2008/03/should-you-ditch-your-chemical-mattress>)

- [20] Earthtalk (2015) “Ward Off Chemical Exposure: Alternatives to Methylene Diphenyl Diisocyanate are More Expensive but Perhaps Safer for your Lungs and More,” *Scientific American* (<https://www.scientificamerican.com/article/better-home-insulation-needed-to-ward-off-chemical-exposure/>); U.S. National Institute for Occupational Safety and Health (1996) “Preventing Asthma and Death from Diisocyanate Exposure DHHS,” Centers for Disease Control and Prevention (<https://www.cdc.gov/niosh/docs/96-111>)
- [21] U.S.Environmental Protection Agency (2000) “Epichlorohydrin (1-Chloro-2-3-Epoxypropane) - CAS 106-89-8,” Health Effects Notebook for Hazardous Air Pollutants (<https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants>)
- [22] M.E.Saravi, M.Vojdani, F. and Bahrani (2012) “Evaluation of Cellular Toxicity of Three Denture Base Acrylic Resins,” *Journal of Dentistry* (Tehran) 9(4):180-188
- [23] J.H.Jorge, E.T.Giampaolo, A.L.Machado and C.D.Vergani (2003) “Cytotoxicity of Denture Base Acrylic Resins: A Literature Review,” *Journal of Prosthetic Dentistry* 90(2):190-193
- [24] Environmental Working Group (2007) “EWG Assessment of EPA Draft Human Health Risk Assessment for the Teflon Chemical PFOA,” (<http://www.ewg.org/research/ewg-assessment-epa-draft-human-health-risk-assessment-teflon-chemical-pfoa>)
- [25] U.S.National Biomonitoring Program (2016) “Fact Sheet: Perfluorochemicals,” Centers for Disease Control and Prevention (https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html); D.Trudel et al. (2008) “Estimating Consumer Exposure to PFOS and PFOA,” *Risk Analysis* 28(2)251-269
- [26] Rick Smith and Bruce Lourie (2009) *Slow Death by Rubber Duck: How the Toxic Chemistry of Everyday Life Affects Our Health*, Toronto: Alfred A. Knopf Canada, p.85
- [27] Chemours (2017) “Teflon: Key Safety Questions About Teflon Nonstick Coatings” (https://www.chemours.com/Teflon/en_US/products/safety/key_questions.html#q2)
- [28] 2015 年、デュポン社は、自社工場から排出された PFOA が地域の飲料水に流れ込んでいるのを知りつつ、何ら手を打たなかったとして、地域住民の癌発病の法的責任を問われている。S.Kelly (2016) “Teflon’s Toxic Legacy: DuPont Knew for Decades It Was Contaminating Water Supplies,” *Earth Island Journal-EcoWatch* (<https://www.ecowatch.com/teflons-toxic-legacy-dupont-knew-for-decades-it-was-contaminating-wate-1882142514.html>)
- [29] U.S.Department of Health and Human Services (2014) “Melamine in

- Tableware: Questions and Answers,” U.S. Food and Drug Administration (<http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm199525.htm>)
- [30] X.Zheng et al. (2013) “Melamine-Induced Renal Toxicity is Mediated by the Gut Microbiota,” *Science Translational Medicine* 5(172):172ra22;
- B.Weinhold(2013) “Gut Bacteria and Melamine Toxicity,” *Environmental Health Perspectives* 121:A149
- [31] World Health Organization (2009) “Toxicological and Health Aspects of Melamine and Cyanuric Acid,” Report of a WHO Expert Meeting in Collaboration with FAO, supported by Health Canada, 1-4 December 2008, Geneva:
- http://www.who.int/foodsafety/publications/chem/Melamine_report09.pdf
- [32] U.S.Department of Health and Human Services (2016) “Nitrosamines,” Report on Carcinogens, Fourteenth Edition, National Toxicology Program, National Institutes of Health (<https://ntp.niehs.nih.gov/ntp/roc/content/profiles/nitrosamines.pdf>);
- W.Altkofer, S.Braune, K.Ellendt, M.Kettl-Gromminger, and G.Steiner (2005) “Migration of Nitrosamines from Rubber Products - Are Ballons and Condoms Harmful to the Human Health?” *Molecular Nutrition and Food Research* 49(3):235-238
- [33] Centers for Disease Control and Prevention (2013) “Frequently Asked Questions-Contact Dermatitis and Latex Allergy,” (<https://www.cdc.gov/oralhealth/infectioncontrol/faq/latex.htm>)
- [34] U.S.Environmental Protection Agency (2000) “Ethylene Thiourea - CAS 96-45-7,” Health Effects Notebook for Hazardous Air Pollutants (<https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants>)
- [35] K.Brigden, S.Hetherington, M.Wang, D.Santillo and P.Johnston (2013) “Hazardous Chemicals in Branded Textile Products on Sale in 25 Countries/Regions During 2013,” Greenpeace Research Laboratories Technical Report 06/2013 (<http://www.greenpeace.org/eastasia/publications/reports/toxics/2014/little-story-monsters-closet>)
- [36] M.A.Browne, P.Crump, S.J.Nivens, E.Teutens, A.Tonkin, T.Galloway and R.Thompson (2011) “Accumulation of Microplastic on Shorelines Worldwide: Sources and Sinks,” *Environmental Science & Technology* 45(21):9175-9179
- [37] Health Canada (2015) “The Safe Use of Cookware,” (<http://www.healthycanadians.gc.ca/product-safety-secure-produits/consumer-consommation/education/household-managers/cook-cuisinier-eng.php#si>)
- [38] Debra Lynn Dadd (2016) “Silica, Silicon, Silicone,” (<http://www.debralyndadd.com/q-a/silica-silicon-and-silicone>)
- [39] S. Bondurant, V.Ernster and R.Herdman, eds., *Safety of Silicone Breast Implants*, Institute of Medicine, Committee on the Safety of Silicone Breast Implants, Washington D.C.: National Academies Press, 1999

- [40] K.Zhang et al. (2012) “Determination of Siloxanes in Silicone Products and Potential Migration to Milk, Formula and Liquid Simulants,” *Food Additives & Contaminants. Part A, Chemistry, Analysis, Control, Exposure & Risk Assessment* 29(8):1311-1321
- [41] TEDX List of Potential Endocrine Disruptors (<https://endocrinedisruption.org/interactive-tools/tedx-list-of-potential-endocrine-disruptors/search-the-tedx-list>); C.Lassen, C.L.Hansen, S.H.Mikkelsen and J.Maag (2005) “Siloxanes - Consumption, Toxicity and Alternatives” Danish Environmental Protection Agency, Environmental Project No.1031 2005 (<http://www2.mst.dk/Udgiv/publications/2005/87-7614-756-8/pdf/87-7614-757-6.pdf>)
- [42] D.Wang et al. (2013) “Review of Recent Advances in Research on the Toxicity, Detection, Occurrence and Fate of Cyclic Volatile Methyl Siloxanes in the Environment,” *Chemosphere* 93(5):711-725
- [43] Takada, H., International Pellet Watch: Studies of the magnitude and spatial variation of chemical risks associated with environmental plastics. , in “Accumulation : The material politics of plastic” . 2013, Routledge: p. 196-197 in p.184-p.207.
- [44] L.Shen et al. (2010) “Present and Future Development in Plastics from Biomass,” *Biofpor* 4(1):25-40
- [45] R.Narayan (2009) “Biodegradability,” *bioplastics MAGAZINE* 4(1):28-31
- [46] R.Narayan and C.A.Pettigrew (1999) “ASTM Standards Help Define and Grow a New Biodegradable Plastics Industry,” *ASTM Standardization News*, December 1999
- [47] Beth Terry, *My Plastic Free Life*, p.167
- [48] A.Dean and J.Armstrong (2009) “Genetically Modified Foods,” Statement of the American Academy of Environmental Medicine (<http://www.aaemonline.org/gmo.php>)
- [49] Discover Financial Services (2008) “Discover Financial Services Introduces Biodegradable Discover Card” Press Release (<https://investorrelations.discover.com/newsroom/press-releases/press-release-details/2008/Discover-Financial-Services-Introduces-Biodegradable-Discover-R-Card/default.aspx>)
- [50] Freinkel, *Plastic:A Toxic Love Story*, pp.207-220
- [51] Matsuguma, Y., Takada, H., Kumata, H., Kanke, H., Sakurai, S., Suzuki, T., Itoh, M., Okazaki, Y., Boonyatumanond, R., Zakaria, M.P., Weerts, S., Newman, B. (2017) Microplastics in sediment cores from Asia and Africa as indicators of temporal trend in microplastic pollution, *Arch. Environ. Contam. Toxicol.*, 73, 230-239.
- [52] The Story of Microfibers (<http://storyofstuff.org/movies/story-of-microfibers>)
- [53] C.M.Rochman, E.Hoh, T.Korube and S.J.Teh (2013) “Ingested Plastic

Transfers Hazardous Chemicals to Fish and Induces Hepatic Stress”
Scientific Reports 3(3263)を参考に著者が算出。

- [54] 環境省 HP <http://www.env.go.jp/press/files/jp/108892.pdf>
- [55] 3R推進団体連絡会 HP <http://www.3r-suishin.jp/?p=547> プラスチック容器包装のリサイクル率は、分母を「容器包装リサイクル協会の公表する『排出見込み量』」、分子を「自治体の回収量から異物などを取り除いて再商品化された量+店頭回収などの自主回収量」として算出されている。
http://3r-suishin.jp/PDF/2015Report/Followup_Report2015_all.pdf
- [56] ペットボトルのリサイクル率は産廃も含む国内全体の推計値。
<http://www.petbottle-rec.gr.jp/data/calculate.html>
- [57] <https://www.env.go.jp/council/former2013/03haiki/y0315-15/mat02.pdf>
- [58] <https://www.pwmi.or.jp/pdf/panf2.pdf>
- [59] こうした動きの拡大を問題視して、より循環的なアプローチの推進を目指す国際的な団体 GAIA (Global Alliance for Incinerator Alternatives) に記者は一時勤務したが、プラスチックの熱回収の拡大はますます大きな脅威として認識されている。熱回収が単なる焼却や埋め立てよりも望ましいのは言うまでもないが、安易に熱回収を広げることで、「燃やせば済む」という論理からリデュースの推進が妨げられるという側面も憂慮される。
- [60] <https://www.pwmi.or.jp/pdf/panf1.pdf>
- [61] <https://www.pwmi.or.jp/pdf/panf2.pdf>
- [62] (注なし)
- [63] 詳細は以下の記事などにもわかりやすく説明されている。
<https://forbesjapan.com/articles/detail/24796>
<https://sustainablejapan.jp/2018/08/28/plastic-recycle/34068>
上述のとおり、環境省の資料でも、同じ数字をもとに、「リサイクル率」と「熱回収」を区別して扱っている。
<https://www.env.go.jp/council/03recycle/y0312-03/y031203-s1r.pdf>
- [64] <https://www.treehugger.com/energy-policy/no-sweden-does-not-recycle-99-per-cent-its-waste.html>
- [65] https://www.plasticseurope.org/application/files/5715/1717/4180/Plastics_the_facts_2017_FINAL_for_website_one_page.pdf
- [66] https://www.epa.gov/sites/production/files/2018-07/documents/2015_smm_ms_w_factsheet_07242018_fnl_508_002.pdf
- [67] <https://www.pwmi.or.jp/pdf/panf1.pdf>
- [68] C.A.Shaw et al. (2014) “Aluminum-Induced Entropy in Biological Systems: Implications for Neurological Disease,” *Journal of Toxicology* 2014:491316;
C.A.Shaw and L.Tomljenovic (2013) “Aluminum in the Central Nervous System (CNS): Toxicity in Humans and Animals, Vaccine Adjuvants, and Autoimmunity,” *Immunologic Research* 56(2-3):304-316

- [69] 綿花には世界の全農薬使用量の16%が使われ、この量はほかのどの作物よりも多い。使用される農薬には発癌性が判明しているものも多く、世界各地の綿農家の死因との関連が指摘されている。Environmental Justice Foundation & Pesticide Action Network-UK (2007) “The Deadly Chemicals in Cotton,” (<https://ejfoundation.org/index.php?p=reports/the-deadly-chemicals-in-cotton>)
- [70] ウールの生産には大量の害虫駆除剤が使われる（ヒツジにつくシラミなどの寄生虫の駆除目的）。また、残忍な方法で毛を刈り取っているウールも多い。
- [71] 皮革工場の大半は発展途上国に位置し、有害な化学物質を大量に使用する。特に「なめし」の工程は毒性が強く、労働者たちの健康も危険に晒す。まだ、牛など動物の皮を使う点についても、「牛肉産業の副産物である皮を有効活用している」（＝本来捨てられるはずの部分を利用している）という考え方がある一方で、革製品の需要増加により、2025年までに30%にあたる数の牛を屠殺しなければ間に合わなくなると言われる。K.Martinko (2016) “Why It’s Time to Say Goodbye to Leather,” Treehugger.com (<http://www.treehugger.com/culture/why-its-time-say-goodbye-leather.html>)

Chapter 5

- [1] K.Stastna (2014) “Bottle vs. Tap: 7 Things to Know About Drinking Water,” CBC News (<https://www.cbc.ca/news/health/bottle-vs-tap-7-things-to-know-about-drinking-water-1.2774182>)
- [2] T.Orci (2013) “Are Tea Bags Turning Us Into Plastic?” Theatlantic.com (<https://www.theatlantic.com/health/archive/2013/04/are-tea-bags-turning-us-into-plastic/274482>)
- [3] R.Smithers (2010) “Most Uk Teabags Not Fully Biodegradable, Research Reveals,” Theguardian.com (<https://www.theguardian.com/environment/2010/jul/02/teabags-biodegradable>) ; L.Miles (2014) “The Scandalous Plastic in Tea Bags - Who Knew?” (<http://treadingmyownpath.com/2014/07/11/the-scandalous-plastic-in-tea-bags-who-knew>)
- [4] Nick Osborne, “The Plastic Taste in New Coffee Makers - Just a Bad Taste, or Toxic Too?” (<http://www.coffeedetective.com/plastic-taste-coffee-makers.html>)
- [5] J.Hamblin (2015) “A Brewing Problem: What’s the Healthiest Way to Keep Everyone Caffeinated?” (<http://theatlantic.com/technology/archive/2015/03/the-abominable-k-cup-coffee-pod-environment-problem/386501>)
- [6] Lloyd Alter (2016) “Trouble Brewing for Coffee Pods as German City Bans Them to Reduce Waste” (<http://www.treehugger.com/sustainable-product-design/trouble-brewing-coffee>)

- e-pods-german-city-bans-them-reduce-waste.html)
- [7] <http://www.killthekcup.org>
- [8] C.A.Shaw et al. (2014) “Aluminum-Induced Entropy in Biological Systems: Implications for Neurological Disease,” *Journal of Toxicology* 2014: 491316;
C.A.Shaw and L.Tomljenovic (2013) “Aluminum in the Central Nervous System (CNS): Toxicity in Humans and Animals, Vaccine Adjuvants, and Autoimmunity,” *Immunologic Research* 56(203):304-316
- [9] N.O. Ak, D.O.Cliver and C.W.Kaspar (1994) “Cutting Boards of Plastic and Wood Contaminated Experimentally with Bacteria,” *Journal of Food Protection* 57(1):16-22
(http://www.treenshop.com/Treenshop/ArticlesPages/SafetyOfCuttingBoards_Article/CliverArticle.pdf)
- [10] たとえば Mother Earth News
(<http://www.motherearthnews.com/real-food/canning/home-canning>)
- [11] G.Gourmelon (2015) “Plastic Straws: A Life Cycle,” Worldwatch Institute Blog (<http://blogs.worldwatch.org/plastic-straws-a-life-cycle>)
- [12] <https://www.treehugger.com/organic-beauty/recipe-homemade-deodorant-really-works.html>
- [13] <http://www.safecosmetics.org/get-the-facts/chemicals-of-concern/>
- [14] K.Mok (2014) “7 Powerful Reasons Why You Should Switch to Reusable Menstrual Products,”
<http://www.treehugger.com/health/reasons-why-you-should-switch-to-reusable-menstrual-products.html>
- [15] アメリカ食品医薬品局がタンポンに微量のダイオキシンを確認したことも報告されている。U.S.Food and Drug Administration (2015) “Tampons and Asbestos, Dioxin and Toxic Shock Syndrome,” as cited in S.Dudley (2016) “Tampon Safety” (<http://center4research.org/i-saw-it-on-the-internet/tampon-safety>)
- [16] A.Scranton (2013) “Chem Fatale: Potential Health Effects of Feminine Care Products,” *Women’s Voices for the Earth*
(<http://www.womensvoices.org/wp-content/uploads/2013/11/Chem-Fatale-Report.pdf>)
- [17] Trish Walraven, “Crest Toothpaste Embeds Plastic in Our Gums,” 4 March 2014, *Dental Buzz - A Jolt of Current: Trends, Innovations and Quirks of Dentistry*
(<http://www.dentalbuzz.com/2014/03/04/crest-embeds-plastic-in-our-gums>)
- [18] <http://www.5gyres.org/microbeads>
- [19] J.Nalbone (2015) “Unseen Threat: How Microbeads Harm New York Water, Wildlife, Health And Environment,” New York: Office of New York State Attorney General Eric T.Schneiderman, p.7
(http://ag.ny.gov/pdfs/Microbeads_Report_5_14_14.pdf)
- [20] C.Rochman et al. (2015) “Scientific Evidence Supports a Ban on Microbeads,”

- Environmental Science & Technology*, 49:10759-10761
- [21] Y.Mato (2001) “Plastic Resin Pellets as a Transport Medium for Toxic Chemicals in the Marine Environment,” *Environmental Science & Technology*, 35(2):318-324
- [22] P.Sundt, P-E. Schulze and F.Syversen (2014) “Sources of Microplastic Pollution to the Marine Environment,” Norwegian Environment Agency (Miljødirektoratet), p.16
(<http://www.miljodirektoratet.no/Documents/publikasjoner/M321/M321.pdf>)
- [23] <https://www.beatthemicrobead.org/product-lists/>
- [24] <https://www.treehugger.com/organic-beauty/diy-beauty-recipes-use-only-2-ingredients.html>
- [25] D.F.Maron (2013) “Flame Retardants Linked to Lower IQs, Hyperactivity in Children,” *Scientific American*, 6 May 2013
(<https://www.scientificamerican.com/article/flame-retardants-linked-lower-iq-hyperactivity-children/>)
- [26] (注なし)
- [27] Anna Maria Clement and Brian Clement, *Killer Clothes: How Seemingly Innocent Clothing Choices Endanger Your Health... And How to Protect Yourself*, West Palm Beach: Hippocrates Publications, 2011; G.Luonga (2015) “Toxins Remain in Your Clothes,” *ScienceDaily*
(www.sciencedaily.com/releases/2015/10/151023084508.htm)
- [28] ゴアテックスの製造元は、「環境への影響に懸念のあるフッ素化合物」を2023年までに、一般消費者向けのすべての製品から除去することを公約している。ただし、その代替りとなるものが本当に安全な素材となるのかが重要な点だ。
(<https://www.gore-tex.jp/technology/responsibility/pfc-goal>) (日本語)
- [29] (注なし)
- [30] <https://www.patagonia.jp/worn-wear.html>
- [31] Beth Terry, *My Plastic Free Life: Gardening Without Plastic*, Parts 1-3
(<https://myplasticfreelife.com/2011/05/gardening-without-plastic-part-1/>);
Lindsay Miles, *Treading My Own Path: Zero Waste (+ Plastic Free) Gardening*
(<http://treadingmyownpath.com/2016/06/09/zero-waste-plastic-free-gardening>)
- [32] U.S.Environmental Protection Agency, “Advancing Sustainable Materials Management: 2014 Tables and Figures”
(https://www.epa.gov/sites/production/files/2016-11/documents/2014_smm_tablesfigures_508.pdf)
- [33] <https://www.youtube.com/watch?v=8vNxjw2AqY&feature=youtu.be>

Chapter 6

- [1] インドの Verterra、中国の Bambu、ドイツの Leaf Republic、ベルギーの DoEat、アメリカの Natural Value など。
- [2] <https://www.youtube.com/watch?v=r4Cc5zmy0eY>
- [3] <http://www.oceanconservancy.org/our-work/international-coastal-cleanup>
- [4] <https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/cleanswell/>
その他、同様の主なプログラムに、Litterati (www.litterati.org)、Marine Debris Tracker (www.marinedebris.engr.uga.edu)、ヨーロッパに特化した Marine LitterWatch (www.eea.europa.eu/themes/coast_sea/marine-litterwatch)、オーストラリアに特化した Tangaroa Blue Australian Marine Debris Initiative (www.tangaroablue.org/amdi/amdi-program.html) など。

エピソード

- [1] C.Wilcox, E.Van Seville and B.D.Hardesty (2015) “Threat of Plastic Pollution to Seabirds is Global, Pervasive and Increasing,” *Proceedings of the National Academy of Sciences* 112(38):11899-11904
- [2] B.Worm (2015) “Silent Spring in the Ocean,” *Proceedings of the National Academy of Sciences* 112(38):11752-11753
- [3] M.Manikkam, R.Tracey, C.Guerrero-Basagna and M.K.Skinner (2013) “Plastics Derived Endocrine Disruptors (BPA, DEHP and DBP) Induce Epigenetic Transgenerational Inheritance of Obesity, Reproductive Disease and Sperm Epimutations,” *PLoS ONE* 8(1):e55387
- [4] <https://www.ellenmacarthurfoundation.org/our-work/activities/new-plastics-economy>

日本語版解説

- [1] Levine, H., Mindlis, I., Swan, S.H., Martino-Andrade, A., Jørgensen, N., Mendiola, J., Weksler-Derri, D., and Pinotti, R., 2017. Temporal trends in sperm count: a systematic review and meta-regression analysis. *Human Reproduction Update* 23, 646-659.10.1093/humupd/dmx022
- [2] Liao, C., Liu, F., Alomirah, H., Loi, V.D., Mohd, M.A., Moon, H.-B., Nakata, H., and Kannan, K., 2012. Bisphenol S in Urine from the United States and Seven

Asian Countries: Occurrence and Human Exposures. *Environmental science & Technology* 46, 6860-6866.10.1021/es301334j

- [3] Teuten, E.L., Saquing, J.M., Knappe, D.R.U., Barlaz, M.A., Jonsson, S., Bjorn, A., Rowland, S.J., Thompson, R.C., Galloway, T.S., Yamashita, R., Ochi, D., Watanuki, Y., Moore, C., Pham, H.V., Tana, T.S., Prudente, M., Boonyatumanond, R., Zakaria, M.P., Akkhavong, K., Ogata, Y., Hirai, H., Iwasa, S., Mizukawa, K., Hagino, Y., Imamura, A., Saha, M., and Takada, H., 2009. Transport and release of chemicals from plastics to the environment and to wildlife. *Philosophical Transactions of the Royal Society B-Biological Sciences* 364, 2027-2045.10.1098/rstb.2008.0284
- [4] 高田秀重、大垣多恵 (2018) “インターナショナルペレットウォッチの市民科学としての役割”、「水資源・環境研究」 31, 4-10.

*URL はすべて 2017 年 12 月原書刊行時のものです。
(注なし) は欠番です。