

From the perspective of landscape architects, the continuous change of industrial nature in the Ruhr is a major element of the attraction for tourists and locals alike. In the densely built district, the former industrial areas intertwined with ruderal species and shrubs and even trees constitute a possibility for contemplating how the growing plants continually renew the spaces and to experience the shift of seasons. A capacity for process is a key focus for both ecologists and landscape architects engaging in industrial nature in the Ruhr.

The capacity for process also applies, I would argue, to larger questions of memory work. As was shown by examples of military facilities turned into wildlife reserves and former industrial sites transformed into commodified landscapes of consumption, industrial nature can also work as a visual rhetoric that conceals responsibilities for past and present social injustices. There is a thin line between processes of reconciliation and rekindling of hope for the future on the one hand, and processes of gentrification and the attraction of discovery on the other. A territory can simultaneously be understood as industrial *land*, meaning a place of work and of home, and as a post-industrial *landscape*, meaning a place of touristic gazes and visual desires. Intimate familiarity and distanced gazes do not simply represent good or bad ways of healing post-industrial landscape scars; their entanglement and complexity extend much further. I suggest that the scar constitutes a connection between the land and the landscape, turning the two understandings into simultaneous projections rather than chronologically successive definitions.

The ambiguity of the scar will remain, but its potential is that of a prospective approach. It is not just continuously added layers of meaning that define our memory work in the present, but an unfolding engagement that shapes new understandings, new places, and new worlds. The metaphor of the scar directs our glance toward the difficult and unstable places and stories, toward the closeness of the physical and the mental, and toward the temporally uneven and spatially widespread process of sharing past and present experiences.

Notes

1 Introduction

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3 Distance of Fear

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12. "Protokoll fört vid sammanträde med Löddeköpinge kommunalfullmäktige måndagen den 28 oktober 1968, kl. 19.15 å Folkets Hus." Löddeköpinge kommun. Kommunalfullmäktige. Protokoll 1967–1971. AI: 3. 1968, § 111. Kävlinge municipal archives; "Protokoll fört vid sammanträde med byggnadsnämnden i Löddeköpinge den 17 oktober 1968, kl. 18.30 å kommunalkontoret i Löddeköpinge." Löddeköpinge kommun. Byggnadsnämnden. Protokoll. 1968. AI:5. 1968, § 181. Kävlinge municipal archives; "Sammanträdesprotokoll, Byggnadsnämnden, Löddeköpinge kommun, 21 augusti 1969." Löddeköpinge kommun. Byggnadsnämnden. Protokoll. Åren 1965–69 samt 1973. 1969, § 201, Bil. Kävlinge municipal archives; It might be worth noting that the town plan was exhibited during three weeks in the middle of the summer vacation period. See "Sammanträdesprotokoll, Byggnadsnämnden, Löddeköpinge kommun, 3 juli 1969." Löddeköpinge kommun. Byggnadsnämnden. Protokoll. Åren 1965–69 samt 1973. 1969, § 187. Kävlinge municipal archives; Malmsten, interview; "Planerna på atomkraftverk innebär industriellt uppsving," *Sydsvenska Dagbladet* (December 24, 1965); Annelie Sjölander-Lindqvist, Anna Bohlin, and Petra Adolfsson, *Delaktighetens landskap: Tillgänglighet och inflytande inom kulturssektorn* (Stockholm: Riksantikvarieämbetet, 2010), 27.
 13. Stefan Lindström, "Implementing the welfare state: The emergence of Swedish atomic energy research policy," in *Center on the periphery: Historical aspects of 20th-century Swedish physics*, ed. Svante Lindqvist, Marika Hedin, and Thomas Kaiserfeld (Canton, MA: Science History Publications, 1993), 179ff.
 14. Arne Kaijser, "Redirecting power: Swedish nuclear power policies in historical perspective," *Annual Review of Energy and the Environment* 17 (1992), 441ff.; Arne Kaijser, "From tile stoves to nuclear plants—the history of Swedish energy systems," in *Building sustainable energy systems: Swedish experiences*, ed. Semida Silveira (Stockholm: Svensk byggtjänst, 2001), 71ff.
 15. Jonas Anshelm, *Bergsäkert eller våghalsigt? Frågan om kärnavfallens hantering i det offentliga samtalet i Sverige 1950–2002* (Lund: Arkiv, 2006), 182.
 16. Jonas Anshelm, *Mellan frälsning och domedag: Om kärnkraftens politiska idéhistoria i Sverige 1945–1999* (Eslöv: Brutus Östlings Bokförlag Symposion, 2000); this period is also described in Åsa Moberg, *Ett extremt dyrt och livsfarligt sätt att värma vatten: En bok om kärnkraft* (Stockholm: Natur och kultur, 2014).
 17. Kaijser, "Redirecting power," 445f.

18. Ibid., 447, 49f.
19. "Planerna på atomkraftverk innebär industriellt uppsving," *Sydsvenska Dagbladet* (December 24, 1965); "Atomkraftverk blir turistattraktion," *Skånska Dagbladet* (July 29, 1971); there had been local protests caused by a fear of radioactive emissions in Sweden back in 1959, in connection with the planning of the Ågesta plant south of Stockholm. See Anshelm, *Bergsäkert eller våghalsigt?* 25, 48.
20. Anshelm, *Bergsäkert eller våghalsigt?* 13, 18ff., 31, 36. Anshelm is referring to SOU 1976: 30–31.
21. Ibid., 180.
22. Krohn Andersson, *Kärnkraftverkets poetik*, 61ff.
23. Ibid., 95, 194f.
24. Ibid., 98, 172.
25. Vattenbyggnadsbyrån, "Kraftöverföring från Barsebäcksverket," Kävlinge kommun. Kommunstyrelsen. Rapporter Utredningar. Energi. Spridda år. FC I: 6. Undated, 9. Kävlinge municipal archives; Krohn Andersson, *Kärnkraftverkets poetik*, 125ff.
26. Krohn Andersson, *Kärnkraftverkets poetik*, 118f., 124.
27. Ibid., 173; Henrik Borg and Helen Sannerstedt, *Barsebäcks kärnkraftverk. Rapport 2006:57* (Regionmuseet Kristianstad/Landsantikvarien i Skåne, 2006), 35; Vattenbyggnadsbyrån, "Kraftöverföring från Barsebäcksverket," Kävlinge kommun. Kommunstyrelsen. Rapporter Utredningar. Energi. Spridda år. FC I: 6. Undated, 13f. Kävlinge municipal archives; see also "Atomkraftverk blir turistattraktion," *Skånska Dagbladet* (July 29, 1971).
28. Krohn Andersson, *Kärnkraftverkets poetik*, 153f.
29. "Atomkraftverk blir turistattraktion," *Skånska Dagbladet* (July 29, 1971).
30. Krohn Andersson, *Kärnkraftverkets poetik*, 94, 176.
31. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 39; "Atomkraftverk blir turistattraktion," *Skånska Dagbladet* (July 29, 1971).
32. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 33; Niclas Grahn, *Barsebäcksverkets lokalisering och nedläggning: Hur förutsättningar och omständigheter för ett kärnkraftverk kan komma att förändras*, Arbetsrapporter. Kulturgeografiska institutionen nr. 710 (Uppsala: Uppsala Universitet, 2010), 21.
33. Arne Kaijser, "Trans-border integration of electricity and gas in the Nordic countries, 1915–1992," *Polhem*, no. 1 (1997), 6.
34. Bjurling, *Sydskraft—sambälle*, 22, 54ff.
35. Kaijser, "Trans-border integration of electricity and gas in the Nordic countries, 1915–1992," 13, 18; Bjurling, *Sydskraft—sambälle*, 170.
36. Henry Nielsen and Henrik Knudsen, "The troublesome life of peaceful atoms in Denmark," *History and technology* 26, no. 2 (2010), 96; Henrik Knudsen, *Risørs reaktorer: Registrering og dokumentering*

af bevaringsverdige genstande fra Forskningscenter. Risø reaktor-faciliteter med henblik på at bevare Danmarks nukleare kulturarv (Bjerringbro: Kulturarvsstyrelsen, 2006), 5, 7.

37. Oluf Danielsen, *Atomkraften under pres. Dansk debat om atomkraft 1974–85* (Roskilde: Roskilde Universitetsforlag, 2006), 49f.
38. Bjurling, *Sydskraft—sambälle*, 295.
39. "Sammanträdesprotokoll, Tekniska nämnden, Löddeköpinge kommun, 23 februari 1971." Löddeköpinge kommun. Tekniska nämnden. Protokoll. Åren 1962–71 samt 1973. 1971. Kävlinge municipal archives; "Sammanträdesprotokoll, Tekniska nämnden, Löddeköpinge kommun, 13 augusti 1973." Löddeköpinge kommun. Tekniska nämnden. Protokoll. Åren 1962–71 samt 1973. 1973. Kävlinge municipal archives; from 650 in 1960, the community's population increased to 4,600 by 1976.
40. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 15f.; Fredrik Krohn Andersson, "Kärnkraftens arkitektur," in *Kärnkraft retro*, ed. Jan Garnert, *Dædalus, Tekniska museets årsbok* (Stockholm: Tekniska museet, 2008), 119f.
41. "Energiplanering i Kävlinge kommun. Alternativa värmeplaner för tätorterna Kävlinge, Furulund och Löddeköpinge. Utförd av kommunen och Sydskraft, januari 1982." Kävlinge kommun. Kommunstyrelsen. Rapporter Utredningar. Energi. Spridda år. FC I: 6. 1982, 1, 3. Kävlinge municipal archives.
42. Danielsen, *Atomkraften under pres*, 60, 71, 253; *Atomkraft?* no. 21–22 (1978), 18. Jørgen Steen Nielsen's private collections.
43. Malmsten, interview.
44. Maria Taranger, interview, Barsebäck, November 3, 2010; Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 44.
45. Taranger, interview; Sjölander-Lindqvist et al., *Delaktighetens landskap*, 28; the photo calendar was sent out starting in 1988.
46. "Sammanträdesprotokoll 1994–08–25." Kävlinge kommun. Lokala säkerhetsnämnden vid Barsebäcksverket. Protokoll. 1990–94. 1994, § 283. Kävlinge municipal archives; the shift in technology began in 1990 and was implemented over the following decade.
47. "Utredning om system för varning av allmänheten runt de svenska kärnkraftverken. Utvärdering av erfarenheterna av RDS-systemet och förslag till ett mera flexibelt varningssystem med plan för genomförande och kostnadsberäkning. Räddningsverket 1995–08–11. Remissutgåva 2." Kävlinge kommun. Lokala säkerhetsnämnden. Ämnesordnade handlingar. 1995. F:4. 1995, 4. Kävlinge municipal archives; "Sammanträdesprotokoll 1982–02–22." Kävlinge kommun. Lokala säkerhetsnämnden vid Barsebäcksverket. Protokoll. 1981–89. AI:1. 1982, § 5. Kävlinge municipal archives.
48. Roland Palmqvist, interview, Kävlinge, October 31, 2011; Dalia Gineitiene et al., "Public risk perceptions of nuclear power. The

- case of Sweden and Lithuania," in *Social processes and the environment. Lithuania and Sweden*, ed. Anna-Lisa Lindén and Leonardas Rinkevičius (Lund: Lund University, 1999), 136, 59; see also Jan Pålsson, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 64; Taranger, interview.
49. For a description of a relationship between the plant management and the local population marked by distrust, see Françoise Zonabend, *The nuclear peninsula*, translated by J. A. Underwood (Cambridge: Cambridge University Press 1993), 51.
 50. Palmqvist, interview.
 51. "Till ordföranden i Lokala säkerhetsnämnden vid Barsebäcksverket, 1991–04–24." Kävlinge kommun. Lokala säkerhetsnämnden. Korrespondens. 1991. E:1. 1991. Kävlinge municipal archives; "Lokalpolitiker riktar skarp kritik mot Barsebäcksverket: Brandsäkerheten är usel," *Sydsvenska Dagbladet* (May 6, 1991); "Föräldrat brandskydd ett hot mot Barsebäck. Lokal expert fruktar brand mer än hårdsmälta," *Arbetet* (May 6, 1991).
 52. "Beträffande brandskyddet vid Barsebäcksverket. SKI 1991–05–07." Kävlinge kommun. Lokala säkerhetsnämnden. Korrespondens. 1991. E:1. 1991. Kävlinge municipal archives; "SKI planerar brandsyn på alla kärnkraftverk," *Hallandsposten* (May 7, 1991); "Ang entledigandet av Jan Andersson i lokala säkerhetsnämnden." Kävlinge kommun. Lokala säkerhetsnämnden. Korrespondens. 1991. E:1. 1991. Kävlinge municipal archives.
 53. Anshelm, *Mellan frälsning och domedag*.
 54. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 59.
 55. Bjurling, *Sydskraft—sambälle*, 251.
 56. Kaijser, "Redirecting power," 452f.
 57. Ibid., 453.
 58. Anshelm, *Mellan frälsning och domedag*.
 59. Caj Andersson, "Om vi kände skräck för kärnkraften skulle vi inte arbeta här!," *Året runt* 46 (1979).
 60. Ibid.
 61. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 21.
 62. Kaijser, "Redirecting power," 454; see also Maja Fjæstad, "Demokratins triumf eller fiasko? Folkomröstningen om kärnkraft i retrospektiv," in *Kärnkraft retro*, edited by Jan Garnert. *Dædalus, Tekniska museets årsbok*, 65–75 (Stockholm: Tekniska museet, 2008).
 63. Anshelm, *Mellan frälsning och domedag*.
 64. This period is described in Åsa Moberg, *Ett extremt dyrt och livsfarligt sätt att värma vatten: En bok om kärnkraft* (Stockholm: Natur och kultur, 2014); Lennart Daléus, interview, Saltsjöbaden, October 5, 2010.
 65. Leif Öst, interview, Barsebäck, November 3, 2010.

66. Ibid.; Anshelm, *Bergsäkert eller våghalsigt?* 50f.; Bjurling, *Sydskraft—sambälle*, 249, 79f.
67. Bjurling, *Sydskraft—sambälle*, 281.
68. Kaijser, "Redirecting power," 455.
69. Bjurling, *Sydskraft—sambälle*, 281.
70. Danielsen, *Atomkraften under pres*, 79.
71. *Atomkraft?* no. 1 (1974), 5. Jørgen Steen Nielsen's private collections; *En fremtid med atomkraft? Organisationen til oplysning om atomkraft* (1975). Jørgen Steen Nielsen's private collections.
72. Danielsen, *Atomkraften under pres*, 259, 99, 314ff., 28.
73. Bent Sørensen, "Rasmussen rapporten skaber tvivl. Er Gyllingnæs sikker?" *Atomkraft?* no. 15 (1976). Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*, 65f.; Jørgen Steen Nielsen, interview, København, November 2, 2010; *En alternativ energiplan for Danmark*, (København: OOA, 1983).
74. Danielsen, *Atomkraften under pres*, 15.
75. Ibid., 12, 658.
76. Jørgen Steen Nielsen, "Overblik," *Atomkraft?* no. 25–26 (1979). Jørgen Steen Nielsen's private collections; Knudsen, *Risø reaktorer*, 100.
77. Steen Nielsen, interview.
78. Siegfried Christiansen, "Disse selskaber og deres prægtige atomkraftværker," *Politiken*, (November 30, 1973); Arne Schiøtz, "Vort ansvar over for vore efterkommere," *Politiken*, (February 6, 1974); Jørgen Steen Nielsen, "Vi må ikke handle i blinde," *Berlingske tidene* (February 3, 1974); Jørgen Boldt, "Atomkraftens pris," *Information*, (January 19–20, 1974); Siegfried Christiansen, "Atomkraftens skygge sider," *Ekstra bladet*, (January 26, 1974); Jørgen Boldt, "Hjemmelavet atombombe," *Politiken*, (January 20, 1974); Siegfried Christiansen, "ELSAMs kamp for at få atomkraftværkerne ind ad den danske bagdør," *Information*, (February 6, 1974); "aldrig gi'r vi op..." *Atomkraftmarcherne 1978*, København: OOA, 1978. Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*, 702; Steen Nielsen, interview.
79. "Letter from Anne Lund" (April 4, 1975). D7a, 1321/2001. National Museum of Denmark archives; Badge (1975). D16f, 692/2001. National Museum of Denmark archives; Mette-Line Thorup, "Solmærket, ja tak," *Information*, (July 25, 2007).
80. Thorup, "Solmærket, ja tak," *Information*, (July 25, 2007).
81. Steen Nielsen, interview; as in Denmark, antinuclear publications in Sweden were remarkably technical in their approach. See Anshelm, *Mellan frälsning och domedag*.
82. *Atomkraft?* no. 25–26 (1979), 2. Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*, 700f.; Steen Nielsen, interview.
83. "Inhold," *Atomkraft?* no. 25–26 (1979), 2. Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*, 255f.; Køre

- Anker Jørgensen, "De 3 hovedkrav," *Atomkraft?* no. 25–26 (1979), 6. Jørgen Steen Nielsen's private collections.
84. Annette Wiborg, "Der har altid været tryk på..." *Atomkraft? OOA—ti år i bevægelse* no. 45 (1984), 24. Jørgen Steen Nielsen's private collections; Steen Nielsen, interview; "Kræver beslutning om atomværker i Danmark udskudt 3 år," *Ekstra bladet* (1974); "En OOA-aktivist. Beretning fra Helle Green," 165/99 (2000). National Museum of Denmark archives; "OOA memories, written by P.J. Snare" 165/99 (2000). National Museum of Denmark archives; Danielsen, *Atomkraften under pres*, 698.
85. Energibevægelsen OOA. Organisationen til Oplysning om Atomkraft, www.ooa.dk (accessed June 19, 2012).
86. *En fremtid med atomkraft? Organisationen til oplysning om atomkraft* (1975), 22. Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*, 702.
87. *Atomkraft?* no. 25–26 (1979), 10. Jørgen Steen Nielsen's private collections.
88. Ibid., 14.
89. *Atomkraft?* no. 21–22 (1978), 23. Jørgen Steen Nielsen's private collections.
90. Daléus, interview; Steen Nielsen, interview.
91. See, for example, Steen Nielsen, "Overblik," *Atomkraft?* no. 25–26 (1979), 3. Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*, 178.
92. *Atomkraft? OOA—ti år i bevægelse* no. 45 (1984). Jørgen Steen Nielsen's private collections; *Atomkraft?* no. 1 (1974), cover page. Jørgen Steen Nielsen's private collections; "Myten om atomkraftens 'fredelige' udnyttelse," *En fremtid med atomkraft? Organisationen til oplysning om atomkraft* (1975), 14. Jørgen Steen Nielsen's private collections.
93. Per Högselius and Arne Kaijser, *När folkhemselen blev internationell: Elavregleringen i historiskt perspektiv* (Stockholm: SNS Förlag, 2007), 58.
94. Kaijser, "Redirecting power," 457.
95. Anshelm, *Mellan frälsning och domedag*, 352.
96. Ibid., 362f., 462; see also Ernst Klein, "Vi behöver kärnkraften," *Östgöta Correspondenten* (undated).
97. Danielsen, *Atomkraften under pres*, 549.
98. Palmqvist, interview; Daléus, interview.
99. Högselius and Kaijser, *När folkhemselen blev internationell*, 59f., quote from 60.
100. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 70.
101. "1988–06–30 Inbjudan till information om den fortsatta verksamheten vid Barsebäcksverket." Kävlinge kommun. Kommunstyrelsen. Handlingar. Korrespondens. 1988. E I: b 6. 1988. Kävlinge municipal archives; "Kolförsök försenas?" *Norra Skåne* (January 13, 1989).

102. "Protokoll fört vid KSO-möte i Bad Nenndorf 1989-08-18." Kävlinge kommun. Lokala säkerhetsnämnden. Ämnesordnade handlingar. 1989. F:2. 1989, § 3. Kävlinge municipal archives.
103. Jan Thorsson, "Barsebäcksborna till kamp mot kolet," *Svenska Dagbladet* (January 23, 1989); Jan Jönsson, "Dahl kommer inte till möte om kolgasen," *Sydsvenska Dagbladet* (January 12, 1989); Sjölander-Lindqvist et al., *Delaktighetens landskap*, 32.
104. "Barsebäcksbor vill stoppa kolgasverk," *Kristianstadsbladet* (January 9, 1989).
105. Jan Thorsson, "Politkerna vändas," *Svenska Dagbladet* (January 23, 1989); "Letter from Miljö- och naturresursdepartementet to Sydkraft AB." Kävlinge kommun. Kommunstyrelsen. Handlingar. M-Ö. 1992. EIIc: 2. 1988. Kävlinge municipal archives.
106. Högselius and Kaijser, *När folkhemseven blev internationell*, 60f.
107. Danielsen, *Atomkraften under pres*, 387.
108. Quote in original: "Tack, ni svenska vaktorn. Med plutonium tvingar vi dansken på knä. Här: Danmark, utskitet av kalk och vatten. Och där: Sverige, hugget i granit. Danskvävar. Danskvävar!"
109. "Sydkraft klarar vintern med el från Danmark," *Nyheterna* (December 23, 1992); "Dansk el räddar skånska julen," *Sydsvenska Dagbladet* (December 23, 1992).
110. Thorsten Jansson, "Dansk kol-el håller Sverige ljust i jul," *Östra Småland* (December 23, 1992); Sven Bergquist, "Vad hände i Barsebäck den 28 juli?" *Expressen* (December 4, 1992).
111. Larry Andow, "Barsebäck—Danmarks alibi," *Arbetet* (September 9, 1982).
112. Pär Adolfsson, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 72.
113. Öst, interview.
114. Taranger, interview.
115. Sonje Johansson, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 66.
116. Ibid., 44.
117. Ibid., 48.
118. Ibid., 44.
119. Öst, interview.
120. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 48; Öst, interview.
121. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 49f.
122. Ibid., 61, 67.
123. Arne Hansson, cited in ibid., 62.
124. Arne Hansson, cited in ibid., 61f; see also Sjölander-Lindqvist et al., *Delaktighetens landskap*, 39.
125. Taranger, interview; see also Öst, interview.
126. Bjurling, *Sydkraft—sambälle*, 275.

127. Taranger, interview; Öst, interview.
128. Leif Öst, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 47.
129. Taranger, interview.
130. Jan Pålsson, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 64; for a similar story told at the Clab storage in Oskarshamn, see Gunilla Bandolin and Sverker Sörlin, *Laddade landskap – värdering och gestaltning av teknologiskt sublimes platser*, R-07-14 (Stockholm: SKB, 2007), 38.
131. Zonabend, *The nuclear peninsula*. See, for example, 6, 101, 20.
132. Ibid., 93f.
133. In addition to previous references, Gineitene et al. report on an opinion survey of the 1990s that includes Barsebäck. See Gineitene et al., "Public risk perceptions of nuclear power," 136, 59.
134. Jan Pålsson, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 66; Öst, interview.
135. Öst, interview.
136. Ibid.
137. Lars Tornsberg, cited in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 69.
138. Sonje Johansson, cited in ibid., 71.
139. Taranger, interview.
140. Palmqvist, interview.
141. Åsa Carlson, interview, Malmö, November 4, 2010.
142. Energibevægelsen OOA. Organisationen til Oplysning om Atomkraft, www.oaa.dk (accessed June 19, 2012).
143. Birgitte Thusing, "Barsebäck værste terror-mål," *Extra bladet* (September 18, 2001).
144. Jens Aagaard Poulsen, "Vi er forsvarsløse," *Extra bladet* (September 18, 2001).
145. Dan Nilsson, "Höjd beredskap vid svenska kärnkraftverk," *Svenska Dagbladet* (September 18, 2001).
146. *Atomkraft? OOA—ti år i bevægelse* no. 45 (1984), 6. Jørgen Steen Nielsen's private collections; Danielsen, *Atomkraften under pres*: 5f., 187, 429; Energibevægelsen OOA. Organisationen til Oplysning om Atomkraft, www.oaa.dk (accessed June 19, 2012).
147. Palmqvist, interview.
148. Philip Moding, "Underlag för gemensamt PM till Energikommisionen—Kävlinge kommun, 1995-08-28, KK6226." Kävlinge kommun. Lokala säkerhetsnämnden. Ämnesordnade handlingar. 1995. F:4. 1995. Kävlinge municipal archives.
149. Carlson, interview.
150. Öst, interview.
151. Ibid.
152. Taranger, interview.

153. Sjölander-Lindqvist et al., *Delaktighetens landskap*, 35.
154. Kristian Berg and Lars-Eric Jönsson, "Öppet brev till länsantikvarien i Malmöhus län," *Helsingborgs Dagblad* (June 9, 1988).
155. Regionmuseet, *Stort, fult, farligt? Barsebäcks kärnkraftverk och kulturarvet. Rapport 2003:115* (Regionmuseet Kristianstad/Länsantikvarien i Skåne, 2003); Borg and Sannerstedt, *Barsebäcks kärnkraftverk*.
156. Magdalena Tafvelin Heldner, Eva Dahlström Rittsél, and Per Lundgren, *Ågesta: Kärnkraft som kulturarv* (Stockholm: Tekniska museet, Stockholms läns museum, Länsstyrelsen i Stockholms län, 2008); Jan Garnert, ed. *Kärnkraft retro* (Stockholm: Tekniska museet, 2008); at the National Museum of Science and Technology in Stockholm no fewer than eight exhibitions on nuclear power were shown between 1949 and 1999, mainly from an uncritical and supportive perspective. See Magdalena Tafvelin Heldner, "Strumpstickor och pingpongbollar: Med Tekniska museet i atom-åldern," in *Kärnkraft retro*, ed. Jan Garnert, *Dædalus, Tekniska museets årsbok* (Stockholm: Tekniska museet, 2008).
157. During the planning before the seminar several of the heritage representatives did not find it self-evident to connect the nuclear power plant to heritage issues. See preface by Barbro Mellander in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 9; Sjölander-Lindqvist et al., *Delaktighetens landskap*, 25.
158. Preface by Barbro Mellander in Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 9. See also 85, 92; Berg and Jönsson, "Öppet brev till länsantikvarien i Malmöhus län," *Helsingborgs Dagblad* (June 9, 1988).
159. "Letter from the National Museum to OOA activists," 165/99 (June 28, 2000). National Museum of Denmark archives; Energibevægelsen OOA. Organisationen til Oplysning om Atomkraft, www.oaa.dk (accessed June 19, 2012).
160. "En OOA-aktivist. Beretning fra Helle Green," 165/99 (2000). National Museum of Denmark archives; see also "OOA memories, written by P.J. Snare," 165/99 (2000). National Museum of Denmark archives.
161. "Sculpture 'Sigyn'" J2v, D7a, 1562/2001. National Museum of Denmark archives.
162. Visit to the museum, November 2, 2010.
163. Knudsen, *Risørs reaktorer*, 1, 7.
164. Ibid., 111.
165. Johan Joelsson, "Kärnkraft som attraktion," *DIK-forum*, no. 6 (2010).
166. Taranger, interview.
167. Borg and Sannerstedt, *Barsebäcks kärnkraftverk*, 100.
168. Jan Olof Andersson Hederöth, cited in ibid., 78; see also Sjölander-Lindqvist et al., *Delaktighetens landskap*, 37.

169. Håkan Lorentz, interview, Barsebäck, November 3, 2010; Carlson, interview.
170. Sjölander-Lindqvist et al., *Delaktighetens landskap*: 30f.; these plans have recently met with resistance from the County Administrative Board. See Ulf Sundberg, "Länsstyrelsen sågar Barsebäcks sjöstad," *Sydsvenska Dagbladet* (April 14, 2014).
171. Sjölander-Lindqvist et al., *Delaktighetens landskap*, 30.
172. Henrik Borg, "Barsebäck, en historia om trivsel, säkerhet, demonstrationer och kulturarv," in *Kärnkraft retro*, ed. Jan Garnert, *Dædalus, Tekniska museets årsbok* (Stockholm: Tekniska museet, 2008), 143.

4 Lost Utopia

1. Paul Josephson, *Red Atom: Russia's nuclear power program from Stalin to today* (New York: W. H. Freeman and Company, 1999), 34.
2. Ibid., 35, 234.
3. See, for example, Sonja D. Schmid, "Celebrating tomorrow today: The peaceful atom on display in the Soviet Union," *Social Studies of Science* 36, no. 3 (2006), 356.
4. Arne Kaijser and Per Högselius, *Resurs eller avfall? Politiken kring hanteringen av använt kärnbränsle i Finland, Tyskland, Ryssland och Japan, R-07-37* (Stockholm: SKB, 2007), 41; Andis Cinis, Marija Drėmaitė, and Mart Kalm, "Perfect representations of Soviet planned space: Mono-industrial towns in the Soviet Baltic Republics in the 1950s–1980s," *Scandinavian Journal of History* 33, no. 3 (2008), 237; Per Högselius, "Connecting East and West? Electricity systems in the Baltic region," in *Networking Europe. Transnational infrastructures and the shaping of Europe 1850–2000*, ed. Erik van der Vleuten and Arne Kaijser (Sagamore Beach, MA: Science History Publications, 2006), 251.
5. Cinis et al., "Perfect representations of Soviet planned space," 237; Kristina Šliavaitytė, *From pioneers to target group. Social change, ethnicity and memory in a Lithuanian nuclear power plant community* (Lund: Lunds universitet, 2005), 64, 70f.
6. Šliavaitytė, *From pioneers to target group*, 69f.; see also Kate Brown, "In the house that plutonium built: The history of plutonium, radiation and the communities that learned to love their bomb," 26. Unpublished.
7. Cited in Šliavaitytė, *From pioneers to target group*, 70f.; combining Soviet and American contexts, Kate Brown describes how places were regarded as empty of history and then given a beginning and thus meaning through the establishment of a nuclear enterprise. See Kate Brown, "Gridded lives: Why Kazakhstan and Montana are nearly the same place," *The American Historical Review* 106, no. 1 (2001), 28.

122. Schmid, "Celebrating tomorrow today," 342ff.
123. Brown, "In the house that plutonium built."
124. Šliavaite, *From pioneers to target group*, 46; Senn, *Lithuania awakening*, 9f., 202f.
125. Josephson, *Red atom*, 32, 38; Wendland, "Inventing the atomograd."
126. Brown, "In the house that plutonium built," 3, 26, 36.
127. Ibid., 25.
128. Wendland, "Inventing the atomograd," 18; Stefan Buzar, *Energy poverty in Eastern Europe: Hidden geographies of deprivation* (Aldershot: Ashgate, 2007).
129. Josephson, *Red atom*, 290; Karaliūtė, "Nuclear knowledge management," 222.
130. Marija Drėmaitė, "Industrial heritage in a rural country: Interpreting the industrial past in Lithuania," in *Industrial heritage around the Baltic Sea*, ed. Marie Nisser et al., Uppsala Studies in Economic History 92 (Uppsala: Acta Universitatis Upsaliensis, 2012), 65f.
131. Cinis et al., "Perfect representations of Soviet planned space," 227.
132. Drėmaitė, "Industrial heritage in a rural country," quote from 73.
133. Within this trend, some nuclear power plants have been reused for cultural and commercial uses, although this is rather rare. One example is a breeder reactor site that was never in operation, Kalkar in Germany, now transformed into an amusement park (including a museum of the site's history). See Maja Fjæstad, "Ett kärnkraftverk återuppstår: Från Snr300 till Wunderland Kalkar," *Bebyggelsehistorisk tidskrift*, no. 63 (2012).
134. Drėmaitė, "Industrial heritage in a rural country," 65f.
135. Algimantas Degutis (with Alfredas Jomantas), interview, Vilnius, November 26, 2010; Ševaldin, interview.
136. Ševaldin, interview.
137. Drėmaitė, "Industrial heritage in a rural country," quote from 73.
138. Schmid, "Celebrating tomorrow today," 335ff.
139. Degutis, interview.
140. Ibid.
141. Ibid.
142. Ševaldin, interview.
143. Urbonavičius, interview.
144. Ibid.
145. Kenneth E. Foote, *Shadowed ground: America's landscapes of violence and tragedy*, revised edition (Austin: University of Texas Press, 2003), 29.
146. The construction of reactor 3 started in 1985, was suspended in 1988, and demolition began in 1989. Dismantling was completed in 2008; for a discussion on decommissioning costs, see Åsa Moberg, *Ett extremt dyrt och livsfarligt sätt att värma vatten: En bok om kärnkraft* (Stockholm: Natur och kultur, 2014), 246.

147. Urbonavičius, interview.
148. Ševaldin, interview.
149. Urbonavičius, interview.
150. David E. Nye and Sarah Elkind, eds., *The anti-landscape* (Amsterdam: Rodopi, 2014).
151. See also Gunilla Bandolin and Sverker Sörlin, *Laddade landskap – värdering och gestaltning av teknologiskt sublimes platser, R-07-14* (Stockholm: SKB, 2007).
152. Paul Ricœur, *Memory, history, forgetting*. Translated by Kathleen Blamey and David Pellauer (Chicago: University of Chicago Press, 2004).

5 Industrial Nature

1. "Industrial nature" can also be understood as "industrialized nature," that is, environments directly changed by industrial production. See, for example, Paul R. Josephson, *Industrialized nature: Brute force technology and the transformation of the natural world* (Washington DC: Island Press, 2002); Gene Desfor and Lucian Vesalon, "Urban expansion and industrial nature: A political ecology of Toronto's port industrial district," *International Journal of Urban and Regional Research* 32, no. 3 (2008); however, for the sake of this chapter, I choose to leave this understanding aside and concentrate on conceptualizations emphasizing a post-industrial situation or industrial wastelands, beside production or after production has ceased.
2. Tobias Plieninger and Claudia Bieling, "Resilience and cultural landscapes: Opportunities, relevance and ways ahead," in *Resilience and the cultural landscape: Understanding and managing change in human-shaped environments*, ed. Tobias Plieninger and Claudia Bieling (Cambridge: Cambridge University Press, 2012), 332; Thymio Papayannis and Peter Howard, "Editorial: Nature as heritage," *International Journal of Heritage Studies* 13, no. 4–5 (2007), 300; Hugh Cheape, Mary-Cate Garden, and Fiona McLean, "Editorial: Heritage and the environment," *International Journal of Heritage Studies* 15, no. 2–3 (2009); Andrew Karvonen, *Politics of urban runoff: Nature, technology and the sustainable city* (Cambridge, MA: MIT Press, 2011), quote from 188.
3. Anne Brownley Raines, "Wandel durch (Industrie) Kultur [Change through (industrial) culture]: Conservation and renewal in the Ruhrgebiet," *Planning Perspectives* 26, no. 2 (2011), 195f.
4. Nate Millington, "Post-industrial imaginaries: Nature, representation and ruin in Detroit, Michigan," *International Journal of Urban and Regional Research* 37, no. 1 (2013), 285, 91.
5. Gaëlle Covo, "Spatial planning, structural change and regional development policies within the Ruhr area in Germany," in *Exploring the Ruhr in Germany* (Bochum, 2001); Andreas Keil and Burkhard Wetterau, *Metropolis Ruhr: A regional study of the new Ruhr* (Essen: Regionalverband Ruhr, 2013), 14f.

6. Joachim Huske, *Die Steinkohlenseichen im Ruhrrevier. Daten und Fakten von den Anfängen bis 2005*, 3. überarbeitete und erweiterte Auflage (Bochum: Deutsches Bergbau-Museum, 2006; repr., 3rd).
7. Ingerid Helsing Almaas, "Regenerating the Ruhr—IBA Emscher Park project for the regeneration of Germany's Ruhr region," *The Architectural Review* CCV, no. 1224 (1999).
8. Jörg Dettmar, "Forests for shrinking cities? The project 'Industrial Forests of the Ruhr,'" in *Wild urban woodlands: New perspectives for urban forestry*, ed. Ingo Kowarik and Stefan Körner (Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg, 2005), 264; see also Keil and Wetterau, *Metropolis Ruhr*, 26.
9. Polise Moreira De Marchi, "Ruhrgebiet: redesigning an industrial region," in *Exploring the Ruhr in Germany* (Bochum, 2001), 29.
10. Wolfram Höfer and Vera Vicenzotti, "Post-industrial landscapes: Evolving concepts," in *The Routledge companion to landscape studies*, ed. Peter Howard, Ian Thompson, and Emma Waterton (Abingdon: Routledge, 2013), 406f.; Ingo Kowarik and Andreas Langer, "Natur-Park Südgelände: Linking conservation and recreation in an abandoned railyard in Berlin," in *Wild urban woodlands: New perspectives for urban forestry*, ed. Ingo Kowarik and Stefan Körner (Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg, 2005), 287; Jens Lachmund, *Greening Berlin: The co-production of science, politics, and urban nature* (Cambridge, MA: MIT Press, 2013).
11. Kowarik and Langer, "Natur-Park Südgelände," 287.
12. Ibid.
13. Ingo Kowarik, "Novel urban ecosystems, biodiversity, and conservation," *Environmental Pollution*, no. 159 (2011), 6.
14. Ingo Kowarik, "Wild urban woodlands: Towards a conceptual framework," in *Wild urban woodlands: New perspectives for urban forestry*, ed. Ingo Kowarik and Stefan Körner (Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg, 2005), 2.
15. Heiderose Kilper and Gerald Wood, "Restructuring policies: The Emscher park international building exhibition," in *The rise of the rust-belt*, ed. Philip Cooke (London: UCL Press, 1995), 226; Wolfgang Pehnt, "Changes have to take place in people's heads first," *Topos: European landscape magazine*, no. 26 (1999), 22. Kersti Morger's private collections.
16. *Internationale Bauausstellung Emscher-Park: Werkstatt für die Zukunft alter Industriegebiete*, Memorandum zu Inhalt und Organisation (Düsseldorf: Der Minister für Stadtentwicklung, Wohnen und Verkehr des Landes Nordrhein-Westfalen, 1988). Kersti Morger's private collections.
17. Covo, "Spatial planning, structural change and regional development policies."
18. Thomas Sieverts, "Die Internationale Bauausstellung Emscher Park: Werkstatt zur Erneuerung alter Industriegebiete—Eine

- strukturpolitische Initiative des Landes Nordrhein-Westfalen," *Arcus Architektur und Wissenschaft: IBA Emscher Park, Zukunftswerkstatt für Industrieregionen*, no. 13 (1991), 6. Kersti Morger's private collections.
19. Robert Shaw, "The International Building Exhibition (IBA) Emscher Park, Germany: A model for sustainable restructuring?," *European Planning Studies* 10, no. 1 (2002), 82.
20. Ibid., 84; Gerhard Seltmann, "Eine unmögliche Ausstellung? Merkzeichen für die Internationale Bauausstellung Emscher Park," *Arcus Architektur und Wissenschaft: IBA Emscher Park, Zukunftswerkstatt für Industrieregionen*, no. 13 (1991). Kersti Morger's private collections.
21. Raines, "Wandel durch (Industrie) Kultur," 200.
22. Joachim Weiss et al., "Nature returns to abandoned industrial land: Monitoring succession in urban-industrial woodlands in the German Ruhr," in *Wild urban woodlands: New perspectives for urban forestry*, ed. Ingo Kowarik and Stefan Körner (Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg, 2005), 143.
23. Wolfgang Ebert, interview, Geldern, February 12, 2007; see also Rainer Slotta, "Industrial archaeology in the Federal Republic of Germany," in *Industrial heritage '84 national reports: The fifth international conference on the conservation of the industrial heritage* (Washington DC: 1984), 40.
24. Raines, "Wandel durch (Industrie) Kultur," 195; Ebert, interview.
25. "A selection of projects: IBA Emscher Park," *Topos: European landscape magazine*, no. 26 (1999), 98. Kersti Morger's private collections; Local governments and private companies often jointly financed the projects within IBA Emscher Park. However, at Landschaftspark Duisburg-Nord most of the expenditures were publicly funded. See Environmental Protection Agency, International brownfields case study, Emscher Park, Germany, www.epa.gov (accessed October 15, 2007).
26. Ebert, interview; the German Society for Industrial History was founded in 1986.
27. Ibid.
28. Environmental Protection Agency, International Brownfields Case Study, Westergasfabriek, Amsterdam, Netherlands. www.epa.gov (accessed October 15, 2007); Andreas Keil, "Use and perception of post-industrial urban landscapes in the Ruhr," in *Wild urban woodlands: New perspectives for urban forestry*, ed. Ingo Kowarik and Stefan Körner (Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg, 2005), 128; Anna Storm, *Koppardalen: Om historiens plats i omvandlingen av ett industriområde*, Stockholm papers in the history and philosophy of technology, Trita-HOT: 2047 (Stockholm: KTH lic., 2005).
29. Ebert, interview; nevertheless, the word "park" could also signify ongoing industrial activity. A steel works in northern Duisburg was

- for example called "Industriepark Ost." See Håkon W. Andersen et al., *Fabrikken* (Oslo: Scandinavian Academic Press/Spartacus Forlag, 2004), 576.
30. The CSR triangle theory is an ecological classification of plants into competitors, stress-tolerators and ruderals. Ruderals are defined as having "high reproductive rates in transient disturbed habitats." See J. Philip Grime and Simon Pierce, *The evolutionary strategies that shape ecosystems* (John Wiley & Sons, Ltd, 2012), 12f.
 31. Personal communication with Arne Anderberg, September 24, 2013; Encyclopedia Britannica <http://www.britannica.com/> (accessed September 25, 2013); Oxford English Dictionary online, entry for "ruderal," <http://www.oed.com/view/Entry/276667?redirectedFrom=ruderal&> (accessed September 25, 2013).
 32. Peter Latz, "Landscape Park Duisburg-Nord: The metamorphosis of an industrial site," in *Manufactured sites: Rethinking the post-industrial landscape*, ed. Niall Kirkwood (New York: Spon Press, 2001), 157.
 33. Latz und Partner, www.latzundpartner.de/projects/detail/18 (accessed September 25, 2013).
 34. Landschaftspark Duisburg-Nord, www.landschaftspark.de (accessed March 19, 2007).
 35. Personal communication with Dietrich Soye, January 22, 2014.
 36. For an analysis of different experiences of nature including examples from the Ruhr area, see Klas Sandell, "Var ligger utomhus? Om nya arenor för natur- och landskapsrelationer," in *Utombusdidaktik*, ed. Iann Lundegård, Per-Olof Wickman, and Ammi Wohlin (Lund: Studentlitteratur, 2004).
 37. Dettmar, "Forests for shrinking cities?" 265.
 38. Ibid.; quote from Ebert, interview.
 39. Ebert, interview.
 40. John Urry, "The place of emotions within place," in *Emotional geographies*, ed. Joyce Davidson, Liz Bondi, and Mick Smith (Aldershot: Ashgate, 2005), quote from 81.
 41. Shaw, "The International Building Exhibition (IBA) Emscher Park, Germany," 91; see also Axel Föhl, "Ein Abwurfplatz für Meteoriten". Industriedenkmale und die IBA," *Industrie-Kultur* 3 (1999); Ulrich Heinemann, "Industriekultur: Vom Nutzen zum Nachteil für das Ruhrgebiet," *Forum Industriedenkmalfpflege und Geschichtskultur* 1 (2003).
 42. Ursula Poblitzki, "Transformation of a landscape," *Topos: European landscape magazine*, no. 26 (1999), 48. Kersti Morger's private collections.
 43. Keil, "Use and perception of post-industrial urban landscapes in the Ruhr."
 44. Ibid., 128.

45. Ibid., 119. Their field studies were carried out in 1997, 1998, and 2003.
46. Ibid., 119, 27.
47. Ibid., 127.
48. Ibid., 125.
49. "A selection of projects: IBA Emscher Park," 126. Kersti Morger's private collections.
50. Ebert, interview; the figure is specified in Marie Nisser, "Nytt liv i Europas gamla industriområden," *Kulturmiljövård*, no. 6 (1994), 15.
51. Raines, "Wandel durch (Industrie) Kultur," 189f.
52. Ibid., 191.
53. Ibid., 186ff.
54. Dagmar Kift, "Heritage and history: Germany's industrial museums and the (re-) presentation of labour," *International Journal of Heritage Studies* 17, no. 4 (2011), 380; Raines, "Wandel durch (Industrie) Kultur," 186ff.; Rita Müller, "Museums designing for the future: Some perspectives confronting German technical and industrial museums in the twenty-first century," *International Journal of Heritage Studies* 19, no. 5 (2013), 511.
55. Kift, "Heritage and history," 385f.
56. Ibid., 380; for a slightly different perspective, see Müller, "Museums designing for the future," 511.
57. Shiloh R. Krupar, *Hot spotter's report: Military fables of toxic waste* (Minneapolis: University of Minnesota Press, 2013).
58. Ibid., 6–11.
59. Millington, "Post-industrial imaginaries," 283–89.
60. Ibid., 293.
61. See, for example, Chris Hagerman, "Shaping neighborhoods and nature: Urban political ecologies of urban waterfront transformations in Portland, Oregon," *Cities* 24, no. 4 (2007), 285ff., quote from 290; Anna Storm, *Hope and rust: Reinterpreting the industrial place in the late 20th century* (Stockholm: KTH diss., 2008).
62. Hagerman, "Shaping neighborhoods and nature," 288.
63. Ibid., 287–95, quote from 295.
64. Storm, *Hope and rust*; Storm, *Koppardalen*.
65. Höfer and Vicenzotti, "Post-industrial landscapes," 405.
66. Ibid., 406.
67. Ibid.
68. Thomas Lekan and Thomas Zeller, *Germany's nature: Cultural landscapes and environmental history* (New Brunswick, NJ: Rutgers University Press, 2005), 4; a similar logic underpins the volume *Urban wildscapes*, among other things including examples from several European countries. Anna Jorgensen and Richard Keenan, ed., *Urban wildscapes* (New York: Routledge, 2011).

69. Höfer and Vicenzotti, "Post-industrial landscapes," 409.
70. Ibid., 410.
71. Ebert, interview; Dietrich Soye, "Das amerikanische Industriemuseum 'Sloss Furnaces'—ein Modell für das Saarland?," *Annales. Forschungsmagazin der Universität des Saarlandes*, no. 1 (1988).
72. Hagerman, "Shaping neighborhoods and nature," 295.
73. Divya P. Tolia-Kelly, "Landscape and memory," in *The Routledge companion to landscape studies*, ed. Peter Howard, Ian Thompson, and Emma Waterton (Abingdon: Routledge, 2013), 323.
74. Zygmunt Bauman, "From pilgrim to tourist—or a short history of identity," in *Questions of cultural identity*, ed. Stuart Hall and Paul du Gay (London: SAGE Publications Ltd, 1996), 30; Sharon Zukin, *Loft living: Culture and capital in urban change* (New Brunswick, NJ: Rutgers University Press, 1982), 111f.; the conversion of former industrial buildings for cultural purposes is taking place in many places in Europe. See, for example, Fazette Bordagè, ed., *The factories: Conversions for urban culture* (Basel: Birkhäuser, 2002).
75. Millington, "Post-industrial imaginaries," 281; Tim Edensor, *Industrial ruins: Spaces, aesthetics, and materiality* (Oxford: Berg, 2005).
76. Tim Edensor, *Industrial ruins*; see also Richard Pettersson, "Plats, ting och tid: Om autenticitetsuppfattning utifrån exemplet Rom," in *Topos: Essäer om tänkvärda platser och platsbundna tankar* (Stockholm: Carlssons Bokförlag, 2006); Klas Sandell, "Friluftsliv, platsperspektiv och samhällskritik," in *Topos: Essäer om tänkvärda platser och platsbundna tankar* (Stockholm: Carlssons Bokförlag, 2006).
77. *Internationale Bauausstellung Emscher-Park*, 44. Kersti Morger's private collections.
78. Jan Turtinen, *Världsarvets villkor: Intressen, förhandlingar och bruk i internationell politik*, Acta Universitatis Stockholmiensis, Stockholm studies in Ethnology 1 (Stockholm: Stockholm University, 2006), 60f.; the concept of authenticity is under negotiation, however, especially under the influence of value systems in Asia. See, for example, the Nara Document on Authenticity, www.iicc.org.cn/Info.aspx?ModelId=1&Id=422 (accessed April 12, 2014).
79. Kowarik, "Wild urban woodlands."
80. Ibid., 17ff.
81. Ibid., 21.
82. Ibid., 22; see also Jorgensen and Keenan, eds., *Urban wildscapes*.
83. Kowarik and Langer, "Natur-Park Südgelände," 288, 90.
84. Ibid., 291.
85. Dettmar, "Forests for shrinking cities?," 267.
86. Ibid.
87. For other large-scale transformations in the Ruhr, see, for example, Keil and Wetterau, *Metropolis Ruhr*, 30.

88. Raines, "Wandel durch (Industrie) Kultur," 197f.; Müller, "Museums designing for the future," 525; see also Völklinger Hütte, www.voelklinger-huette.org/de/faszination-weltkulturerbe/das-paradies/ and Das Paradies, www.euromuse.net/en/exhibitions/exhibition/view-c/das-paradies/ (both sites accessed August 29, 2013).
89. Kowarik and Langer, "Natur-Park Südgelände," 296; Dettmar, "Forests for shrinking cities?," 269.
90. One could note how Germany became industrialized and urbanized later and more rapidly than many other countries like France and Britain, and also that it experienced six different political regimes from 1871 up to 1990. See Lekan and Zeller, *Germany's nature*, 4.
91. Gregory Ashworth and Peter Howard, *European heritage planning and management* (Exeter: Intellect Ltd, 1999), 24.
92. David Lowenthal, *The heritage crusade and the spoils of history* (Cambridge: Cambridge University Press, 1998), x.
93. Zukin, *Loft living*, 73.
94. Kenneth E. Foote, *Shadowed ground: America's landscapes of violence and tragedy*, revised edition (Austin: University of Texas Press, 2003), 25.
95. Kowarik, "Wild urban woodlands," 3.
96. Cited in Raines, "Wandel durch (Industrie) Kultur," 203; see also Karl Ganser, "The present state of affairs... Karl Ganser in a conversation with Carl Steckeweh and Kunibert Wachten," in *Change without growth? Sustainable urban development for the 20th century. VI. Architecture biennale Venice 1996*, edited by Kunibert Wachten (Braunschweig/Wiesbaden: Friedr. Vieweg & Sohn Verlagsgesellschaft mbH, 1996), 12–23.
97. Shaw, "The International Building Exhibition (IBA) Emscher Park, Germany," 84f.
98. Huske, *Die Steinkohlenzechen im Ruhrrevier. Daten und Fakten von den Anfängen bis 2005, 3. überarbeitete und erweiterte Auflage*.
99. Raines, "Wandel durch (Industrie) Kultur," 193, quote from 201.
100. Ibid., 183.
101. Ibid., 195.
102. Dettmar, "Forests for shrinking cities?," 272.
103. Landschaftspark Duisburg-Nord, www.landschaftspark.de/architektur-natur and www.landschaftspark.de/architektur-natur/landschaftsarchitektur (accessed September 25, 2013).
104. Quote from Universität Oldenburg, landscape ecology, www.landeco.uni-oldenburg.de/20716.html (accessed September 25, 2013); Mira Kattwinkel, Robert Biedermann, and Michael Kleyer, "Temporary conservation for urban biodiversity," *Biological Conservation*, no. 144 (2011).
105. David Harvey, "Emerging landscapes of heritage," in *The Routledge companion to landscape studies*, ed. Peter Howard, Ian Thompson, and Emma Waterton (Abingdon: Routledge, 2013), 154f.

106. Matthew Gandy, "Urban nature and the ecological imaginary," in *In the nature of cities: Urban political ecology and the politics of urban metabolism*, ed. Nikolas C. Heynen, Maria Kaika, and Erik Swyngedouw (New York, NY: Routledge, 2006), 71.
107. Mattias Qviström, "Network ruins and green structure development: An attempt to trace relational spaces of a railway ruin," *Landscape Research* 37, no. 3 (2011), 257.
108. Millington, "Post-industrial imaginaries," 282, 86.
109. Karvonen, *Politics of urban runoff*, 188.

6 Enduring Spirit

1. Eva Vikström, *Industrimiljöer på landsbygden: Översikt över kunskapsläget* (Stockholm: Riksantikvarieämbetet, 1994), 42–73; Eva Vikström, *Platsen, bruket och samhället: Tätortsbildning och arkitektur 1860–1970* (Stockholm: Statens råd för byggnadsforskning, 1991), 23ff.
2. Ewa Bergdahl, Maths Isacson, and Barbro Mellander, eds., *Bruksandan—hinder eller möjlighet? Rapport från en seminarieriserie i Bergslagen*, Ekomuseum Bergslagens skriftserie no 1 (Smedjebacken: Ekomuseum Bergslagen, 1997).
3. Maths Isacson, *Industrisamhället Sverige: Arbete, ideal och kulturarv* (Lund: Studentlitteratur, 2007), 195, 275; Maths Isacson, "Bruksandan—hinder eller möjlighet? Sammanfattning av fyra seminarier i Bergslagen 1995–1997," in *Bruksandan—hinder eller möjlighet? Rapport från en seminarieriserie i Bergslagen*. Ekomuseum Bergslagens skriftserie no 1, ed. Ewa Bergdahl, Maths Isacson, and Barbro Mellander (Smedjebacken: Ekomuseum Bergslagen, 1997), 127.
4. Einar Lövgren, *Folkare din hembygd* (Avesta, 1977), 120.
5. Helena Kåks, *Avesta: Industrierbete och vardagsliv genom 400 år*, DFR-rapport 2002:1 (Falun: Dalarnas forskningsråd, 2002), 27, 37.
6. Sten von Matérn, "Hållpunkter i Avestas historia," in *Koppardalens utveckling: Underlag för prioritering och detaljerad planering av Koppardalens vidare utveckling och exploatering*, 1996, 2. Avesta municipality.
7. Eva Vikström, *Bruksandan och modernismen: Brukssamhälle och folkhemsbygge i Bergslagen 1935–1975*, Nordiska museets handlingar 126 (Stockholm, 1998), 171–78.
8. *Detaljplan för Koppardalens industriområde, planbestämmelser* (July 26, 1989). Avesta municipality.
9. Vikström, *Bruksandan och modernismen*, 174ff.
10. Eva Rudberg, *Alvar Aalto i Sverige*, Arkitekturmuseets skriftserie nr 12 (Stockholm: Arkitekturmuseet, 2005), 66–77.

11. Isacson, *Industrisamhället Sverige*, 219; Jan Fredriksson, "Alvar Aalto och den uteblivna förnyelsen av Avesta stadscentrum," *Dalarna* (1997).
12. *Svenska Dagbladet* (November 3, 1976). Tidningsurklipp 1976–1983, F1:10, Handlingar angående Avesta, Bo Hermelins samling. Nordstjernan Corporation central archives, Engelsbergsarkivet; "Anteckningar rörande Avesta Jernverk under disponent Walfrid Erikssons tid (1927–49), Meddelande 18.2." 1971. Museifragor, F2B:119, Avesta Jernverks AB. Nordstjernan Corporation central archives, Engelsbergsarkivet; Cyber City web encyclopedia, <http://urbanhistory.historia.su.se/cybercity/stad/avesta/befolkning.htm> (accessed November 12, 2013), category "tätort" meaning "densely built-up area."
13. "Avtal mellan Avesta AB och Avesta Industriad AB. Bilaga 2, Hyreskontrakt 1." (1986) 3. Avesta municipality.
14. Marie Nisser, "Industriminnen under hundra år," *Nordisk Museologi*, no. 1 (1996).
15. "Utredning beträffande erforderligt utrymme för museisamlingarna 1944: Förslag till allmän plan för bergstekniskt och brukshistoriskt museum i Avesta. Meddelande från Bo Hermelin, LAP 43/69" (October 3, 1969). Handlingar angående Avesta, F1:6. Nordstjernan Corporation central archives, Engelsbergsarkivet; see also "Några industrihistoriska minnesmärken" (1946). Handlingar i diverse ämnen, F5B:6, Kultur- och industrihistoriska minnesmärken. Nordstjernan Corporation central archives, Engelsbergsarkivet.
16. Isacson, *Industrisamhället Sverige*, 217.
17. Rudberg, *Alvar Aalto i Sverige*.
18. Nisser, "Industriminnen under hundra år;" see also Marie Nisser and Fredric Bedoire, "Industrial monuments in Sweden: Conservation, documentation and research," in *The industrial heritage: The third international conference on the conservation of industrial monuments. Transactions 2. Scandinavian reports*, ed. Marie Nisser (Stockholm: Nordiska museet, 1978), 74; Anders Houlitz, *Teknikens tempel: Modernitet och industriarb på Göteborgsutställningen 1923*, Stockholm papers in the history and philosophy of technology, TritaHOT: 2041 (Hedemora: Gidlund, 2003).
19. Annika Alzén, *Fabriken som kulturarv: Frågan om industrilandskaps bevarande i Norrköping 1950–1985* (Stockholm/Stehag: Brutus Östlings Bokförlag Symposion, 1996), 23f.; Nisser and Bedoire, "Industrial monuments in Sweden," 74ff.
20. Maths Isacson, "Industrisamhällets faser och industriminnesforskningens uppgifter," in *Industrins avtryck: Perspektiv på ett forskningsfält*, ed. Dag Avango and Brita Lundström (Stockholm/Stehag: Symposion, 2003), quote from 21; Nisser, "Industriminnen under hundra år," 79; Marie Nisser, "Industriminnen på den