

Modern Nature for a Modern Nation
An Intellectual History of Environmental Dissonances in the Swedish Welfare State

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In the mid-1990s, the concept ‘ecological modernization’ was established internationally to characterize the perception that environmental protection and economic growth are not mutually exclusive but rather comprises a solid foundation for sustainable development.¹ According to this idea ingenious ‘green’ technological solutions bring about ‘win-win’ situations, which generate both financial and ecological profits. Furthermore, ‘green’ consumerism in the form of eco-marked products will guide the market in an environmentally-friendly direction. Ever since, the idea of an ecological modernization has directed environmental politics in the European Union, although not without critique.²

In Sweden, the perception of ecological modernization most visibly manifested itself in Social Democratic Party Leader Göran Persson’s vision of the ‘Green Welfare State.’ In his first speech before parliament as Prime Minister in 1996, he set up the following objective: ‘Sweden will be a driving international force and a leader in the endeavour to create ecologically sustainable development. Welfare will be built on a more effective use of our natural resources—energy, water, and raw materials’.³ This vision of a green welfare state meant rebuilding society by improving energy systems, recycling waste, rationalizing the extraction and refinement of raw materials, and investing heavily in green technology. In turn, such ‘ecological engineering’ and ‘eco-entrepreneurship’ would safeguard jobs and welfare for generations to come and provide innovations and practical knowledge, which Swedish companies also could export abroad. Decisive to the fate of this ambition was, according to

¹ Maarten Hajer, *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process* (Oxford: Clarendon, 1995).

² Dana R. Fisher and William R. Freudenburg, ‘Ecological modernization and its critics: Assessing the past and looking toward the future’, *Society & Natural Resources* 14:8 (2001): 701–9, and Susan Baker, ‘Sustainable development as symbolic commitment: Declaratory politics and the seductive appeal of ecological modernization in the European Union’, *Environmental Politics* 16:2 (2007): 297–317.

³ Riksdagens snabbprotokoll, Protokoll 1996/97:2. In Swedish: ‘Sverige skall vara en pådrivande internationell kraft och ett föregångsland i strävan att skapa en ekologiskt hållbar utveckling. Välståndet skall byggas på en effektivare användning av naturresurserna—energi, vatten och råvaror’.

Prime Minister Persson, that everyone—trade and industry, the public sector, and private citizens—develop in the same direction. This way, Sweden could become a model nation.

However, as we will argue in this essay, believing that modernization, economic growth, and a healthy environment could go hand-in-hand was nothing new as far as Sweden was concerned. Rather, it is a belief that has developed over time due to an extensive dialogue about the proper relationship between nature and society in the construction of the welfare state under Social Democratic rule. By drawing on our own and other historians' case studies on the intellectual environmental history of the *'folkhem era'*—in this article from the 1930 Stockholm Exhibition to the United Nations Conference on the Human Environment in Stockholm 1972—the aim of this essay is to uncover the different voices in this dialogue.

First, we will demonstrate how the champions of modernization viewed the relationship between nature and society, and analyse what they considered the basis for the optimism so characteristic of the times. Examples of how perceptions of machinery, mass production, development, and rationality influenced the handling of natural resources and a variety of environments and landscapes are provided. We will especially highlight the idea of 'dissonances' as a salient metaphor describing the disharmonic relation between old and new and the modern society and the modern nature. According to advocates of modernization, it was important to overcome dissonances—backwardness, inefficient use of natural resources and negative 'side effects' of societal progress such as pollution and environmental damage—between society and nature. Instead, by rational thinking and new technology it would be possible to make society and nature go hand-in-hand and thereby enhance human welfare.

We will then consider another group of public intellectuals that raised critical objections against both specific instances of exploitation and pollution and the ravages of modernization as a whole. These recurring objections—ranging from a severe critique of the notion of progress motivated by a concern for the environment ('civilization criticism') to more optimistic suggestions, reminiscent of what later has been labelled as ecological modernism ('moderate objections')—were fecund soil for the broad impact of a kind of eco-modern thinking and were in time incorporated into ideas for building the society of the future.

Hence, we have chosen key intellectuals that were well-known in Swedish public debate during this period and which either championed or criticised modernisation. In addition, we offer examples of how actors connected to authorities, politics and industry were

influenced by these different voices and how tangible decisions and actions regarding the relationship between nature and society in the Swedish welfare state became shaped.

In using the term ‘modernization’, we mean a future-oriented practice to change society, humankind, and nature with the aid of science, technology and rational planning.⁴ This ongoing process involved constant innovation and the abandonment or wholesale transformation of old traditions, routines, and ways of thinking.⁵ Characterizing modernization in this manner is one thing, assuming that such development will automatically lead to universal betterment is quite another. In that case, faith in the blessings of modernization becomes an ideology of progress, referred to as the ‘modern project’.⁶ The modern project in Sweden (as well as in other expanding western welfare states during this period) aimed at coordinating available resources in a maximally rational manner in order to achieve economic growth and increased welfare for all citizens and their families. An important component in this project was the belief that it was possible to plan and control development and overcome any difficulties encountered along the way. However, the rise of environmental concerns in the 1960s posed an unexpected challenge to this optimism. It questioned whether modernization was either fundamentally defective and unsustainable or if this was merely another case of ‘dissonances’ in the machinery of the welfare state that could be corrected with more expertise, better technology, and a few minor calibrations of the social order?

A Vision of a Modern Nation

The image of Sweden as a modern nation emerged in the 1930s, not the least through the influential reportage *Sweden: The Middle Way* (1936) by American journalist Marquis Childs.⁷ In particular, the book praised the new, Social Democratic financial policies as an

⁴ James C. Scott, *Seeing like a state: How certain schemes to improve the human condition have failed* (New Haven: Yale University Press, 1998).

⁵ Marshall Berman, *All that is solid melts into air: The Experience of Modernity* (New York: Simon and Schuster, 1982).

⁶ Martin Kylhammar, ‘Bryt upp! Bryt upp: Om den moderna konsten att göra sig kvitt det förflutna’, in Martin Kylhammar and Michael Godhe (eds.), *Frigörare? Moderna svenska framtidsdrömmar*, pp. 16–41 (Stockholm: Carlsson, 2005).

⁷ Marquis Childs, *Sweden the Middle Way* (New Haven: Yale University Press, 1936).

accessible median between capitalism and communism. However, Childs was also swayed by the 1930 Stockholm Exhibition, where functionalist architecture and design—‘Swedish Modern’—was launched on a broad front. It was this event that had attracted him to this distant Nordic country in the first place.

In the wake of the Stockholm exhibition, a manifesto entitled *acceptera* [accept] was produced by a group of prominent and forward-thinking architects and art critics. The publication, which is regarded as one of the most influential and pregnant artistic and ideological moments in the Swedish modernist project, contains a provocative description of the current social situation.⁸ Society, it says in the introduction, is divided into two parts: Europe A and Europe B. According to the authors, Europe A functions like ‘a great organism [...] where all the cells, from the solitary farm to the immense factory or bank, are dependent on one another’.⁹ In Europe A, transit networks were extensive, reliable, and connected by thousands of hubs. New ideas, goods, and fashions circulated rapidly within the body politic with the largest financial metropolises acting as ‘nerve centres’. Individuals and businesses were specialized and manufactured only a few products, while whatever else was needed was purchased abroad. It was a ‘machine culture’ with a high level of production and consumption. Steam power, scientific inquiry, and easy access to fossil fuels, machinery, banks, and education were all key features of Europe A.

While Europe B displayed isolated elements of new technology, it certainly lacked organic integration. The components of society were like islands separated by vast seas, and the transportation of goods occurred only on a modest scale. ‘Cut off from the rest of the world, the farmer builds his own cottage, eats crops that grow in his own fields, meat that comes from his own pigs and cows; his wife spins and weaves wool from his own sheep to clothe him’.¹⁰ The basic principles of barter and self-sufficiency still dominated Europe B; here agrarianism, religious orthodoxy and illiteracy reigned. Due to inadequate communications millions of farms and villages ‘stagnate like the tiny creatures in a coral

⁸ Eva Eriksson, *Den moderna staden tar form: Arkitektur och debatt 1910–1935* (Stockholm: Ordfront, 2001).

⁹ Gunnar Asplund, Wolter Gahn, Sven Markelius, Gregor Paulsson, Eskil Sundahl and Uno Åhrén, *acceptera* (1931), Engl. transl. ed. in, *Modern Swedish Design: Three Founding Texts*, eds. Lucy Creagh, Helena Käberg and Barbara Miller Lane (New York: The Museum of Modern Art, 2008), p. 156.

¹⁰ Asplund et al., *acceptera*, p. 157.

reef'.¹¹ Conduct and manners were undeveloped; civilization lay fallow. The conclusion reached by the authors was that while 'Europe A is industrialized, even down to its agriculture, Europe B is the domain of farmers even in its towns. Europe B is what Europe A was one hundred and fifty years ago'.¹²

This was not simply a matter of indicating which particular European country belonged to which group in its specific stage of development. There were also clear differences *within* countries themselves. Sweden, the authors explained, was both 'Sweden-now and Sweden-then'.¹³ The old, agricultural regions which once were the cradle of the realm belonged to Europe B. Sawmills and pulp and paper mill towns, steel cities, mining communities, and other industrial centres, on the other hand, were part of contemporary Sweden. The issue, however, remained that Sweden's contemporary industries still mainly manufactured low-quality products to meet the needs of Sweden's old-fashioned culture. This caused an industrial 'dissonance' that needed to be overcome.¹⁴

Dissonances, described as unfortunate disharmonies between old and new, tradition and progress, undeveloped and developed, could also be detected in hygiene, culture, education, and in the exploitation of the country's natural resources. While the environment is not an explicit theme investigated in *acceptera*, it is apparent—almost taken for granted—that a correct and efficient handling of nature's resources was seen as decisive to the success of a society. The apprehension of nature is expressed succinctly by the book's illustrations. While Europe A is illustrated with photographs of densely built-up, highly-industrialized urban spaces with soaring chimneys crisscrossed by railway tracks, a combine harvester cutting through a gigantic, monocultural field of grain, and an enormous lumber sorting mill on a mighty northern river, Europe B is represented by matted heath and a lone farmer driving his horse and plough over hilly fields. Clearly, the message was that the functional, high-yielding, and large-scale landscape was preferable. In order not to bottleneck contemporary society, 'disadvantaged' environments needed to 'be improved', which meant rationalizing the use of natural resources.

¹¹ Asplund et al., *acceptera*, p. 157.

¹² Asplund et al., *acceptera*, p. 157.

¹³ Asplund et al., *acceptera*, p. 162.

¹⁴ Asplund et al., *acceptera*, pp. 164-5.

Simply put, the old should abandon its ways and *accept* the culture and rational solutions of the ‘Sweden-now’.¹⁵ For the sake of Sweden’s market competitiveness and domestic harmony, all of society must march to the drum of the times, better yet, the beat of the future. The fact that this future—partly due to the modernistic view of nature represented by the authors of *acceptera*—would engender new dissonances in the form of severe environmental costs makes the manifesto a rewarding document from which to embark on an investigation of the attitude of the modern Swedish project toward nature as mainly a pantry of resources.

Cleaning Up the Welfare State

The image of modern Sweden was also that of a clean country, ‘the cleanest country in Europe’, as two British authors put it after a visit in the 1920s.¹⁶ The impressions of these foreign guests would, however, not go unchallenged at home.

In 1938, journalist Ludvig ‘Lubbe’ Nordström embarked on a cross-country tour, reporting his impressions from the road on radio. With only one national radio channel the report series was an immediate success and was published in the book *Lort-Sverige* later the same year, with the same peremptory tone as *acceptera*. ‘Lort’ means dirt but it is also a mildly rude word for excrement. Armed with a keen eye, a microphone, and a passion for lucid, social documentary reportage, Nordström single-handedly turned the image of Sweden on its head. Upon closer inspection, rather than being a modern model of efficiency, many regions, particularly in the countryside, remained undeveloped. Ramshackle houses with dirty floors and no modern sanitary facilities, stinking, open sewage ditches, and poverty met Nordström everywhere he turned. The filthy conditions in which they were forced to live also affected the residents, who appeared culturally and even racially degenerate. In other words, Nordström did not discover the modern, ‘New Sweden’ he expected on his travels, but rather the ‘Dirty Sweden’ nobody talked about.

With this appellation, I do not mean that Sweden is dirt, far from it, but that Sweden *has* dirt within its borders, too much dirt to be calmly tolerated, and this dirt must be

¹⁵ Asplund et al., *acceptera*, p. 162.

¹⁶ Sofia Eriksson, ‘A Rarity Show of Modernity: Sweden in the 1920s’, *Annals of Tourism Research* 37:1 (2010): 79.

cleaned up as quickly and thoroughly as possible, and not just for the sake of national prestige but, much more importantly, for the sake of national efficiency. We cannot afford to clog the national machinery with so much dirt/excrements.¹⁷

Like beacons of light in this backward darkness, Nordström presented in particular the stalwart figure of the district medical officer, the local general physician, who did his utmost to clean up the worst grime and preach the blessings of modernity and personal hygiene. Strewn about the landscape were also modern, functionalistic neighbourhoods he called ‘Villa-Sverige’ [Bungalow Sweden], single-family homes outfitted with central heating, hot and cold running water, flush toilets, proper plumbing, and neatly-trimmed lawns and flower beds. The residents of these suburbs had also adopted the modern mentality and were found to be diligent and forward thinking. They were modern.

In the environmental debate of the 1960s there were often references to *Lort-Sverige* as a precursor of the environmental awakening.¹⁸ Indeed, Nordström was a zealous advocate for the elimination of dirt and excrements, offensive smells, litter, and unhealthy homes, but it was to be done in the name of progress and industrialism. He wanted the dirt removed from view—an aesthetic morale-booster to promote worker efficiency. However, *where* the dirt ended up seems to be something Nordström never gave much thought to. When it was banished from his sight, it disappeared from his mind. So, framing Nordström as an early environmentalist is, according to us, an exaggeration.

After exposing the flaws—or dissonances, to use the terminology of *acceptera*—in the burgeoning welfare state, Nordström’s mission was to grease the wheels of the ‘national machinery’ and speed up the pace of modern development. He adored large-scale industry and craved efficient exploitation of natural resources and a clean, shiny country with well-groomed citizens manning the assembly lines. This mania for industrial progress revealed itself clearly when Nordström visited an industrial town in the North. ‘The impressive power plant, the sky-high, smoke-belching factory chimneys and the panoramic view of a sea plied

¹⁷ Ludvig Nordström, *Lort-Sverige* (1938), new ed., (Sundsvall: Tidsspeglén, 1984), p. 11. In Swedish: ‘Med denna benämning menar jag icke, att Sverige är lort, långt därifrån, men att Sverige har lort inom sina gränser, för mycket lort för att kunna med lugn tolereras och att denna lort skall bort så fort och så grundligt som möjligt, och detta inte bara för den nationella prestigens skull utan, vad som är vida viktigare, för den nationella effektivitetens. Vi har inte råd att ha så mycket lort i det nationella maskineriet.’

¹⁸ Bo Rosén, *Lort-Sverige – 50 år efter Lubbe Nordström* (Stockholm: Svenska kommunförbundet, 1988).

by ships loaded with lumber and pulp are the fanfare of The New Sweden'.¹⁹ So there was dirt and then there was dirt. For Nordström, smoke-belching factory chimneys were not dirty but rather a symbol of wealth and a promising future. The dirt and filth, which was both physical and moral, was instead personified by crofters and smallholders in cultural backwaters. This was the dirt that needed washing off.²⁰

Nordström's outlook reflects a shift in mentality from the turn of the century when the city was perceived as a dangerous, unhealthy place, to the 1930s, when urban life became increasingly synonymous with the good modern life.²¹ For many, this change implied liberation from misery, ancient subservience, cultural stagnation, and social control, something working-class author Ivar Lo-Johansson described so grippingly in his contemporary fiction.²² But although urban life became the new ideal, cities were still not entirely adapted to purpose. Dingy industries lay close by residential dwellings and ancient neighbourhoods were shabby, cramped, and lacked indoor plumbing.²³ Add to that the arrival of the automobile for which the existing street system was ill equipped. As the architect and city planner Carl-Fredrik Ahlberg put it, 'structural alterations to the urban body' were necessary in order to achieve a hygienic and socially acceptable environment.²⁴ The catchphrases bandied about were *functional separation*, *efficiency*, and *concentration*. A place for everything and everything in its place with expanded transit systems for smooth circulation between functions. Old buildings were sacrificed to let in light and air and make

¹⁹ Nordström, *Lort-Sverige*, p. 290. In Swedish: 'I det imponerande kraftverket, i de skyhöga, rökbolmande fabriksskorstenarna och i den vida utblick mot havet, där de trä- och massalastade fartygen stävade fram, har man som en Det nya Sveriges fanfar.'

²⁰ Otto Fagerstedt and Sverker Sörlin, *Framtidsvittnet: Ludvig Nordström och drömmen om Sverige* (Stockholm: Carlssons, 1987).

²¹ Kristian Berg, 'När landsbygden blev hygienisk', *Tvärsnitt* 4 (1989): 20–31.

²² Magnus Nilsson, *Den moderne Ivar Lo-Johansson: Modernisering, modernitet och modernism i statarromanerna* (Hedemora: Gidlunds, 2003).

²³ Kerstin Thörn, *En bostad för hemmet: Idéhistoriska studier i bostadsfrågan 1889–1929* (Ph.D. diss., Umeå University, 1997).

²⁴ Carl-Fredrik Ahlberg, 'Stadsplaneringens sociala betydelse' (1950), in Eva Rudberg (ed.), *Tankar om samhällen och samhällsplanering: Ett urval artiklar från fyra decennier* (Stockholm: Swedish Council for Building Research, 1986), p. 23.

room for the growing fleet of automobiles. Two decades on and most Swedish communities had been changed beyond recognition by this urban renewal project.²⁵

Confidence in the urban future did not mean that interest in the countryside abated. The object was rather to achieve a balance between town and country, to create a new 'rural culture'.²⁶ The mercurial world surrounding them demanded that residents of the countryside abandon their agrarian conservatism and adopt a more 'urban' outlook, as researcher, artist, and author Gösta Carlberg put it.²⁷ Agriculture also began undergoing rapid rationalization. The time-honoured small farm ideal was forsaken. Agricultural commissions were set up and consultants dispatched to teach diverse measures intended to create larger fields suitable for mechanized operations. With artificial fertilizer, meadowlands could be transformed into forest or farmland. Specialization was encouraged.²⁸ The goal was not to rationalize away agriculture altogether, but to make it efficient, which would strengthen family farms and provide the farmer with the same standard of life enjoyed by the urban industrial worker. Even though the number of holdings did not decrease significantly, the farmer became increasingly alone in his field due to mechanization, which freed up manpower to take jobs to meet the needs of the industrial and civil service sector.²⁹

The Modernization of Nature

The woods, mines, and rivers were the building blocks of the industrial transformation of Sweden. The exploitation of these natural resources hearkened to a long economic tradition stretching back to the eighteenth-century utilitarianism of Carl Linnaeus.³⁰ In the nineteenth

²⁵ Per Lundin, *Bilsamhället: Ideologi, expertis och regelskapande i efterkrigstidens Sverige* (Stockholm: Stockholmia, 2008).

²⁶ Tore Frängsmyr, *Vägröjare i kulturdebatten: Ragnar Oldberg och Perspektiv* (Stockholm: LT Förlag, 1977), pp. 30–1.

²⁷ Gösta Carlberg, *Svensk landsbygd som kulturmiljö* (Stockholm: LT Förlag, 1949), pp. 198–201.

²⁸ Harald A:son Moberg, *Jordbruksmekanisering i Sverige under tre sekel* (Stockholm: Royal Swedish Academy of Forestry and Agriculture, 1989).

²⁹ Mats Morell, 'Småbruk, familj jordbruk och mekaniseringen: Aspekter på det sena 1800-talets och det tidiga 1900-talets svenska jordbruk', in Bo Larsson (ed.), *Bonden i dikt och verklighet*, pp. 62-116 (Stockholm: Nordiska museet, 1993).

³⁰ Lisbet Koerner, *Linnaeus: Nature and nation* (Harvard University Press, 1999).

century, the government assumed more and more responsibility for charting and exploiting the nation's rich but still underutilized resources.³¹ Economizing was not the same as protecting nature from the ravages of man but rather planning long-term, rational management. Nature would be manipulated and shaped by the needs of man and society, but according to a plan. Agronomists, forest rangers, geologists, and agricultural engineers, all professions with their roots in the late nineteenth century, were thought to have a lot to learn from industry. Technological innovation, mechanization, and scientific management had led to far-reaching advances in efficiency and increased production while Sweden's natural resources were still not part of the 'the long-run economy' with its standardization and purpose-built production lines.³²

During the first half of the twentieth century, recurring reports of an imminent shortage of forest were issued. Boreal landscape experts claimed that mass amounts of forest had been 'depleted' by irrational exploitation and were in need of 'restoration'.³³ After the Second World War the government and the industry joined forces to change this situation, as well as enhance a sustainable production in order to meet an international demand of forests products in the rebuilding of European countries.³⁴ Forest ranger Eric Ronge, for example, remarked that summer Alpine and forest grazing were obsolete methods, which had no place in the industrial age.³⁵ In the same way, social planners strove to separate the different

³¹ Gunnar Eriksson, *Kartläggarna: Naturvetenskapens tillväxt och tillämpningar i det industriella genombrottets Sverige 1870–1914* (Umeå: Umeå University, 1978), Sverker Sörlin, *Framtidslandet: Debatten om Norrland och naturresurserna under det industriella genombrottet* (Stockholm: Carlssons, 1988), and Christer Nordlund, *Det upphöjda landet: Vetenskapen, landhöjningsfrågan och kartläggningen av Sveriges förflutna, 1860–1930* (Umeå: Royal Skytte Society, 2001).

³² Ingvar Svennilson and Erland Waldenström, *Till frågan om det industriella framåtskridandet i Sverige: Ett diskussionsinlägg* (Stockholm, 1942), pp. 55–57.

³³ Anders Öckerman, 'Joel Wretlind på Malå revir: Kunskap och legitimering i det moderna skogsbruket', in Martin Johansson (ed.), *Miljöhistoria idag och imorgon: Rapport från en miljöhistorisk konferens vid Högskolan i Karlstad 9–10 april 1997*, pp. 239–51 (Karlstad: Karlstad Högskola, 1998), and Erland Mårald and Erik Westholm, 'Changing Approaches to the Future in Swedish Forestry, 1850–2010', *Nature and Culture* 11:1 (2016): 1–21.

³⁴ Erland Mårald, Camilla Sandström, Annika Nordin et al., *Forest Governance and Management Across Time: Developing a New Forest Social Contract* (London and New York: Routledge, 2017).

³⁵ Eric Ronge, 'Hur skogen vårdas i Norrland', in *Den svenska skogen: Radioföredrag 1944–1945*, pp. 51–65 (Stockholm: Radiotjänst, 1945).

functions of the city, the different activities taking place in the landscape needed to be spatially separated. Animal husbandry would continue but according to rational methods and ‘within enclosed pastures’, stated Ronge.³⁶ This division would also make forestry more effective. It was important to plant tight, cohesive stands in order to maximize land use. ‘Crooked individuals’ would be cleared away and after repeated thinning the result would be a stately, uniform forest for the felling.³⁷ The ideal was straight trunks, all of the same species in rectilinear lines. Homogeneous, just like the welfare state itself, which by then had adopted practices of sterilization in order to halt reproduction of ‘feeble-minded’ individuals.³⁸

There was also a discrepancy within the industry between the technically advanced pulp and paper mills and logging itself, which right up until the Second World War was almost exclusively carried out with axe, saw, and muscle. Logs were driven down river to the mills, and the lumberjack was a seasonal jack-of-all-trades. This was now considered old-fashioned and out of date. In a prognosis written in 1942, economist Ingvar Svennilson and future lumber company president Erland Waldenström stated, ‘It is however natural that after having rationalized his own company to the fullest extent, the industrialist would begin to be increasingly interested in a similar development of the branches of business upon which they are dependent’.³⁹

Along with underdeveloped work routines, the duo also criticized the ‘medieval’ division of property rights, which stood in the way of the construction of a modern network of logging roads and therewith a rationalized forestry industry.⁴⁰ This echoes the idea broached in *acceptera* about dissonances between developed and undeveloped aspects of society and business. The fundament of industrial progress was continuous, ongoing rationalization, and

³⁶ Ronge, ‘Hur skogen vårdas i Norrland’, p. 57.

³⁷ Ronge, ‘Hur skogen vårdas i Norrland’, p. 63.

³⁸ Gunnar Broberg and Mattias Tydén, *Oönskade i folkhemmet: Rashygien och sterilisering i Sverige* (Stockholm: Gidlunds, 1991).

³⁹ Svennilson and Waldenström, *Till frågan om det industriella framåtskridandet i Sverige*, p. 26. In Swedish: ‘Det är emellertid naturligt, att industrimännen, när de drivit rationaliseringen inom sina egna företag till sin spets, alltmera börja intressera sig för en motsvarande utveckling inom de näringsgrenar, av vilka de äro beroende.’

⁴⁰ Svennilson and Waldenström, *Till frågan om det industriella framåtskridandet i Sverige*, pp. 28–9.

if one part lagged behind it had consequences for others on the cutting edge. This required swift action, so in the 1950s a full-scale mechanization process was undertaken introducing chainsaws and tractors, transporting logs in truck beds instead of by river rafting, and creating a professional, full-time work force.⁴¹ The mixed woods began to be transformed into monotonous plantations dominated by coniferous trees.⁴²

This period also witnessed the most expansive era in the construction of hydroelectric power stations.⁴³ River regulation did encounter opposition, but protesters carried little weight when pitted against the respect for engineering and the increasing need for new energy sources. Silenced cataracts were a small price to pay in the name of development, explained engineer Erik Blomqvist. ‘The loss of our rapids should however be seen as richly compensated by the light and energy and heat that will spread over city and countryside through the availability of electricity for virtually everyone in Sweden. Furthermore, a power station can also be an attractive feature in a rural landscape’.⁴⁴

These vast construction projects transformed the countryside with dammed river valleys, vacated villages, dry riverbeds, and redesigned local environs in addition to hydro line corridors, transformer stations, and the massive, concurrent proliferation of telephone utility poles, roads, bridges, and gravel pits.⁴⁵ Straight lines, deep shafts, and large-scale installations embedded in a similarly grandiose natural landscape became an increasingly common sight in the Swedish terrain. Environmental historian Sverker Sörlin has called this

⁴¹ Manfred Näslund, ‘Våra skogars tillstånd och medlen till skogsproduktionens höjande’, *Svenska skogsvårdsföreningens tidskrift* 22 (1948): 75–91.

⁴² Claes Bernes and Lars J. Lundgren, *Use and misuse of nature’s resources: An environmental history of Sweden* (Stockholm: Swedish Environmental Protection Agency, 2009).

⁴³ Jonas Anshelm, *Vattenkraft och naturskydd: En analys av opinionen mot vattenkraftutbyggnaden i Sverige 1950–1990* (Linköping: Linköping University, 1992).

⁴⁴ Blomqvist, Erik. ‘Svensk vattenkraft – återblick och framtidsvy’, *Teknisk tidskrift* 80 (1950): 596–7. In Swedish: ‘Emellertid bör förlusten av våra forsar anses väl täckt av det ljus och den kraft och värme, som sprides över land och stad genom elkraftens tillgänglighet för i stort sett envar i Sverige. Dessutom kan även en kraftstation vara ett vackert inslag i landskapsbilden.’

⁴⁵ Sundin, Bosse. ‘Ljus och jord! Natur och kultur på Storgården’, in Tore Frängsmyr (ed.), *Paradisets och vildmarken: Studier kring synen på natur och naturresurser*, pp. 320–360 (Stockholm: LiberFörlag, 1984).

huge metamorphosis ‘outdoor modernism’.⁴⁶ We may even talk about a ‘modernization of the national landscape’.⁴⁷ From an environmental perspective, this extension of the infrastructure and installation of technology meant that the very processes of nature, from grain and forest growth to the flow of rivers, were sped up and enlisted in the pursuit of economic growth. The ‘industrial pace’ would come to pervade all of contemporary society including nature itself.⁴⁸ Nature would be modernized, merge with culture, and become a part of modern society.

Civilization Criticism

In the 1930s, the modern Swedish project gathered its strength, gained momentum, and took off. A new, mechanized industrial sector promised a bright future of development and rational progress that reformed the entire social system. It was, however, a turbulent time marked by both political and financial international crises. In the wake of these crises, a growing ‘anti-culture’ burgeoned in the form of diverse social movements, following a critical civilization’s trajectory. Some problematized values and culture regarding mankind’s relationships; others focused attention on man’s relationship with now putatively harnessed nature. Holistic ideals, vegetarianism, organic farming, and other so-called ‘alternative stances’ became something of a fashion in Europe as well as in the United States.⁴⁹

One of the outspoken Swedish critics of the modernization of nature in this period of time was Stig Wesslén. Today, Wesslén is primarily remembered as a documentary filmmaker interested in wilderness and Sami culture in the North, but he was also a photographer and author with political and literary ambitions.⁵⁰ His bibliography is mainly

⁴⁶ Sverker Sörlin, ‘Den stora skalan’, in Dag Avango and Brita Lundström (eds.), *Industrins avtryck: Perspektiv på ett forskningsfält* (Eslöv: Symposion, 2003), p. 296.

⁴⁷ Sverker Sörlin and Christer Nordlund, ‘Modernizing the National Landscape’, *The Kenyon Review* 25:3–4 (2003): 301–315.

⁴⁸ Theodore Steinberg, *Nature Incorporated: Industrialization and the waters of New England* (Cambridge: Cambridge University Press, 1991).

⁴⁹ Philip Conford, *The Origins of the Organic Movement* (Edinburgh: Floris, 2001), and Martin Stolare, *Kultur och natur: Moderniseringskritiska rörelser i Sverige 1900–1920* (Göteborg: University of Gothenburg, 2003).

⁵⁰ Erland Mårald and Christer Nordlund (eds.), *Kamerajägaren: Stig Wessléns skildringar av naturen och det samiska* (Umeå: Royal Skytte Society, 2010).

comprised of straightforward descriptions of nature—especially of birds, their habits, and habitats. These descriptions were, however, interspersed with more explicitly articulated thoughts and value judgments on what Wesslén saw as an increasing problematic relationship between nature and culture.⁵¹

Wesslén clearly refused to ‘accept’ the advance of industrial society with its unsentimental exploitation of natural resources. In his debut as an author—*Träskets aristokrater* [Aristocrats of the Marsh]—he claimed that modern man was ‘a barbarian, a vandal and assassin in a world otherwise created in balance and harmony, where he abuses the power given him by an optimistic creator.’⁵² These harsh words were likely influenced by Wesslén’s personal observations and experiences in the woods in which he spent so much of his time. He noticed the impact of forestry on landscape but was in particular upset about the extinction of birds of prey. Yet, his reference to a state of balance and abuse of stewardship immediately recalls an earlier Romantic tradition of dystopian thought voiced by critics like Gustav Hedenvind-Eriksson, a lumberjack-turned-author whose debut *Ur en fallen skog* [From a Fallen Forest] (1910) drew significant attention to the ravages of the logging industry and the modernization process as a whole,⁵³ and Karl-Erik Forsslund, an author and educator who in 1914 characterized modern man as ‘a mass murderer of the rest of the earth’s creatures, an avaricious, wasteful devastator of the treasures of the soil’.⁵⁴

Wesslén’s numerous critical forays, culminating in his feature-length documentary *Den levande skogen* [The Living Forest, 1966], illustrate the fact that the forest had become an arena in which conflicts of interest were played out. The motivation was not strictly material, as the forest also had an aesthetic and existential significance cherished by Wesslén

⁵¹ Henrik Lång, Erland Mårald and Christer Nordlund, ‘Making Wilderness: An Inquiry into Stig Wesslén’s Documentation and Representation of the Northern Swedish Landscape’, *Journal of Northern Studies* 9:2 (2015): 9–36.

⁵² Stig Wesslén, *Träskets aristokrater* (Stockholm: Norstedt, 1930), pp. 5–6. In Swedish: ‘en barbar, en skövlare och mördare i en för övrigt i jämviktsläge och relativ harmoni skapad värld, hon missbrukar den makt, en optimistisk skapare givit henne.’

⁵³ Anders Öhman, *De förskingrade: Norrland, moderniteten och Gustav Hedenvind-Eriksson* (Stehag: Symposion, 2004).

⁵⁴ Karl-Erik Forsslund, *Hembygdsvård* (Stockholm: Wahlström & Widstrand, 1914), p. 7. In Swedish: ‘en massmördare av jordens andra varelser, en på samma gång sniken och slösande skövlare av jordens skatter.’

as well as many other Swedes. Thanks to the comparatively rich forest assets in combination with *allemansrätten* (the legal right of access to privately-owned, open land), many had their own personal attachment to outdoor life in the woods, which in turn was amplified by literary and artistic associations.⁵⁵

The forest gave rise not only to local symbols and myths, but also to national ones. The connection between domestic nature and culture was particularly evident during the heyday of the National Romantics, when nature was integrated into the Swedish nationalization process.⁵⁶ By that time, the forest had been established as the country's most lucrative economic resource. Sweden had also become a rhetorical land of forests. Verner von Heidenstam wrote lyrically of the Swedes as a nature-loving, 'woodland folk', while author and literary critic Fredrik Böök claimed that all of Swedish culture was embedded in its vast forests, like a pioneer's log cabin.⁵⁷ A lengthy list of renowned authors, artists, and composers who expressed and contributed to solidifying the cultural dimension of these forests could easily be compiled. However, the cultural significance of the forest, like its significance for cultural production, is not unique to the National Romantics; rather, it has survived the modern age and remains vital today, with weighty tomes like Kerstin Ekman's *Herrarna i skogen* [Lords of the Forest] and Johannes Ekman's *Skogen i vårt inre* [The Forest Within] as recent examples.⁵⁸

Modern forestry was criticized both because it transformed the forest environment and because it threatened cultural myths. Another yet completely different manifestation of this critique of civilization came in the form of Elin Wägner's *Väckarklocka* [Alarm clock] as well as the book *Fred med jorden* [Peace with the Earth], which she co-authored with

⁵⁵ Johannes Ekman, *Skogen i vårt inre: Utmark och frihetsdröm* (Stockholm: Carlsson, 2008). On the history of outdoor life in Sweden, see Klas Sandell and Sverker Sörlin (eds.), *Friluftshistoria: Från "hårdande friluftslif till ekoturism och miljöpedagogik* (Stockholm: Carlssons, 2000).

⁵⁶ Sverker Sörlin, 'Natur och kultur: Om skogen och fosterlandet i det industriella genombrottets Sverige', *Lychnos: Lärdoms-historiska Samfundets Årsbok 1981–1982*, pp. 87–144.

⁵⁷ Jacob Christensson, *Landskapet i våra hjärtan: En essä om svenskars naturumgänge och identitetssökande* (Lund: Historiska media, 2002).

⁵⁸ Kerstin Ekman, *Herrarna i skogen* (Stockholm: Bonnier, 2007), Ekman, *Skogen i vårt inre*, and Anna Lindkvist and Christer Nordlund, 'Skogslandskapet som arena: En idé- och miljöhistorisk bakgrundsanalys', in Anna Lindkvist et al., *Konflikt och konsensus i skogen: Intensivodling av skog ur ett humanistiskt och samhällsvetenskapligt perspektiv*, pp. 2–32 (Umeå: Swedish University of Agricultural Sciences, 2009).

Elisabeth Tamm.⁵⁹ In contrast to conservative, National Romantic Wesslén, Wägner's standpoint was feminist and pacifist, combined with an organic, holistic perspective.⁶⁰ She attacked the masculine 'sovereign' approach, which had long striven to force both nature and woman into submission. Such attitudes threw off the balance between men and women and society and nature with the World War as one disastrous consequence. However, a state of war had existed long before 1939, when mechanization, specialization, and brute force replaced organic interrelation, versatility, and cooperation, according to Wägner. She claimed that

this is why civilization has been on war-footing in peacetime, too. It works with speed, mass, with forces it rouses but does not understand. It loves to break laws and crush opposition. It is bellicose and destructive, even when it seems to be working constructively. Wherever it sets its foot, ancient cultures must be laid to ruin, nature desecrated and plundered.⁶¹

Furthermore, Wägner wrote: 'soldiers spray their biggest enemies with bullets, while the farmer sprays his smallest with chemical solvents'.⁶² Both undertakings were misdirected since the enemy was an indispensable part of the human family and vermin part of the totality of nature. Sooner or later, all force and violence will come home to roost—'there are no vermin', she declared.⁶³ In the same spirit, woman with her unique characteristics was a necessary part of existence. The way forward was to restore the balance between men and

⁵⁹ Elisabeth Tamm and Elin Wägner *Fred med jorden* (Stockholm: Bonnier, 1940), and Elin Wägner, *Väckarklocka* (1941), new ed. (Stockholm: Proprius, 1990).

⁶⁰ Katarina Leppänen, *Elin Wägner's Alarm clock: Ecofeminist theory in the interwar era* (Lexington books, Lanham, 2008).

⁶¹ Wägner, *Väckarklocka*, p. 13. In Swedish: 'Därför har civilisationen även under fredstid varit på krigsfot. Den arbetar med fart, massa, med krafter som den väcker upp och inte helt behärskar. Den älskar att bryta lagar och motstånd. Den är krigisk och nedbrytande, även där den skenbart arbetar uppbyggande. Där den går fram, måste äldre kulturer raseras, naturen skändas och plundras.'

⁶² Wägner, *Väckarklocka*, p. 334. In Swedish: 'soldaterna besprutar de största fienderna med kulor, lantmannen besprutar de minsta med sina kemiska lösningar.'

⁶³ Wägner, *Väckarklocka*, p. 334.

women and fundamentally reconsider society's relationship with nature. According to Wägner it was not nature that needed to be modernized and adapted to culture, but culture that should adapt to nature.

To Wägner's chagrin, *Väckarklocka* went largely unnoticed upon publication; the ongoing war monopolized all interest. However, discussion of the negative effects of 'machine culture' on nature, mankind, and society intensified around 1950, when it was claimed that the fast pace of modern, industrial society was creating nervous wrecks since man's moral and biological evolution had not kept pace with technology's development.⁶⁴ The pernicious effect of agriculture's liberal use of toxic chemicals was also noted.⁶⁵ However, the single invention which came to symbolize the duality of modern culture's desire for power over nature, was the atomic bomb. It was now clear that mankind's accumulated knowledge could also wipe humanity out in the blink of an eye. In 1956, in a thought-provoking response to this realization, nature-lover and future Nobel laureate Harry Martinson published his epic dystopian verse cycle *Aniara: A Review of Man in Time and Space*, the story of how the remains of the human race are systematically evacuated from a planet Earth laid waste by pollution and nuclear war.⁶⁶ From this particular civilization critique, which deal with both the material and moral decay of advanced civilizations,⁶⁷ the modern scientific and technological developments that characterized the road to Europe A could, in the end, be the road to hell on earth.

Moderating Objections

The intellectual debate on nature and culture conducted at the height of the industrial age was not just about the willingness to accept or reject the advances of modernization. In time, suggestions which might be best characterized as 'moderating objections' were offered, one

⁶⁴ Erik Hj. Linder, 'Teknikens samhälle och människan', *Teknisk tidskrift* 80 (1950): 589–94.

⁶⁵ Jonas Anshelm, *Det vilda, det vackra och det ekologiskt hållbara: Om opinionsbildning i Svenska Naturskyddsföreningens tidskrift Sveriges Natur 1943–2002* (Umeå: Umeå University, 2004).

⁶⁶ Tord Hall, *Vår tids stjärnsång: En naturvetenskaplig studie kring Harry Martinsons Aniara* (Stockholm: Bonnier, 1958).

⁶⁷ Svante Lindqvist, 'Introductory Essay: Harry Martinson and the Periphery of the Atom', in Svante Lindqvist (ed.), *Center on the Periphery: Historical Aspects of 20th-Century Swedish Physics* (Canton, MA: Science History Publications/USA, 1993), pp. xi–lv.

of which came from Rutger Sernander, a distinguished botanist who in 1909 helped to found Naturskyddsföreningen [the Swedish Society for Nature Conservation (SSNC)]. In 1935, Sernander presented a government-sponsored report on organizing the protection of nature, wherein he advocated that developers assume greater responsibility for conserving valuable natural assets.⁶⁸ His hope was that much of the devastation of nature and conflict between ‘material’ and ‘idealistic’ demands could be mitigated or prevented altogether through planning and negotiation. In order to facilitate this process, he proposed that a special government agency be established to oversee the creation of a ‘common’ nature. This wish was realized much later when the Swedish National Environmental Protection Agency, the first of its kind in the world, was founded in 1967.

Efforts were also made to modernize conservationism itself. As its chairman, botanist and author Sten Selander argued that the SSNC ought to go from being a science-dominated elite conclave to a voluntary association open to the general public. Instead of concentrating on preserving exotic, peripheral biotopes in the interest of an academic elite, more effort should be put into protecting the mundane natural environments within reach of the ordinary citizen. Selander maintained that ‘the conservation of nature is for the sake of man, not nature’.⁶⁹ By preserving green spaces in proximity to urban centres, health and wellbeing would increase. This was the ‘real value’ which easily compensated for the nominal financial cost. If society did not take conservation into consideration, it would ‘be transformed into a strictly technological, strictly economic, soulless machine civilization’.⁷⁰ This was a recurring theme also in Selander’s sprawling tome *Det levande landskapet i Sverige* [Sweden’s living landscape] from 1955.⁷¹ Although it was true that the rationalization mania of technocrats and economists had led to the blighting, destruction, and exhaustion of the country’s natural resources, Selander was, nonetheless, optimistic about the future. If natural scientists instead of engineers or businessmen had the final word, he believed most problems would be overcome in time.

⁶⁸ Rutger Sernander, SOU 1935:26. *Betänkande med förslag rörande det svenska naturskyddets organisation och statliga förvaltning*.

⁶⁹ Sten Selander, ‘Naturskyddet och samhället’, *Sveriges natur: Svenska Naturskyddsföreningens Årsskrift* 27 (1936): 18.

⁷⁰ Selander, ‘Naturskyddet och samhället’, p. 20.

⁷¹ Sten Selander, *Det levande landskapet i Sverige* (1955), 3 ed. (Göteborg: Bokskogen, 1987).

Sigurd Curman, head of the Riksantikvarieämbetet (National Heritage Board), also strove to moderate the encroachment of the infrastructure upon the Swedish countryside. His main priority was the protection of historically significant cultural sites and relics. Like Sernander and Selander, he preferred compromise to confrontation. Influence was never going to be gained by saying a categorical ‘no’ to development. Curman compared the ‘absolutist road builder’ who, come hell or high water had to build perfectly straight roads, to the ‘steadfast local preservationist’ who saw every single relic of the past as indispensable. The two extremes needed to meet in the middle in order to build ‘cultural roads’.⁷² Similarly, Curman argued in favour of a ‘cultured power plant’, where cooperation between developers and conservationists would both assure a steady flow of electricity and minimize the destructive effects of river regulation on the landscape.⁷³

Hence, in contrast to the independent critics who questioned the very foundations of modern industrial society, the official curators of natural and cultural heritage were more positive and generally approved of the transformations of modernization. Theirs was a mature, responsible attitude, which increased the chances of moderating the worst ravages of profit-driven developers. They hoped that through rational planning, faults in development could be corrected beforehand and conflicts of interest could be reduced.⁷⁴ By conducting an inventory of objects, resources, and activities, social planners could more thoughtfully assemble the puzzle of varying interests ensuring that conservationists too had their pieces added to the finished landscape. This separation of functions would render land use more effective and coordinate similar activities with one another. The practice foreshadows the so-called ‘fysisk riksplanering’ [national spatial plan] introduced in 1972 in order to regulate the usage of land and water throughout Sweden.⁷⁵

⁷² Sigurd Curman, ‘Vägarna och kulturvården’, *Svenska vägföreningens tidskrift* 24 (1937), p. 337.

⁷³ Sigurd Curman, ‘Kultur- och naturvårdens önskemål vid vattenregleringar och kraftverksbyggen’, *Femte Härnömässan 1945: Föredrag och anföranden i Östersund den 12 och 13 juli*, pp. 122–134 (Östersund: Jämtlands läns tekniska förening, 1945).

⁷⁴ O. Lundgren, ‘Naturvården och den översiktliga planläggningen’, *Sveriges natur: Svenska Naturskyddsföreningens Årsskrift* 48 (1957): 69–78.

⁷⁵ Håkan Forsberg, *En politisk nödvändighet: En studie av den fysiska riksplaneringens introduktion och tillämpning* (Linköping: Linköping University, 1992).

Another example of faith in rational environmental protection was the prospect that nuclear power plants would save the last, untouched rivers from future regulation. Despite the fact that there was a certain consciousness of the inherent problems posed by such power plants, including radioactive waste, many ecologists between the late fifties and early seventies were favourably disposed to this large-scale technological solution. The affection many concerned Swedes had for their riparian landscapes was something of which Olof Palme, the leader of the Social Democratic Party at this time, was well aware. Palme's foremost argument for retaining nuclear power plants was of course that domestic industry demanded access to cheap energy. At the same time, he also underlined that the future of the rivers was in jeopardy due to the development of water power plants.⁷⁶ Not even the Swedish Society for Nature Conservation was against nuclear power. When a referendum for or against nuclear power was held in 1980, causing an extensive public debate, they rather chose to remain neutral in order not to risk losing the few rivers that had been spared so far.⁷⁷

The Environmental Awakening

Transformation of forest ecosystems, pollution, agricultural toxins, and other effects of industrial society on nature and humanity were not new problems confronting Sweden in the mid twentieth century, nevertheless the 1960s hailed a new phase for environmental concern as it became a central social and political issue. From an ecological perspective, it was now apparent that what had previously been seen as a number of separate problems were, in fact, all part of the same environmental dilemma.⁷⁸ It was also during the sixties that the term 'environment' itself became synonymous with mankind's troubled relationship with its physical surroundings.⁷⁹

⁷⁶ Henrik Berggren, *Underbara dagar framför oss: En biografi över Olof Palme* (Stockholm: Norstedt, 2010).

⁷⁷ Anshelm, *Det vilda, det vackra och det ekologiskt hållbara*.

⁷⁸ Lars J. Lundgren and Jan Thelander, *Nedräkning pågår: Hur upptäcks miljöproblemen? Vad händer sen?* (Stockholm: Swedish Environmental Protection Agency, 1989), and David Larsson Heidenblad, 'Framtidskunskap i cirkulation: Gösta Ehrens värds diagnos och den svenska framtidsdebatten, 1971–1972', *Historisk Tidskrift* 135:4 (2015): 593–621.

⁷⁹ Sverker Sörlin and Anders Öckerman, *Jorden en ö: En global miljöhistoria* (Stockholm: Natur och Kultur, 1998), and Paul Warde and Sverker Sörlin, 'Expertise for the Future', in Jenny Andersson and Eglé

In the first half of the decade, the debate on nature and civilization broadened, with increasing numbers of ordinary citizens realizing that the situation had become acute. Alarms about sterile bird's eggs and birds of prey poisoned by mercury from agriculture leaching into the soil received widespread coverage.⁸⁰ With Rachel Carson's *Silent Spring* (1962), which was immediately translated and published in Swedish, so-called biocides were also brought to the attention of the public. Conservationists claimed that the chemical industry threatened a total 'toxification' of both nature and society.⁸¹ During the latter half of the decade, it became increasingly common to question contemporary society's relationship with its surroundings. New civilization critics denounced as defective the whole conceptual world upon which modern industrial society was built. In 1966, politician and author Rolf Edberg wrote in *Spillran av ett moln* [Remnants of a cloud]: 'It was delusional of us to believe we could rule over nature. We can only change it. And our changes have almost without exception been for the worse. Almost every page in the book of nature is inscribed with a *cave hominem*—beware of the human'.⁸²

This new environmental consciousness brought the imminent and pernicious environmental changes closer to home and was illustrated by journalist Barbro Soller's book *Nya Lort-Sverige* (New Dirty Sweden, 1969). Thirty years after Ludvig Nordström's countrywide trek, Soller followed in his footsteps and was able to conclude that 'dirty Sweden' had not ceased to exist; it had just been moved outdoors. Exhaust fumes and acidification of the air were poisoning the big cities; piles of garbage towered everywhere one looked and the streams had become sewers. The pulp and paper mills Nordström had once

Rindzevičiūtė (eds.) *The struggle for the long-term in transnational science and politics: Forging the future*, pp. 38-62 (New York: Routledge, 2015).

⁸⁰ Karl Borg, *Kvicksilverförgiftningar bland vilt i Sverige* (Stockholm: Statens veterinärmedicinska anstalt, 1965).

⁸¹ Harri Siiskonen, 'Silent Spring and the Nordic Agricultural Magazines', *Scandinavian Economic History Review* 50:1 (2002): 7-23, and Ebba Lisberg Jensen, 'Sätt stopp för sprutet! Från arbetsmiljöproblem till ekologisk risk i 1970-talets debatt om hormoslyr och DDT i skogsbruket', in Fredrick Björk, Per Eliasson and Bo Fritzboeger (eds.), *Miljöhistoria över gränser*, pp. 197-230 (Malmö: Malmö Högskola, 2006).

⁸² Rolf Edberg, *Spillran av ett moln: Anteckningar i färdaboken* (Stockholm: Bonnier, 1966). In Swedish: 'Det var en villfarelse, då vi trodde oss kunna behärska naturen. Vi kan bara förändra den. Så gott som undantagslöst har våra förändringar varit till det sämre. Nästan på varje sida av naturens bok står ett *cave hominem*—varning för människan.'

admired as cathedrals of progress had transformed the Bay of Sundsvall in Northern Sweden into ‘a dead sea’.⁸³ Even the well-appointed suburbs—bungalow Sweden—with their modern conveniences and household appliances had generated eutrophicated lakes, the stench of heating oil, and a level of electricity consumption, which had commandeered one river after another. Soller put the everyday life of the average citizen in perspective and in doing so showed that the modern lifestyle was not environmentally viable.

This new critical view is also evident in the book *Civilization till döds?* [Civilization to death?], published in 1970 by Bengt Hubendick, biologist and curator of the Natural History Museum in Gothenburg.⁸⁴ Hubendick wrote about a series of problems related to agriculture, forestry, motoring, pollution, and species extinction. He also discussed the theory of ‘the greenhouse effect’ (global warming) as a serious threat as well as highlighted technologies that indeed were very advanced but also may cause severe problems in the future, such as nuclear power and the new gene technology. The main argument in the book is that nature, through its evolution, has developed a certain ‘balance’ that modern society was about to destroy. And it was humans, their intelligence and technology, that was the cause of the destruction. As Hubendick bluntly put it: ‘The very first idea of agriculture was the beginning of the end for man’.⁸⁵ Science and civilization was no more a sign of progress and development, it was, for Hubendick, a sign of death. What was now needed, according to Hubendick, was a new type of ‘science for survival’, an expression coined by the American scientist and environmentalist Barry Commoner.⁸⁶ But Hubendick also called for a new type of attitude, both in relation to nature and in relation to science and technology. Since it was obvious that many of the new environmental problems were results or side effects of modern science and technology, it was no longer sustainable to explore and create things only because it was possible to do so. In other words, Hubendick asked for strong moderation.

At the beginning of the 1970s, the number of local activist groups concerned with the environment in the broadest sense of the term grew steadily and by mid-decade had reached

⁸³ Barbro Soller, *Nya Lort-Sverige* (Stockholm: Rabén och Sjögren, 1969), p. 78.

⁸⁴ Bengt Hubendick, *Civilisation till döds? Kring människan som del av sin biologiska miljö* (Göteborg: Zindermans, 1970).

⁸⁵ Hubendick, *Civilisation till döds?*, p. 129.

⁸⁶ Michael Egan, *Barry Commoner and the Science for Survival: The Remaking of American Environmentalism* (Cambridge, Mass and London: The MIT Press, 2007).

five to six hundred.⁸⁷ Biologist and author Björn Gillberg, who founded an organization called ‘The Environmental Centre’ in 1971, used publicity stunts and the courts to get at a variety of ecological sinners. The struggle against the use of pesticides along railway embankments, the release of contaminated sewage, and the demolition of old city neighbourhoods led to outright riots. Large-scale road, industrial estate, and hydroelectric projects were also targeted, and victory at the so called ‘Battle of Vindeln River’ in 1970, which spared it from regulation, was the Swedish environmental movement’s first major success.⁸⁸

The belief that ‘the personal is political’ resulted in a ‘Green Wave’ of migration out of the city to seek alternatives to the consumer hysteria of affluent society.⁸⁹ Even more generally, the public began to question the tacit acceptance of the environmental effects of industry. With economical structural transformations came increased unemployment and undermined welfare; production rationalization and the policy of full employment, the very foundation upon which the spirit of mutual understanding between industry and the trade unions was built, lurched and tottered. Big business no longer benefitted everyone and so its right to pollute lost its legitimacy. The use of phenoxy herbicides in forestry management and the fact that unscrupulous factory owners attempted to hide barrels of poison by burying them in the middle of populated areas was met with withering criticism.⁹⁰ The public debate on the environment during the last years of the decade were completely dominated by mobilizing

⁸⁷ Janerik Gidlund, *Aktionsgrupper och lokala partier: Temporära politiska organisationer i Sverige 1965–1975* (Lund: LiberLäromedel/Gleerup, 1978), and Anna Kaijser and David Larsson Heidenblad, ‘Young Activists in Muddy Boots: Fältbiologerna and the Ecological Turn, 1959–1974’, *Scandinavian Journal of History* (2017): 1–23.

⁸⁸ Jonas Anshelm, *Vattenkraft och naturskydd: En analys av opinionen mot vattenkraftutbyggnaden i Sverige 1950–1990* (Linköping: Linköping University, 1992).

⁸⁹ Carl Holmberg, *Längtan till landet: Civilisationskritik och framtidsvisioner i 1970-talets regionalpolitiska debatt* (Ph.D. diss., University of Gothenburg, 1998).

⁹⁰ Lisberg Jensen, ‘Sätt stopp för sprutet!’, and Erland Mårald, *Svenska miljöbrott och miljöskandaler 1960–2000* (Hedemora: Gidlunds förlag, 2007), pp. 57–87.

forces for the 1980 referendum on nuclear power, and out of this emerged the Swedish Green Party.⁹¹

Modern Environmental Policy

Developments in the sixties and seventies expanded the environmental debate and increased ecological consciousness among the public at large, however, most of the hands-on environmental work in Sweden was channelled through the academic world or via government agencies. From an international perspective, it is striking how early the Swedish state intensified its involvement in ecological matters. In the 1960s, the government conducted numerous public inquiries on the environment in order to investigate how the use of the country's natural resources, how to pursue research, how the government should organize its environmental management, and how to frame new legislation. These efforts led *inter alia* to the aforementioned establishment of a national environmental protection agency, the attachment of regional conservation units to each county administrative board, and the institution of a special environmental protection law. In this way, the environmental question was bureaucratized and managed mainly by federal employees.⁹²

The gravity and explosive force of the environmental question had come as an unwelcome surprise for decision-makers. All indicators of a higher standard of living had pointed upward since the end of the Second World War. Impoverished Sweden no longer existed, the welfare system was in place, the universities were open to all, and the economic and social upswing of the 'peak years' had been considerable. In many ways, Sweden of the early sixties seemed to be the model, modern nation dreamed of by the authors of *acceptera*, but a heightened environmental consciousness called this progress into question. Valfrid Paulsson, the first director-general of the Environmental Protection Agency, captured the mood: 'Modern society has cleared away most of the hygienic and aesthetic problems which previously prompted debate and outrage. The improvement is evident. This is why we are all

⁹¹ Kall, Ann-Sofie, *Förnyelse med förhinder: Den riksdagspolitiska debatten om omställningen av energisystemet 1980–2010* (Ph.D. diss., Linköping University, 2011).

⁹² Thomas Hillmo and Ulrik Lohm, 'Nature's Ombudsmen: The Evolution of Environmental Representation in Sweden', *Environment and History* 3:1 (1997): 19–43.

the more taken aback to discover that the old problems have been replaced by new ones which are just as great, if not greater'.⁹³

It was often repeated that environmental problems were an unavoidable side effect of the modernization of society. Eric Holmqvist, Minister of Agriculture in the Social Democratic cabinet responsible for environmental affairs, maintained in 1968 that 'We were all aware that significant environmental destruction was the price we have had to pay for technological and economic progress'.⁹⁴ Environmental issues were seen as structural in nature—a social sphere, which had simply been neglected and fallen behind. But now, when these dissonances finally had come to the fore, it would be possible to correct them. Sweden was seen as a wealthy nation equipped with enough scientific knowledge and technical know-how to bring the dissonances into harmony.

Due to the 'Swedish model', heavyweight players from trade and industry, trade unions, and municipal government gained significance influence over state environmental efforts. As a result, radical groups and critics of civilization were marginalized in favour of objectors who were more moderate, according to environmental historian Jonas Anshelm. He has suggested that the reception of the ideas of two very different Social Democratic thinkers, the before mentioned Rolf Edberg and Hans Palmstierna, is a striking example of this tendency.⁹⁵ Edberg's pessimistic, critical tone, formed during his years as ambassador in Oslo, was diametrically opposed to the idea of progress and allowed for no political solutions on a national level.⁹⁶ Thus, his influence on Social Democratic environmental policy was limited, even if his books caused many readers to reflect upon a harsh reality. Chemist Palmstierna's book *Plundring, svält, förgiftning* [Plunder, hunger, poison, 1967] painted a

⁹³ Valfrid Paulsson, 'Miljövården och lokaliseringspolitiken', in Leif Andersson (ed.), *Idéerna som drivkraft: En vänbok till Tage Erlander*, pp. 177–84 (Stockholm: Tiden, 1969). In Swedish: 'Det moderna samhället har röjt undan de flesta av de hygieniska och estetiska omgivningsproblem som tidigare skapade debatt och indignation. Förbättringarna har varit påtagliga. Därför har chocken blivit desto starkare när man upptäckt att de gamla problemen ersatts av nya som är lika stora om inte större.'

⁹⁴ Holmqvist, Eric, 'Vår miljö', *Kommunal tidskrift* 1 (1968): 992. In Swedish: 'Vi vet alla att miljöförstörelsen i stor utsträckning är det pris vi fått betala för det tekniska och ekonomiska framåtskridandet.'

⁹⁵ Jonas Anshelm, *Socialdemokraterna och miljöfrågan: En studie av framstegstankens paradoxer* (Stockholm: Symposium, 1995).

⁹⁶ David Larsson Heidenblad, 'Ett ekologiskt genombrott?—Rolf Edbergs bok och det globala krismedvetandet i Skandinavien 1966', *Historisk tidsskrift* 95:2 (2016): 245–266.

scenario no less apocalyptic than Edberg's *Spillran av ett moln*, but left the door open to reform and referred to a well-known imperative.

While stemming the most harmful outflow of aggression, one can channel it in another direction. This can be done by intensifying discussion about the use of technology for the benefit of mankind, discussing how society should be rebuilt, revolutionized, in order that as many people as possible enjoy the highest possible standard of living [...].⁹⁷

Palmstierna's trust in the potential to merge ecology and modernization fit perfectly with the political pattern, which had been established for dealing with the environmental question. In the late sixties he, unlike Edberg, was appointed to the group charged with formulating the official Social Democratic environmental platform.

It was not a case of putting the emergency brakes on development. Valfrid Paulsson in particular criticized what he viewed as a hysterical tone of the environmental debate. According to him, there were objective, factual arguments and it was important to keep the environmental debate 'clean from exaggeration and inaccuracy'.⁹⁸ While Paulsson insisted that short-sighted financial obstacles should not be allowed to get in the way of conservation efforts, he indicated that there was a basic, legitimate expectation of economic growth that needed to be taken into account ensuring full employment and local development. These demands might conflict with particular environmental concerns, and if so, then conservationists would have to compromise. 'Realism in action is a prerequisite for the continued success of environmental protection'.⁹⁹

⁹⁷ Hans Palmstierna, *Plundring, svält, förgiftning* (Stockholm: Rabén och Sjögren, 1967), 130. In Swedish: 'Samtidigt som man hejdar aggressivitetens farligaste utlopp, måste man kanalisera den i andra riktningar. Det kan ske genom en intensifiering av diskussionerna om teknikens användning för människornas bästa, diskussioner om hur samhället skall byggas om, revolutioneras, så att så många som möjligt får bästa möjliga levnadsvillkor'.

⁹⁸ Valfrid Paulsson, 'Den nya miljövården', *Sveriges Natur: Svenska Naturskyddsföreningens tidskrift* 60 (1969): 10.

⁹⁹ Paulsson, 'Den nya miljövården', p. 10. In Swedish: 'Realism i handlandet är ett villkor för att naturvården skall ha fortsatt framgång.'

Just like Paulsson's moderate predecessors in the 1930s, being willing to tolerate continued development meant sharing responsibility. It provided the opportunity to have real and not just rhetorical influence in order to help lagging environmentalism catch up. The general principles drawn up for environmental affairs were also aimed at reform.¹⁰⁰ A healthy environment was portrayed as a goal that could be achieved with objectivity via government intervention. During this gradual process, compromises would be made between the various special interests so that the negative consequences of environmental planning would be minimized while employment and economic development were not jeopardized.¹⁰¹

Ear-marked research funding, financial incentives, tougher legislation, and the general restructuring of society in an environmentally-friendly direction brought financing to the environmental movement. Some former 'environmental criminals' cleaned up their acts. Agricultural research quickly adopted an ecological perspective and added 'environmental control' to its scientific agenda, while actors in the road and water sectors morphed from 'technocrats' into 'environmental contractors'.¹⁰² Even some of the captains of industry attempted to burnish their tarnished environmental image.

In 1972 the first United Nations Conference on the Human Environment— 'Only One Earth'— was held in Stockholm. Its main goal was to inspire and guide the peoples of the entire world in the preservation and enhancement of the human environment. Increasing human capabilities for a life of dignity and well-being was stressed as an objective. Another objective was increased "development", including financial and technological assistance to "underdeveloped" countries.¹⁰³ Just in time for the conference an English edition of the Swedish journal *Teknisk tidskrift* [Journal for technology] entitled 'Cleaning Our Paradise' was published (later also in book form in Swedish). In the introduction, engineer Bertil Håård asserted: 'The time of to wake up has passed, the alarm clock can be shut off, now it's time

¹⁰⁰ Holmqvist, 'Vår miljö', p. 994.

¹⁰¹ Mårald, *Svenska miljöbrott och miljöskandaler 1960–2000*.

¹⁰² Olle Pettersson, 'Hur kom miljöforskningen till lantbrukshögskolan?', *Kungl. Skogs- och Lantbruksakademiens tidskrift* 129 (1989): 197, and Folke Karlefors and Lennart Rahm, 'V-byggarnas roll i miljö vården?', *Väg- och vattenbyggaren* 7 (1971): 215–218.

¹⁰³ Björn-Ola Linnér and Henrik Selin, 'The United Nations Conference on Sustainable Development: Forty years in the making', *Environment and Planning C: Government and Policy* 31 (2013), pp. 971–987.

for systematic facts, hard work, and a whole lot of money'.¹⁰⁴ The way forward was not to heed the words of 'doomsday prophets', such as Wesslén, Wägner, Martinson, Edberg and Hubendick, but to continue developing large-scale technology while always keeping the environment in mind. Håård optimistically claimed that with the help of technology and at a reasonable price it would undoubtedly 'be possible to heal all our environmental wounds'.¹⁰⁵ Consequently, there was broad agreement among politicians and civil servants, technical and scientific experts, businessmen, and industrialists that the problems with the environment—the dissonances—would eventually disappear through the unabated pursuit of continued modernization.

Conclusion: The Vision of a Green Welfare State

Our conclusion is that there is a bright scarlet thread running from the ideas broached in *acceptera* and Ludvig Nordström's *Lort-Sverige*, through the 'moderating objections' of the social welfare state to the eco-modern Green welfare state of Prime Minister Göran Persson's visions. The official goal has always been to push Sweden to the fore of development—to see that the *whole* country be part of 'Europe A' without any dissonances. To get there demanded logical, rational solutions, which improved on the old and developed the new. Research, innovation, regulation, technological development, planning, and the rebuilding of society are the oft-repeated buzzwords. What happened in the environmental arena internationally, and likewise in Sweden, during the 1990s was more of a shift of focus and management, from a mainly government-controlled development to increased market self-regulation and New Public Management.¹⁰⁶

By and large, following this line has proved successful. The open sewer ditches and outhouses of old, 'dirty' Sweden disappeared, the cities were sanitized, the use of domestic natural resources became more efficient, and health and welfare improved. Many of the local environmental problems plaguing the sixties and seventies have been rectified. The gush of sewage spewing filth into Swedish waterways had been reduced to a trickle.

¹⁰⁴ Bertil Håård, 'Tekniken – risk och resurs', *Teknik för miljön* (Stockholm: Ingenjörsvetenskapsakademien, 1973): 5–6. In Swedish: 'Uppvaknandets tid är över, väckarklockan kan stängas av, nu är det dags för systematiska fakta, hårt arbete och en hel del pengar'.

¹⁰⁵ Håård, 'Tekniken – risk och resurs', p. 6.

¹⁰⁶ Andrew Jamison, *The making of green knowledge: Environmental politics and cultural transformation*. (Cambridge: Cambridge University Press, 2001), pp. 123–146.

However, we can also trace another thread, from the critics of civilization in the 1930s onwards to the radical green movement in the ‘Environmental era’ of the 1970s.¹⁰⁷ Here problems that occur due to society’s impact on nature have not been viewed as simply dissonances within modern society, possible to alter through moderate calibrations of the dominant social system. Instead the very ideas of modernity and progress, including a capitalistic system that decouples economy from ecology, has been looked upon as the main problem, causing dissonances in the relationships between nature and culture.¹⁰⁸

Finally, it may be remarked that Swedish, as well as other Nordic countries, environmental politics of today still is strongly shaped by the ideas of ecological modernization and an unswerving faith in technical solutions and rational planning. In the meantime, new issues and conflicts emerge, including recurring outcries against clear-cutting forests and river damming and intrusive road works. Sometimes the solution to one problem creates several new ones, and uncertainty remains great as to whether nuclear power and genetic engineering offer prudent or dubious solutions. Production and building has certainly become more efficient and less polluting but ecological profits have declined with the parallel increase in consumption and transportation; Sweden’s global ‘ecological footprint’ and CO₂ emissions are not insignificant.¹⁰⁹

Furthermore, broadened knowledge, intellectual horizons and critiques of progress have brought new transnational problem complexes to light, with the threat of global warming as only the most striking example. Like the dream of Sweden the modern Model Nation, the definitive answer to the difficulties of the environmental issue has constantly been deferred. New insights, broader perspectives, changing values, and ideological scrutiny manifest new dissonances incessantly.

¹⁰⁷ Sabine Höhler, *Spaceship Earth in the Environmental Age, 1960–1990* (London: Pickering and Chatto, 2015).

¹⁰⁸ Jonas Anshelm and Martin Hultman, *Discourses of Global Climate Change: Apocalyptic framing and political antagonisms* (Routledge: New York, 2015).

¹⁰⁹ Atle Midttun and Lennart Olsson, ‘Eco-modernity Nordic style: The challenge of aligning ecological and socio-economic sustainability’, in Nina Witoszek and Atle Midttun (eds.), *Sustainable Modernity: The Nordic Model and Beyond* (London: Routledge, 2018), pp. 204–228.

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