NORWEGIAN WOOD Trails to Ecological Design Kjetil Fallan

Made famous by the Beatles' 1965 hit song, and subsequently catalyzed by Haruki Murakami's 1987 novel. the term "Norwegian wood" has taken on a mythical allure in international popular culture. Its commercial appropriations today include a rock festival, a best-selling book about firewood, a craft beer, as well as a purportedly ethical and sustainable fashion and homewares brand – all favoring the phrase for its allusions to something genuine. wholesome, and natural. Whereas the appropriateness of many of these appropriations certainly could be questioned, the term's universal familiarity and distinct connotations make it an apt point of departure for exploring some of the less-trodden trails to ecological design. Judging by today's discourse – whether scholarly, professional, or popular – one might get the impression that ecological design is a recent or flat-out ahistorical phenomenon, the result of a new and immaculate imperative. Only by retracing key historical trajectories, however, can we hope to arrive at a fuller understanding of its complexities and contemporary significance.

Just like the song and the novel, the emerging discourse on ecological design traced in the following bridged the local and the global, inserting the national in the international – and vice versa. The rise of popular environmentalism and the migration of basic ecological ideas from the life sciences to general and professional media in the latter half of the 1960s helped change the meaning of internationalization in design discourse. If hitherto primarily gauged by the local export of exquisite objects and the rising fame of national design heroes, internationalization now also came to signify a new concern for how local communities were affected by the border-defying nature of environmental problems and a growing awareness of the global connections underpinning our material culture and natural ecosystem alike. In this chapter, I will trace one of the many trajectories through the emergence of this new understanding of design's environmental entanglements by following the writings and actions of the Canadian-Norwegian architect Robert Esdaile and his quest for an ecologically founded design education and practice. Shifting to a more literal understanding of "Norwegian wood," the final section examines the morality of materials in the marked shift in the 1960s from teak to pine as the dominant material in Norwegian furniture design.

Although Nordic design in general tends to be associated with nature and the natural, at least when mediated internationally,¹ the trope of "nature" has been particularly pronounced in Norway. During the heyday of "Scandinavian Design" in the 1950s, nature was portrayed as a sublime presence, a majestic force – a source both of material resources and creative inspiration. The growing acknowledgment that the serenity and purity of nature hitherto taken for granted was now under threat, and that design and designers were implicit in this environmental destruction, significantly changed how nature was perceived and invoked in design discourse. The concept of ecology, at this very time spilling over into the public realm from the narrower confines of the life sciences, quickly became a favored tool amongst design professionals for rethinking human-nature relations. Making it his life's mission to reform design practice and education according to ecological principles. Robert Esdaile and his concern for what comes "after us" represents one of the first sustained efforts to bring an ecological, or ecologically informed, critique to bear on design and its practices and ideologies in a Norwegian context. Tracing Esdaile's work leads us along one of many trails through the extensive and dense Norwegian wood(s), exemplifying how ecological design grew from many different roots, and that one of its main characteristics is the dual attention to the local and the global.

1. Niels Peter Skou and Anders V. Munch, "New Nordic and Scandinavian Retro: Reassessment of Values and Aesthetics in Contemporary Nordic Design," *Journal of Aesthetics & Culture* 8, no. 1 (2016), 6–8. 2. Letter to Robert Esdaile from secretary Armand Halvorsen of the National College of Applied Art and Craft/Oslo School of Architecture, dated January 18, 1964. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, NTNU University Library, Trondheim.

3. Arne Gunnarsjaa, *Arkitekturleksikon* (Oslo: Abstrakt forlag, 1999), 224.

Finding Ecology

At the exact same time as the Beatles released "Norwegian Wood," in December 1965, Robert Esdaile launched a targeted and comprehensive criticism of designers' lack of concern for environmental problems on the pages of the Norwegian architectural magazine Arkitektnytt. His acutely titled essay, "The Environmental Crisis," was published in five installments from 1965 to 1967, setting the tone for the budding debate on ecology and design in Norway. Canadian-born Esdaile trained at McGill University, Montreal, and at the University of Cambridge. After marrying Elin Høst, a Norwegian, he moved to Norway in 1948, where he first worked as a planner before setting up an architectural practice in 1955. Collaborating with key figures such as Odd Brochmann, Dag Rognlien (editor of Arkitektnytt from 1966), and Christian Norberg-Schulz, Esdaile remained a steadfast modernist, a member of the International Congresses of Modern Architecture (CIAM) to the very end, and a key promoter of Le Corbusier's ideas in Norway. From 1964, initially filling in for Sverre Fehn, he taught at the Oslo School of Architecture,² until being appointed professor at the Norwegian Institute of Technology in 1971.³ Esdaile was as radical a citizen as he was a design theorist and educator. After he attended the



Robert Esdaile, apartment building at Bjørnekollen, Oslo (1956). Photo: Bjørn Winsnæs (1959). Courtesy of the National Museum of Art, Architecture, and Design. CC-BY-NC.

seventh congress of the International Union of Architects (IUA) in Havana, Cuba, in 1963, where both Fidel Castro and Ernesto "Che" Guevara addressed the delegates, he took to signing private letters "Venceremos" and "Hasta la victoria siempre." Deeply inspired by his experience in Cuba, he would later cite from Fidel's and Che's IUA talks in his teaching as a way of convincing his students that they and their profession could make a difference in – and to – the world.⁴

With a background in planning, in his essay on the environmental crisis Esdaile homed in on perhaps the most obvious target: the car and its implications for the organization of transport systems and settlement patterns. Esdaile argued that this quintessential symbol of modern society and personal liberation had become a massive paradox, paralyzed by its own success: "The dream of 'living freely' murders the freedom of living."⁵ The car was both a societal and an environmental problem:

> the privately owned automobile ... creates chaos, pollution, an alarming number of deathes [*sic*] and wounded. It distorts civic life and will in time congest and pollute the most exquisite countryside, our last reserve of inspiration and human dignity. This is not a fantasy, but a pure statement of facts.⁶

He did not oppose the car as such, but believed that its production, distribution, and use had to be brought under strict regulation to keep it from suffocating our airways and highways alike.

The car was just a convenient example, though, and Esdaile cast the entirety of human history as "a career which gradually freed him [Man] from the inhibiting discipline of nature. The acquired knowledge of this last millennia [*sic*] of his existence on earth is like a bulldozer out of control. All the 'signs' and warnings which nature gently confronts us with are being trodden upon in a gigantic stampede. This planless stampede leaves behind it an environmental crisis."⁷ Stopping the bulldozer required coordinated planning and a holistic, or at least systemic, approach to design. Over-specialization resulted in tunnel vision and the pulverization of responsibility, he argued. 4. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design; Nils Werenskiold, "Den radikale arkitekt-professor," *Aktuell*, no. 8 (February 20, 1971), 28, 29; anon., "Miljøvokteren," *Dagbladet*, May 30, 1970, p. 5.

5. Robert Esdaile, "Our Environmental Crisis II," *Arkitektnytt* no. 3 (1966), 42.

6. Esdaile, 42.

7. Robert Esdaile, "Our Environmental Crisis," *Arkitektnytt* no. 20 (1965), 376. 8. Esdaile, 376.

9. Richard Buckminster Fuller, *Operating Manual for Spaceship Earth* (Carbondale: Southern Illinois University Press, 1968).

10. Andrew G. Kirk, The Whole Earth Catalog and American Environmentalism (Lawrence: University Press of Kansas, 2007), 56–64; Peder Anker, From Bauhaus to Ecohouse: A History of Ecological Design (Baton Rouge, LA: Louisiana State University Press, 2010), 68–82.

11. Robert P. McIntosh, *The* Background of Ecology: Concept and Theory (Cambridge, UK: Cambridge University Press, 1985).

12. Robert Esdaile, "Our Environmental Crisis III," *Arkitektnytt* no. 14 (1966), 254.

13. Finis Dunaway, Seeing Green: The Use and Abuse of American Environmental Images (Chicago, IL: University of Chicago Press, 2015), 66. However, it is in Esdaile's prescription for curing this illness that his intervention becomes particularly perceptive. Addressing the environmental crisis, he suggests, requires that design engages with "ecological issues, because this exact and beautifully broad science coordinates mans [sic] behavior with the laws and habits of nature."8 Esdaile's trumpeting of ecology in a mainstream design context stands out, three years before the arrival of Buckminster Fuller's Operating Manual for Spaceship Earth[®] and the first Whole Earth Catalog – publications that were key in popularizing ecology and promoting the idea of "whole systems" thinking in design discourse.¹⁰ Although ecological thought has a long history, there is broad consensus that as a distinct discipline ecology emerged in the early twentieth century. It was only in the 1960s, however, that it gained public prominence, as a consequence of increased concern for the state of the environment.¹¹

Esdaile was an architect, not a biologist, and there is nothing in his article that indicates any profound scientific knowledge of ecology. His interest in the concept seems to have been as an inspiration or tool with which designers could learn to think more holistically about their interventions in the world and the environmental impact of their practice. The time was ripe, he claimed, for the human species to put its creative capacities to better use:

> The success of people to adapt themselves has been at times astonishing and admirable, at other times they have wasted the land depleting both their energies and reserves. Never before has the power of man to waste and ravage been so decisive. Final destruction lies in his own hands.¹²

This latter observation on the prospect of human-originated obliteration is clearly colored by the Cold War climate in the wake of the Cuba crisis. In an environmentalist context, Esdaile's comment recalls a tagline later made instantly famous: "We have met the enemy and he is us," which cartoonist Walt Kelly originally applied to a poster he created for the first Earth Day in 1970.¹³ It also preempts a very similar remark made by György Kepes in the context of the vastly ambitious "Universitas Project" at New York's Museum of Modern Art in 1972: "At this historical junction, the real beasts are man-created: we face ourselves as the enemy."¹⁴Kepes, an artist, designer, and scholar teaching at MIT, then went on to say that this new awareness of our precarious situation had made us begin

> to see that our extended body, our social and man-transformed environment must develop its own self-regulating mechanisms to eliminate the poisons injected into it and to recycle useful matter. Environmental homeostasis on a global scale is now necessary to survival.¹⁵

Like Kepes, Esdaile saw in ecology a conceptual model for thinking across scales and along relations. Only by adopting an ecological mindset, he argued, could designers help to reinstate the equilibrium they have contributed to upset by, in the words of Victor Papanek, "creating whole new species of permanent garbage to clutter up the landscape, and by choosing materials and processes that pollute the air we breathe."¹⁶ To pull back from the brink of Armageddon and set spaceship earth on a more sustainable course, Esdaile reasoned, we needed an entirely new approach to planning the human environment. Recalling its publication date – 1966 – his suggested strategy remains an early articulation of key principles of ecological design:

> What resources can we now call upon to face this new situation? Certainly not new weapons: certainly not a new invention. No, a conscientious ability to see with microscopic clarity and macroscopic breadth the interwoven and complex unity of man and nature. The science is called ECOLOGY. If we could apply it in its generous wholeness which is its supreme justification, we might have time to regain a balance. But the application of Ecology demands a changed state of mind: an *I-Thou* relationship instead of an *I-it* relationship. This has nothing to do with the sentimentality of a "back to nature" attitude which is the prestige of the well-to-do urban dweller. It embodies rather humility and collaboration, expressing the balance in biological

14. György Kepes, "Art and Ecological Consciousness," in The Universitas Project: Solutions for a Post-Technological Society, ed. Emilio Ambaszed (New York, NY: MoMA Publications, 2006), 152.

16. Victor Papanek, *Design for the Real World: Human Ecology and Social Change* (New York, NY: Pantheon Books, 1971), xi.

^{15.} Kepes, 154.

17. Esdaile, "Our Environmental Crisis III," 254.

18. "Bilag til søknad fra Prof. Robert Esdaile," dated August 21, 1978. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design.

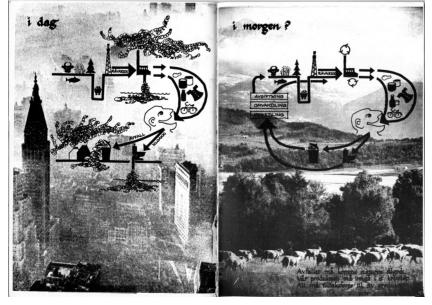
19. "Protokoll fört vid förberedande samträde mellan interesserade i utställningsprojektet ÄN SEN DÅ... den 18 dec. 1968," Robert Esdailes arkiv, NAM1995:23 Serie Gc Manuskripter til foredrag, artikler og andre tekster, Nasjonalmuseet for kunst, arkitektur og design. sciences. Most important to the architect, it gives a very clear picture of environmental factors and their interplay.¹⁷

Exhibiting Doom and Gloom

"The Environmental Crisis" was just the beginning of Esdaile's passionate and long-lasting efforts in the name of ecological design, most of which he would channel through his teaching and campaigns for educational reform. An alternative way of communicating the message, though, was the medium of exhibitions. In 1968, marking the occasion of his employer, the Oslo School of Architecture, moving out of the premises of its parent institution, the National College of Applied Art and Craft, he organized an exhibition about urban environmental problems. According to him, this event was the "precursor" to another exhibition shown the following year in Oslo "on [his] initiative" called And after us...¹⁰ This claim is slightly misleading, though, as the latter exhibition was a local adaptation of a concept developed by architecture students at Chalmers Institute of Technology in Gothenburg and shown at a dozen venues in Sweden since May 1968, generating considerable media coverage and public attention. A delegation from the Oslo School of Architecture, led by Esdaile, along with representatives from the Norwegian Society for the Conservation of Nature and the United Nations Association of Norway, met with one of the original curators, Ivar Fernemo from Chalmers, and others in December 1968 to plan a Norwegian version of the show.¹⁹ The basic message of the exhibition – that the future of the world and humanity alike was threatened by our maltreatment of the environment – was carried over from the Swedish edition, including excerpts from research by leading Swedish environmentalist-scholars underpinning this view, such as biologist-cum-geographer Georg Borgström and biochemist Hans Palmstierna. As agreed, though, Esdaile added to this Norwegian material, sampling from, for example, zoology professor Rolf Vik's popular writings on the environmental crisis, a Rachel Carson-derived exposé of DDT by Ragnhild Sundby (professor of zoology at the Norwegian College of

Agriculture and, from 1972, president of the Norwegian Society for the Conservation of Nature), historian Tore Linné Eriksen's work on developmental aid, and Esdaile's own crusade against the private car.²⁰

Through the medium of a pop-up exhibition structure designed for ease of assembly and transport accompanied by a comparatively comprehensive catalog, Esdaile and his architecture students – assisted by design students from the National College of Applied Art and Craft – then organized and presented this broad swath of scholarship using visually striking infographics and photomontages accompanied by succinct texts. Neatly indicating the pertinent vet precarious nature of the project's main message, the catalog's cover featured an illustration composed of an ultrasound image of a six-week-old fetus rendered in red superimposed on a black-and-white image of Earth seen from space. Rendering an unborn child in this context makes it an extreme example of the trope of "children as emotional emblems of the future" identified by Finis Dunaway as key in the visual culture of environmentalism: "Within the context of popular environmentalism, children's bodies provide a way to visualize the largely invisible threats of radiation, toxicity, and other environmental dangers."²¹ A forceful symbol of Mother Earth, this illustration, paired with the distressing title, And after us..., efficiently communicated the sense of fragility and



Spread from the exhibition catalog And after us... illustrating "today" (left) and "tomorrow?" (right).

20. Anon., ed., *og etter oss...* (Oslo: Norges naturvernforbund, 1970).

21. Dunaway, Seeing Green, 3.



Front cover of the catalog for the exhibition *And after us...* featuring an image of a fetus superimposed on a "blue marble" photo of the earth.

urgency which the exhibition sought to instill in the public. And the message hit home. Not only was the exhibition met with great public interest, drawing eighty thousand visitors in Oslo alone before moving on to Bergen, Trondheim, and other venues²² – it even pushed back at the academic community, becoming "important in triggering a call to action amongst the environmentally concerned at the University [of Oslo]," especially for the emerging ecophilosophers.²³ Sigmund Kvaløy Setreng, a research fellow and former student of professor Arne Næss and prime mover in the formation of the Ecophilosophy Group,

> was greatly impressed by the exhibition, and invited the architects to join hands with students of ecology, philosophers, and technical climbers from the Alpine Club, to create a Co-working Group for the Protection of Nature and the Environment at the University.²⁴

Their subsequent correspondence reveals that Esdaile was clearly flattered and motivated by Kvaløy's gesture, as it meant bringing design discourse to the epicenter of environmental scholarship and activism.²⁵

Decentralizing Design

In June 1966, Esdaile wrote to Håkon Stenstadvold, rector of the National College of Applied Art and Craft, regarding an exhibition planned for the institution's 150th anniversary two years later. At this point, at least until its relocation in 1968, the Oslo School of Architecture had a rather symbiotic relationship with the National College of Applied Art and Craft, from which it had spawned in 1962.²⁶ Exactly what his role was in these plans is unclear, but Esdaile's involvement is testimony to his commitment to the reform of design in general, across professional specializations. Turning again to ecology, he advised that the exhibition should showcase

> a new attitude towards the idea of dwelling, showing that it is possible to make a fundamental

22. Anon., "Og etter oss...," *Norsk natur*, no. 5 (June 1969), 34–39.

23. Peder Anker, "Science as a Vacation: A History of Ecology in Norway," *History of Science* 45, no. 4 (2007), 463.

24. Anker, 463.

25. Letters from Robert Esdaile to Sigmund Kvåløy, dated July 8, 1969, August 31, 1969, and October 1, 1969, Robert Esdailes arkiv, NAM1995:23 Serie Gc Manuskripter til foredrag, artikler og andre tekster, Nasjonalmuseet for kunst, arkitektur og design.

26. Gunnarsjaa, Arkitekturleksikon, 729. **27.** Robert Esdaile, letter to Håkon Stenstadvold, June 24, 1966. Statsarkivet i Oslo, A-10583, 02/Da-0170.

28. Esdaile, letter to Håkon Stenstadvold.

29. Most famously articulated in Christian Norberg-Schulz, Genius Loci: Towards a Phenomenology of Architecture (New York, NY: Rizzoli, 1980).

30. Letter from Robert Esdaile to professor Knut Knutsen. Undated [1966-1969]. Robert Esdailes arkiv, NAM1995:23 Serie Gc Manuskripter til foredrag, artikler og andre tekster, Nasjonalmuseet for kunst, arkitektur og design. improvement in the urban structure, in the dwelling structure, or an integration of both which would combine to solve a large number of pressing ecological problems.²⁷

Furthermore – and perhaps somewhat surprisingly coming from a Canadian immigrant – he lamented the fact that our material culture was being transformed through "a steadily increasing number of mass-production articles of foreign design and origin," making it all the more "imperative that Norway makes an effort to express the material and regional quality of its products - especially those products which form our own environment."28 It is not unlikely that Esdaile's interest in design's local context and environment was informed by his collaborator and colleague Christian Norberg-Schulz, who at this time had just begun developing his theories of place in architecture which later would become massively influential.²⁹ Crucially, though, Esdaile's interest in locally distinct design solutions was paired with his appreciation of the global perspective fostered by ecological thinking in response to the environmental crisis. This juxtaposition of scales inspired by ecology and regionalism effectively preempted the idiom "think globally, act locally," which some years later would become the slogan of the Friends of the Earth (established in 1969) and emblematic of the environmentalist movement in general.

This insistence on acting locally for the greater (global) good would become a staple of Esdaile's teaching practice and his steadfast drive for educational reform. Not long after he started teaching at the Oslo School of Architecture he wrote a letter to the head of the school, professor Knut Knutsen, complaining that "two scientific subjects that concern relations between humans and nature. ecology and ethnology ... are utterly neglected in the school's curriculum."³⁰ Knutsen was known for his renewal of Norwegian timber architecture and his gentle treatment of the natural surroundings, especially following his cabin in Portør (1949), so Esdaile presumably expected his superior to take favorably to his ideas for teaching ecological design. Writing again to the school's management in April 1968, he presented a "draft program for socio-ecological studies." The purpose was to increase the students'

knowledge about the most pressing of "current problems," emphasizing the consequences of the environmental crisis for the design professions.³¹ "Failing to address these questions," he claimed, "is tantamount to denying our descendants the right to live, or to accept the aggravation of the misery of the world."³² His proposed reading list included works by scholars represented in *And after us...*, such as Borgström, Palmstierna, and Vik.³³

For Esdaile, however, introducing courses on ecology and related topics would only go some way towards the required educational reform. Dismissing what he dubbed "the 98% adoption of a technical scientific approach to Ecology for training of architects," Esdaile argued that "for architects the important thing is to UNDERSTAND, see, smell, feel, and diagnose in this way, respecting with an almost religious awe the beautiful synthesis of all nature from the cosmic to microcosmic."³⁴ Therefore, merely revamping the curriculum would not do the very structure of architectural education had to change, from large, centrally located academic institutions to small, geographically dispersed nodes of practical learning. This type of distributed learning was required because "students need more intimate working knowledge of environmental issues, and it is questionable if this can be achieved from an institutional mileau [sic]."³⁵ The first public presentation of his ideas for a decentralized architectural education appeared on the pages of Arkitektnytt in 1969. What he suggested was that a central institution – a "mother-school" - could serve as a central hub for, say, sixty "outposts" located in small communities around the country. Each outpost would consist of a dozen or so students conducting locally specific, real-life projects supervised by one or a few teachers. The local context was crucial to the new type of design and planning expertise he envisaged: "Here the group is confronted with the people, the resources, the traditions, and the future prospects of the place. Here is the architect's laboratory."³⁶ Moving to a new outpost every semester, interspersed by brief visits to the mother-school for theoretical teaching components as well as project presentations and appraisals, the students would thus in the course of the program receive solid, yet varied hands-on and in situ experience with planning and design work. "An

31. Robert Esdaile, memo titled "Til S.A.O.," dated April 1968. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design.

32. Robert Esdaile, memo titled "Planlegging ved SAO," undated. Robert Esdailes arkiv, NAM1995:23 Serie Ga Manuskripter til forelesninger og annet undervisningsmateriell, Nasjonalmuseet for kunst, arkitektur og design.

33. Ibid.

34. Letter from Robert Esdaile to "Tore" [no last name provided], October 24, 1969. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design.

35. Robert Esdaile, "Perspektives [sic] of architectural education," manuscript dated 1974. Robert Esdailes arkiv, NAM1995:23 Serie Gb Materiale knyttet til undervisning ved NTH, Nasjonalmuseet for kunst, arkitektur og design.

36. Robert Esdaile, "Desentralisering av arkitektutdannelsen," *Arkitektnytt* no. 9 (1969), unpaged. **37.** Robert Esdaile, "Undervisningens dilemma," *Arkitektnytt* no. 19 (1969), unpaged.

38. Letter from Robert Esdaile to Øystein Dalland, dated August 22, 1969. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design.

39. Letter from Robert Esdaile to Sigmund Kvåløy, dated July 8, 1969. Robert Esdailes arkiv, NAM1995:23 Serie Gc Manuskripter til foredrag, artikler og andre tekster, Nasjonalmuseet for kunst, arkitektur og design.

40. Letter from Arne Næss to Robert Esdaile, undated (1975). Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design.

41. Minutes from meeting on the decentralization of architecture, dated March 5, 1970. Robert Esdailes arkiv, NAM1995:23 Serie D Korrespondanse, Nasjonalmuseet for kunst, arkitektur og design.

42. Robert Esdaile, "The decentralized school of architecture: A new response to our environmental crisis," unpublished manuscript, January 9, 1975. Robert Esdailes arkiv, NAM1995:23 Serie Gc Manuskripter til foredrag, artikler og andre tekster, Nasjonalmuseet for kunst, arkitektur og design.

43. Letter from Robert Esdaile to Architectural Design (att: Editorial Assistant Barbara Goldstein), dated February 10, 1975. Robert Esdailes arkiv, NAM1995:23 Serie Gb Materiale knyttet til undervisning ved NTH, Nasjonalmuseet for kunst, arkitektur og design. outpost," he explained, "is perhaps best likened to F. L. Wright's Taliesin, but the purpose is entirely different. We are to serve society's needs under its organic development, not a subjective formalism."³⁷

Writing to an acquaintance he hoped could help set up an outpost in Alta, a small town in the far north of Norway, the geographer Øystein Dalland (who would later become professor of environmental planning at Telemark University College), Esdaile was confident that "in a very near future we could count on creating a miniature school of architecture in Alta, a school complete with an ecologist, sociologist, and an architect-planner."³⁸ Not surprisingly, Esdaile's radical proposal proved hard to realize. Hoping to secure broader academic support for the idea, he wrote to Kvaløy suggesting they could discuss the matter in the Co-working Group for the Protection of Nature and the Environment at the University of Oslo.³⁹ Even though the latter had little to offer beyond moral support, he kept in touch – also with their "godfather," Arne Næss.⁴⁰ His own institution's management was not entirely dismissive of the decentralization idea, agreeing to establish a committee tasked with exploring its feasibility.⁴¹ Except for a couple of ad hoc trial projects more akin to summer excursions, though, the scheme would remain at the proposal stage. That did not deter Esdaile from persistently promoting the idea, even long after he moved to Trondheim in 1971 to take up his professorship at the Norwegian Institute of Technology. His new institution does not seem to have been any more enthusiastic about it than was the Oslo school, but as late as 1975 he described the scheme as "a new educational response to our environmental crisis."42 He also sought to publish the idea internationally, writing to Architectural Design magazine that "we can't count on initial Govm't support nor on students who primarily want qualifying semesters. We have to count on the appeal that the idea has for the few and the appeal of Norways [sic] dramatic landscape."43

Norway's dramatic landscape clearly held significant appeal to Esdaile himself. For the cover of the first issue of 1976, *Byggekunst* chose an image of Esdaile's own DIY cabin – a repurposed coastal artillery emplacement on top of a cliff above the Jøssingfjord in south-western



Front cover of *Byggekunst* (no. 1, 1976) featuring Robert Esdaile's DIY cabin on top of a cliff above the Jøssingfjord in south-western Norway. Courtesy of *Arkitektur N*.

Norway. The simple, un-intrusive structure consisted of a low wooden roof raised on top of the artillery emplacement, which was built in 1942 as part of Hitler's Atlantic Wall. Reclaiming a remote, spectacular site from the destructive forces of military technology and, by the smallest means possible, turning it into a sanctuary for the appreciation of the natural landscape, the project constitutes a highly symbolic gesture – a three-dimensional manifesto of ecological design. The location of the site made 44. Letter from Robert Esdaile to the Norwegian Pollution Control Authority, dated February, 17, 1979. Robert Esdailes arkiv, NAM1995:23 Serie Gc Manuskripter til foredrag, artikler og andre tekster, Nasjonalmuseet for kunst, arkitektur og design.

45. Robert Esdaile, "'Jansholet': Hytte ved Jøssingfjord," *Byggekunst* 58, no. 1 (1976), 6–7. the project doubly symbolic, as the Jøssingfjord featured prominently in environmentalist discourse at the time, due to the heavy pollution of the fjord caused by waste from the Titania company's ilmenite mines nearby (the world's biggest bearing of that mineral). As a concerned citizen Esdaile contributed to this attention by complaining to the newly established (1974) Norwegian Pollution Control Authority, accusing it of being too lenient towards the company's practices.⁴⁴ The power of the double symbolism inherent to his cabin project was naturally not lost on Esdaile, who presented it to the readers of *Byggekunst* explicitly as a commentary on the combined ills of society and an intervention in the name of more sustainable modes of interaction with nature.⁴⁵

Moral Materials

What's in a chair? The rise of the environmentalist movement and the emerging ecological sensitivity of design professionals discussed above coincided with a marked shift in furniture design: the sudden abandoning of tropical woods in favor of indigenous ones. The Norwegian furniture industry had enjoyed considerable commercial success and critical acclaim from the mid-1950s as part of the wider international interest in Scandinavian design. Paradoxically, though, this furniture, which to international audiences apparently expressed something inherently Scandinavian, was predominantly made from woods nowhere to be found in the region, but which had to be imported from far corners of the globe – most notably teak, but also mahogany, rosewood, etc. Always fearing a fad, design critics grew skeptical of the fashion for tropical woods in the 1960s, but their arguments soon moved beyond the usual warnings against herd mentality and lack of originality. The tropical materials which had contributed to the international fame of Scandinavian design were now cast as alien, false, and extravagant; as inappropriate for Norwegian furniture. Alf Midtbust, director of the National Federation of Furniture Manufacturers, put it succinctly: "The Danes conquered the world with teak from Siam... We Norwegians have the opportunity to conquer

the world using pine and birch."⁴⁶ In stark contrast to Denmark, Norway (and Sweden) has vast forests ripe with resources readily available to local designers and manufacturers, and utilizing these rather than tropical imports became a moral imperative.⁴⁷

The design magazine Bonytt led the way, propagating quite intensely for the use of indigenous woods, especially birch and pine, in the name of functional appropriateness, national traits, ethics, and resource management alike. Leisure cabins became a stepping stone in this campaign, on the assumption that these spaces required furniture which was simpler, sturdier, and cheaper than in permanent homes – and pine, especially, was considered optimally suited for such designs.48 In 1965, a spate of design competitions, organized by the National Federation of Furniture Manufacturers, the Norwegian Home Craft Association, and the Furniture Industry's Trade Council. resulted in a wide range of innovative furniture, much of which was made from pine. The same year, the Norwegian Furniture Fair in Stavanger dedicated an exhibition to new designs in pine, which generated considerable attention.

Pine, of course, has many applications other than furniture, and was the basis for many small businesses and industries in towns and rural districts across the country. Designing furniture in pine to be manufactured by such enterprises rather than by traditional cabinetmakers or furniture factories had a double effect: firstly, it allowed these enterprises to move into the production of finished goods with a higher profit margin, thus potentially generating economic growth in local communities threatened by depopulation. Secondly, designing for simple, rational production without relying on specialized craft expertise, and using an inexpensive and abundant material, resulted in affordable products. Such design projects could thus also contribute to social sustainability, a feature considered inseparable from design for environmental sustainability by key thinkers from William Morris to Arne Næss, and intricately intertwined also in other, contemporary efforts to revitalize local communities by design.⁴⁹

The work of designer Edvin Helseth becomes particularly interesting in this context. Throughout the 1960s he developed several furniture systems – all in **46**. Alf Midtbust, "Frem for furua," *Bonytt* no. 5 (1965), 126.

47. Kjetil Fallan, "'The "Designer": The 11th Plague': Design Discourse from Consumer Activism to Environmentalism in 1960s Norway," *Design Issues* 27, no. 4 (2011), 34.

48. See, e.g., Alf Midtbust, "Frem for furua," Bonytt, no. 5 (1965), 126–27; Marianne Gullowsen, "Efterlyses...," Bonytt no. 5 (1965), 139–40; Arne Remlov, "Det lyktes – så langt," Bonytt no. 7/8 (1965), 221–24; Arne Remlov, "Vår mann i Stavanger," Bonytt no. 9 (1965), 252–58; Arne Remlov, "Fra det ene til det annet...," Bonytt no. 9 (1966), 242.

49. Malin K. Graesse, "The Weaving World of Deep Ecology and Textile Design: Locating Principles of Sustainability at Austvatn Craft Central" (master's thesis, University of Oslo, 2017). pine – for small, local industries based in the heavily forested regions around Norway's largest lake. Miøsa. In 1961 Helseth designed the modular storage system 5-15 for Systemtre A/L in Hamar (the town was also home to Helseth's design practice) and redesigned the flexible bookshelf system BBB for the rake manufacturer Eidsvoll Rivefabrikk. None of these companies had any experience with furniture production but extensive knowledge about wood processing, so the choice of material, the unconventional know-how, and the constraints and affordances of the production process, were key factors in the design process. Helseth brought these experiences to the table when he designed the furniture series Trybo, launched in 1965. Manufactured by the local sawmill Stange Bruk. the various pieces in the series were designed using pine in standard dimensions, assembled in only right angles and straight lines, requiring as little finishing as possible.



Designer Edvin Helseth (left) and the General Manager of Trysil Municipal Forest Administration, Jostein Bjørnersen (right), demonstrates a Trybo chair for the Minister of Industry, Sverre Walter Rostoft, on the occasion of receiving the Norwegian Design Award in 1967. Courtesy of DOGA – Design and Architecture Norway. CC-BY-NC.

The joints were pine plugs rather than nails or screws.⁵⁰ To be assembled by the customer (or retailer), the furniture was shipped flat-packed for more economical (and thus more environmentally-friendly) transport – a concept later made world-famous by IKEA. Trybo was favorably received in design circles, and it was precisely its social design ambitions and attention to resource use which was highlighted. The jury of the Norwegian Design Award, which it received in 1967, hailed it as "an exceptionally good example of product development based on strictly limited raw materials and production facilities."⁵¹

As mentioned above, whole system thinking was essential in formulating theories of ecological design. Helseth's design practice can be seen as a real-world manifestation of this mode of thinking. His systemic approach to design made apparent – and thus consequential – the many material, social, economic, and ecological connections extending from his pine furniture. Fully in line with his systemic design philosophy, the Trybo furniture was originally developed as an integral part of a new, modular, prefabricated leisure cabin model, the Trysil cabin, commissioned by Trysil Municipal Forest District. When the project was presented in the British Council of Industrial Design's *Design* magazine, it was again as an example of environmentally sensible social design:

> [the cabin] was designed in response to two needs. The first was to create more work in an area of depopulation. The other was to produce a holiday house which was easy to erect and would fit into the landscape, as part of a plan to develop tourism in the region.⁵²

The cabin itself, naturally also made from pine, was designed by Helseth's colleague in the architectural office Arkitim, Hans Østerhaug. Trybo was thus part of the new, morally acceptable material culture of leisure, but also a paradigmatic example both of the systemic thinking and the attention to regional specificities integral to the development of ecological design. 50. Harriet Clayhills, "Hytter med system," *Bonytt* no. 9 (1965), 240–43; Liv Schjødt, "Vi trenger hyttemøbler også!," *Bonytt* no. 1 (1966), 12–13.

51. Alf Bøe, Den norske Designpris, de syv første år/The Norwegian Design Award, its first seven years (Oslo: Norsk Designcentrum, 1969), 52.

52. Alf Bøe, "Designed for Leisure Living," *Design* no. 248 (1969), 32–34.

Conclusion

Just as the Beatles established "Norwegian Wood" as an instant enigma in popular culture, from the mid-1960s Norwegian wood took on a new meaning in design culture - both literally and figuratively. The growing awareness of and attention to the precarious state of the natural environment and the harm inflicted on it by industry and consumer society made designers and architects recalibrate their professional ethics. Inspired by models and ideals culled from the life sciences, and particularly from ecology, radically-minded and eloquent educators and practitioners called for new approaches to design, to manufacturing, and to consumption – ultimately, to life itself. Conceptually and ideologically, Norwegian wood represented a reaction both to the refined but elitist niceties of 1950s Scandinavian design and to the rampant consumerism symbolized by jukeboxes and Juicy Fruit. Simultaneously a model ecosystem, a material and economic resource, and a setting for a natural and healthy leisure life, Norwegian wood is a shorthand for the broad scope of professional and societal changes deemed necessary to design a more sustainable future

"Isn't it good, Norwegian wood?"