



ARNE NAESS

# An Example of a Place

*Tvergastein* BY ARNE NAESS

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## THE GLOBAL PLACE-CORROSIVE PROCESS

When the majority of people lived on the land, with little mobility, it was natural to feel at home at certain places. One stayed at home, left home, went home—but home was not a building. The advertising of “homes” for sale is not an offer of a home in the connotation relevant to our analysis. Home was where one belonged. It was “part of oneself,” that is, it delimited an ecological self, rich in *internal* relations to what is now—called environment. Humanity today suffers from a place-corrosive process.

Urbanization, centralization, increased mobility (although nomads have proved that not all sorts of moving around destroy the relation of belonging somewhere), dependence on goods and technologies from where one does not belong, increase of structural complication

of life—all these factors weaken or disrupt the steady belongingness to a place, or even hinder its formation. There seems no place for PLACE anymore.

Nevertheless, the loss of place is felt, the longing persists, and this emphasizes the need to articulate what it means to belong to a place. Doing so strengthens the movement toward the development of a sense of place to reinvigorate the internal relation of the self to the environment. This movement is of prime importance for the motivation to partake in the deep ecology movement. Most supporters of the movement are people who are intimately acquainted with urbanization; it actually facilitates their capacity to think globally. People who are completely absorbed in the land have no need for high levels of abstraction and articulation, nor do they have the training to make their *implicit* global attitudes a basis for action.

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The *implicit* global attitude does, sometimes, show itself in action. In the 1950s, when people in Norway were asked to contribute money to help fisheries in the south of India, the non-urbanized, relatively poor people in extreme arctic Norway contributed the most. Of course, what is of most importance to these nonurban people is their homestead. It is clear that only the destruction of fisheries through overkill, and the destruction of local and provincial markets, would make them consider leaving their homestead, their *hjemsted* (home-place).

It is important for those who have experienced the place-corrosive process but somehow saved their belongingness to a place (at least in somewhat modified form) to tell others about how their sense of place survived. This may help others strengthen their motivations, and it may also strengthen and purify how those who still feel belongingness act out their chosen way of life and priorities.

This introduction may seem somewhat bombastic in relation to what I am going to say about the place Tvergastein. Not many people are in a position, or would have the inclination, to identify with a place like Tvergastein. However, the development of a place for a person to feel at home, and to belong, shows exceptionally clearly *some of the forces at work in the establishment of a place* (or perhaps I should say establishment of a place as a Place). Unfortunately, the reader will have to consider some autobiographical details. I have to say some words about how I came to look toward Tvergastein as my future place.

## GEOGRAPHY

About 200 kilometers east of Bergen are two great landmarks, the Hardangerjøkul (a dome-shaped glacier of about 80 square kilometers, a remnant of the time when Norway, like Greenland, was covered with ice) and a 40-kilometer-long broad mountain called Hallingskarvet, running from east to west. This mountain is composed of hard eruptive rocks laid bare millions of years ago through the erosion of softer mountains. From its southeastern slopes, one may survey an enormous part of southern Norway (tens of thousands of square kilometers). On these slopes we find a place called Tvergastein, 1,500 meters above sea level, with a lake named Tvergasteintjernet. Softer rocks have been protected by the overlaying, hard, 200-meter near-vertical part of Hallingskarvet.

The stupendous, majestic Hallingskarvet captured my imagination from the time I was about five years old, staying during Easter and summers in a cottage at Ustaoset, a tiny village about 8 kilometers from the mythogenic mountain where I developed my place.

In *documents*, “Tvergastein” is the name of the cottage at Tvergastein, the place. In terms of *geography*, the “place” is the name of the cottage and its immediate surroundings, that is, about 40 meters in all directions from the walls of the cottage. A wider usage, referring to a greater gestalt, treats the place as comprising the lake, Tvergasteintjernet, and a whole shelf on the slopes of Hallingskarvet as seen from the



Hallingskarvet. PHOTO: JOHAN BRUN

cottage (which is situated directly under the precipices of Hallingskarvet). Geographically, this is an area of a couple of kilometers in length, and rich in contrasts. Compared to the region of *seter* (mountain pastures), it is a world apart, reflecting arctic conditions at 1,500 meters at 60°5' north latitude and very different from the 1,000-meter level (arctic yes, but influenced by the Gulf Stream from the west). From Tvergastein, the mountains and glaciers around the great Hardangerfjord are clearly seen—and appreciated.

Even from a distance Hallingskarvet looks greenish, but this is clearly not the result of grass. The Place asked to be studied and the greenish cliffs asked to be recognized as such. When looked at closely, it revealed innumerable patches of beautiful green lichen. The Tvergastein Naturalist Library indicated that a particular species, *Geographicus*, was responsible for the green color. There were lots of other lichens, but a study of them required the use of a microscope and was rather technical compared to the study of flowers. Anyhow, the most “barren” parts of the visible surface of Hallingskarvet were alive even in the narrow sense of consisting of organisms—myriads in every square foot. The lichens are strangely connected beings: algae intimately interrelated with fungi. A still stranger connection: algae, fungi, human beings.

In the early summer mornings (at 3 or 4 a.m.) the huge shadow of Hallingskarvet keeps the landscape toward the south and west sleeping in semidarkness, but by 5 a.m. the sunshine brightens hundreds of small lakes and tiny patches of water on the plateau below Tvergastein,

and at about 7 a.m. the sun appears over the mountain and penetrates the east window of the library, hitting a wooden plate painted stark black, thus contributing to the heating up of the small room.

The early morning sun also illuminates a faraway, 30-mile-long string of metallic electric masts and thick wires—hydroelectric power destined for Oslo, 200 miles away. Each mast is an elegant structure revealing much love and ingenuity on the part of the engineers, but such a string of masts transforms the landscape. If only a few mountainous landscapes were changed in this way, we probably should not complain and feel sorrow. However, the number of landscapes without these strange beings diminishes rapidly. There are now more than two million gigantic masts around. The masts would have a less disturbing character if the power were used to increase the quality of life. As it is, the power is to a large extent wasted, which contributes to making people unaware of their fantastic material richness. What does a gallon of boiling water mean in the cities? Nothing. At Tvergastein it is a formidable luxury, enough to satisfy a host of essential services, a gift of nature of the most astonishing character.



Arne Naess preparing food in Tvergastein's main room.

PHOTO: JØRN MOEN

## FLOWERS

Arriving at Tvergastein from below, some people might call its flowers small, inconspicuous, unspectacular, even poor or insignificant. Let us say we point to green patches of *Salix herbacea* (mouse-ears). If we say “Look!” some people would answer “What? What do you see?” They see tiny unspectacular leaves like ears of mice (*musøre*). These plants (“huddling together”) rarely reach more than an inch from the rock—you see no soil. In front of the cottage, they reach half an inch. Of course, they are not “huddling” together; they are probably having a very good life together. Their flowers—hardly detectable until one is very near the plant—are well formed, their reddish seeds very conspicuous after a while.

These plants seem to delight in tiny cracks in the stony ground, sometimes much less than an inch wide. They join the lichen and “dominate” where no organic life is capable of having a good time. *Salix herbacea* seems to be “everywhere” at Tvergastein. We walk on them without the slightest regret. We make soup of them without thinking about extinction or interference with their habitat.

Whereas we human beings only gradually come to appreciate the mouse-ears, there are tiny creatures, a kind of wasp, that make red apple-like houses on the mouse-ears. Opening the walls of the “house,” we see a tiny white worm, which will probably die from exposure, but, as they are so tiny, we don’t care very much. At least we must be allowed to inspect one of the million interesting red dots on the leaves? Note our ineradicable inconsistency! When interested, I would still (even after writing about this “cruelty”) disturb such worms.

There are fraction-of-an-inch flowering plants of unsurpassed beauty, the *Gentiana nivalis*—a typically ethnocentric Nordic name: “Jesus blue-eyes.” In the most authoritative botanical reference work, that of Johannes Lid, the height of the flower is given as “7 cm,” nearly 3 inches! Most of the specimens in front of the cottage are less than 1 centimeter. The dark blue color is so intense, though, that on a windless sunny day in late

July, they look great and clamoring for attention. Unfortunately, there are few such days, and on most days in the latter half of July, the flowers are closed. The plant is then difficult to find. The rest of the year—where is it? The plant lives only one year. In order not to become extinct at Tvergastein, *Gentiana nivalis* must somehow start a new generation in July next year (or the July after that, if next July is cold). Obviously, the existence of the plant at Tvergastein is precarious.

Other flowers are typical arctic plants, like *Dryas octopetala* (the “Reindeer rose”), which has big beautiful white flowers—often bigger than the rest of the plant. They have a good time where there is no soil to be seen, keeping together so that there may be several hundred within a single square meter. Still richer with white flowers: a square meter of well-shaped downy-haired *Cerastium alpinum*. There were more than 600 *Cerastiums* (3–4 inches tall) within one square meter at a spot near the famously windy northeast corner of the cottage—a sight of overwhelming richness!

Before I leave the “tiny” flowers, a particularly delicate, beautiful, modest one must be mentioned, the *Cassiope hypnoides*. Thousands of them create a carpet of green with white spots. The plant’s shape is misleading; it bends as if not being worthy of looking at us. It has fragility but no weakness, flowering even in dry summers in spite of its shallow roots, and growing where there is no soil to be seen. It does not creep but turns its stem straight out into the air—even as high as an inch.

After dwelling with some of the small flowers, when we first glance at a kind of dandelion (*Taraxacum alpinum* and similar arctic species) it looks not only crude, but downright indecent. It need not be higher than an inch, but it produces a flower 2 inches in circumference. To be just, the “flower” is really a basket of flowers, about a hundred of them. From its seeds each dangling from a parachute, we should all understand that the “flower” is a luxurious basket.

When one arrives at Tvergastein, more than a few easily changeable attitudes have to be more or less

unconsciously modified. Everything is different from Ustaoset (8 kilometers away), and vastly different from the coast (50 kilometers to the west). Conversely, the adjustment again to the seacoast (not to mention the adjustment to the tropical rain forests of the south) is immense, if not terrifying. The differences scream at you. A rose is seen as a caricature of beauty. A tree is unnecessarily tall, grossly overdone, obstructing your alpine freedom of movement. While staying at Tvergastein, one's attitudes change, and one's personality changes, at least temporarily. After one week, there is a noticeable difference; three weeks—that is a very good stay. The last two weeks, the effects of mere contrast are largely gone. You are genuinely *there*. You are not seeing things through glasses from somewhere else. After a month, or two months, getting back down, and to town, is exciting but painful, harassing.

The distribution of snow is peculiar in windy arctic mountainous landscapes. If we are asked, "What is the snow depth at Tvergastein now?" there is no answer. There is no definite thickness, no small area with even distribution. The wind shapes the snow. After a strong west wind, there may be 2 meters of snow east

of the east wall, but if "the same wind" reaches hurricane force, all the snow is carried away. There is no snow anywhere near the cottage. There is practically no snow anywhere at Tvergastein, even in January, but not far away there are usually 5–10 meters of snow in a wind-protected valley or gully. This makes skiing in August possible!

A highly romantic consequence of the uneven distribution of snow is that certain protruding cliffs with tiny cracks are normally snowless, and a "tiny" flower, which tolerates freezing cold, uses the cracks and occasional twenty-hour sunshine to bloom in the middle of May. It is the famous *Saxifraga oppositifolia*, so well known and cherished in the Arctic. It is the very first flower in spring, and its red color stands out vividly in a world of snow and rock at Tvergastein. And so, you go skiing and, at the same time, enjoy the flowery season. *Farther down, at 1,200 meters or 1,000 meters, there are no flowers; they appear much later (one reason: the soil is deeper and frost keeps it rock-hard).*

In the precipices of Hallingskarvet, above Tvergastein, the *Saxifraga* also blooms in May because the sun's rays heat up the rocks. When the sun stands at



Flowers near Tvergastein. PHOTO: JOHAN BRUN

20° above the horizon, the plants on 70° cliffs (with a minimum of soil) enjoy rays coming in at a 90° angle; again, this is a story of the special quality of the arctic mountain climate. There are beautiful flowers combined with below-freezing temperatures, a hot sun warming cliffs, and deep crystalline new snow in protected areas. With this story about *Saxifraga oppositifolia*, a hero that may even have survived the Ice Age in Norway, we must close the chapter on flowering plants.

## ANIMALS

Many animals live at Tvergastein and belong there. The mountain mice deserve to be mentioned first. Soon after the cottage was built, some families established themselves under the cottage. Later, when the cottage was made larger, they were welcomed to the big western room. Sometimes a family makes a nest there, but mostly they just like to investigate everything in peace and at their leisure. The mice have access to other rooms only by special invitation. They are never invited to the kitchen.

When a human being enters their room, the mice hide for a couple of minutes, disturbed by the excessive noise, but then go on with their business. Sometimes there are things that the human occupiers of the place do not like them to nibble or eat. It is a joy to find out how to limit their access to these things.

When caught, the Tvergastein mice reveal an astonishing diversity of character. Some are very shy, others more easily pacified. One liked to rest on the downy slippers of the human occupier—something that made his moving around very awkward. Another was mainly interested in climbing and other sports; another was a great eater but did not show many other interests; still another was far more inquisitive and alert. Most tend to bite when handled, making neat small holes in the fingers. It is better not to “caress” them!

The mice are at home all the way to the top plateau of Hallingskarvet, that is, as high as there are shelves with

vegetation. In wintertime, their nests under the snow keep them warm, or at least above freezing temperatures.

After the mice, the reindeer should be mentioned. From time to time, as long as there is snow around Tvergastein, herds of reindeer, 100–500 individuals, appear near the cottage. One evening the leaders decided they had been traveling enough and lay down between the cottage and the precipices. Most of the others leisurely lay down behind the leaders, but some restless youngsters kept on moving and lay down in front of the leaders. These found that they had to get up and place themselves ahead of the insubordinates. This happened again, but then the leaders did not bother. One should not take the youngsters too seriously.

Among the carnivores, the *Mustela erminea* is exceedingly popular but rarely seen. If seen, it tends to jump around from rock to rock with unbelievable elegance, speed, and tenacity. Exhibitionism? The tiny *Mustela nivalis* is just as unpopular as its relative is popular: it is capable of getting through the established official mice entrances into the cottage, and can also track down the mice under the cottage. Result: indiscriminate slaughter. Now there have been no mice for about three years. The place is not as it should be without mice children carefully inspecting the world outside the cottage every morning for several seconds and then running with lightning speed back to safety.

Sightings of the strong, sinister *Gulo gulo* (wolverine) are very rare, and bears have not been seen around Hallingskarvet in a century. Anyhow, it is too high for them to live here. Neither *Gulo gulo* nor bears belong here, but several big birds do—the *Haliaeetus albicilla* (ocean eagle) being the biggest and most regal. If its nest is above, or near, climbing routes behind the cottage, the male may treat the climber to an exquisite dive, keeping its wings close to its body and aiming at the intruder’s head. It turns away just above the head at the first dive, then gets less interested and impressive, turning away much too soon. Once, the human occupier of Tvergastein felt the eagle had shouted “Abominable!” after a really bad dive. We do not approach their nests.

All in all, compared to mountains in milder climates, the richness and diversity of big animals—animals bigger than mice—is poor. This is scarcely because of human interference, I suppose. Lots of ptarmigan are shot, but it is said, apparently with the support of some evidence, that this is not a main reason for their scarcity.

## GENESIS OF A PLACE-PERSON

How did we, who belong to a place, get to belong there in spite of not being raised there, and in spite of not always having lived there? Here is one example of a genesis of place-person, reconstructed from evidence some of which has an inevitable character of being speculative.

My father, who died a year after I was born, had a small cottage above timberline (1,000 meters above sea level) at Ustaoset, a station on the railway between Oslo and Bergen. From the time I was a small boy, my mother, sister, and two brothers (ten and eleven years older than I) lived in the cottage in summertime and at Easter.

Largely rejecting my mother and sister as persons to imitate, I was happiest when my brothers played with me, sometimes in a rough way. When I was still only five or six years old, for example, they had great fun on a cold, windy day at Easter seeing whether the wind could physically push me up a small hill on skis. Their love was particularly manifest, or so I thought, when I was on the verge of crying because of their wild ways of playing. Perhaps I felt loved mainly through such play.

The steam engine of the train carrying us from below to above the timberline barely managed to do the job. The grade was steep. The vast world above the trees, and the process of getting through the timberline, made on me an impression so profound and deeply gratifying that it left an intense longing to get back to that world just as soon as I was again in my usual surroundings—a big house on a fairly large, partly forested property in the hilly suburbs of Oslo.

The dense landscape I could see from my window in Oslo was completely dominated by big dark spruce

trees whose branches sorrowfully pointed slightly downward. When it was windy, these sinister trees rocked slowly back and forth murmuring what I would much later articulate as “Damned, damned, you are damned, damned.” The feeling of being imprisoned and damned was vivid. It reflected a not entirely happy life situation that I need not discuss here. I mention the fateful trees blocking the view because the contrast with the free view above the timberline is obvious.

Whatever the influences, the experience of elevation (of moving from darkness to light, from being hemmed in to a life in a seemingly unlimited and friendly world) was so strong that I attached myself too much to this free-floating longing for the land beyond and above the forests. It promised to be a land of freedom beyond anything imaginable lower down. This is what I felt living at my parents’ cottage.

Along the distant horizon toward the north lived the massive Hallingskarvet. It looked different every day while still retaining its supreme poise. Greeting it in the morning, during August, I might see that it had suddenly turned white from autumn snow, sometimes from the summit plateau down to 1,500 meters, sometimes all the way down to its foot at 1,200 meters. This is one of the grand characteristics of great mountains: their ability to turn brilliant white in the summer.

This faraway, supreme, powerful, serene, aloof, beautiful mountain gradually gained in status, revealing itself to me as the benevolent, protecting father or even divine being. I made Hallingskarvet into the symbol of everything good that was lacking in the world and in myself. When still a boy, I was able to reach its knees; later I roamed around on its shoulders and on the vast summit plateau with its surface of big greenish rocks, rounded through erosion.

It got to be a great dream to be able to stay *on* the mountain—not compelled to come down before dark or because of rain and thunderstorms. In 1937, when I was twenty-five years old, I chose the best possible place to build a cottage: not too high and difficult to reach for transporting materials over snow, but high

enough on the flank of Hallingskarvet to feel that I was living on the mountain, and to have a superb view of a large part of Norway through the window.

A friend at Ustaoset who had a horse promised to transport enough materials for a very sturdy wooden cottage 8 × 5 meters in size. He indicated that fifteen trips would be needed, but it actually took sixty-two trips because of the difficult terrain and uneven snow. “Madness!” was the judgment of people at Ustaoset: the highest private cottage in northern Europe and in a climate unsuitable for “normal” cottage life.

## HUMAN LIFE AT TVERGASTEIN

After one has stayed there awhile, Tvergastein is experienced as teeming with life. In summer and early autumn, even the snow slopes are alive, turning reddish from the great populations of the green algae *Chlamydomonas nivalis* (the red pigment is the same as we know from salmon). After a while, we get a much more realistic view of the excellent living conditions at such arctic places. Even ecologists sometimes talk about extreme, destitute, difficult, marginal, poor, stressful, disadvantaged, harsh, or even hostile, conditions of life. This is improper, shameful language! Some species of flowers do not become as tall as lower down, but what has tallness got to do with well-being? Where the living beings use the excellent microclimates close to the soil, and behind rocks, why bother to climb high into the atmosphere? Most flowers at Tvergastein simply dislike rich soil. Some flourish where no soil is seen. The lichen and the mosses grow big and dominate even where snow covers the ground nine or ten months of the year. *Ranunculus glacialis* grow large and fat at such places, and nowhere else. The snow does not hurt things; it makes life sleep and wait. Admittedly, in winter there is not much life to be seen, but mammals, like the fox, know where to push away snow and find mice and lemmings. In short, there is nothing wrong about life in general at Tvergastein—but what about human beings?

The choice of the geographical place was based more or less on a set of requirements, but now the question was: what would the place require of me? What kind of lifestyle, activities, and ceremonies would be appropriate for this place? What would be a life worthy of Hallingskarvet and in solidarity with, and respect for, the other life-forms?

The difficulty and cost of transporting things by horse, together with obvious peculiarities of the place, clearly suggested a simple lifestyle with maximum self-reliance. Clumsy attempts on my part to produce some vegetables were complete failures. Of the native plants, only the mouse-ear was both eatable and present in sufficient quantities to serve the human occupier of the cottage. Hunting was possible farther down, but distasteful. In short, I had to rely on “importing” things, mostly by rucksack.

The question of heating the cottage was central, but the few junipers at 1,400-1,500 meters were small and rarely more than 5 inches high. Obviously, they should be protected, living precariously at the upper limits of their range. Again, the obvious solution was to “import.” So there were two major unpleasant conclusions. There was no question of living on the land by the land.

Wind power, of course, was a possibility investigated early on. Inquiries suggested that because of the terrific downslope winds from the precipices of Hallingskarvet, the windmills would have to be specially built and of great bulk. I was sorry that this idea had to be reluctantly given up. Solar power was a possibility, but here also there were complications to overcome.

In 1937 a little firewood was transported by horse, and during the war, by rucksack. Then storms more or less regularly carried away major parts of the roof, despite increasing conservation measures, including cables to hold it down. This roof loss, however, resulted in a splendid byproduct: enough wood for austere use of firewood through the end of the twentieth century!

When I attempt to trace psychological and social determiners of my professional philosophy, some key terms stand out: unruffledness, equimindedness, aus-

terity, distance, aloofness, nonviolence, diversity, egalitarianism. Most of them seemed to help in forming a lifestyle appropriate to the place.

*Temperature:* obviously very low inside the cottage. Below 9°C, however, everything gets wet, including paper, and the interesting fungi thrive *too well*. A marvelous effect of low indoor temperature for weeks or months is increased blood circulation near the surface of the skin, a feeling of physical activeness and fitness akin to that achieved after a hike. During short stays, though, it is not possible to adapt completely and so in 1960 came a revolution: acceptance of a rule not to let the indoor temperature drop below 14°. The temperature is much lower only in the morning, but on the rise.

*Rooms heated:* normally only one room 2.5 × 2.5 meters. In this room there is space enough for two, a little strenuous for a family life of three or four.

*Food:* simple, nourishing. Appetite inevitably strong.

*Keeping warm:* If one slowly gets uncomfortable, some strenuous exercise. Five minutes of very vigorous muscular movements is enough to heat the human body. A person occupies less than 1 percent of the volume of the room. Why heat more than 99 percent in order to heat that little volume?

*Indoor occupations:* research, reading, writing. Also listening to the wind and to other kinds of music. The usual housework is kept at a minimum.

Given that transporting food and other essentials is fairly complicated, the *reuse* concept is central. It is amusing to make extended and surprising use of everything brought up. Important result regarding quality of life: everything brought up is looked upon as having more value than before, an increasing feeling of quality and richness.



Tvergastein. PHOTO: ROLF STEINAR BJØRNSTAD

Water carried by hand from sources 200-300 meters away becomes more valuable. If snow is melted, it is of prime importance to remember that the calories needed to bring snow to the melting point—that is, a temperature increase from  $-1^{\circ}\text{C}$  to  $+1^{\circ}\text{C}$ —and the calories needed to bring water to the boiling point ( $92^{\circ}$  at Tvergastein) are the same. For the last twenty years, I have found water under the deep snow but above the thick ice along the shore of Lake Tvergastein. Consequently, we carry water from there instead of melting snow. I am surprised that cottage people do not know about the presence of such water under deep snow along the shores of lakes.

When a person who has *grown up* in a city *grows into* a nonurbanized personal place, how does this affect his friends and relatives? Obviously, there are potential sources of tension and personal tragedies—or the extension of influence so that one's nearest also establish a relationship with the same place. For thirty years there were no serious problems of this kind associated with living at Tvergastein. My nearest felt positively about the area and its lifestyle. Then, with increasing mobility and other factors, steady life in good company at Tvergastein became less frequent. Evidently, the more peculiar and isolated a place, the less are the chances to establish satisfactory social relationships. It is impossible to deny that the climate of Tvergastein negatively affects the main outdoor activities, hiking, skiing, climbing. The high winds, more than the low temperatures, require toughness and hardiness. With increasing age, fewer people are able or willing to adapt. The eleventh big storm is not as romantic as the first ten.

What is remarkable about Tvergastein and similar places is their capacity to furnish the basis for a life of simplicity of means and richness of ends. The latter is dependent upon their development from being a place to being a *Place*. With increasing intensity of commitment, the *Place* will satisfy an increasing variety of needs and will allow for an increasing variety of cherished goals to be reached. The little time and effort spent on the simple means frees time for dwelling in situations characterized by intrinsic values.

For most of us, though, the Personal *Place* cannot permanently satisfy every need. Perhaps the time spent there decreases over the years or is never more than a minor part of each year. This holds true for Tvergastein. Nonetheless, it is remarkable how a *Place*, even when it is uninhabited most of the year, largely determines one's attitudes, one's likes and dislikes, and one's general outlook. One is caught up in the *Place*, hopefully with good consequences, but inevitably causing some maladjustments in localities very different from the *Place*.

A Person-*Place* occasionally tyrannizes, imposes itself, gives orders. To disobey those "orders" creates a feeling of guilt or weakness of character. This is unavoidable. Phenomenologically speaking, the orders given by the *Place* and the orders given by oneself are inseparable. Only philosophies that impose a sharp subject-object dualism try to trace a border between the self and "its" geographical surroundings.

In psychology, the concept of superego is common and, using this terminology, one may say that the orders given by the *Place* are parts of the orders given by the superego. This conceptualization is not incompatible with the concept of Person-*Place*.

One example: *disposal of trash*. In the 1930s, given the geographical remoteness of Tvergastein from human habitation, together with the mild norms among people enjoying cottage life, solid trash was placed beyond a moderately large rock 150 meters from the cottage. For twenty years, the trash was the object of joyful study because of the enormous number of interesting changes of the flora within a meter of the trash. One plant, the *Cerastium alpinum*, benefited tremendously and multiplied and grew to inordinate size, at least 5 inches. Further, the delicate alpine and arctic grasses were largely suppressed by coarser, darker species. There were at least 100 clearly discernible changes within the radius of 1 meter. Outside this area, no change was to be seen.

Liquid trash was placed nearer the cottage in a crack between two smaller rocks. The effect was the same, but on a grander scale. There was a new world of

excessive growth, luxurious but clearly foreign to the general character of the landscape.

There were problems, however. Big solid things fell to pieces—often smashed when carried away by the wind—which necessitated some kind of burying ground. This was found in deep black holes between enormous boulders in a region without any life-forms except lichens.

Then came the 1960s with the environmental conflicts. Evidently, those engaged in the battle to clean up trash *everywhere* had to be very careful what they did themselves. So a disagreeable situation arose. More and more trash was carried down the mountain in rucksacks and sometimes transported all the way to Oslo.

The trash example illustrates some relations of importance:

1. “With increasing quantity, quantity changes into quality.” This Hegelian slogan is admirably illustrated. With increasing quantity of trash, it sooner or later degrades a wild place, a mountain, a landscape. Before this happens, when quantities are microscopic, the quality of a Place is not disturbed. In environmental conflicts, we must conserve our sense of proportion.
2. The defenders of wild nature against further encroachments by human beings tend to view any kind of trash (however diminutive in size or “innocent” in kind) as an evil. Of course, a piece of orange peel has a color and coarse fabric that cries out as a foreign element in the Tvergastein landscape, but there are limits beyond which it begins to be ridiculous to demand a “cleaning up of the trash.” In short, beware of fanaticism, beware of allowing admirable feelings to run amok. Personal relations with antagonists in environmental conflicts should not be threatened by fanatical demands.
3. “Absolute consistency is impossible.” Suppose we wholeheartedly accept the following.  $P_1$ : Remove trash from wild places!  $P_2$ : Tvergastein is a wild place.  $P_3$ :  $x$  is a piece of trash.  $P_4$ :  $x$  is at Tvergastein.  $C$ : Remove  $x$ !

What holds concerning the remove-the-trash norm holds as well for hundreds of other norms that are important in environmental conflicts. The formulations are short and, of course, vague and ambiguous to some extent. They have an indispensable function as slogans, but to use logic before they are made more precise is to ignore important aspects of slogans. Even after they have been reformulated, formal logic of consistency, in any strict sense, is only moderately applicable (because of the nature of a normative system, which we cannot avoid. “All things hang together”—even in thinking!). It is not here a question of the validity of formal logic of consistency, but rather of the limitations of application in concrete situations.

## CLIMBING

Classical European music consists of pieces of varying degrees of difficulty to perform. In concerts performers are supposed to follow the notes of the compositions, but sometimes they improvise. Improvisation by individual performers and small bands is also very popular today. There are professionals and there are amateurs, and the latter form the great majority of music lovers who do more than just listen to music. In dancing there are highly structured definite kinds of sequences of steps, but free improvisations are more popular than ever.

In climbing there are also definite routes of varying degrees of difficulty on the one hand, and the freedom to improvise on the other. Children climb stairs, chairs, and tables and advance to trees and boulders if any are available. No special equipment is used. Climbing on Hallingskarvet is more closely related to informal dancing, musical performances, or childish play than to climbing by established routes described in climbing guides. Let me be more specific about the Tvergastein variety, now a fifty-year tradition of climbing.

Hallingskarvet has more than 30 kilometers of precipices, most of them between 50 and 200 meters high and all of them very steep. The rock itself is hard (erup-

tive), but there are often loose stones and moss. This, in addition to its isolation from roads, makes it rarely visited by climbers, although the climbing, a 15-minute walk from Tvergastein cottage, is excellent. Many routes are described, *but never published*. Some are among the most difficult done in Norway at the time they were first climbed. Improvisation, however, is the rule.

Full security when climbing is axiomatic. There is no question of taking chances, not even the temptation to do so, but full security from serious injury is not the same as absolute security (the absence of even the *possibility* of serious injury). The same applies to skiing: neither Tvergastein climbing nor Tvergastein skiing is “dangerous.”

In Norway, climbing but not skiing is supposed to be dangerous. This is because skiing, especially the cross-country variety, is part of the general culture and the vast majority of skiers are not tempted to risk life or limbs (although sometimes limbs!). There is always a *possibility* of getting seriously hurt, but the joy of skiing is not seen as looking for extremes of physical challenge. Climbing, on the other hand, is done by a small minority and *looks* dangerous to most people. Whereas concern for safety when learning to ski is a subordinate theme, it is rather central in climbing. At Tvergastein, though, the result is the same as with skiing: full security.

It should be unnecessary to discuss the metaphysical background of mountain climbing.<sup>[1]</sup> It plays a role at Tvergastein, but so does the simple joy of rhythm and movement, of exciting challenges, and of the appreciation of lichens, rocks and stones, flowers, animals, the sky.

The high precipice, 15 minutes from the cottage, has fairly broad shelves in its lower part. The exuberance of the vegetation is astonishing. Flowers are much taller than at the cottage and even farther down. Some plants grow on the shelves that one ordinarily sees only much farther down (below 1,000 meters). The reason is largely unknown to the public but is very clear: the climate in the precipices of Hallingskarvet is generally much milder than below because there is less wind.

The steepness also favorably affects this growth. If the shelf is angled at 30°, the rays of the sun strike the vegetation at about a 90° angle at 60° north latitude.

The nearness of the climbs, the informality, the fabulous view, the beautiful vegetation among the sheer rock formations, the milder climate—all make it natural to go climbing rather often. In summertime, one *may* go climbing several times during the day, being away each time for a couple of hours or less. (Daylight is from 3 a.m. to 10 p.m.)

In short, climbing is normally integrated into life at Tvergastein, but it is a sort of climbing that differs from the risk- and competition-colored image of climbing propagated by the mass media.

## TVERGASTEIN AMATEUR RESEARCH

It is difficult to separate unimportant biographical details from an adequate biographical description. The main thing is that a favored place relentlessly and remorselessly determines details of one’s life. It may enrich life, but it may also lead to a manifold of habits and ways of thinking that are peculiar and a source of irritation to anybody not adapted to that special life. I find that attachment to places should not be uncritically praised.

In contrast to some of my ecosophically inclined friends, I do not regard science, and above all, research, as incompatible with profound positive feelings toward nature. Tvergastein as “object” of botanical, zoological, mineralogical, meteorological, and other scientific research did not at all detract from the immediate experience of togetherness, of identification and appreciation. On the contrary. In the great naturalist tradition, exemplified by systematics (taxonomy) of butterflies, the motivation is not mainly cognitive, but conative. Feelings, just as much as abstract thinking, direct the research.

In Einstein’s scientific thinking, very different from that of a typical naturalist, the external world as

1. See e.g., articles in Tobias & Drasdo, 1979; LaChapelle, 1978.

a field of lifelong research was essentially nonpersonal. Its very impersonal character in part determined his strong motivation as a scientist:

It is quite clear to me that the religious paradise of youth, which was thus lost, was a first attempt to free myself from the chains of the “merely-personal,” from an existence which is dominated by wishes, hopes and primitive feelings.

Out yonder there was this huge world, which exists independently of us human beings and which stands before us like a great, eternal riddle, at least partially accessible to our inspection and thinking. The contemplation of this world beckoned like a liberation, and I soon noticed that many a man whom I had learned to esteem and to admire had found inner freedom and security in devoted occupation with it.<sup>[2]</sup>

This way of liberation leads to abstract thinking and imagination of a special kind: “[A]ll our thinking is of this nature of a free play with concepts; the justification for this play lies in the measure of survey over the experience of the senses which we are able to achieve with its aid.”<sup>[3]</sup>

The way of liberation through “natural history” is different: very little abstract thinking, very much seeing, listening, hearing, touching. The secondary and especially the tertiary qualities are in focus, the world of concrete contents, not the primary as in physics.<sup>[4]</sup> There are worlds of minerals, rocks, rivers and tiny rivulets, plants, hardly visible or big (larger than 1 centimeter) animals, plant or animal societies, tiny or great ecosystems—all more or less easily available for enjoyment, study, and contemplation. The meaningfulness inherent in even the tiniest living beings makes the amateur natu-

ralist quiver with emotion. There is communication: the “things” express, talk, proclaim—without words. Within a few meters of the gnarled wooden walls of Tvergastein cottage are rich and diverse changing worlds big enough to be entirely unsurveyable.

When I was only fifteen years old, I met among the highest mountains of Norway, Jotunheimen, the paleontologist Johan Kiær. He was eager to talk about his exciting search for fossils in Svalbard (Spitsbergen). Clearly, he was engaged emotionally, describing how groups of animals trapped in ash from volcanic eruptions sought to be together in death. He was *yearning* for closer understanding of evolution. Two years later, in Norway’s biggest library, I found thick volumes with beautiful drawings of one-celled organisms. Evidently scientists were the only persons who really loved nature and life, with the smallest forms being taken care of with unbelievable accuracy! Poets, in contrast, appre-



Arne's laboratory in Tvergastein. PHOTO: JOHAN BRUN

2. Schilpp, P.A. (Ed.). (1949). *Albert Einstein: Philosopher-Scientist*. Evanston, IL: Library of Living Philosophers, p. 5.

3. Ibid.

4. For a *theory* of the world as concrete contents, see Naess, 1985 (in *SWAN X*).

ciated only a small fraction of living beings. It took decades to rid myself of this illusion about scientists, and to understand that what I had admired was found among only a small minority of them.

At Tvergastein I could wholeheartedly engage in amateurish research. Collections of stones could be seen at the Tvergastein petrographical institute; a few quartz crystals and other items formed its mineralogical institute. Thanks to low indoor temperatures and poor ventilation, the institute of fungiology (mycology) had several branches. Temperatures in the kitchen

in winter were below freezing, which resulted in interesting glacial formations down the walls. Glaciological institute! Hundreds of questions were formed; few were answered. This intensified wonder. This state of mind plus appreciation of the richness and diversity of phenomena within reach seems to be an essential trait of free research—however amateurish.

To develop a taste and appreciation for what there is enough of—this has always been a pillar of ecosophical education. With growing insight into the “limits of growth,” that is, growth of material production and interference, this educational motto becomes ever more important. With this introductory note I shall describe more closely a new branch of amateur research—Tvergastein chemistry.

With the kerosene lamp on my work table it was practicable to heat chemical solutions above the lamp and in clear view. The smooth waves of colors in never-repeated variety cannot but make a profound impression on anyone willing to spend a little time in this occupation. In short, the most elementary chemical processes reveal a fascinating world. Tvergastein chemistry requires very few raw materials, very little heating. Boiling of more than a few seconds is prohibited because the room has little ventilation. Gases must be under strict control. So “the game” has rules that conform to strict ecosophical norms. There is one, and only one, main Tvergastein method of making exciting new chemical substances: mixing two substances that are soluble in water, with the more or less well founded hope that a certain new nonsoluble substance will appear. It is, however, somewhat difficult to obtain fairly pure substances straight



Dreamlike drawing of Tvergastein and Hallingskarvet by Sigmund Kvaløy Setreng, 1977

from nature. The valuable self-reliance of the Tvergastein institute of chemistry was severely undercut after a talk with the president of Oslo University, who happens to be a chemist. Hearing my concern about self-made, very impure chemicals at Tvergastein, he naturally was delighted to help create the new branch of (amateur) chemistry by offering me free access to the resources of pure chemicals at his own institute. A helping hand from one institute to another!

Compromise and inconsistency! Consider, for example, the 25 grams of bismuth trichloride I acquired—enough for twenty-five experiments at the level of Tvergastein ecological resource utilization, but presumably made by one of the worst gigantic chemical-factory polluters along the Rhine. I supported the poisoning of this magnificent river and added a little to the North Sea! Worse still, the stuff had from an amateur point of view a ridiculously high level of purity. The impurity from arsenic, for example, was *guaranteed* to be less than one in

a million. This implies that a great deal of energy from coal or gas had been used in a series of wasteful operations aimed at cleaning the substance of any kind of impurities whatsoever. Anyhow, such chemicals are far removed from nature: from cliffs to stones, from stones to minerals, from minerals to abstracts some of which are not found in free nature at all. There is nothing “wrong” about such new substances, but we may note the distance of their study from that of a consistent naturalist.

Whatever the inconsistencies, the Tvergastein chemistry is an example of something of central importance in rich industrial societies: to assist youth in the warm *appreciation* and understanding of basic natural processes such as beautiful solutions, the miraculous transformation of one substance into others, the re-creation of thousands of beautiful colors and dyes. Those who are offered the opportunity for such experiences are changed, their life quality enhanced. They can live with less dependence on what there is not enough of for all.



Hallingskarvet. PHOTO: JOHAN BRUN

Unfortunately, the large-scale realization of ecoeducation requires a new politics, a green politics, a politics that does not systematically favor people who concentrate mainly on getting more of what there is not enough of.

Taking naturalist science and research, professional or amateur, as the paradigm of science and research, ecosophies may without inconsistency hail these human undertakings. It is counterproductive, I think, to make *science* and *research* into negative terms, dyslogisms. There are from the amateur naturalist-researcher's point of view immense opportunities at Tvergastein, as at other places. Research fits in with the conception of a Personal Place.

What can we learn from each other? Can tragic developments be avoided? The classic case of belonging to a place is that of being born and raised somewhere—somewhere just in the geographical sense—and then the place develops into the Place. When the place is physically destroyed or unfit for living because of other factors, can a different place develop into the Place? Certainly it can, and that is what happened for me with the Tvergastein area. The same will happen to many people in the future—they experience a longing and a satisfaction that elicits such utterances as “Here I belong!” It may even happen that there are two places to which we

are drawn, and a conscious choice is possible. In such cases, certainly one thing can be inferred on the basis of my experience at Tvergastein: choose what has a reasonable chance of also being satisfactory to a life companion and to close friends. Don't choose the place that is so particular that that chance is small. Furthermore, don't choose the place where there is little chance that you yourself will be capable of mastering it when you reach an advanced age. Then it is not a place where you can live and die. Tvergastein is extreme in many ways and unfit for many purposes. The development of a hut and life there could only be more or less tragic, but even so it is difficult for those of us who have a place where we feel we belong not to be glad and grateful to have one. Why so? That is difficult to say.

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