Ready to change

1. building
2. growing
3. adapting
4. changing
5. exchanging
6. collaborating

onestar press polonca lovsin ready to change

Ready to change

Polonca Lovsin

Pickled Plums

1.5 kg plums
1.5 l pickling vinegar
2 sprigs of tarragon
10 peppercorns
a few cloves

Wash and dry the plums. Prick each plum a few times with a toothpick. Place the plums in wide-neck jars, cover in vinegar, and add the spices. There is no need to boil the plums and we use cold vinegar. They will be ready to eat in a month.

Serve with baked or boiled meats.

Pickled Squash

some round white squash
1 l pickling vinegar
1 l water
12 dag salt
8 dag sugar
peppercorn
a few bay leaves

Wash the squash and cut into small cubes (1-2 cm.). In a large pot, bring the vinegar and water to a boil along with all the other ingredients. Blanch the squash in the vinegar water a little at a time. Spoon the squash directly from the vinegar into warm jars. Finally, fill all the jars with the hot vinegar water. Let cool slowly.

Serve as a savory side. This dish has a flavor very similar to pickled mushrooms

Plums in Honey

plums
flower honey

Wash and dry some nice plums and prick with a toothpick several times. Put them in jars and drench them in flower honey. Wait a little while, as much as you need to, and add more honey. Then close the jars.

Wait a year before using this so the plums can absorb all the honey. It makes a delicious treat.

Roasted Peppers in Oil

ingredients for one jar (0.7 l)
4 red peppers
2.5 dl sunflower or olive oil
a few garlic cloves
lemon juice
salt

Wash and dry the peppers. Place them in an ungreased baking dish and put them in a preheated oven. When the skin on a few of the pieces starts to blacken and bubbles form, carefully turn the peppers over.

When the peppers are roasted, wait a little for them to cool and then skin them. While they are still warm put them in a marinade of lemon juice, salt, and minced garlic. Mix it all together, cover the dish, place in the refrigerator for 24 hours. Take them out the next day and let them reach room temperature, then strain and put in jars. Add a few whole garlic cloves to each jar. Mix the remainder of the marinade in the oil and heat the mixture to 80oC. Carefully pour the hot oil mixture into the jars, making sure that the peppers are completely covered. Seal the jars while still warm.

Serve as an appetizer with bread.

Sage Cough Syrup

120 sage leaves
40 dag sugar
1 l schnapps

Put all the ingredients in a pot and stir every day for 20 days so that the sugar will dissolve. Then strain, press out the leaves, and pour into a bottle.

Drink this when you have a cough. Have a little glass before bedtime.

Sataras

young string beans
onions
bell peppers
tomatoes
salt
oil

Take equal amounts of the beans, onions, peppers, and tomatoes. Wash and chop all the ingredients: the string beans at 1/2 cm., the onions in small pieces, the peppers in small cubes, and the peeled tomatoes in medium pieces. First roast the onion in hot oil, then add the peppers, the beans, and, finally, the tomatoes. Salt. Let roast until the water evaporates. Put it warm into the jars and close them right away.

You can serve this as a side dish, either cold or heated up. You can also use it as a seasoning in sauces, soups, and stews.

String Beans in Brine

string beans
water
salt

Wash and string the beans. Boil them in salted water, then place them in warm jars, cover with the hot brine, and close immediately.

To make it spicier you can add some black peppercorns or one or two garlic cloves.

Use during winter just as you would fresh string beans.

Tomato Juice

ripe tomatoes

Wash the tomatoes and chop them into big pieces. Put the chopped tomato into a large pot (without water!), cover with a lid and bring to a boil on a low flame. Let simmer for half an hour. Cool the jam and press through a strainer or juicer. Once more, bring the tomato juice to a boil and pour it hot into jars or bottles, which you should close tightly right away.

If you have a freezer, you can freeze the juice in ice-cube bags. Use the individual cubes as a relish for various dishes.

adapting

The Invisible Purification System

Text and Photographs by: Tjasa Bulc

Constructed Wetlands

In terms of both area and volume, the greater part of our planet is occupied by water, with the oceans accounting for 71% of the earth's surface. Ours is a very wet planet, indeed, since only 3.5% of its water is found on the continental landmasses. For this reason, the purity of our water, which is now and will remain a source of life and one of its primary substances, is all the more important.
Human beings help create the environment's equilibrium. Humans can delight in the environment and strive to preserve it, but they can also contribute to its destruction, even while taking delight in it. Translated in terms of environmental water, this means that water quality is the result of all the complex relationships in the environment, and it is water quality that determines whether and how water can be used.
Polluted water can be purified in a number of ways, using mechanical, physiochemical, and biological processes either separately or in combination.
Biological methods of wastewater treatment include several new ones, which attempt to imitate natural processes as much as possible. These methods work by means of wetlands.

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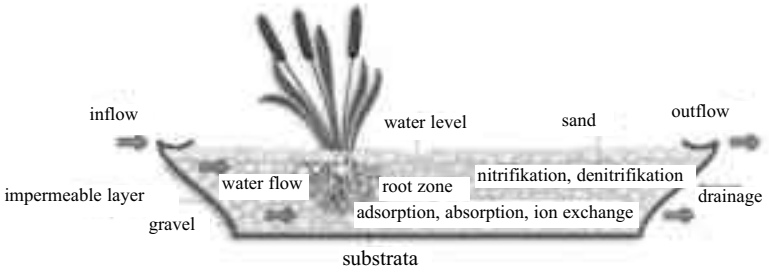
Ecologists generally agree that wetlands are one of the most important ecosystems on earth. Because of their ability to function as "the earth's kidneys," wetlands not only regulate the flow of surface water, they also improve the biological and chemical composition of water by retaining sediments and removing nutrients.

The origins of water purification using wetlands reach back to ancient Greece, although the filtering capacities of plants was recognized also by the Aztecs and ancient Egyptians, who would draw water only from among a river's water plants. Similar methods were recorded in 1557 in Prussia, where it was used for more than three hundred years. In 1857, the English government proclaimed this method to be an effective way of purifying city sewage and protecting the aquatic environment. In the eighteenth century such a method was used in Paris, Berlin, and Moscow, and ever since 1870, it has also been used in the United States.
Somewhere in the early 1970s people started deliberately developing wastewater treatment systems that used wetland plants to mimic nature's self-cleansing capabilities. This method proved to have many advantages over more familiar and established water purification methods. This kind of water purification system is usually called "constructed wetlands."

Despite the word "constructed," these are natural systems. Occupying areas of various sizes, they use a number of different kinds of vegetation, well adapted to the wettest environments, which are planted in an appropriate substratum through which the wastewater flows. The cleaning process takes place in microecosystems represented by the plants, together with their root systems and surrounding microorganisms. The constructed wetland improves water quality by means of a whole range of biological processes, which appear naturally in marshland environments. The microorganisms that live on water plants and in the substratum transform organic and other nutritive substances in wastewater into forms that help create favorable conditions for a diverse wetland ecosystem.



Plants play an active role in the absorption of nitrogen, phosphorus, and other compounds (such as, for example, heavy metals) present in wastewater. It is then possible to cut down the water plants and remove them from the system, along with the substances they have absorbed, and process them in whatever way seems most suitable (as compost, briquettes, etc.).
It is very easy to build a constructed wetland, and just as easy to use and maintain one, all without incurring any exorbitant costs. The water uses gravity to flow through the system, so, as a rule, no special energy source or mechanical device is required. Pretreatment mostly takes place in septic tanks or sedimentation basins. After pretreatment, in which all larger particles are deposited as sediment, the water flows into a system of watertight plant beds, where it runs horizontally or vertically through the substratum in the plant beds. Various moisture-loving plants, most often reeds (Phragmites australis) and cattails (Typha latifolia), are planted in the substratum, which is usually a mix of various kinds of sand. We can also put a pond at the end of the system, which, as the final link in the chain, will not only provide additional purification, but will also allow us to use the water for various purposes (such as watering gardens or playing fields, extinguishing fires, or reviving the karstic pool as a part of the landscape).

As with other natural biological purification systems, constructed wetlands have a number of additional benefits: they recycle wastewater and can help establish or preserve critical marshland habitats, thus contributing to ecological diversity.

All the mechanical, physiochemical, and biological processes that occur in constructed wetlands, whether separately or in combination, take place under supervised conditions (in terms of space, time, and effect). Constructed wetlands also work in winter. This is because the primary agents in the purification

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process are the microorganisms, not the plants themselves. In winter, the system is simply inhabited by other kinds of microorganisms; the decrease in efficiency due to the loss of the plants' contribution is a mere 15%-20%. We can, however, compensate for this winter decrease in efficiency by expanding the constructed wetland by an equivalent 15%-20%.

The system is designed to fit nicely into any given landscape and, indeed, will remain completely unseen among the surrounding vegetation.
Although constructed wetlands are purification systems for household waste water, there do not give off any foul odors because the water always stays beneath the substratum, which also helps to keep away insects. The occasional visitor will not be able to detect, either by sight or smell, that he or she is standing in the vicinity of a wastewater treatment system. The constructed wetland can even be transformed into a park. Such a purification system does not require a great deal of work; the only thing required is to check to see if the pipes are functioning properly, and that is easy to do.

3.

4.

This technology can be used in a great variety of geographical areas, including arid, tropical, and mountain climates, and can clean nutrient-rich wastewater even under extreme weather conditions. The constructed wetland can be adapted to a wide range of sizes, shapes, and locations. For greater treatment burdens, the system can be expanded like Lego blocks. The system's main limitation is the amount of area it requires, since we need approximately two to three square meters of surface per person. A one-family household would require about 15 square meters.
Constructed wetlands represent an economic, environment-friendly, effective, and visually attractive solution to the problem of protecting water-based ecosystems. The wider acceptance and use of this approach is a sign that our understanding of nature as a whole has reached a new plateau; at the same time, this approach to wastewater treatment offers potential for sustainable development.

5.

Building a Constructed Wetland for a One-Family Household

Creating a Constructed Wetland

When creating a constructed wetland to treat wastewater from a one-family household, we should, as a guideline, consider a hydraulic load and pollution load that can be expressed as 4 PE (people-equivalent), that is, for four persons. In terms of the European standard, which holds that an individual uses an average of 200 liters of water a day, we can estimate total daily water use as 800 cubic meters per day. For such an estimated burden, the required constructed wetland area would be 15 square meters, or a gross volume of 9 cubic meters. Before wastewater enters the constructed wetland, it should flow into a sedimentation tank with a volume of 0.5 cubic meters. The water should remain in the constructed wetland for three days. In a constructed wetland of this size, the wastewater would be purified to the extent required by the environmental regulations of the Republic of Slovenia (Official Gazette of the Republic of Slovenia 35/96). The system would attain its greatest effectiveness in one to two years, depending on when the vegetation was planted.

The following numbers can serve as a basis for designing a constructed wetland:

o Suspended solids: 600 mg/l
o COD (chemical oxygen demand): 350-400 mg/l
o BOD5 (biochemical oxygen demand): 200-250 mg/l
o NH3-N (ammonia nitrogen): 20-30 mg/l
o Total nitrogen: 40-60 mg/l
o NO2-N (nitrite): 0.05-0.2 mg/l
o NO3-N (nitrate): 0.2-0 mg/l
o Fats: 15-30 mg/l
o Microbiological parameters (the total number of fecal coliforms): 109-1013

How to Build It

After staking out, excavating, and preparing the area for the constructed wetland, you should line both of its plant beds with impermeable material in order to insulate them. Place the sedimentation tank in front of the first plant bed, and

place inspection shafts with ball valves behind the tank, between the two plant beds, and at the end of the system. The valves will make it possible to regulate the water flow through the system and to ensure the three-day retaining period that is needed for complete purification of the water. At the bottom of both plant beds place an inflow and outflow drainage system to allow the water to move through the system as evenly as possible. Next, fill the plant beds with substratum, which should be a mixture of regular sand, very fine river sand, and gravel. The system outflow should be directed through a shaft into a drainage pipe or pond. The pond should be thoroughly insulated, with graduated sides. Usually, the plant beds should be planted with seedlings for the common reed (Phragmites australis), but you can also plant cattails (Typha latifolia), sedge (Carex gracilis), water irises (Iris pseudocorus), and other moisture-loving plants with a high biomass accretion and with an enlarged ability to release oxygen into substrata through their root systems. The pond can be planted with various floating or stationary marshland or water plants.

The Purification Process

The wastewater flows into the tank, where most of the larger particles are retained through sedimentation. The water, now 25%-35% purified, flows into the constructed wetland's first filtration plant bed, where the rest of the hard particles are retained. It will probably be necessary, because of clogging, to change the substratum in the first basin of the constructed wetland every 15 to 20 years, depending on how well the tank is maintained and emptied. Along with filtration, aerobic and anaerobic microorganisms and plants also contribute to the purification process in the first plant bed. We can expect that an additional 30%-40% purification takes place here. The water then flows from the filtration plant bed into the second purification plant bed. Here the main part of the purification process takes place, primarily by means of microbiological decomposition, by means of which the water is purified to regulatory standards. The purified wastewater then flows over beautifully shaped cascades, which further help to aerate the water, and enters the nearest water channel or, alternatively, collects in a pond for multipurpose water use (watering gardens, extinguishing fires, raising water-based cultures, increasing biodiversity, beautifying the area around the house).

Maintaining Your Constructed Wetland

The work involved in maintaining a constructed wetland includes removing sludge from the sedimentation tank, cleaning the inflow and drainage pipes, checking the valves, adding sand, planting more reeds and cattails, and each year cutting down the marsh plants, which are then used to insulate the plant beds during the winter period, while in spring they are removed to ensure easier growth for new seedlings.

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The Intelligent Biouvac

text and photographs by: Miha Kajzelj

Priout Hut on the Elbrus (5300m), Caucasus - a capsule for the most extreme weather conditions.

Alpine Architecture

1. Architecture in Nature's Most Extreme Conditions

In general terms, the phrase "alpine architecture" refers to any architecture built in the high mountains. To understand this properly, we must distinguish it from lowland architecture, which is not affected by the kinds of climatic and topographical features one finds at high altitudes. In the mountains, climate and topography combine to exert a powerful influence on construction methods, which are, in many ways, quite different from lowland building practices. Cold and freezing weather, frequent snowfall, avalanches and landslides, wind and snowdrifts, strong solar radiation and huge temperature differences are only some of the important factors that require architects to follow special principles of design when building in the mountains. In simplified terms, the course of designing a structure, from conception to realization, takes place in the following steps:
- a site is chosen on the basis of an analysis of the climatic and topographical factors in the outlying area of the intended location; this would exclude sites susceptible to avalanches or landslides, sites that are too steep or too much in shadow, or ones that are too much exposed to wind; in the steep and jagged mountain terrain, the possibilities for erecting a building are often limited only to occasional anticlinal locations on a ridge, shoulder or summit, since these are the only places safe from landslides or avalanches-in such places, however, it is difficult to avoid strong wind currents;
- the positioning of the structure depends on the steepness of the terrain, exposure to the sun, the dominant wind direction, and its functionality;
- a programmatic plan for the structure is weighed toward the most efficient solutions in terms of construction and energy, with a particular emphasis on ensuring the greatest adaptability of the structure to changes both outside and inside; the ultimate goal is to achieve a balance between the building and the environment;
- an aerodynamic design in the shape of building must account for external climatic influences.

Devising a successful design is a two-fold process. On the one hand, it means designing the space from the inside out, beginning with the most efficient and multi-purpose use of the interior; on the other hand, it also means designing from the outside in, so that the final shape of the structure is as unified and compact as possible. The quality of alpine architecture depends on how adaptable it is to the environment, and this is determined by the principles we use to address the problematic effects of the environment while using the its positive effects to the advantage of the architecturfurther

2. The Cultural Challenge of Building in the Mountains

Creating architecture within the range of the possible, and deciding whether or not to build in the first place, presents a cultural challenge that requires us, on the one hand, to explore the origins of the culture of alpine man and, on the other, to look at this small segment of architectural practice in terms of modern civilization and contemporary architectural trends. To build something in the mountains means to make a human action within pristine natural surroundings, and so requires a good understanding of this explicitly primordial environment, where the elements reveal themselves in all their destructive force. Architectural creation oscillates between restrained submission to the environment and capitalization on the few advantages nature offers on the chosen site.
What follows from this is a clearly enunciated architecture, purged of all that is unnecessary, anything that could conceal the architecture's inner essence. Since the plan must focus on a single basic goal-namely, how a simple and well-considered architecture, using available technological resources, can produce something that will endure-all possible solutions are immediately put to the test, with bad decisions and imprudent ideas doomed in advance to failure. Within the polyphony of today's architectural trends, good mountain architecture can serve as a reality-check; in this way, too, it proves itself to be extremely timely.

3. The Technological Challenge of Building in the Mountains: High-Tech or Low-Tech?

Because of the extreme climatic conditions and the many technical and practical problems involved, building in the mountains also represents a special technological challenge. Some factors that make this one of the most technically demanding kinds of architecture are the asymmetrical burdens of wind and snow, the expansion and contraction of materials due to unusual vacillations in temperature, problematic foundations, difficult design issues due to the need for aerodynamic construction, great losses in heat, material degradation because of the aggressive climate, the problem of ventilation, the difficulty of delivering building materials to the site, and the short construction season. These issues require a high expertise in design and execution, which is the only guarantee for an enduring work of architecture. It makes a lot of sense, then, to take advantage of advanced technology, which can provide easier and more effective solutions to these problems and so justify their greater costs. In general, whether or not advanced technology is required will depend on where the building is placed in the mountains, at which altitude and how accessible it is, how difficult it is to get building material to it, how demanding its placement on the terrain is, and how much time is available in the summer for construction. The more problematic construction is in regard to these issues, the more it makes sense to take advantage of the latest technology. Above the snow line and on glaciers, where materials can be delivered only by helicopter, concrete can be used only for the support bases; the building itself should be assembled on site using lightweight prefabricated parts that have already been produced in the lowlands.

Margherita Shelter on the Peak of the Monte Rosa(4559 m) - the highest altitude mountain hut in Europe (built in 1893)

C.Mollino, Lago Negro Hut (1946), Sauze d'Oulx, Italiy - a masterpice of this architect: a house with two faces; a humble traditional wooden hut from the north opens into a darinf, modern facade in the south.

J. Eschnemore, Bertol Hut (3300m), Arola, Walis, Switzerland - due to the lack of space the house is developed along its vertical axis, its prism-like form creates a harmonious and artistically perfect whole with the environment (built in 1976).

4. The Bivouac: A Self-Sufficient Service Unit and a New Universal Architectural Type in the Mountains

With the development of mountain climbing in the 1930s, people started placing untended shelters at the highest or hardest-to-reach locations in the Alps. These bivouacs serve as support stations for climbing logistically difficult mountains (such as the Matterhorn) or as starting points for mountain ascents. The bivouacs are unrestricted service units with no ties to the lowlands and offer the people who use them only shelter from the elements and a place to spend the night. A person can spend only a short time in a bivouac and must use his or her own provisions. Unlike mountain huts, these are nonprofit, basic-survival units which do not need much maintenance. Placing virtually no burden on the environment, these are, from an ecological point of view, examples of harmless architecture. Shaped, in technical terms, like a capsule-a universal form unrelated to any particular culture or region-they function, especially in summer, as a kind of foreign body, looking more like a weather balloon than a lowland house.

From the very beginning, the bivouac was free of any formal or ideological relationship to alpine folk architecture and presented itself as a new type of alpine architecture. Because it involved building under extreme conditions and on exposed sites, bivouac design required constant testing and a continual search for newer and better solutions, which were developed by progressive architects, aided by modern technology, specifically for the demands of building under such exceptional conditions. The bivouac blueprint unites an aerodynamic exterior design able to withstand wind and snow, an economical use of the interior for optimal temporal and spatial flexibility, and a structural efficiency using a skeletal frame and a covering. All this led architects to employ new materials and technologies in creating both the frame and the external shell; consequently, bivouac design presents a new field for experimentation in architectural creativity.

5. Slovene Bivouacs

Today in the mountains of Slovenia there are 12 bivouacs, which is a very small number when compared to the 150 mountain posts we have altogether. This number is the result of the too-prolific construction of mountain huts in the past, which in many cases was not economically justified. One consequence of this is a flood of poor alpine architecture that for most of the year goes unused and so quickly falls into disrepair; maintenance, then, becomes an unsolvable problem. Unlike mountain huts, which are losing their original purpose because of dwindling use, combined with the need to repair and maintain them, bivouacs offer a kind of self-sufficient architecture that requires minimal care and almost no maintenance.

Bivouac B1

B1 stands in Velika Dnina beneath Mt. Skrlatica, at an altitude of 2,180 meters, and is one of the three best Slovene bivouacs. It was built before World War II, in 1934, when climbers from Jesenice began to erect a series of bivouacs, B1 through B4. This marked the beginning of the construction of a new kind of mountaineering shelter in the most remote areas. The alphanumeric names were an indication of these bivouacs' universality and, at the same time, signified the order in which this type of mountain post was erected.

Because of the great susceptibility to avalanches in the Velika Dnina region, B1 was set right into a neighboring mountain wall, where it was quite safe from avalanches. Because of its placement on an inclined shelf, it was elevated on steel legs and fixed to the wall with steel cables. The small interior, which has room for only four people, was modeled on French and Italian bivouacs in the shape of an elongated half-cylinder, which because of the steep terrain and lack of space on the shelf was turned so it would be parallel to the wall and accessible from the shelf.
This shape is one of the best examples of a synthesis between interior space, external aerodynamics, and an effective structural design made of a curved wooden frame paneled and covered in sheet metal. Since the small interior space warms quickly, the bivouac does not have any special thermal insulation. This proves the theory that when we optimize the necessary interior volume it is possible even to use a thinner external shell despite cold outdoor temperatures.

The Bivouac Beneath Mt. Skuta

Together with B1 and B2 in the Julian Alps, the bivouac erected in 1946 on the edge of the high mountain plateau of Mali Podi (2,070 meters) in the and

D. Korenini, Biouvac 1 - B4, Velika Dnina under the Skrlatica mountain (2180 m), the first biuvac, from the series of the Jesenice biouvacs B1 - B4 with the moste extreme placement.

Kamnik Alps brought to a close the brief heyday of bivouac construction; even today these are among the best examples we have of domestic alpine architecture. The architect Vlasto Kopac designed this bivouac with an angular aerodynamic body and a rectangular floor plan, which is sufficiently aerodynamic for the climatic conditions of the Slovene mountains and, at the same time, provides a structurally simple solution for the economic use of the interior.

The essential contribution this bivouac made toward the development of the genre was in the way it organizes individual functions, despite its small size, while at the same time allowing for an extremely flexible use of the interior. Unlike other bivouacs, this one has a small anteroom, which in the mountains provides a crucial intermediate stage between the outside environment and the interior living area. The anteroom also serves as a wind trap and as a place to change equipment. The living area can sleep up to 11 people; the architect accomplished this by having the upper bunks fold beneath the ceiling during the day; the eating table, too, can be used as a bed at night. In this way, over a 24-hour period, the same room can serve as a dining room, a bedroom, or simply a living area.

The Portable Mountain Post

From 1972 to 1975, the architect Tija Badjura, working with the company Avtomontaza, developed a special kind of bivouac in the form of a portable mountain post.
The basic idea of her project was to find a flexible solution to the problem of maximum and minimum capacities in the seasonal use of mountain posts at various times of the year. The portable mountain post was intended to be a lightweight bivouac, a single basic living unit that could be flown to the site by helicopter. The individual units could be joined together to make larger structures, which could then substitute for a mountain hut or could provide a hut with supplemental accommodations. Because the units modular, the bivouac was designed centrally in an octagonal shape with only one foundation point. It was a lightweight metal structure outfitted with polyester-polyurethane panels that, in accordance with the signaling system, were alternately orange and gray.
A bivouac for six to eight people would have its own source of solar or wind energy as well as a water tank.

Unfortunately, this visionary, almost utopian, project was never realized. The bivouac prototype, which actually was produced, proved to be too cumbersome for the kind of helicopter transport that existed at the time.

Thus, it was never taken to its intended site on Bogatin Saddle on Komna.

6. Bivouac 5: A Mountain Survival System

The Broader Perspective

The concept for the Bivouac 5 (B5) project derives from Pelja and seeks to revive high-quality mountain post construction in Slovenia. The intention is to restore the former importance of bivouacs, which has virtually been forgotten, primarily as a result of today's proliferation of mountain huts. From the evolutionary perspective of mountaineering, new mountain regions, which up to now have been quite remote, will in the future be equipped with bivouacs, while mountain huts, which operate on the edge of economic sustainability, are fast on the way to becoming derelict shelters.
In this sense, B5 has been conceived as a support base for visiting the most demanding and hardest-to-reach regions, which has been made even harder by the lack of mountain posts since only a very few people manage to tackle these areas in a day's trek. There are quite a number of such regions in Slovenia, and it is in these locations that it would make the most sense to set up bivouacs for mountain climbers. Such bivouacs place little burden on the environment, which is especially important in nature preserves, and there is no need to look after them. Moreover, their presence

would never cause any excessive increase in mountain traffic.
B5 makes use of the expertise developed over the years by previous bivouac designers and supplements it with modern technological advances and today's values. In form and function, it is modeled on the tent-like woodcutter shelters on Menina Planina, which were wedge-shaped.

Positioning the Bivouac

In planning the project, the presumed location for setting up the bivouac was on the edge of a high mountain plateau where it would be possible to find a small bit of level space. Since it would be impossible to avoid wind in such a location-and snowdrifts would accumulate in any hollow-the bivouac was positioned so its back would be turned toward the predominant and most powerful wind, the northeasterly wind. In this way, the wind's lines of force would simply wash around the bivouac's large side planes. Because the shape of the bivouac acts to accelerate the wind speed, snow will not accumulate on it, and in front of the entrance, where the wind comes off the side surfaces, a kind of shelter area is created.
Due to abundant snowfall the body of the bivouac is elevated one meter from the ground and rests on six support legs. This will keep it above the snow blanket even in the worst of winters and keep the entrance from being

snowed in. If the stony ground it stands on is uneven, the bivouac's positioning can be adjusted by changing the length of the individual legs.

The Layout

Lengthwise, the bivouac is composed of three sections differentiated by temperature and function.
- The terrace is the bivouac's outside weather in either winter or summer; in bad weather, it can be folded upwards so as to become the front wall of the bivouac. The terrace is doubly protected from wind, by both the body of the bivouac and its own sloping wall. The protected angle facing southwest provides an ideal space for any activity that might take place in front of bivouac-and there will be quite a bit of this, since, as a rule, people would go for walks in the mountains in good weather.

-The terrace's sloping wall is both its support beam and a brace for a bench, which hangs on the wall and can be removed when the terrace is closed up. The terrace is made of metal latticework, so that, in horizontal position, the snow from people's boots simply falls through it, while in vertical position, the latticework lets in light, but not snow, which falls vertically or, at least, under the angle of its slightly overhanging plane.

- The bivouac's anteroom is protected from snow and wind. It is intended for changing and removing larger pieces of equipment (skies, ice-picks, climbing irons, etc.), and is especially important in bad weather when wet and snowy visitors can shake off their snow and dampness under its roof. Because its floor, too, is made of metal latticework, snow will not collect on it; this area, however, is as cold as outdoors. When the front wall is suspended to make the terrace, the anteroom acts as a covered section of the terrace; when the terrace is shut and the bivouac becomes an entirely closed body with a side entrance, the anteroom becomes part of its interior.

- The interior living space is the most important area of the three sections. It is divided from the anteroom by a slanted glass wall, through which the interior gets most of its light. When the front wall is open, all three sections function as a single room with the glass wall providing a full and unimpeded view onto the surrounding scenery.
The interior of the bivouac is a multipurpose space that can be adapted to various numbers of people and their activities both day and night. Since the room is wedge-shaped in both its cross-section and floor plan-to address the demands of outside conditions-all interior subsections of the room are also determined by this shape. The basic subsection is the wedge-shaped bed, which also makes the most ergonomic sense.
There are eight beds in the interior space, arranged in three levels of various heights. The lower level is a single sleeping area made up of three beds in the rear corner of the bivouac and two along the sides (which are benches during the day). There are two more beds on the side walls beneath the sloping ceiling; these can fold up under the ceiling. An eighth

person can sleep on the eating table. This means there is room in the bivouac for five people, plus, in reserve, two beds below the ceiling and one on the table.
The table, which along with the side benches constitutes the eating area, is suspended between vertical supports; in keeping with the whole, it is also wedge-shaped. Lengthwise, it is divided into two wings, which can be closed in vertical position between the two supports. Thus, one wing can be raised for eating while the other is folded down to allow for unhindered access to the beds in the back. In this way, the people using the bivouac, who might be from different groups and on different schedules, can go about their business without disturbing each other.
The same is true for the upper bunks and the benches, which can be open or closed with the shift from day to night use. During the day, personal equipment can go under the beds, sleeping gear in the compartment under the back beds, while food and cooking equipment can go on the shelves next to the entrance.

Ventilating the Bivouac

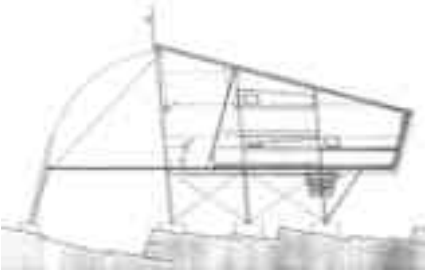
The constricted space and large amount of dampness brought in by visitors means that it is of critical importance for the interior to get fresh air through the back window and the vent in the entryway; air can exit, meanwhile, through the upper window in the glass wall. This window can remain open even when the bivouac is empty, since it opens into the covered anteroom. Small windows located at the head of each bed provide additional ventilation; in this way sleepers can regulate the airflow however they wish.

Relationship to the Environment

The bivouac functions as a self-maintaining whole. It takes only solar energy and water from the environment without putting anything into it other than heat. The bivouac satisfies its small energy needs by means of solar cells located at the front part of the terrace; the roof, meanwhile, collects water, which is kept in a tank beneath the rear of the bivouac. Bivouac visitors are expected to take their garbage with them back to the lowlands and to use their own sleeping bags on the beds; in this way, the burden on the environment is virtually nil.

The Construction Plan

Bivouac 5 will be a lightweight, structurally efficient, and quickly assembled piece of architecture, resistant to any asymmetrical burdens of snow or wind and to various expansions resulting from uneven heating. It will be built using contemporary technology; to keep construction costs low, the level of The technical expertise required lies somewhere between do-it-yourself skills and available technology from Slovene manufacturers. Because of the uneven stony ground, the biggest construction problem will be making the support bases, which must be well anchored against the wind. This will be the only work involving concrete, which will be difficult to use because of the lack of water at these altitudes. The skeleton of the bivouac will be a lightweight yet sturdy steel construction composed of four frames, trapezoidal in shape and able to be joined together lengthwise.



The rationale behind this design is its quick assembly and the optimal size and weight of the prefabricated parts, which must be delivered to the site by helicopter. The frames will be welded into single pieces in the lowlands, so that the complete construction can be assembled on site using only screws.

Once assembled, this skeleton will be covered with horizontal bands of Trimo insulation panels, which are lightweight, but relatively strong, and easy and quick to install. Their ability to fit together solves the problem of dampness, so that sheet metal borders are required only for the corners and roof of the bivouac. Trimo panels can serve as both the bivouac's outer shell and its insulation, which can be minimal because of the bivouac's relatively small volume.

The inner skin is made of water-resistant plywood; any moisture that seeps through the playwood will collect on the inner side of the Trimo panels, which are lined with felt. The entire floor in the anteroom is made of metal latticework, which is strong and light; in the bivouac interior, the floor is further covered with insulation panels and rubber.

A New Bivouac on the Mountain Ridge Above Breginj

A Small Building with Great Significance for the Development of Alpine Architecture in Slovenia

The first project I realized was a bivouac on the mountain ridge above Breginj, and I am very pleased with the way it was built. This small building served as a nice conclusion to my diploma work, under the supervision of Prof. Janez Kozelj, which dealt with alpine architecture. The goal of my research, which included a discussion of the history of alpine building and the development of its principles, was above all to provide a scholarly analysis of the evolution of Slovene alpine construction up to the present day that would show the many excellent mountain huts and, especially, bivouacs, which we have in the mountains of Slovenia, draw attention to their priceless value, and so lay the foundation for the further development of alpine architecture.
The bivouac constructed on Mt. Muzec is the first piece of architecture in a very long time to be built according to the principles of modern mountain architecture and the sustainable development of the Alpine regions. It is my hope that, with its exposure as a thesis project, this bivouac will open a new chapter for Slovene mountain construction.
The very fact that people ever had the idea to build bivouacs in the first place gives me reason to hope. For mountaineers, bivouacs have at least one advantage over mountain huts: they are open the whole year 24 hours a day. Bivouacs offer basic shelter from bad weather and a place to sleep. This is something we should expect from all mountain huts, but unfortunately, in most cases that is not what we get. Bivouacs require only minimal maintenance and place little burden on the environment.
In the mountains of Slovenia we have far too many supervised mountain huts, which function poorly, are closed most of the time, and hardly bring in enough annual income to survive. On the other hand, they do not offer the very thing they were built to provide, namely, a mountain refuge.

The Investor, the Development Society of Breginjski Kot, and Its Developmental Project

Putting a bivouac on Mt. Muzec was part of a larger project supported by the Development Society of Breginjski Kot, whereby a number of cross-border bicycle and foot paths were put in good working order. The Breginj Division of the Kobarid Mountaineering Society, meanwhile, repaired and renovated the mountain path that goes from the village of Breginj to Mt. Muzec. The purpose of the whole project was to revive the

Breginj area through recreational tourism, which, by creating a link with neighboring Venetian Slovenia, offers the best hope for the development of both areas. When the international border between Italy and Slovenia vanishes, bicycle and foot paths will unite these two neglected areas into a single larger region for recreational tourism.

The Location on the Ridge

The ridge that runs in a straight line west from Kobarid into Italy forms the southern edge of the Alps and, because of the extraordinary views it offers, is an interesting destination for ridge-walking, though for now that is still interrupted by the international border west of Muzec. The new bivouac on Muzec represents the central support point in the middle of the ridge; once the border is removed, its function will become even more pronounced. Between Kobarid (234 meters above sea level) and Montemaggiore (Breski Jalovec) in Italy, the ridge now has three support points with sleeping accommodations: the Hlek bivouac (1,225 meters) on Krejska Planja, the new bivouac on Muzec (1,580 meters), and, in Italy, a bivouac on the other side of Montemaggiore. Of these three, the new bivouac, with its central location on the ridge, is certainly an important addition, since it is located just where there is greatest need for a sleeping shelter.

The Kobarid Ridge is 35 kilometers long with peaks and saddles ranging in height from 1,500 meters to 1,700 meters. Facing Breginj, the sides of the ridge are very steep, naked and grassy-the Breginj villagers used to mow hay right up to the summit of ridge and bring it back down into the valley (a difference in altitude of 1,000 meters!). The northern sides of the ridge are covered top to bottom in trees and shrubs, but the peaks and exposed places on the ridge are naked.

The Bivouac's Position on the Site

The saddle between Little Muzec and Great Muzec, at an altitude of 1,580 meters, was chosen as the site for the bivouac. The saddle is very much exposed to north and south winds, resulting in big snowdrifts on the north side during winter. We deliberately chose not to place the bivouac on the lowest part of the saddle, but rather on a site facing slightly to the west and a couple of meters below the crest, where mountaineers from Breginj had dug out a terrace, 4 meters by 5 meters, into the slope. Thus, even in winter the bivouac will not suffer from snowdrifts, though it is, of course, even more exposed to southern winds. This problem we solved by the bivouac's shape, which is specially adapted for wind.

The Shape, Size, and Layout of the Bivouac

The bivouac is positioned in line with the ridge; the profile of its three-plane roof resembles a snowdrift on the ridge. The bivouac is designed to hold four to eight people. There are four lower beds, two on each side of the room, and these are at the same can serve as benches. The backrest for the bench is a simple board that can be slipped beneath bench before bedtime. Between the benches In the middle of the room, there is a wooden table that can be moved along the length of the bivouac. The upper beds (which at the present time still have to be completed) are on hinges and can be folded up beneath the ceiling; these are used only when there is a larger number of visitors. The bivouac interior is equipped with blankets and pillows, which visitors can use with their sleeping bags. The only other thing inside the bivouac is a fire extinguisher.
There is a window in the back wall with a view to the east, while the door in the front wall has a window that looks out onto Little Muzec. Both these openings have outside shutters. In front of the bivouac is a covered porch with a projecting roof that is made from wooden latticework for shaking off snow.
The entire bivouac structure is made of wood and covered with sheet metal siding; it rests on concrete supports and, to avoid dampness, is elevated from the ground.

Assembling Bivouac

The bivouac was made by a carpenter from Cerkno named Sinkovec. The entire wooden structure, including the paneling, was assembled in his backyard, then numbered, disassembled, and carried to Breginj.
From here, helicopter transport was organized in six cargoes, which had to weigh no more than 900 kilograms. The front and back walls were each carried as a single piece. The entire transport was done in three-quarters of an hour, and the structure lay folded in pieces on the mountain saddle, along with the paneling, the metal siding, and the other necessities. The helicopter pilot skillfully handled his vehicle during transport and unloading, and also had some fun on the side doing loops. Two young mountain climbers from Cerkno began assembling the structure right way and spent the night on the ridge. Thanks to teamwork, the bivouac was in place in three days. The supports were set in concrete at a later time; some of the water for the concrete was cleverly acquired by collecting rainwater in a plastic canopy placed upside down in a hollow on the ridge. A metal worker from Bovec covered the bivouac in metal siding and carried out the final trim.

Miha Kajzelj

Completed diploma thesis, titled "Alpine Architecture," at the School of Architecture, University of Ljubljana
He received several prizes in architectural and landscape competitions.
Reference Projects:
- Tourist Office of Via Slovenica on Nazor Street, Ljubljana.
- Climbing Wall for Rock Climbing Competitions - Transportable
- Turk Apartment Building in Notranjska
- Landscape-Architectural Design for Koseze Pond, Ljubljana
- Central Marketplace in Maribor, public competition

He works as a freelance arhitect.

changing

Upside-Down Habits

text by: Polonca Lovsin, photographs by : Polonca Lovsin and Tomaz Tomazin

Without Mistake

What interests me is the way ordinary people adapt themselves to modern society, which is ever more mobile, flexible, and fast-paced. The structures, equipment, and clothes I design require people to use them in different and somewhat unusual ways, which challenge our entrenched attitudes and our understanding of what is normal and logical.

My projects revolve around the topic of altering our life habits, which also includes making changes in our form of dwelling, in the clothes we wear and the equipment we use, as well as changing our ideas about what is most essential and necessary for our lives. I am not talking about developing visionary or utopian models, but about objects and structures that can be used today in everyday life.

Habits and attitudes are shaped in society; any departure from the norm is thought of as a mistake. To live without making any mistakes means to follow the written and unwritten rules of society. In this way we enter a world that is completely controlled and defined. But often, we do not find it logical or congenial, and then we make mistakes. Mistakes usually lead to progress, inasmuch as inventions are said to be born out of mistakes, and thus the world changes. If we have no desire to live in a permanent way or build a structure that will last forever, if we build without a blueprint or own a house but no land, then we are well on our way to arriving at change. If we stand things on their head, if our umbrella is upside down, if we take a shower in the middle of the office or drive our car up the stairs to the second floor, then we are doing things that are not exactly ordinary. This kind of deviation from the norm we could call a modification that represents a gradual change in something entrenched. Modifications are especially interesting because they signify a transitional form between old and new ways of doing things. They have one foot in old and centralized methods and the other foot in something new and peripheral. Modifications often take root and survive, even as the original forms die off and vanish.

Video stills: Collapsible Room, Ljubljana 2002

Without Permanence

Cities used to be built to defy time. They remained unchanged through the centuries. This was their strong suit. Today a city is composed of old quarters, which even now remain as they always were, and new sections, which do not strive to be constant or always the same. New architecture and new spaces know that they have to change and that sooner or later they will be replaced by something else. They are adapted to the pace of modern life and thus are not permanent but temporary, not static but dynamic. All of this influences the way these spaces are programmed, the decision about where to put them, the manner of building them, and the choice of materials used in making them.

Structures not intended to last forever include tent constructions, inflatable rooms, prefab buildings, trailers and mobile homes, pavilions, containers, urban gardens and their toolsheds, and not least of all, the improvised shelters of the homeless.

I often encounter the perception that these peripheral types of dwelling are cheap and usually associated with low social status, but this is not always the case. They can also come about because the established and frequently overvalued standard patters are missing; such structures are usually a critique of entrenched attitudes and present a wild response to them.

The traditional nomadic domicile is constructed so it can be erected and taken down quickly. Therefore, it must be lightweight and collapsible. This is a Bedouin black tent in southern Morocco. (source: Collapsible)

WARM SHELTER

25 bamboo sticks, 180 cm ea, insulated foil, synthetic rope, pine branches, animal pelts (After Buckminster Fuller)

Without Blueprints

Temporary structures include not only those designed by architects and builders, but also those erected by people who do not have any special training in construction. Just about anyone can hammer something together, lean it against a wall, prop it up and so build themselves a roof, a shelter, a wall, or even a house. This construction method uses materials that are chosen not for aesthetics but for function. Scrap material is often put to new use, as well as anything else that may be lying around. The primary difference, however, between planned and unplanned construction is in the way of thinking. Planned construction is rational, well-considered, and separated from the actual execution of the project. First a plan is made, then materials are chosen, and the details are put down on paper; only later does someone start to build a house.

Unplanned construction represents a process in which planning and execution take place at the same time. Problems are solved as they arise, and the choice of materials is, for the most part, extremely logical, since they are immediately put to the test. The two forms of logic represent an inversion: the first kind of construction adapts what is actually built to an idea conceived in the mind; the second adapts the idea to the thing that is actually being built.

A homemade house, on wheels and on water, in Belgrade.

PORTABLE BEACH

wooden platform 200 x 120cm, tractor tire inner tubes, canvas with mettalic coating 400x120 cm, synthetic rope, paddles, anchor

Withou Land

Usually, we buy a piece of land and put a house on it. But there are also kinds of domiciles that we do not put on plots of land. To buy a house first and then set it on a piece of land or a foundation is completely opposite to the usual way of doing things.

A landless house is built according to certain defined regularities. That usually means that it is small and made of lightweight materials, that it is built according to the principles of collapsible design, and that it has a very functional arrangement of parts. The landless house can be a flying, floating, or movable house, which we can shift from point to point at will. In the case of mountain shelters, the house can be put together in the valley and transported by helicopter to its place in the mountains.
One traditional landless house is the nomad's tent; a modern version of this is the mobile home.
A movable house is a house that is no longer attached to any one spot, and so is neither dependent on nor defined by any particular location. We can live in such a house in an urban setting or in some remote area, but in either case we can change our surroundings or live somewhere in between. The movable house is something we always carry with us, whether on wheels, on a vehicle, or on a camel. We can travel and stay at home at the same time, and this meets the demands of modern mobile people.

The Jurassic Park Mobile is a conceptual vehicle from Renault. It is fitted with a camera on its roof that rotates 360 degrees, an ultramodern Philips computerized communication system, and an additional area for laboratory research.

COLLAPSIBLE ROOM

Tent, 200x120 cm, mounted on automobile roof, automobile, ladder

Extraorinary Gadgets

Text by: Mateja Medvedic
Photographs by: Polonca Lovsin and Tomaz Tomazin

Sculptor Polona Lovsin's structures and objects address our day-to-day existence in the world. They represent a unique collection of movable devices and gadgets intended for everyday use. They examine in minute detail the relationships between what is movable and what is fixed, what is public and what is private, what is ordinary and what is extraordinary.

How one exists within the accepted and well-organized socio-economic structures is a matter of established routine: having a regular job, buying and owning an apartment, doing everyday errands, meeting social expectations, and appeasing the relentless machinery of the bureaucracy. But what happens if a person, out of necessity or desire, cannot or will not participate in this beautifully ordered world? The equipment and gadgets that Lovsin has made are concerned precisely with modes of survival outside the established norms. But to survive in a "parallel world," in a kind of gray zone, requires maximum autonomy from existing economic, social, and spatial structures. Lovsin devised her nomadic equipment as a kind of intimate extension of the human body. A body so "enhanced" becomes, then, a mobile autonomous zone in a constant state of readiness. Although this equipment is intended to be used for the most basic and ordinary functions, it has acquired its extraordinary aspect precisely because it requires the greatest possible mobility, autonomy, and economy. The need for mobility necessarily entails a demand for the greatest possible autonomy from existing urban infrastructures. Emancipation from the infrastructure has, as well, a necessary reciprocal influence on the objects. They can, then, become all the more compact, lightweight, and simple. Economy is a key word: an economy of the utilized materials and an economy of function for the individual objects.

The Solar Collection

1. High-hill shoes, solar cells, batteries, mobile phone
2. Japanese sandals, sollar cells, batteries, Walkman
3. Cap with viser, solar cells, electric motor, plastic fan

Usable objects are thus subject to the minimalization and economization of materials and space. Constrained by all the factors that ensure the greatest possible mobility, these objects are also subjected to full hybridization and transformation. Through the joining and mixing of incompatible functions, the appearance and meaning of these objects are distorted in amusing ways.

Self-sufficiency and autonomy from existing infrastructures and energy sources make up one of the most important aspects of this extraordinary gadgetry, for Lovsin has undertaken emancipation from existing infrastructures in a way that is whole and thorough. The most intimate devices, which one straps or wears on the body in such a way that they become fashion accessories, she has named "The Solar Collection." This alone conveys the possibility of independence from state producers of electric energy, the cost and provision of which the individual has no control over whatsoever. With the aid of low-tech solar cells worn stylishly on high-heel shoes, together with a battery, we can enjoy autonomous use of a mobile phone for hours and hours or we can listen to hours and hours of music on our Walkman. A simple piece of foil with a thin layer of solar cells, when placed on a summer hat equipped with a suitable electric motor, keeps us endlessly cool with a small fan. In a nomadic world, one needs to think of everything. To ensure that water will not be a problem, Lovsin presents us with a kind of multipurpose umbrella, which, when turned upside down, can become simultaneously protection from rain and a water-collector. Or if you wish, it can be a parasol or, perhaps, even a shower cubicle for convenient showering in places where there is no bathroom.

Hybridization can be found even in one's personal living space, which is the next level of intimacy in the nomadic existence. One of these intimate spaces Lovsin has named "The Collapsible Room." A collapsible polyester shell affixed on the roof of a car offers the most basic sort of shelter: a room on wheels. Free of the weighty foundations of ordinary rooms in houses, and as fast-moving as your car, it provides the cozy familiarity of home whenever you want it, but in always-unfamiliar places. It reveals, too, its basic nature as construction and technology, along with a logic in which everything is subordinated to practicality and economy. An old converted van is a comfortable variation on the collapsible room. Besides being a space for the basic life functions of sleeping, nourishment, and hygiene, it can also expand into a traveling work space.

Multipurpose Umbrella 1

1. High-hill shoes, solar cells, batteries, mobile phone
2. Japanese sandals, sollar cells, batteries, Walkman
3. Cap with viser, solar cells, electric motor, plastic fan

One of the properties of being mobile is the ability to create locations ex nihilo, or to put it another way, any space can prove to be a suitable location, including ones that seem most infeasible or that do not yet even exist. The “Portable Beach” problematizes precisely the creation of the nonexistent in that it creates a temporary zone of peace and shade even on the most crowded seashores.

When the construction and the utilized materials are reduced to the most essential, what bubbles up to the surface are the most private and personal things, which usually remain hidden from the eyes of others. Exposing what is private in public spaces is tolerated by society only in specially designated colonies, ghettoized and neatly tucked away in vacation camps. Extraordinary gadgetry and the nomadic mode of existence take on an extraordinary aspect precisely in the light of their difference from what is urban and socially accepted. In this sense, the urban perspective views the unpredictably moving object as a troublesome alien being, able to materialize unexpectedly in the most inconvenient places and at the most inopportune times. From the viewpoint of the nomadic inhabitant of the city and the one who uses this extraordinary gadgetry, these structures and objects are experienced as means of liberation that enable people to create something cozy and familiar anywhere they wish and at anytime they want.

Mateja Medvedic

Received her diploma at the School of Architecture in 1996.
She is a co-editor of the Slovene-Croatian journal for architecture and culture, Oris, and is a regular contributor to the journal Ambient.
Her writing is also published in the magazines Hise and Art.si, contributes commentary about architecture and culture on the weekly program Studio City on Slovene national television.

Currently, she is completing her master's degree at the School of Architecture in Ljubljana, where she is researching the phenomenon of the ephemeral in contemporary architecture.

Video stills: Multipurpose Umbrella 2, Ljubljana 2002

exchanging

Cold Money

Text by: Ursa Jurman

An E-Mail Interview with Heidemarie Schwermer

Heidemarie Schwermer (born 1942) lives out the idea of "give-and-take" with complete consistency. In 1994, she established Give-and-Take Central in Dortmund, Germany, and this experience gradually changed her life. She discovered that the more she bartered the less money she needed and that her life was enriched thanks to the stronger connections she now had with other people. In 1996, she decided to take things a step further: she gave away her possessions, gave up her apartment and her practice as a psychotherapist, and cancelled her health insurance. Since then she has been living without money. Everything she needs for life she gets through barter with others.

The engaged way she lives her life urges us to reconsider our own value system and to imagine possible alternative forms of coexistence.

In 1996, you decided to change your life radically: you started to live without money, just on the basis of exchanging things with other people. At first you intended the Star-Dollar Experiment-as you named this life experiment-to last only one year, but you kept on with it. Why did you decide to embark on such a "life experiment" in the first place and how was it that you continued with it?

I wanted to show that it is possible to give and take things and actions, without using money, with unknown people, not only friends or family. My experiment was supposed to last one year. During that year I noticed that the quality of my life totally changed; strangers became my friends, my heart became bigger, and I felt great happiness and freedom.
Today I am already in my seventh year of living without money and my happiness continues to grow.

Could you tell us how you came up with the name of your experiment-the Star-Dollar Experiment-about which you also wrote a book with the same title?

In Germany, there is a children's fairy tale called "The Star-Dollars." In this story, a very poor girl gives away the last few things she has (a piece of a bread and her clothes) and then receives a lot of "star-dollars" from heaven and becomes rich for the rest of her life.
I gave all my things away and received a lot in return-I feel very rich!

What sort of associations do you have regarding money?

Money separates people and makes them feel lonely. Money sets up differences between human beings and brings about poverty and death.

What ideas do you have for a possible alternative to a money-based economic system?

I can't offer any solution for a new political and economic system. What I always say is, now is the time for each person to accept his or her responsibility and work on his or her own life. It is absolutely necessary for human beings to become more independent, to lose fear and gain confidence. This is a kind of idealism, but as I have shown with my own example, it can work. My ideal is for people to become self-conscious and active, for them to live their own life and not be dependent on rules and money. It is very important to ask ourselves what it is we actually need.

It seems to me that an agreement between two persons involved in a direct exchange is also a kind of a rule, a matter of agreement.

Sure, but it is not a crime if someone breaks the rule. Because there is no control, the players can act as they wish. This is very different from how we live with money.

In a way, aren't you, too, dependent on all those people who earn money?

I am not dependent on people with money; I am dependent on other people, like everyone else. We all live in dependence on each other, but I am less dependent because I need less than most other people.

I would like to ask you about some of the practical aspects and issues involved in a "no money" life model. How do you arrange your sleeping quarters?

During the first years, I lived in the houses of people who were traveling. I looked after their cats and flowers, and the owners of the houses left food for me. Nowadays, there are a lot of houses where I can always go. I have some keys and I can choose. All these people, who are also my friends, are glad to host me in their homes, because I have a lot to give back in return.

Can you give one or two examples of the kind of exchange you make for accommodations?

There is a family with two children; the parents like to sing and this they do once a week. I take care of their children in the evening and then I sleep there too.
A mother has problems with her daughter; I go there to speak with both and it is a great help for them. I stay there till morning.
A woman has problems with writing; if she has to write a text for her work, I come to correct it. She is very grateful for that help and always offers me a place to sleep.

How and where do you eat during the day?

When I am in Dortmund, I spend my day at an office where I can also use the computer, the Internet and the telephone. In return, I sometimes clean the office, help with other things, and cook each day for the people who work there. I get groceries for the meals from a certain bio shop, where I can exchange their products for my work-I help with the cleaning and gardening.

What if you get sick? How do you deal with something like that without health insurance?

I haven't been ill in almost twenty years; I live healthy. But three months ago I got sick-I couldn't move my arm and I had a lot of pain. I didn't visit a doctor; I just laid on a sofa in the office for two weeks. Someone cooked for me and I had a lot of visits, even from people from other towns. I felt people's concern and that made me happy. During that time I thought a lot about what was behind that illness and finally I changed my eating habits. I don't drink coffee any more and I eat more fruit and vegetables.

How do you travel?

At the beginning of my experiment, I asked people on trains if I could go with them. In Germany it is possible for one person to buy a ticket and four others can travel on it as well. In exchange I gave the books I had written before The Star-Dollar Experiment.
Now I travel only if somebody invites me for a lecture or a project. They send a ticket to my postal address.

What do you do if you want to go to some cultural event?

Sometimes people give me a ticket for the theater or cinema, because I helped them with something.

What did you do with the money you got from your book?

I gave it to people who needed it. Most of the money I gave to single-parent mothers who don't have enough money for their children's education. Some money I gave to various groups that needed it for important projects. Once I changed a thousand marks (500 euros) in small coins and then went downtown, where I cried: "Here you can get money!" I asked people to use this money as a present for someone. During the action I also distributed a paper in which I asked people to think about money and what we do with it. It was a good action.

Do you ever buy anything?

At the beginning of my experiment, I wanted to show myself that I was not a fanatic and so sometimes I bought something-butter or milk. But in recent years, I haven't touched a euro.

To be able to survive by means of exchange one must know a lot of people or must build some kind of exchange network, I believe. In 1994, you founded Give-and-Take Central in Dortmund. Is this still running and do you do most of your exchange through it?

I left Give-and-Take Central before I started the Star-Dollar Experiment. Give-and-Take Central was a very important beginning for me, but I wanted to go further. Nowadays, there are new people coming into my life every day. I

exchange with them and receive all that I need. But the most important thing in my life is the knowledge that there exists a spirit world.

Can you describe the principles of Give-and-Take Central during the time you were still involved in it?

It functioned on the basis of an exchange of services and things, which were not hierarchically divided. All works were equal. For example, cleaning was equal to a consultation with a lawyer. Some people had a big problem with that, so they left the group.
The number of members was always changing, and sometimes it reached as many as 400. Four times a year, participants received a list of offered and requested services from the people involved in the group. Each member had to put on the list what he or she wanted to give or offer. Many people had huge deficits; they said they would participate and offer something, but in reality they didn't. A lot of people were not very active.

I am curious as to whether there is any network or cooperation between different exchange centers, maybe in the sense of exchanging experiences between the people who are involved in them?

In Germany there are more than three hundred "give-and-take" groups. They have different names and they handle things differently, but there is also cooperation between some of them.

In 2002, you made a request to the authorities to let you work off your taxes in the form of counseling services for the unemployment office by introducing people (welfare recipients) to new alternatives. I am curious about what is happening with your attempt to step out of the role of taxpayer?

The mayor of Dortmund suggested I work as a volunteer, but this is not the same as the "give and take" principle.
I am always thinking of what else I can do to reduce the discrepancy between poor and rich people. Recently, I founded a "give-and-take house," where people can stay for a while without paying any money but by helping with the house. There are a number of plans in my head, and step by step I am realizing them.

Ursa Jurman

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hEXPO, Festival for self-organized cultural forms (2000, Ljubljana, Maribor, Koper)
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Hot Goods

text: The Goods exchange Offer from the local Newspaper

GOODS EXCHANGE

AUTO, BMW 528 i, 98, 58000 km, reg. to 03/7, metallic silver, fully loaded, service manual (4,100,000 SIT), will exch for real estate w/ my add. payment, possibly on Croatian coast
AUTO, C BX 1.6, 89, metallic color, elect. windows, new hydraulics, sm repairs needed, will exch for other goods worth ca 60,000 SIT
AUTO, P 405 1.6 GL, 91/3, 250,000km, will exch for house appliances or bldg material
AUTO, VW polo 1.4, 97, white, a.c., fully loaded, in except. shape, will exch for apartment or older house, will pay remainder, the rest by agr
CELL PHONE, ericsson 1018, will exch for CB radio
COMMERCIAL SPACE, store, 65m2, will exch for good car, all-terrain or personal. Remainder by agreement
COVERS, leather, thermal, new, for golf IV, will exch for computer, PC, w/ all accessories
NOTIONS, razors and attachments worth ca 1,000,000
SIT, will exch for personal van, will consider other goods
RANGE, gorenje exclusive, rustfree burners, 2 elect., 2 gas, oven, will exch for any electronics
SCOOTER, new, steel, will exch for cell phone GSM or something else
SEWING MACHINE, will exch for anything
VACUUM, depth, work, w/ brush attachment, cell phone, panasonic 520, and color TV, gorenje, will exch for car R 5, not nec. reg.
VCR, samsung 4-head, will exch for car 126 P or yugo w/ my additional payment

GOODS EXCHANGE

AUTO BMW 528 i, 98, 58000 km, reg. to 03/7, metallic silver, fully loaded, service manual (4,100,000 SIT), will exch for real estate w/ my additional payment, possibly on Croatian coast
AUTO, opel kadett, will exch for beech firewood or other goods
AUTO, skoda favorit GLX, 93, in nice shape, undamaged, will exch for fir wood, cut, for roof
AUTO, VW polo 1.4, 97, white, a.c., fully loaded, in except. shape, will exch for apartment or older house, will pay remainder, the rest by agr
CAR RADIO, panasonic, new, will exch for GSM, video camera, or similar
CAR SPEAKERS, new, 2 X 240 W, exch for CD player, camcorder, etc
CDs, 100 pcs, music, orig., valued 50,000 SIT, will exch for other material of same value (GSM, vcr, car radio, mtn bike, computer equipment, etc.)
CELL PHONE, ericsson 1018, will exch for CB radio
COTTAGE, Cateske Toplice, will exch for personal car or bldg material
CUBES, wooden, suitable for pallets or paving, 10 x 14 x 8 cm or 14 x 14 x 8 cm, will exch for building material or electronics
HOUSE, older, in Croatia, suitable for weekend cottage, will exch for auto worth 1,800,000 SIT or will sell
JACKETS, leather, motorcyclist, several, will exch for any other goods, esp auto, motorcycle, or jewelry
LOG CABIN, ca. 30m2, Duga Uvala near Pula, fully furn. for 6 people, on parcel 150m2, 800m from sea, near pool, tennis, will exch for personal car
MOPED, tomos, automatic, older, 1st reg 02, and pair of tires 205/65/15, will exch for electric generator or other practical goods
MOTORBIKE, yamaha TZR 125, 98, will exch for golf I or II D.
MOTORCYCLE, aprilia RS 125, 00, model 01, nice, not much ridden, will exch for 2 farm mares or several ponies, worth 700,000 SIT
OVERCOAT, fur, black, size 40, will exch for cell phone, nokia 3310, in flawless condition
PICKUP TRUCK, tata 2.0, 95, white, attractive, carries 1 ton, will exch for motorbike or smthg else
RING, gold, atlantean, will exch for cell phone, nokia 3310, in flawless condition
SCOOTER, will exch for other goods, possibly for cell phone
SEWING MACHINE, 200 yrs old, 2 typewriters, and other antiques, will exch for other goods
SUITCASE, for travel, prinz, hard plastic, will exch for anything
TENT, used twice, will exch for built-in glass-ceramic gas burner
VACUUM, depth, work, w/ brush attachment, cell phone, panasonic 520, and color TV, gorenje, will exch for car R 5, not nec. reg.
WHEEL RIMS, ALU, 4 pcs, w/ tires pirelli, for fiat uno, will exch for cell phone

GOODS EXCHANGE

AUDI 100, 87, 2.2 B, white, drivable, will exch for RV or unbuildable property near Ljubljana
AUTO, C BX 1.6, 89, metallic color, elect. windows, new hydraulics, sm repairs needed, will exch for other goods worth ca 60,000 SIT
AUTO, ford fiesta, crashed, will exch for cell phone GSM
AUTO, ford sierra 1.6, 92, blue, 5-shank rims, flawless engine, will exch for hi-fi, camcorder, vcr or other personal car
AUTO, VW jetta 1.6 B, white, 89, 5-door, 5-shift, good cond, will exch for other goods worth 290,000
CAR ALARM, new, many functions, will exch for other electronics
CAR RADIO, new, will exch for GSM apparatus, camera, video camera, and similar CDs, 100 pcs, originals, music, will exch for other goods worth 50,000 SIT (wrecked scooter, mtn bike, etc)
CELL PHONE GSM, ericsson 1018 and motorola D520, will exch both for CB or ultra-shortwave radio
COMMERCIAL SPACE, in Kisovec, 18m2, will exch for car or other goods
CUBES, wooden, suitable for pallets or paving, 10 x 14 x 8 cm or 14 x 14 x 8 cm, will exch for building material or electronics
FURNITURE, unused, and neon lights w/out the bulbs, will exch for anything
HOUSE, small, older, in Croatia, near Varazdin, suitable for weekend cottage, will exch for car, worth 1,800,000 SIT
JACKETS, leather, motorcyclist, several, will exch for any other goods, esp auto, motorcycle, or jewelry
MOTORCYCLE, aprilia RS 125, 00, model 01, nice, not much ridden, will exch for horse trailer, worth 700,000 SIT
OIL BURNER, for CK, German, good shape, will exch for strap-on lawn trimmer
OVERCOAT, fur, black, woman's, size 40, will exch for GSM nokia 3310 in flawless condition
PERSONAL CAR, nissan sunny 1.5 GL caravan, will exch for personal computer, worth 60,000 SIT
RECEIVER, sony, STR DE415, dolby surround, DPL, DTS, DSP, RDS, 6 x 80 sinuses, many other functions, will exch for alu wheel rims, 5 x 100, 16 or 17 in, w/ tires
RING, gold, atlantean, will exch for cell phone, nokia 3310, in flawless condition
SCOOTER, new, steel frame, will exch for telephone or something else
SCYTHE, attachable, for tractor honda 420, will exch for winter tires w/ rims, for P 206
SEWING MACHINE, will exch for anything
SIDECAR, steib LS 200, for motorcycle, and parts for BMW 250/500, will exch for other goods
STORE EQUIPMENT, shelves, display case, will exch for personal car
TOOLS AND EQUIPMENT, kit for making metal stands for flowers, ikebana, will exch for car. Remainder by agreement
WELDING MACHINE, will exch for cell phone GSM

GOODS EXCHANGE

AUTO, audi 100, 87, 2.2 B, white, drivable, will exch for RV or unbuildable property near Ljubljana
AUTO, C BX 1.6, 89, metallic color, elect. windows, new hydraulics, sm repairs needed, will exch for other goods worth ca 60,000 SIT
AUTO, saab 9000, 92, metallic blue, reg ea yr, fully loaded, will exch for property near Trebnje
AUTO, VW passat 1.6, 97, fully loaded, service manual, no accidents, perfect, v. nice, will exch for real estate up to 5,000,000 SIT, remainder by agr
AUTO, Y florida, 90, blue, 2nd owner, new tires, brakes, will exch for recent color TV, or other
CABINET, for cold storage, sharp, new, top-of-the-line model, and equipment for dentist's lab, like new, will exch for leather sofa and chairs, or other goods
CAR ALARM, new, 17 functions, will exch for other electronics
CAR SPEAKERS, new, 2 X 240 W, exch for CD player, camcorder, etc
CELL PHONE GSM, panasonic 520, flawless, will exch for electric sander with suction
CLOTHING, men's & women's, several pcs, will exch for other goods
GRAMMOPHONE RECORDS, from 1928, will exch for German medals or postcards
JACKETS, leather, motorcyclist, several, will exch for any other goods, esp auto, motorcycle, or jewelry
KNITTING MACHINE, empisal, single-row, Japanese, will exch for freezer or freezer chest up to 7 yrs old
LATHE, prvomajska ATR250, revolver-type, will exh for diesel truck, extended, raised
OIL BURNER, for CK, German, good shape, will exch for strap-on lawn trimmer
OVERCOAT, fur, black, woman's, size 40, will exch for GSM nokia 3310 in flawless condition
PIPE, MS, fi 11/12, will exch for anything. Price: 120,000 SIT
SEAT COVERS, leather, new, w/ spirals, for golf IV, will exch for computer w/ accessories, good deal, near Celje
SEWING MACHINE, christopher columbus, 200 yrs old, and several other antiques, will exch for anything
SKIS, elan phantom, 193 cm, half-carving, new, in package, will exch for other goods or bldg material
WELDING MACHINE, electric, will exch for anything
WELDING MACHINE, will exch for GSM

GOODS EXCHANGE

AUTO, audi A8 4.2 tiptronic quattro and chevrolet camaro 5.04/8, exc cond, 5,000,000 SIT value, will exch for real estate, poss on coast, w/ my additional payment
AUTO, saab 9000, 92, metallic blue, reg ea yr, fully loaded, will exch for property near Trebnje
AUTO, skoda favorit, 93, good cond, undamaged, will exch for wood, pine, timber or planks
AUTO, VW passat 1.6, 97, fully loaded, service manual, no accidents, perfect, v. nice, will exch for real estate up to 5,000,000 SIT, remainder by agr
AUTO, Y 60, 90, reg to 03/4, cast rims, will exch for vcr, stereo, or color TV
BOOK, Gardening Encyclopedia, new, will exch for cell phone GSM nokia 3310 or 3330, worth up to 18,000 SIT
BOOK, Healing Power of Fruit and Vegetables, will exch for cell phone GSM
CAR RADIO, cassette player, new, will exch for GSM apparatus, vcr or similar
CAR SPEAKERS, new, 2 x 240 W, will exch for other electronics
FITNESS MACHINE, ABtronic, new, will exch for GSM apparatus
LOG CABIN OR GARDEN SUMMERHOUSE, will exch for small pickup truck
PERSONAL CAR, y florida 1.4, 90, blue, 1 owner, new tires, brakes, will exch for fairly newer TV or other goods
SKIS, elan phantom, 193 cm, half-carving, new, in package, will exch for other goods or bldg material
WHEEL RIMS, ALU, 7 X 15, 4 X 100, little used, will exch for electric drilling machine

Collaborating

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Ready to change

This book presents a number of individuals who all share an interest in following independent and individualistic life strategies. At first glance, these examples seem quite different from one another, but what they have in common is an enormous amount of originality.
With strong personal conviction, which is realized in their day-to-day life, these people manage to avoid all that is mass-produced, regulated, controlled, and presumed. They turn their own understanding of life into reality, as they attempt to shape it into something independent of the ordinary.
We are not dealing here with revolutionary changes, in the sense of social or cultural revolutions, but rather with small changes made along the way, as life is lived.

Polonca Lovsin

Finished architecture studies (1996) and sculpture program at the Academy of Fine Arts, Ljubljana (2001).
Selected Exhibitions:
- 2001, International Exhibition in Milan, Galleria Via Farini
- 2002, Exhibition in Belgrade-SKC, project: Video Works from the Street Collection
- 2002, International Art Festival, Soho in Ottakring in Vienna, Austria, project: Collapsible Room (video and car with a tent)
- 2002, START, International exhibition for the young artist, Ljubljana, project: Video Works from the Street Collection
- 2003, Solo Exhibition in Kapelica Gallery (Ljubljana), title: Ready to go; Mobile Equipment and Video Works
- 2003, START International exhibition for the young artist, Zagreb, Croatia, project: Solar Collection
- 2003, SUPER, International exhibition of Video and Sound Installations in Transformer Gallery, Washington, USA

Currently, a postgraduate student of sculpture and video, at the Academy of Fine Arts, Ljubljana

Polonca Lovsin

Ready to change

First edition limited to 250 numbered copies.
10 copies deluxe limited edition of this book,
accompanied by a signed and numbered multiple by the artist,
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