# Energy and Experience: An Essay in Nafthology

Antti Salminen and Tere Vad**é**n

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Published by MCM' Publishing Chicago 60608 www.mcmprime.com

Library of Congress Control Number 2015908384

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#### **Foreword**

#### Jeff Diamanti

Energy and Experience: An Essay in Nafthology offers a most unexpected materialism in an age seemingly replete with "new" ones. For while the physical connotations of energy hint at a conjunction dealing with matter and our experience of it (both energy and experience would name the subject and object of matter over time), energy proves in this book to be the name for something completely different than matter stripped bare. This at least is the problem with which this book begins, for "like the notions of force, will, work, and the sacred, energy seems to name at the same time something internal, immaterial, and spiritual and something material, concrete, and physical" (9). Thus we are dealing not with matter and the life it leads, but rather the social, epistemological, political, and philosophical determinations of an energy system responsible for not just our capitalist modernity, but most of our thoughts about it, too. What's most unexpected about the materialism of Nafthology is therefore that energy, once redefined not as metaphysical but as time in matter, releases materialism from the shackles of vulgar matter and the speculations we might derive from it. Meanwhile, it lets us see a family resemblance between energy and that other historical force over matter, which this book unhesitatingly calls capital.

Its most important contribution to the many philosophies of the present is to put energy — not, strictly speaking, as itself matter, but rather the force that animates matter — at the heart of its analysis, and it does so as a rejoinder to what the authors see as an enormous oversight in twentieth-century philosophy and sociology. The result is utterly fascinating, and is neither predictable nor novel, since what energy finally mediates in Antti

Salminen's and Tere Vadén's account is what in most traditions is a fundamental antinomy of capitalist modernity: the general economy, or what we might call the cosmic rhythms of force, motion, and expenditure, and the political economy of capital and the world it creates in its image. Very much in the spirit of Georges Bataille, from whom the idea of a general economy is inherited, this book takes seriously the consequences of an economic system logically tied to a productivism never fully satisfied by human labor power. And in an era fully saturated with the market rhythms and material residues of a fossil-fueled global economy, the critique of energy this book makes available could not have come at a better time.

Energy's concept, however, extends beyond the mediation between capital and labor, and this is where Salminen and Vadén take us into uncharted territory. Once energy becomes a dialectical resource for philosophy and politics, in other words, unpredictable questions begin presenting themselves. For instance, how much does capitalism eat? (Eight billion tons of coal, three billion cubic meters of natural gas, and thirty billion barrels of oil.) Is God transfigured as oil? (Yes, the concept for which is nafthology.) Does wood have a political philosophy like coal, oil and natural gas? (Yes, and it has to do with fields of meaning and what Marx called the social metabolism of labor.) Is class consciousness imputed through the energy sector? (Most certainly, and it is captured in what they call con-distancing.) What's remarkable about this book is that it directly answers questions like these and in the meantime establishes a method for energy criticism with some help from Marx, Schopenhauer, Heidegger, Bataille, and Albert Borgmann. With each development in the problem of energy, Salminen and Vadén show us its inseparability from both the problems of capital and labor's solutions, in part because both get redefined in the process. Energy as a critical concept has been brought back to the fore in recent years thanks to an enormous political mobilization against the environmental

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risks tied to infrastructural expansion in the energy sector. Academic inquiry into the chemical, biological, anthropological, literary, and philosophical shape of industrial and postindustrial energy systems has grown, too, very much in the wake of the new climate science established in the 1990s. Today there is very little dispute about the planetary costs involved in burning fossil fuels, and even less dispute about the risks involved in extracting ever harder to reach sources of hydrocarbons. Yet we still find ourselves confronted with the physical and social world that matured during the golden years of fossil fuel deepening, the sustainability of which is nearly impossible to imagine without the physical force available from coal, oil, and natural gas. Fossil fuels thus lubricate concrete abstractions in the form of social relations, market affects, and the historically specific relation between labor and capital.

Faced with this impasse — the infrastructural, logistical, social, and epistemological limits to a full transition away from fossil fuels — nothing except the invisible hand of the market seems capable of thwarting our dependence on carbon since capital itself depends on the unique properties of fossil fuels in order to maintain its own autonomous appearance. Thus the energy impasse is, in this account, the impasse of capitalism, and any attempt to address one without the other will result in either bad politics or bad philosophy — or, more commonly, both.

This is where *Nafthology* intervenes. Its authors begin not with the environmental horrors of industrial and postindustrial energyscapes — though they are not insensitive to them — but rather with the impasse that prevents any meaningful promise of an alternative. What makes this book so important in the growing study of energy across the humanities, social and physical sciences, is that it makes the political, social, epistemological, philosophical, and economic contours of the impasse explicit (in sections 1 and 2) and then hazards a political philosophy of the transition out of the impasse (in sections 3 and 4). And if you

think the opening claim that "After His death, God turned into oil" is weird, wait until you get to the forests of foci, "the sauna!", and multifocal base matter (6). Socialists in the room — of whose number I count myself — will no doubt find the end of this book wild, but this book also contributes something to a Left politics in sore need of wild positions.

In fact, there is no shortage of weird in this book. This, however, is not because its authors are not serious about mapping the impasse of fossil fuels, or the transition away from them; *Energy and Experience: An Essay in Nafthology* is enormously serious. It's just that once energy is allowed to exercise away some of the more regrettable habits of materialist criticism, the world starts to look incredibly strange, which Salminen and Vadén will insist is a good sign that they are on to something important, serious, and essential.

# 0. The Body Snatchers

On the Absheron peninsula, a few kilometers northeast from the center [of Baku] there is a small Mogul temple of Surakhani from the 18th century. A crack in the ground seeped natural gas enough to sustain an eternal flame. The trident of Shiva is depicted on the temple. Worshippers of fire — ferocious Zoroastrians, sun-revering Persians, and devout Punjabis — came to the temple to praise God. But what God has ever conquered progress? In 1879 the Hindu priest guarding the flame sold the gas rights to the Baku Oil Company! Big oil companies are titans stronger than gods. The Muslim selling tickets at the door explains that today the temple is connected to the municipal gas network.

— Sylvain Tesson, Eloge de l'énergie vagabonde

After God was killed in the bourgeois revolution, He went underground in order to be utilized as oil by its descendants. Offshore drilling starts in Baku in 1846, the first commercial oil well in the New World opens in Pennsylvania in 1859, the first pipelines are built during the next decades, and oil starts to traverse long distances. Nietzsche identifies the body in 1882. This temporal coincidence reveals the semi-conscious experience that has haunted the last century and a half in Europe, the United States, and increasingly the whole globe. The death of God has been experienced not only as a liberation from authoritarian chains but also as the dissolution and diminution of all meaning, the sunset of values and goals, after which we have only the levelled and laborious age of "the last man." The age of oil has been the unrecognized twin of the triumph of capitalism and globalization; by another temporal coincidence the supposed final victory of liberal democracy in the 1990s happens close to the moment of highest overall production of crude oil.

But the victory was not final. There is a new beginning. Two possible paths present themselves. On one hand there is the path of the supposedly inevitable global process of Westernization, industrialization, informationalization, scientification, and individualization, carrying maybe somewhat flat but at the same time rational and universal values. On the other hand there are more or less revolutionary attempts at creating new values or finding ways to retain the old ones. However, very seldom has either of these alternatives tried to put together their specialized knowledge and experience; they have not tried to synthesize their economic and technological experience of living with fossil fuels together with the cultural, symbolic, and psychological experience of living through the Nietzschean "revaluation of all values." This specialization, division of labor, and distance between fields of experience reveals in a negative way the possibility of a hidden connection and unified experience. The death of God and the birth of the age of oil have been experienced together, precisely by keeping them apart. The distinction — the sacred and the meaningful here, the economic and useful there — is one of the most essential characteristics of the age of oil. After His death, God turned into oil, and oil became a surrogate God with very straightforward utility: everything that smacks of being sacred is burned in the black motor of economic growth. A strangely familiar odor hits the nostrils.

This is the context for our speculative step: we claim that the death of God and the use of oil are connected and that by investigating the disjunctive *and* binding nature of this connection it is possible to discern features of the here and now better.

When fossil fuels bind things together by keeping them separate, the consequences are similar to the consequences of modern division of labor. Focusing on separate tasks and expert knowledge creates efficiency and dumbs down, de-skills, and atomizes. In the same way, the work that fossil fuels perform, for instance, in internal combustion engines, makes society

more efficient and renders the conditions and consequences of the gasoline in the tank invisible. Let us call the way in which the age of oil has brought things together by keeping them separate "con-distancing" — meaning the particular way of keeping something close so that it at the same time stays alien, at a distance. Con-distancing is not inevitable. It has its material and cultural conditions, some of which are being revealed right now through various "crude awakenings" to fossil fuel shortages. Con-distancing is one of the roots of the peculiar alienation experienced during the age of oil, and therefore some kind of political economics is needed in coming to terms with it.

For now we face a new situation. The production of oil has stopped growing. That in itself is a fact of historic proportions. We have barely registered the first state of exception, that of everincreasing oil use, and the concomitant growth in population and economy, when we are thrown into a new one. After the increase in production and enlargement of spheres of influence granted by oil, we discover limits to growth and huge quantities of carbon dioxide in the atmosphere. Even though we have yet to come to grips with the experiential and cultural effects of everincreasing oil use, we have to start adjusting to its decline. The drama and breathtaking speed of these historic changes gives a hint about another characteristic of the age of oil: an experience of acceleration that is both literal (cars, airplanes, rockets) and cultural (the changes in habits, livelihoods, professions, fashions, knowledge, and so on).

The production of oil — like the production of any non-renewable resource — can be described by a bell-shaped curve. First production grows until it reaches a more or less stable and longer or shorter peak moment, after which it declines. The moment of highest production, so-called peak oil, has been predicted through many means and has been placed in many different dates: most of the predictions assume that the peak happens sometime during the early twenty-first century. The

classic calculation by M. King Hubbert, a geologist working for Shell, calculated in the '50s that the peak would occur in 1995. Some of the most optimistic predictions have pushed the date back to 2020 and 2030.<sup>2</sup> The exact date matters most as a symbol; the crucial effects cluster around it, both before and after.

The sun is now in the middle of its main sequence which totals something around ten billion years. The genesis of carbohydrates takes millions of years, so it is possible that during the age of the sun another bounty of fossil fuels is created in the crust of the earth. But for now, the current age of oil is turning a corner, the roughly 150 years of exceptional normality are coming to an end, and we find ourselves on an unknown path.

#### 1. The Fossil Machine

You are machine-breakers. Do you know what a machinebreaker is? Let me tell you. In the eighteenth century, in England, men and women wove cloth on hand-looms in their own cottages. It was a slow, clumsy, and costly way of weaving cloth, this cottage system of manufacture. Along came the steam-engine and labor-saving machinery. A thousand looms assembled in a large factory, and driven by a central engine wove cloth vastly more cheaply than could the cottage weavers on their hand-looms. Here in the factory was combination, and before it competition faded away. The men and women who had worked the hand-looms for themselves now went into the factories and worked the machine-looms, not for themselves, but for the capitalist owners. Furthermore, little children went to work on the machine-looms, at lower wages, and displaced the men. This made hard times for the men. Their standard of living fell. They starved. And they said it was all the fault of the machines. Therefore, they proceeded to break the machines.

— Jack London, The Iron Heel

It is not self-evident what one is thinking about when the topic is energy. Like the notions of force, will, work, and the sacred, energy seems to name at the same time something internal, immaterial, and spiritual and something material, concrete, and physical. Richard Beardsworth has claimed that energy should be approached phenomenally, since it is evident only in its effects: energy itself remains unknown, a universal abstraction. According to Beardsworth, access to the ontology of energy is possible only through matter. As such, energy is something inaccessible and pre-material.

This could be taken to mean that energy is akin to the Ding

an sich. We have only anthropocentric experiences of material phenomena. However, there is no need to go this far. Schopenhauer claimed that Kant made a mistake in thinking that the *Ding an sich* is transcendent. According to Schopenhauer, the *Ding an sich* can be known and thought, since it makes itself known in humans as will (*der Wille*). A Schopenhauerian move is possible also with regard to energy. Energy is not alien to humans, for whatever humans are, they also are and experience energy.

If we study this energetic part of human being through the natural sciences, we get accounts of biological and chemical processes, of carbohydrates, mitochondria, ions tunnelling through cellular boundaries. Humanistic research would talk about ecstasy, boredom, grit, love, and hate. But let us hold on to Schopenhauer's holistic approach: the energetic part of human being is first and foremost experience, meaning, life, and will, before it becomes natural science, literature, and philosophy. Furthermore: energy in humans is for the most part non-human, it does not originate from humanity, it does not exist in the human scale and is not for her purposes. This lived — but not unitary or homogenic — energetic part makes it possible to study the experientiality of the age of oil.

If we see energy as something universal having effects on matter, matter itself is easily conceptualized as a source of energy, leading to the idea that fossil fuels and other entities found in nature are to be seen as resources. When energy is separated from matter, measured, and atomized, so that in the end we have kilowatt-hours, the stuff of nature (from oil to uranium), its places (rivers, seams in rock) and processes (from offal from slaughterhouses to wood), are seen as potential and actual reserves. As Martin Heidegger, one of the earliest thinkers to formulate a coherent critique of technology, observes in 1953, through this "technological understanding of Being": "Air is now set upon to yield nitrogen, the earth to yield ore, ore to yield uranium, for example; uranium is set upon to yield atomic energy,

which can be released either for destruction or for peaceful use."2

Heidegger's point gives us a second methodological guideline. The technological understanding of Being does not concern only the "outer" world, but also humans themselves, their lives and experiences. Humans, too, become resources who see themselves as something (objects) to be utilized by themselves (as subjects). Consequently, the experience of oil is largely an experience of using and being utilized and can be recognized as such from a perspective that is a-technological. As a first approximation, a-technological experience means, from the technological perspective, uselessness, wastefulness, and inconsequentiality.

Heidegger wants to depict the technological understanding of Being as a neutral historical phenomenon that is, as such, neither good nor bad, and is not completely in human hands anyway. Even so, according to him, inside the technological understanding of Being humans may experience a distance between their technological selves ("the metaphysics of subjectivity") and their Dasein as addressed by a call from Being. If we discard Heidegger's ultimately misguided attempt at neutral phenomenological description and continue along the methodological line the quote above delineates, we immediately notice that the age of oil has not only been historically decisive for many human cultures, but also horrendously destructive, eventually threatening all life on earth. "The oil curse" is a well-known concept in economics: often a country or an area that contains oil reserves is destroyed ecologically, socially, and economically as the reserves are dug up.3 The utility and wealth produced by oil are experienced elsewhere — once again oil brings together by keeping separate; the oil curse binds whole countries and peoples together by keeping them apart.

A similar oil curse is at work inside the experience of the oil age. After humans have discovered oil and taken it into widespread use, parts of their experience are destroyed and the new riches of experience are felt elsewhere, as separate from the destruction,

as something distilled, modern, and plastic. The death of God is, in the end, an inadequate and too culture-specific name for this destruction of human and non-human life during the twentieth century. The death of God is "only" the foreseen apex of this development, seen through the lens of one monotheistic myth. The disappearance of the sacred and the dispersal of Being did not happen at once and not at random. It took long, hard, and conscious human effort.

These human efforts have been analyzed in many ways and on many different levels, most of the time completely forgetting the importance of fossil fuels, sometimes taking it for granted, and seldom tackling the question straight on. Max Weber's observation in *The Protestant Ethic and the Spirit of Capitalism* is, for a good reason, one of the most quoted. Let us read the passage in full:

The Puritan wanted to work in a calling; we are forced to do so. For when asceticism was carried out of monastic cells into everyday life, and began to dominate worldly morality, it did its part in building the tremendous cosmos of the modern economic order. This order is now bound to the technical and economic conditions of machine production which today determine the lives of all the individuals who are born into this mechanism, not only those directly concerned with economic acquisition, with irresistible force. Perhaps it will so determine them until the last ton of fossil fuel [fossilen Brennstoffs] is burnt. In Baxter's view the care for external goods should only lie on the shoulders of the "saint like a light cloak, which can be thrown aside at any moment." But fate decreed that the cloak should become an iron cage.

Since asceticism undertook to remodel the world and to work out its ideals in the world, material goods have gained an increasing and finally an inexorable power over the lives of men as at no previous period in history. Today the spirit of religious asceticism — whether finally, who knows? — has escaped from the cage. But victorious capitalism, since it rests on mechanical

foundations, needs its support no longer.4

Already the quote above, not to speak of Weber's multifaceted work more generally, contains a plethora of possible lines of inquiry. Two present themselves above others. First, Weber's assumption that the machinery of production is dependent not only on the spiritual landscape that he was describing, but also on fossil fuels. In fact, this means that the spiritual landscape itself is dependent on the existence of those fuels. Without them, the transition of capitalism into a "mechanism" would not have been possible, and they are the precondition of the "material goods" that have saturated human experience. The mechanization of capitalism and the replacement of asceticism by material goods are dependent on fossil fuels: Weber *almost* recognizes their spiritual importance.

Second, Weber takes it for granted that the fossil fuels will be burnt, that they will run out, and that this may be the end of capitalism as a mechanism. This possible end for the economic conditions that determine modern life has since faded from view. Habituation into the ever-increasing availability of fossil fuels has helped put the possibility of the end into oblivion, as well as a belief in the technological possibility of so-called alternative forms of energy. However, neither of these reasons for forgetting the possibility of the end actually invalidate Weber's observation. In fact, the productive machine has not grown more fossil independent after Weber — quite the contrary.

The third amazing thing is that Weber's observation has not been taken up by his followers as a significant research topic. It is very hard to tell whether this omission of the spiritual meaning of fossil fuels is because it is so obvious that it does not need further study or because it is so close that it cannot be studied, cannot be observed from a distance. Or maybe sociology has decided that questions like this are out of bounds for it, so that only phenomena like religion and not materials — like coal, gas, and oil — can have an effect on societies. It is easy to see that a

methodological distinction between thoughts and ideas on one hand, and things and matter on the other, leading to a division of labor inside science, is a culturally and ideologically ingrained habit. At the same time, this separation itself is possible only under conditions of cheap and abundant energy.

A third possibility is a kind of repression. Slavoj Žižek has noted that, in Capital, Marx discusses the historical birth of capitalism and capitalism as such separately, so that he can make visible how certain "external" conditions of capitalism's birth turn into its "internal" mechanisms once it is established.<sup>5</sup> A good example is money: it existed before capitalism, and was accumulated non-capitalistically (in so-called "primitive accumulation" through plunder, enclosure, and so on), but is then transformed into an "internal" element of capitalism, circulating autonomously, from money to commodity to money, and so on. Žižek points out that it is precisely this moment of transformation from external to internal condition that marks the birth of capitalism proper. As a psychoanalyst he continues by noting that such a "re-coded" external condition (the non-capitalist accumulation of money) is typically forgotten, repressed, denied. Could energy be a similar kind of re-coded condition, one that has transformed from externality to internality, becoming a commodity on the markets? Yes and no. Yes, because like money, energy is an external condition for the birth of capitalism, one that in capitalist economics is discussed as one replaceable internal product among others. No, because energy is also an external condition for other types of economic systems, including non-monetary ones. No, also because unlike money, energy is not a social convention, but rather a part of the non-human that has to exist in order for social conventions to take place. As critics of ideology like Žižek have shown, once established, conventions like money are a part of the foundation that forms human individuals ("bourgeois subjects"); insofar as energy as an internalized condition is also such a foundation of subjectivity, it

needs its own critique of ideology. The difference between money and energy is not in how they underlie human subjectivity, but in their existential status: money is (through) human (sociality), energy is (partly) non-human.

#### The Machination of Alienation

The experience of alienation has been a constant companion of the birth, growth, and triumph of capitalism and Western technologization since the times of the first industrial revolution. This is true whether or not we think that alienation means being robbed of some authentic or original nature. 6 If alienation is defined as an involuntary and negative experience, it can be seen as the passive and unconscious side of con-distancing since condistancing also has its active, willed, and conscious side. Alienation has been conceptualized as a distance created between a worker and her/his work (Marx), as a dissolution of organic community (Tönnies, Weil), as anomia created by rapid change (Durkheim), as a consequence of the mechanistic quality of a bureaucratic society (Weber), as the loss of authentic subjectivity while existing as an object (Adorno and Horkheimer), as an excessive division of labor (Zerzan), as a life-emptying technological selfunderstanding (Heidegger), as the disappearance of the sacred in a modern society (Jünger, Weil, Bataille), and so on. In the Grundrisse, Marx describes the experience of being a part of a machine in the following way:

But, once adopted into the production process of capital, the means of labour passes through different metamorphoses, whose culmination is the *machine*, or rather, an *automatic system* of machinery (system of machinery: the automatic one is merely its most complete, most adequate form, and alone transforms machinery into a system), set in motion by an automaton, a moving power that moves itself; this automaton consisting of numerous mechanical and intellectual organs, so that the workers themselves are cast merely as its conscious linkages.<sup>7</sup>

Capitalist production is here described as a total system that utilizes everything encountered so that even workers are nothing but "conscious linkages" in a huge machine with its own purposes. However, it is crucial to notice that this total machination, a unified network of machinery and humans, does not characterize only capitalism but also its hegemonic rival, state socialism. For instance, following Ernst Jünger, Martin Heidegger sees "total mobilization," the wholesale setting in motion of the society toward one singular goal, as originally a socialist phenomenon. Jünger and Heidegger view the first five-year plans of the Soviet Union as an attempt to direct all the material and spiritual forces of the society with precision toward predefined goals, as if in a war effort during peacetime. Especially for Jünger, this development is a continuation of the First World War where, first, everything was set in motion and, second, that motion was directed toward a definite goal.

As phenomena of total mobilization both capitalism and socialism may be called forms of productivism where what is set in motion is resources, raw materials, and the goal is material production. The production is governed either through (state-framed) markets or central planning. Here, machination is not only the construction of the productive machinery, but also its planning, optimisation, logistics, cybernetics (which, according to Heidegger, will replace philosophy), the biopolitics described by Foucault, and so on. Humans produce themselves as parts of the machine, and so the goals of the machine become inadvertently and efficiently the goals of modern life as such.

When the twentieth century has been called an age of totalitarianism, usually the term totalitarianism is taken to mean a political system, a combination of party and state that intends to govern all life under its purview. For instance, Hannah Arendt and Karl Popper have in this context blamed philosophical thinking for totalitarianism: in envisioning and presenting an over-arching and universal theory or scheme of things, philosophers give

politicians a mould into which they can start squeezing the rich and varied reality. Here the mistake of totalitarianism is to put reality in a Procruste's bed, trying to fit it — even violently — into a total vision that never allows for the true richness of life. However, Jünger's concept of total mobilization gives another meaning to the totalitarianism of the oil age. Total mobilization means simply that the mobilization reaches everywhere, so that, in Jünger's words, "With a pleasure-tinged horror, we sense that here not a single atom is not in motion, and we are profoundly inscribed in this raging process."

Jünger recognized total mobilization as a phenomenon in the First World War where the army was no longer a separate part of the state, but rather the state and society in their entirety became parts of the war machinery, when all material and spiritual resources were directed toward the war effort. Moreover, the situation continued after the war as an incessant arms race, doubled by economic competition and eventually a cold war. Jünger calls the kind of humanity that lives in total mobilization a worker (der Arbeiter): with the devotion and attitude of a soldier, the worker encounters the whole world as his/her workshop. The worker is close to and even a part of titanic elementary forces — not a God and not a human since he does not strive for heroism, sacred values, or love, but rather for the realisation of superand non-human goals without a general answer to the question "why?" or "what for?"9

Thus, the totalitarianism of the age of oil has two main characteristics. First, the setting in motion and acceleration of all resources and all life (total mobilization). Second, the channelling of this motion through a unitary plan, ideology, or goal (the total state, the totality of economy). These two characterize socialism and capitalism, liberalism and the welfare state, not to speak of national socialism and fascism.

From the perspective of natural history, productivism, or, in other words, economic totalitarianism, has as its consequence

urbanization, industrialization, mining of minerals, industrial production of livestock and plant matter, on a scale that is already visible from space. The growth of global population and of the world economy (as measured, for instance, by GDP) starts accelerating during the eighteenth century and reaches a crescendo when oil gains widespread global use. Marx's description of the automated productive machine, quoted above, captures in addition to the characterization of the organization of production and the experience of living in that organization (the experience of being a conscious linkage in the machine) a crucial third element: the movement of the automaton.

Strictly speaking, the automaton does not "move itself." It needs external energy in order to move, in order to work. Marx's description of machination already talks about a situation in which the automaton is not moved by the muscles of the workers. Rather, the workers take part as cognitive or intellectual knots in the machinery: they utilize their skills, knowledge, emotions, affects, sociality. The organization of the machine has bypassed human muscles as irrelevant and moved into the area of the mind. Alienation increases, as the consciousness of the workers is not their own, but rather functions as a part of the machine; consciousness moves through the workers according to the needs of the automaton. The worker is a part of a collective titan. However, this alienation that can be described in Marxist, Jüngerian, or Heideggerian terms would not be possible without the movement of the automaton, which in turn requires the input of energy, as Marx observes:

Not as with the instrument, which the worker animates and makes into his organ with his skill and strength, and whose handling therefore depends on his virtuosity. Rather, it is the machine which possesses skill and strength in place of the worker, is itself the virtuoso, with a soul of its own in the mechanical laws acting through it; and it consumes coal, oil, etc. (matières instrumentales), just as the worker consumes food, to keep up its perpetual motion. <sup>10</sup>

The amount of fossil fuels — oil, gas, coal — the machine eats is the third term that grows with population and the economy. The *matières instrumentales* mentioned by Marx are strictly necessary. Without them machination would not be possible; without them the experience of the past 150 years would be very different. Therefore we should call them also *matières expérientielles*, especially if we are, in a generally Marxist vein, interested in how the material world and its practices influence thought, consciousness, and shared social beliefs.

A telling detail is that Marx mentions coal before oil. Coal is the king of the nineteenth century as self-evidently as oil is the king of the twentieth. Even more striking is how the use of coal is again skyrocketing in the twenty-first century, after the production of oil has stopped growing. The productivist regimes, socialist and capitalist alike, were industrialized and grew their economies by burning fossil fuels.

Likewise, fossil fuels are the indispensable condition of population growth, for instance, through the so-called green revolution that raised crop yields globally. The green revolution is, in fact, a black one, since it meant the use of fertilizers and pesticides derived from fossil fuels and the use of fossil fuel powered agricultural machinery and transportation. Since the Second World War, agriculture has used, year by year, increasing amounts of fossil energy. The green revolution has massively increased the amount of units of fossil energy used for producing a unit of food energy. 11 It is characteristic and rather ironic that the raw materials needed for the green revolution (nitrogen, phosphor, kalium) were initially a surplus created by the military industry. The surplus was taken into use by chemical companies that very effectively found markets for them. This war was not waged over land, but against land itself, and a side effect was an explosive growth of human populations.

A similar shift happens in the field of political organization. Coal contains less energy per volume, is harder to transport and

to use than oil. Interestingly, the age of coal gave a solid launchpad for progressive political reforms. Like Timothy Mitchell has shown, the ability of three unions — coal miners, railroaders, and stevedores — to effectively shut down the British empire pushed through important egalitarian measures in the late nineteenth and early twentieth centuries. 12 Likewise, in the U.S., strikes by coal miners were a major challenge. Gradually capitalists learned to break the strikes, and thus formed a model to be followed ever after. Together with the transition from coal to oil this meant that the workers lost control of a decisive nexus in the productive machinery. Oil has almost always been produced in conditions of apartheid: the performers of physical work are a separate group often of different ethnicities — than the geologists, engineers, and other experts, and both groups are flown as Gastarbeiters into the fields from different parts of the world. At the same time, the big oil companies and the governments of Western countries, with the U.S. and the U.K. leading the way, played a skillful game of divide and conquer against the rebel governments and independence movements in oil producing regions. In consequence, the age of oil never engendered the worker power of the age of coal.

The transition from one fossil fuel to another is in its effects similar to the transition from non-fossil energy to fossil fuels. However, despite the differences between coal, oil, and gas, they also share a common effect in terms of political economy, one that is evident in the quote from Marx: these *matières* have lulled even the proletariat into believing that the automaton is independent and its growth inevitable. The idea that, through economic growth, lifestyles can be improved has contaminated the idea of class struggle in a way that is hard to untangle, especially for the Left itself. The development of an autonomous life and culture of the proletariat has also been con-distanced from fossil fuels so that if the workers do not outright demand the re-start of the capitalist machine of growth, at least they believe in the technological utopia of infinite growth. There is very little first-hand experience about

the material conditions of independence and equality.

The appetite of the automaton is enormous. For the production of every calorie of food that a worker eats, approximately ten calories of fossil fuels are used. In terms of work, the work performed by fossil fuels is an order of magnitude bigger than the theoretically maximum amount of work possible by human muscles. According to Vaclav Smil, in 2005 fossil fuels performed with the power of twelve terawatts.<sup>13</sup> If there are seven billion people, and each of them works at the power of 100 watts, we get 0.7 terawatts of muscle labor. This comparison reveals the tens of energy slaves — work hours performed by burning fossil fuels that serve the affluent citizens of the industrialized countries. To use Marx's analogy: fossil fuels move an automaton whose physical power is well over ten times bigger than the theoretically maximal power of human labor, not to speak of actual human labor. Currently the automaton eats each year eight billion tons of coal, three billion cubic meters of natural gas, and thirty billion barrels of oil.14

Despite all of this, energy as an ability to perform work has been seriously undertheorized in discussions of alienation. This is especially striking from the perspective of the mute energy slaves, whose role has only increased since Marx. Fossil fuels work a lot more than humans, and therefore it is they together with so-called alternative fuels — that, in fact, move the automaton. If we want to plan routes out of the hideous machine described by Marx, Heidegger, or Zerzan, we should focus our philosophical attention on energy and fossil fuels at least as often and as vigorously as on structures of ownership or on the technological understanding of Being. If a name is needed for this kind of experiential, phenomenological, and therefore politico-economical view on oil, it could be called *nafthology*. The Greeks of antiquity called naftha  $(v\alpha\phi\theta\alpha)$  the kind of flammable liquid that burned only brighter if water as poured onto it, as Alexander the Great reputedly discovered after bringing a lamp

close to a slave covered in naftha.

### The Conditions of the Auto-movement of the Machinery

Roughly divided, the machine needs at least four conditions in order to start. These conditions are not strictly separate from each other. Rather, they are intertwined in ways that theoreticians and critics concentrating on each of the conditions have described at length.

First, a set of spiritual conditions is needed. It is necessary to have a community of people that are open to total mobilization, that want to organize themselves and their environment for the purposes of material production, whether the goal is set in terms of economic growth, progress, comfort, and convenience, or victory in a war between ideologies. The community needs to be amenable to being instrumentalized and alienated, into living a life of discontinuities and accelerations. As a naïve but very real counterexample one can think of a community (say, an indigenous one) that sees nature as holy and oil as the blood of earth, not to be exploited or burned en masse under any conditions. There really have existed and still exist human communities that have refused productivism and embraced sacred values, taboos, or simply a fidelity toward the conditions of sustainable life. This contrast makes it possible to conclude that the spiritual conditions of the machine are specific, not universal.<sup>15</sup>

At the moment, the prevalent spiritual background of productivism is a capitalist society, where great geopolitical areas like Europe and Southeast Asia, individual countries like the U.S. and China, cities, municipalities, and finally individuals compete against each other. The competition is partly unwitting, as if forced, partly conscious, motivated by a fear of losing out, of falling off the wagon of the victors. The birth and development of the spiritual conditions has been analyzed, for instance, by Heidegger in terms of a 2000-year-long "forgetting of Being" (Seinsvergessenheit), not to speak of countless anthropologists,

theologians, sociologists, and so on.

Second, the machine needs certain social conditions. It needs a specific type of social organization, educational apparatus, legislation, bureaucracy, information technology, and so on in order to uphold a division of labor, and the growth in economy and population. Social sciences have had a role in both describing these conditions and in developing the social technologies needed. However, advances in consumption, advertising, urbanization, population statistics, and entertainment have often been made outside the purview of science.

Third, the machine requires technology in the sense of really existing material tools. The Greeks and the Byzantine imperium used oil militarily in various kinds of flame throwers and firebombs ("Greek fire"). If we believe Heidegger, the descent into a totally mobilized society and a technological understanding of Being begins already with the Greeks. In this sense, they might have had the spiritual conditions for a machinic use of oil, but they certainly did not have the technological tools. Likewise, the history of the industrial revolution illustrates that very specific cross-fertilizations of available resources and technological tools (for example, coal mines, steam engines, pumps, and railroads) are required for the eventual normalization of global fossil fuel use.

Fourth, the auto-movement needs fossil fuels themselves. There have to be fossil fuels and they have to be available for use. Fossil fuels are not created, grown, or manufactured by humans, even though they are "produced" in the sense of drilling and refining the raw material. Fossil fuels are also non-renewable in a human time-scale. In sum, they are a unique bounty, the mother of all windfalls. The productive machinery encounters them as raw material for various chemical processes and as fuel for warmth, movement, and, in general, work in the physical sense of the term. When the other conditions are present, coal, oil, and gas are the motor of the actual physical movement of the automaton.

In a famous way, Heidegger claimed that it is a mistake to seek for the essence of human being by putting the fact that humans exist in brackets: for him, the fact that humans exist is a crucial part of their being, their essence. Likewise, our wager is that the essence of industrial civilization as we know it cannot be sought if the existence of fossil fuels is in brackets. The existence of fossil fuels as a natural, human-independent endowment is essential for the spiritual, social, and experiential/phenomenological nature of industrial civilization and its machinery. Industrial civilization, including fossil capitalism and fossil socialism, is existentially petrochemical.

However, unlike the other three conditions, the existence of fossil fuels has received scant attention and analysis in philosophy. This neglect has at least two negative consequences.

First, the neglect may lead into an overvaluation of the importance of the other three conditions. This overvaluation may appear in both critical and uncritical forms. In uncritical views, the neglect of the existential aspect of oil leads to the illusion that capitalism (or socialism) as such leads to economic growth and prosperity. There are no real-life examples of capitalist industrial production producing wealth for large masses without fossil fuels. Large-scale capitalism without fossil fuels is, of course, possible in theory, but to equate capitalism and economic growth while disregarding fossil fuels is speculative, at best. The same goes for the belief that modern affluent lifestyles are guaranteed by the progress of natural science and technology. There is no empirical evidence of natural science and technology producing current wealth levels in the absence of fossil fuels. Again, such a situation is certainly possible and has been repeatedly described in, for instance, science fiction. But as empirically encountered phenomena, natural science and the concomitant technology need fossil fuels in addition to their spiritual and social conditions. Current levels of prosperity can be imagined, projected, and calculated without the burning of fossil fuels, but

we have no empirical data and no experiential familiarity with such conditions.

In critical views, the neglect often results in the supposition that changing something in the other three conditions is enough in order to topple the machine. So, for instance, some Marxist theories imagine that when ownership of the means of production is transferred from capital to the workers, the alienating machine disappears and productivism is overcome. In a similar vein, some eco-Heideggerian theories may imagine that total mobilization can be overcome through a meaninggiving non-calculative type of meditative thinking that says both yes and no to the technological world. A Marxist might retort to a Heideggerian that meditation does not help and may not even be possible if you are working as a conscious linkage of the machine. And a Heideggerian might remind a Marxist that collective ownership of the means of production does not help if the world is still seen as raw material for human purposes. Too many Marxist, Heideggerian, ecological, and anarchist theories neglect energy in general and fossil fuels in particular, and thus severely incapacitate themselves.

The neglect also produces great shots on wrong targets. When Marx and Engels proclaim in the *Communist Manifesto* that under capitalism "[a]ll that is solid melts into air, all that is holy is profaned," they think they are describing capitalism as such, but in effect the description concerns capitalism that is fed a bigger quantity of fossil fuels each year. <sup>16</sup> The misrecognition is understandable, since Marx and Engels were talking about capitalism of coal, and their followers saw capitalism of oil. If capitalism had reverted back to wood and water-power after coal, the description of the *Manifesto* might ring hollow. For Marx and Engels, the fossil fuel powered acceleration was also a reason to think that capitalism provided a step forward from feudalism. Consequently, the fact that the productive surge of socialism was connected to something non-human also remained

hidden. A similar naïveté characterizes views that see in Western prosperity proof of the ultimate superiority of capitalist modes of production, without paying attention to their motor force. <sup>17</sup>

That theories like Marxism — or certain liberalist theories of capitalism that claim to be focusing on facts on the ground and on material conditions of production — have neglected oil is singularly embarrassing. Maybe one expects less from abstract philosophy and cultural criticism in general. Still, when Heidegger described the current understanding of Being as an enframing (Ge-stell) that encounters everything as raw material or standing reserve for use, he is unwittingly talking about the capacity for work in fossil fuels. Without work there are no raw materials, neither concretely nor as a concept. Without work, technology and matter could sit beside each other doing nothing. Matter is raw in view of the work that can be directed toward it. Work, and not technology alone, enframes matter as raw material. Right now that enframing is performed overwhelmingly by fossil fuels.

Another negative consequence is a blind spot or lacuna with regard to energy itself. What is the meaning of a massive input of energy? If a particular way of organizing labor, of organizing the ownership of the means of production, of utilizing technological equipment, of master-and-slave dialectics, and so on have important consequences for social and individual existence, there is every reason to suppose that equally great consequences are produced by massive and ever-increasing inputs of non-human energy and work. If the other three conditions of the productive machinery do have social, spiritual, and phenomenological effects on human experience, there is no *prima facie* reason to think that the work performed by fossil fuels would not have effects of its own. Quite the contrary. As work that moves the automaton, fossil fuels are in direct contact with human muscles, emotions, and fates.

As unrecognized work, fossil fuels con-distance. They bind the familiar and the close to something unknown, maybe to something non-existent, to something terrific. For instance, everyday plastic things — and they are myriad, from the fibers in our clothes and the fillings in our teeth to phones and bottles — are connected with an umbilical cord to the environmental disasters and social oppression in distant oil fields. Likewise, a cord runs from the plastic items to the giant gyres of plastic debris in the oceans — debris that slowly pulverizes and enters the digestive tracts of marine animals and eventually the blood circulation of all mammals. Furthermore, invisible cords connect oil to the carbon dioxide, dioxin, and other toxins everywhere in the atmosphere. Pretty soon the only place not contaminated by the refuse of chemically modified or burned hydrocarbons will be the deep crust of the earth from which they originated. But these connections can remain unknown, unconscious, because the fossil fuels themselves make possible long distances and high hierarchies that hide the proximity of the near and the far, even though the near can exist only because of the far.

In a nutshell: the age of oil is characterized by a pervasive con-distancing caused by the increasing amount of work fed into the system. The con-distancing concerns everyday life as well as philosophical critique. In philosophy, con-distancing is revealed by the fact that the experiential effects of oil have not been recognized. The praise and the condemnation of the capitalist megamachine have been blind because they have not seen the influence of oil. This blindness must be called con-distancing because it in itself is made possible by fossil fuels. For instance, a society based on burning wood or on muscle power would not make the same mistakes.

There are views and theories that are blind to the uniqueness of fossil labor and that because of their blindness think that particular features of the capitalist megamachine are essential, if not sufficient conditions, even though they are possible only because of fossil fuels. Let us call such theories *nafthist*: we can include certain types of Marxism, popular market theories, certain types of ecological views.

In one extreme of nafthism we have Heidegger and certain types of Heideggerian thought that see the post-nineteenth century awareness of crisis in experiential terms. According to them, this mentality is characterized by technology that encounters everything in the world as raw material. From this point of view, all thinking in our age is bound to a technological framework: for instance, politics cannot but turn into an administration of resources. As an alternative, these views suggest non-calculative and meaning-seeking deliberation that eschews the technological understanding of Being. And why not? We do really need experiential and non-technological viewpoints. But even so, the Heideggerian analysis contains a dose of condistancing. A crucial link between technology and raw material is missing — energy, work. Matter is raw only in a world where it can be taken up as the object of work. Technology may very well be described as the totality of this taking up and enframing, but without energy and its work nothing technological happens. In the Heideggerian poetic view on our current age, technology has been con-distanced from work in a way that is possible only in a world of massive use of fossil fuels. 18

In the other extreme there are views that according to their self-understanding contain a sober and realistic view of the material conditions of human life. This group includes the type of Marxism in which the productive relations and the level of general cognitive and technological progress supposedly more or less determine human freedom. In this view, alienation disappears when class-relations based on private property disappear. Like in the case of Heideggerianism, here, too, the description of the solution may be along the right lines, but the analysis of the problem contains a dose of con-distancing. The dissolution of traditional (feudal, religious, patriarchical) forms of life in a monetary economy is also dependent on the possibility of inputting more labor to the economy each decade, and the input of increased amounts of labor is, in turn, dependent on fossil fuels. Crucially, fossil fuels

themselves, in their existence, are not dependent on productive relations or human cognitive or technological capacities, even though their mining, refining, burning, and so on, are. While this kind of Marxism sees a Heideggerian quest for a new god as regression back to pre-modern times, it has itself con-distanced human liberation and human-independent natural resources.<sup>19</sup>

However, the separation between human freedom and natural resources is possible only if copious amounts of cheap energy are available. Likewise, human cognitive and technological abilities can be seen as a thing on their own, as abstract reifications, only under circumstances of increasing energy inputs. The same goes, mutatis mutandis, for anti-Marxist capitalist theories and theories of market economy that think that the markets will find a replacement for any commodity once the price is right. In any even rudimentarily materialist world such a claim cannot be true, unless we assume ever-increasing energy inputs. If the goods have to be produced and brought to the market by muscle power, the market and its laws will be very different from the markets fed by a logistic chain of internal combustion engines. Furthermore, like a living human organism needs water and not a replacement of water — contemporary industrial civilization needs hydrocarbons. There is no replacement.

Against the Marxist critique of Heideggerianism, we want to emphasize the experientiality and non-human element in energy. Human liberation does not mean a liberation from the non-human in humanity, especially not a liberation from the non-human energy included in being a human. Therefore changing things on the level of subjects is not enough. Against the Heideggerian critique of Marxism, we need to emphasize the particularity of historical circumstances: the age of oil cannot be explained by technology alone, and alienation cannot be explained by liberalism (individualism) alone. By combining elements of Marx and Heidegger, we get a view in which the particularity of historical circumstances, their materiality and fatefulness, mean

also the locality of work and experience.20

There is no such thing as environment, experience, or energy in general; they always exist in the mode of particularity, or better yet, uniqueness. Therefore also both non-alienation and liberation are particular, happen in time and space. The antidotes to nafthism and con-distancing are localism in thinking and attention to the landbase. However, localism and con-distancing are not symmetric opposites. Their relation is unidirectional and biased. The material basis (which we will below call base matter) of localism is not dependent on how human cultures react to it. The existence of coal, oil, and gas is not dependent on human volition, while con-distancing as a human attitude is possible only under certain constellations of base matter. Therefore we must try to understand oil through its nature as base matter and try to see its importance for the kinds of experience that it helps to produce.

# 2. The Experience of Oil

Ich brauche Zeit

Kein Heroin kein Alkohol kein Nikotin

Brauch keine Hilfe

Kein Koffein

Doch Dynamit und Terpentin

Ich brauche Öl für Gasolin

Explosiv wie Kerosin

Mit viel Oktan und frei von Blei

Einen Kraftstoff wie

Benzin

Gib mir Benzin

- Rammstein, Benzin

### Overlooking Oil

Out of sight, out of mind. And: better the devil you know. Oil is encountered in its visible part — the pumps and lights of a petrol station — and the mass of the black iceberg is unseen. Invisibility is given a more metaphysical characterization by Ernst Jünger, who claims that the direction of history is decided by things that cannot be known. Fatefully enough, the non-knowledge of oil is of this historical kind.

However, there is a lot of experience of oil, of living with fossil fuels. Even though such experience may not have been named or recognized as the experience of oil, fossil fuels, or energy, it can still be recognized when we look at the experience in a non-psychological, non-individual, and asubjective way, avoiding all reductions into natural or social sciences. Insofar as the lifestyles and livelihoods of communities share commonalities, their experiences may also be similar. In a curious way, fossil fuels have unified ways of life throughout the globe, unlike muscle-based work, which tends to differentiate and make lives unique. Two

different levels of the experience of oil: oil as a leveller and unifier in general, and the historical experiential features of the age of oil in particular. Consequently, an investigation of the experience of oil needs concepts that do not reduce energy into any one thing — say, joules — and do not dis-affect energy from human being, will, muscle, work.

One of the few philosophers of the twentieth century to take the experience of energy seriously was Georges Bataille, who emphasized not only the connection between the internal/spiritual and the material/energetic but also the internal incommensurability and base-materialism (le bas matérialisme) of all experience. From the gnostic tradition, Bataille gets inspiration for conceptualizing matter as active. Bataille's view emphasizes the unknowability and darkness of matter, its night, which cannot be idealized or domesticated as a part of any ontological machine.<sup>2</sup> This base matter that has not been harnessed for human use, that has not been named, objectified, or individualized, lives in its own ways, has its own modes of existence and effectuality. As base matter, matter is unknown and hidden: a good example is oil before its industrial utilization. Over time immemorial, liquid darkness has been concentrated in the bowels of the earth. Once unleashed, its prodigious blackness makes human rationality twist. Matter like this is the most basic and at the same time the most unpredictable. It is incommensurable with human needs and goals. In its base form, matter does not serve; it is the sovereign part of things material.

Allan Stoekl claims that Bataille's notion of matter is, at root, alchemistic, stemming from writers like Giordano Bruno and de Sade, both of whom Bataille recognizes as his sources.<sup>3</sup> In Bruno's account, everything is matter, but matter is not matter in the sense given to the term in natural science. Matter is shot through with the soul of God, and there is no hierarchy in the continuum of God-matter. The presence of the divine enlivens matter and makes it act independently and meaningfully, as the alchemists

insisted. Consequently, Bruno's God also partakes in the blackness of matter, its destructiveness and aberrations, all the features that de Sade turned into the stuff of his perversions. Bruno, de Sade, and Bataille are connected by their attention to the active side of matter, without idealizing or categorizing it, without turning it into a resource. Bruno's God is in the rotting hare, de Sade's ecstasy is in the secretions of a whipped-up body, Bataille's gift is a "playful lightning" to which "the most alien thing is peace." The philosophy of energy by these thinkers is a non-human and black vitalism; it invites death to a play sequenced by the quirks of living matter.

Bataille distinguishes between two areas of life and economy: the homogeneous and the heterogeneous. The homogeneous is internally commensurable. As an example, one can think about the commensurability created by monetary value in capitalist economies. In contrast, the heterogenic is incommesurable both with regard to the homogeneous and in its internal composition. One example is the Durkheimian account of the sacred: there is the sacred of the right hand, all pure and noble, and the sacred of the left hand, filthy and disgusting. Energy and experience are heterogeneous in this sense: incommensurable, without center, and without a purpose. The homogeneous use of energy, its utilization for a given purpose and end (for example, work) is, according to Bataille, only a temporary phase in the heterogeneous movement through which all energy is ultimately uselessly wasted. An experience of heterogeneous energy is an experience of the purposeless, lawless, non-atomized, and nonindividual, which as such is sovereign in itself, like the sacred of the right or the left hand is sovereign beyond the homogeneous and commensurable. A crucial difference between Bataille and Heidegger is that while Heidegger distinguishes between a technological and non-technological use of energy, for Bataille energy and its use are inseparable.

In Bataille's view, homogenic economy — say, fossil capitalism

in its liberalist form — has been separated out of a general economy, also called the solar economy. The border between the two is delineated by the commensurability that aims at utilizing, reserving, and even increasing available energy. In contrast, the general economy is characterized by purposeless waste, analogous to the way in which the sun pours energy out of itself into empty space, at all times and in all directions. The general economy is heterogeneous since its energies have not been objectified according to a measure or goal. Even though the sun in a sense is one, its energy hits the earth in many different forms, along a wide band of frequencies and kinds: in the end, both the sun and the earth are debris from earlier material mutations. The sun and the earth are base matter; likewise the physical, chemical, and quantum-mechanical effects of the sun's radiation.<sup>5</sup>

In his Bataille-book *The Thirst for Annihilation*, Nick Land observes that even the most casual of natural immensities makes human illusions of infinity look positively puny. Fossil fuels are a good example of such an immensity that, by their very presence, warp human thought and hide from comprehension. The heterogeneous impact of the sun on the earth produced organic waste that the rapidly industrializing Europe, the West, and most of the globe enframed as a homogeneous resource. With its amount and capacity for labor, this homogenic mass produced an illusion of unlimited growth, limitless progress. At the same time, it poisoned rationality and withdrew from view.

Before the age of productivism, the heterogeneous elements in society were, according to Bataille, soldiers, priests, and the aristocracy. Their mission was to waste energy in a sovereign manner, to function as miniature suns like the Sun King. In contrast, the other strata of society are tied to useful production. Through the bourgeois revolution and through total mobilization, the area of heterogeneity shrinks. Everything must be productive, must serve the purposes of homogeneous economy. In Bataille's eyes, the special problem of capitalist production is a denial of

inutility, an attempt to make all of society an area of homogeneous production without residue, without waste, and therefore without sovereignty. As an ersatz for heterogeneous unproductive waste, the machine provides individualized consumption. The attempt fails since the servile is always based on the sovereign and the homogeneous on the heterogeneous — the tip of the iceberg does not count for the whole. However, the daytime consciousness of the Western mind is dominated by this attempt so overwhelmingly that even to talk about the heterogeneous much less to know it in a systematic manner seems impossible — therefore Bataille consistently calls an understanding of base matter *non-knowledge*.

Like all base matter, oil creates its own hyperversum of incommensurate centers of meaning (we will, below, call such constellations forests of foci). Since these distributed centers of meaning are in tension, contradiction, and heterogeneous with regard to each other, they only seldomly and typically in a warped way enter the organized world of daytime consciousness. The unknown cannot but be overlooked. Yet it manifests itself in experience, in life, and like the other conditions of the machine, it can be described on different levels. In different circumstances, climates, moments, and cultures the phenomena of oil are different, and one should not forget their uniqueness. However, sometimes these phenomena share recognizable features.

As base matter, one of the unique properties of hydrocarbons and of oil, in particular, is their stellar net energy that can be described by the concept of *energy return on energy investment* (EROEI).<sup>7</sup> The value of EROEI is given by dividing the amount of energy gained by the amount of energy spent. If the value is greater than one, energy has been gained; if lower, energy has been lost. If the work needed to produce one barrel of oil is bigger than the energy in a barrel of oil, the EROEI of the production is below one, and further production decreases the amount of energy available for use.

When the EROEI of an energy source is well above one,

production pumps more potential labor into the automaton, thus creating an illusion of self-propelling movement. Therefore high EROEI is the property that gives the age of oil the feeling of "all solid melting into air," of transience, mutability, acceleration. As if anything could be transformed to anything else, as if any given process could be sped up or perfected at will — if only the resources are directed and managed in the right way. The unrecognized root of all this is the copious amount of high EROEI energy, without which both technological machination and obscene social hierarchies stop functioning.

The EROEI values of early oil fields — over 100 — are historically unprecedented and unique. No other known source of energy, with the exception of the best seams of coal, comes even close to the EROEI values of oil, especially not in the volumes of oil.8 Simply put, the high EROEI of oil and the large amount of oil together intoxicated the human ape so that it started imagining that the effects of oil were due to the ape's own merits. It started to see a combination of virtue and natural determinism as the roots of its prowess. Alas, there is no virtue in burning fossil fuels and no determinism in base matter. However, this unholy combination of determinism and human ingenuity has haunted most accounts of technology, capitalism, socialism, progress, and so on. Are technology and economic systems the inevitable results of evolution or the historical achievements of human communities?9 The ape does not know for sure, but boy, does it think it has deserved its bounty!

The intoxication caused by high EROEI oil warps not only accounts of the merit given to natural science, technology, and economic systems, but also distorts knowledge of history. Jared Diamond has described how the Europeanization of the world that started in the age of the great discoveries was conditioned by quirks of natural geography. Most of the plants and animals that could be domesticated and used for food and labor happened to live around the Mediterranean. This meant a head start in

agriculture. In contrast, Australia and South America did not have many animal species that could be domesticated, nor many plants amenable to agriculture. By living in proximity with chickens, pigs, and cattle, the populations around the Mediterranean caught epidemic illnesses transmitted by livestock and gradually became more resistant toward them. When Europeans later travelled to other continents, the germs decimated populations with no immunity.<sup>10</sup>

A similar path-dependence can be detected in the rise of the West during industrialization. The high-energy content coal seams in Wales gave the U.K. an advantage, especially in powering naval vessels. In the U.S., oil was discovered on the ground or gushing out in such copious amounts that some sort of commercial use had to be invented. Since the Second World War, the oil of the Middle East has always received the special attention of the U.S. and European countries, creating oddities like Saudi Arabia, not to speak of countless wars and coups. Many political analysts have pointed out how the U.S. needs to set up "good dictators" and "stable governments," which in turn engenders an atmosphere of hypocrisy and exploitation, feeding Islamic fundamentalism. Industrialization and the building of the automaton started in Europe and the U.S., and the upkeep of this systematic imbalance through economic and military policies has created the situation in which "our oil is under their sand," or, as in Finland and big parts of Europe, "under their tundra."

The collapse of the Soviet Union happened simultaneously with its oil peak. Some Western strategists have been quick to take part of the credit for themselves: the arms race drained Soviet resources and the oil finds in the North Sea destroyed a sizeable chunk of its oil revenues. After a severe fall in oil production during its first ten years or so, Russia has been able to increase production and is at times the world's biggest exporter of oil and gas. The rise of the Phoenix Russia with the Gazprom-czar Putin at the helm is one of the most important geopolitical phenomena

of the early twenty-first century, one that is still not sufficiently understood. Many European leaders think that they can bind Russia tighter to Europe and to European values by increasing energy imports from Russia. However, they fail to recognize that in this game Russia holds all the cards. This is also one of the experiential effects of the blind spot: in the name of democratic values, serious statesmen do deals that amount to treason and feed oligarchies.

After the financial crash in 2008, Western leaders have had to learn new ground rules: a recession in the U.S. and in Europe does not necessarily push the price of oil down since willing and able buyers can be found elsewhere. As a surprise, the richest countries are not anymore the biggest buyers of oil. The end of the growth of oil production has also implied a retro-energetic solution that is embarrassing to all ideals of scientific and technological progress: the energy source that comes after oil is the energy source that preceded it — namely, coal. Only coal has a high enough EROEI and exists in sufficient volume to pick up the slack left by stagnating oil production.

Even the most basic metaphor of market economy, the invisible hand that through the law of supply and demand brings buyer and seller together, has a hard time in the post-growth era. Oil is too expensive for buyers, causing demand destruction, even though only increasing use of energy could generate economic growth. At the same time, the price is too low for producers because the EROEI values are plummeting. Production is harder and more expensive, day by day. The low-hanging fruit have been picked, and now oil has to be drilled from wells deep under water, in arctic areas, or even washed out of oil sands. The producers need a higher price; the consumers are unable to pay. Instead of fixing the matter, the invisible hand strikes a wedge between buyers and sellers. Too-expensive prices squeeze the consumers, and at the same time the producers have to abandon and mothball oil wells. Moreover, since oil is a necessary part of transportation

and industrial production, the rise in oil prices means a rise in the price of so-called alternative energies.

How are surprises like this possible in the first place? Have not politicians and scientists been paying attention to coal, oil, and gas? Do we not know the consequences of technological and economic titanism? If there are blind spots here, we have to further analyze the experience of con-distancing. We have to look both at everyday and critical experience. Together, con-distancing and the blind spots produce surprises (due to the blind spots) and the necessity of them (due to con-distancing). The task for nafthology is to connect these seeming opposites.

## The Destruction of the Locality of Localities: Atomization

Stealthily, oil directs history. Geopolitical effects may be the most visible, but like the carbon dioxide that results from the burning of fossil fuels, a pervasive atomization, a cutting-off of holistic bonds, has been pushed by the age of oil everywhere. Maybe the most recognizable consequence of con-distancing is an overall disassembly of material feedback loops, experienced as a lack of a general view and as alienation.

Already in the essay "Total Mobilization" from 1930, Jünger first discusses the instability and opaqueness of the situation. He wonders whether the concept of progress is not really a front for something else; maybe the plans made in terms of progress are really marionettes in the hands of something deeper. The disappearance of fast vantage points, of measure, of overall *Gestalt* is not only the dissolution of synthetic overviews in favor of the multi-centered and dark non-humanity of oil, but more specifically the dissolution of localities, of bioregions, of landbases. The mutability of oil, its alchemical ability to be transformed into virtually anything and its pancratic ability to move virtually anything, shatters the recognizability of localities as localities, whether they are conceptualized as natural areas, cultures, or a nexus of skills. When feedback loops are long

enough, they disappear from human view. For instance, when carbon dioxide emissions, waste, and the production of raw materials are removed far enough from consumption, they vanish into blind spots.

Paul Virilio has observed that every form of technology contains its own type of catastrophe. <sup>11</sup> The twentieth century was not only the century of Auschwitz and Hiroshima, but also the century of the *Titanic* and Chernobyl. As Virilio crystallizes, whoever invented the ship also invented the shipwreck. Analogously, whoever invented polystyrene also invented the plastic gyres in oceans. Because energy is a part of all technology, it is also a part of all accidents and catastrophes. However, energy is not the same as technology. Therefore also its dark side is different from the more or less punctate technological accidents. <sup>12</sup> As base matter, energy spreads its night far and wide, like a film of oil on water. With the same power that creates indoor sports in the winter and ski slopes in hot deserts, oil also enables the disappearance of any feedback mechanism, of any connection.

Because of its high EROEI and big volume, oil is a potent narcotic, sedative, and smokescreen. Carl von Clausewitz's writings have inspired the term "fog of war" to describe the inevitable uncertainty in a situation of war.<sup>13</sup> It is impossible to know the situation in real time since the events cannot be stopped and their meaning analyzed properly. In a metaphoric way, industrialization has been called a war on nature. Along this metaphor, one big reason for the fact that many environmental catastrophes have come as surprises is the fog of war. First coal, but more essentially, oil produced a generalized fog of war in which both thinking and action lost their predictability and precision.

The idea of locality and its importance can be approached via the notion of focal practices as explained by Albert Borgmann. <sup>14</sup> The experience of living in a productivist world is the experience of being at the mercy of opaque and complicated systems whose origin, function, and even purpose are often unclear. Borgmann describes the phenomenon by using heating as an example. A house can be heated using a fireplace. This requires a lot of physical work if one has, for instance, to provide the wood for a long winter. The labor requires a lot of time and planning ahead. It is important to know the quality of the timber since the details of moisture, energy content, and so on mean a lot in terms of spent time and sweat. At the same time, the production of heat is always present in the everyday as logs, axes, saws, the timber house, the hearth, the matches, and so on. This enables the development of skills and a shared understanding of what is needed for the upkeep of the house. By contrast, the heat for a home in a high-rise building is a product that has to be paid. The origin, production, and conduct of that heat is unknown to the dwellers; sometimes the details are even unknowable. The energy company providing the heat may be better aware of the details, but that knowledge is cut apart from the experience of living in the home. Some kind of skill is needed in order to get the money to pay the heating bill, but this skill is very different from the skill of chopping and curing wood, tending a fireplace, and so on.

The skills of productivism are generic, abstract, dispersed, mediated, and atomized. In Heideggerian language, they separate the cognitive and the bodily aspects of human being so that the development of *Dasein* into an authentic direction is not likely or even possible. When the consumer observes that her or his car does not care where the gasoline for it comes from, the heart of nafthism is revealed. The consumer lives in a fog of war waged by and over oil.

Borgmann's suggestion for the overcoming of productivism or, in his words, "the device paradigm," is a certain type of focusing. Focal practices gather human being around a focus that demands skills, traditions, and sociality. An example may be heating with wood, as mentioned above, since it engenders a bodily and skilful gathering around a meaningful practice that

can be socially transmitted over generations.<sup>15</sup> Another example is a meal prepared together, combining spiritual, social, and material elements.

According to Borgmann, focal practices are able to heal the fragmentation caused by the device paradigm. In focal practices, the commanding presence of artifacts and actions becomes possible: these practices demand engagement, skills, and concentration in ways that make humans as a whole grow. Like localism, focality functions against con-distancing. Through training, a focal practice builds up a holistic skill, makes stronger its connections and centrifugal tendencies. A forester is challenged by the forest, and the forest in turn is challenged by the forester; the forester reacts with the store and the hearth, which in their turn change the timber and so on. If this mutual challenge can go on for generations, sustainable skills may be developed so that humans can live with their environments in ways that are both socially and ecologically sound. In this way also the human part of the challenge can be meaningful: it is not any more a technological enframing, but a developed part of the life of the local landbase.

What focality means in terms of practices and skills, locality means in terms of geography and space. The core of both phenomena is a specific set of skills and specific spaces that direct a living gestalt-oriented understanding, where connections, dependencies, and symbioses can be revealed — especially if those connections and dependencies span individual human lifetimes. Focality and locality are both connected to embedded action, so cognition in the narrow sense of the word is secondary for them. Cognition either is a significant part of the emergence of focality and locality, or then it is not. In contrast, focality and locality are characterized by a tendency toward non-individual sustainability without which they would not exist in the first place. <sup>16</sup>

The disappearance of the locality of localities is one side of

the destruction of focality. High EROEI oil atomizes localities and skills. Complex goals are dispersed into discrete and disconnected tasks. When the locality of localities does not exist anymore, they cannot guide focal practices. Localities grow smaller, more individual, and their capacity for sustaining nonindividual and multigenerational experience withers away. On one hand, localities lose their history that is connected to the earth (also in the Heideggerian sense of *Erde*); on the other hand, they also lose the mythical, memory-transmitted, often oral and practical knowledge connected to it. This makes the recognition of focal practices harder, and the knowledge that they bear more individualized, as if it were one alternative among others. Localities are atomized, and every atom is, in terms of total mobilization, in movement toward predefined goals. For the totally mobilized human (such as a person owning and driving a car), the total movement is invisible since she or he is implicated in it. Points of reference and comparison are transformed into vectors of movement.

The political scientist Elmar Altvater has called the current system "fossil capitalism." <sup>17</sup> In his analysis, the death of locality is caused by the organization of production made possible by fossil fuels. Indeed, fossil fuels and capitalism fit together like hand and glove. When cheap energy for transportation is available, production can be abstracted from any given local circumstances. Likewise, artificial lighting gives production freedom over time of day. When the location of production does not matter or can be changed at will, the workers also lose most of their bargaining power. Even more darkly, fossil capitalism can be analyzed as a form of Raubwirtschaft or plunder economy, where the decisive moment of economic activity is the capture and overuse of resources. Jussi Raumolin has studied capitalism as Raubwirtschaft from the perspective of entropy: here capitalism also means the purposeful colonialist destruction (entropy) of certain localities so that other places can be developed.<sup>18</sup>

The other face of the destruction of locality is the unification of times and places. When Heidegger wants to discuss the differences between historical understandings of Being, he uses as examples Greenlanders and African "Kaffirs" — these groups have, according to him, a Dasein and a world different from the German one. <sup>19</sup> Some differences certainly persist, but unification has made ample progress since Heidegger's times. A copious amount of energy and work is needed for such unification and levelling since left on its own, base matter in the landbase keeps on multiplying: imperiums collapse and dominant languages break down into dialects and new vernaculars. Because of this unification and levelling, the destruction of locality can be called atomization in the classical Democritan sense of the term. Due to high EROEI fossil fuels, localities are broken up, not into unique and specific singularities, but into identical, mutually exchangeable abstractions.

The idea of focal practices relates also to Heidegger's notion of thing (Ding), in which the fourfold of gods, mortals, sky, and earth fold together in a playful manner. 20 For Heidegger, the thing folds together a whole world. The thing is a holistic and holographic focus that may take quite mundane, temporary, and unassuming shapes — a creek, a brace, a mirror. A thing is more powerful than an object, since things cannot be copied, multiplied at will, and are therefore outside the productivist realm. The idea is interesting and promising in the way it illustrates focality, but it does not sufficiently reflect the locality of places. The Heideggerian notion of thing is prone to attempts of purification and hierarchization: a thing is better than an object, and an object can become a thing through some kind of spiritual purification where the technological misunderstanding is peeled off. In general, all figures of thought where the demanding, good, and lofty special case (a thing) is separated from the fallen, everyday, and dirty ordinariness (an object) are suspect. If the experiences that are striven for are special peak cases, essentially different from

the day-to-day, they are con-distancing, even though possibly in a different way than the type of con-distancing that they are intended against.

On the other hand, it is possible to imagine situations in which a productivist object, let us say a box of matches, gathers in itself a whole meaningful world. Even though Heidegger's fourfold is multiple, it is in the essay "Das Ding" presented as a closed and self-sufficient whole. Despite its playful heart, the Heideggerian thing seems like a glorified fetish, without the unpredictability of base matter, without the necessary experimentality and impurity of focal practices, without the "fog of play" in which technology does not in any clear way separate from non-technology.

### Sovereign Break

Oil binds by breaking. As an experience, oil breaks up localities and enforces totalization. It is always ready to double any hierarchy, always able to increase the forces directed at one point and the levels of specialization added on top of each other. Oil con-distances horizontally. A highly developed division of labor is possible only under circumstances of productive surplus, and high EROEI fossil fuels enable division of labor on a global scale while at the same time supporting hierarchies in which commercial companies govern millions of square kilometers and financial derivatives grow many times bigger than the global GDP.

The breaks produced by binding can be illustrated by ideas from Simone Weil's thought. Weil identifies by the name *force* a basic principle that obtains both in the spiritual life of humans and in their social interaction. Like Schopenhauerian *Wille*, force forces us to stay alive, to eat, to manipulate, to behave violently, to utilize, and govern; it enslaves and makes inhuman.

In her famous study "The Iliad, or the Poem of Force," Weil describes the way in which force turns both the nobleman and the commoner into objects, overturning the Kantian maxim according to which humans should always be treated as goals in themselves.<sup>21</sup>

Force makes people appear as instruments, resources to each other and to themselves. The low, the vanquished, is in the eyes of the victor a lump of matter, and the best military leader is the one who gets his or her soldiers to see the enemy as objects or, even better, as something to be destroyed. The victor does not, in effect, choose to see the vanquished as an object; the master does not choose to see the slave as non-human. They do so because they are themselves utilized by force; they are performing their psychological and social roles.

Weil's analysis supports a social revolution, in a wide sense of the word. <sup>22</sup> To work, for instance in factories, is to be objectified by force. Forced by hunger and ultimately physical violence, people slave at repetitive and meaningless tasks so that both their spiritual and physical humanity is crushed. The struggle for survival in conditions like this is, also according to Weil's own experience, so constrained and wearying that even the desire to think and to be free becomes alien. But the upper strata of rulers is not free from the web of force, either. Its members have to struggle both in order to stay in their class and ahead of their competitors, and also in order to keep the lower classes oppressed.

According to Weil, even a rudimentary division of labor reveals the inhumanizing force. If one person decides what is to be done and another carries out the doing, the decision maker almost by necessity thinks of the doer instrumentally. Due to this asymmetry, the lower classes usually have a better grasp of the truth. Because they experience hunger, they feel the negative side of force in their flesh unlike the members of the upper classes, who can at least temporarily imagine themselves in control of their destinies, even though at every moment their existence is carried by the toil of the lower classes.

If even the most minute division of labor means bending into the inhumanizing will of force, if this happens even while picking berries or gathering hay, it is easy to imagine what happens when division of labor is connected to the power of millions of tons of fossil fuels. Tasks can be divided and subdivided, the interchangeability and standardization of human laborers taken further. Chaplin's *Modern Times* is too merciful toward this tendency. At the same time a precise Taylorist and Fordist division of labor enables an increase in hierarchy, piling decision makers on top of decision makers. In this way hierarchization, pyramidization, and the centralization of power are not the opposites of the breaks, uprootings, and displacements caused by oil. They are its other face. A clear indication of this Janusfaced atomized centralization is the fact that there is often scant communication, affection, or sympathy between the different levels of the hierarchy. Oil builds sky-scraping pyramids, where the dwellers of different floors and blocks rarely meet.

Out of the different fossil fuels, oil is the most prone for hierarchy. It can be easily transported and stored, and contains a lot of energy per volume. By governing the production, transport, storing, and use of oil, massive energy surpluses may be gathered in order to build automatons, entertainment industries, and armies that past empires could only dream of. There have been, to be sure, some attempts at enlarging the number of people benefiting from oil revenues, like the oil funds in Alaska, the redistribution schemes in Venezuela and Libya, and the massive oil funds in Norway. However, most of the time oil finances oligarchies, timocracies, and various forms of mafia capitalism, where big owners, sheiks, and industry lobbyists live in obscene splendor while at the same time on the other side of town virtual or literal slavery is the order of the day. As the protagonist, called Z, of Reza Negarestani's oil dystopia Cyclonopedia puts it: "To instrumentalize oil through production... is like feeding on the Devil's excrement or its derivatives; there is always the danger of being poisoned to death or even worse."23

Simply, oil holds up unprecedented horizontal structures. At the same time, it breaks up communities, skills, tasks, experiences into ever smaller and more standardized units in order to pile them into Byzantine hierarchies. Whole populations, not to speak of individuals, are isolated in their towers and cellars without any knowledge of the outside world. Everything works as if on rails — even though without its black motor the auto-movement is only an illusion.<sup>24</sup>

Plato suggested that it would be proper if the richest citizen would own at most four times more than the poorest. <sup>25</sup> Currently, ten- if not hundred-fold wealth inequalities are normal in Western societies, not to speak of global imbalances. Of course, the gap between the king and the pauper has been near infinite before. The uniqueness of oil-based social infrastructure is that wealths that are separated by several orders of magnitude become normal parts of the global division of labor. A typical Western person enjoys the services of tens of energy slaves as if by birth right, while absolute poverty is as absolute as before. 26 These days the difference is not normalized through openly racist and biologist narratives like during the early days of the industrial revolution. Rather, the current normalization claims that the rich deserve their energy slaves because of their higher level of technological proficiency. Expertise, creativity, innovation — these are the terms of contemporary racism.

It is not likely that coal could support the hierarchies of oil, not to speak of so-called alternative forms of energy. The percent alized power. The punctate nature of oil resources makes possible their military and economic control, and the transportability and storability of oil together with the apartheid-like circumstances of production have created an energy system that is surprisingly centralized given all the talk on how centralized systems are inferior to market based ones. Current modes of transportation and industrial production are essentially impossible without oil. The leaked Bundeswehr report from 2010 estimates that ninety-five percent of all industrial production is in one way or another dependent on oil. 28

The most characteristic experience of oil is one of shock:

climate change, plastic in oceans, dioxins in blood. The three other conditions of the productive automaton were results of more or less conscious planning; the homogeneous world was designed and built, and it was wanted by powerful groups of people. The transition from God's creation to rational utilizers of inanimate nature was purposeful. Myths were taken down, icons smashed, religious authority discredited, nature unveiled and forced to reveal her secrets. The social and technological conditions of the automaton have received intense attention in terms of research, experimentation, and development. Maybe these conscious efforts have not been as effective as their self-congratulatory histories suggest, but at the very least we can say that there have been and still are important political, economic, and scientific institutions in whose eyes the spiritual, social, and technological conditions of the automaton are on the right track and could be developed even further in the right direction if resources were allocated better. In contrast to this, the fourth condition, the existence of fossil fuels, was neither planned nor predicted. It was like the legendary ants finding the body of the philosopher. This original moment of non-planning and non-prediction has followed the works of oil ever since.

The blows given by oil and its unpredictability are the clearest signs that energy is not only the extension of human will, not the augmentation of human purpose and action, not only a longer arm or a controllable tool. When combined with the other three conditions, fossil fuels produce a homogeneous world, but they also produce something else, something unpredicted and unpredictable. In the standard account, technology is double-edged: all new tools have both a military and a peaceful application — and following Virilio we should add the third edge of the accident embedded in both of these applications. But energy is multi-edged, its quantity and power incessantly turning into new qualities. Even the massively totalizing capitalist automaton with its homogenizing and centralizing tendencies

cannot hold oil energy in check. That which was supposed to guarantee, make calculable, optimize, and secure, in fact also makes more vulnerable, dangerous, and unpredictable. There is no stable way of being dependent on oil, as there is no stable way of being hooked on drugs.

As metaphysical — that is, as a structure structuring other structures — the experience of oil is an experience of break. The threads holding together focal practices are cut. The connections and feedback loops creating localities are broken. The multigenerational and traditional lifestyles symbolized by gods are destroyed. As Jünger rhapsodizes in the essay *Über die Linie*, it seems that humanity has entered a place where it is rudderless and sees its own history as if belonging to another species.<sup>29</sup>

The break speaks of the sovereignty of oil. The sovereign in Bataille's theory is something that does not serve, is valuable in itself and incommensurable with everything else. Following this, oil can after Negarestani be interpreted as a measure-giving force rather than being subordinated to something else, be that technology or money. Oil has, to be sure, always had its price, but it has become evident that the oil price is what sets all other prices. Since the waning of oil discoveries in the '60s and after the U.S. oil peak in early '70s, oil has been setting the value of money.<sup>30</sup>

The metaphysical break inherent in oil can be further analyzed using Carl Schmitt's famous definition according to which the sovereign is able to institute a state of exception, a lawlessness that then grounds a new law. In Bataillean terms, this sovereign is a heterogeneous force that underlies a given homogeneous order. When oil enters an economy, it creates a state of exception. The old rules of production, consumption, distance, work, and free time do not apply anymore. The state of exception becomes the new normal and the change of paradigms the new paradigm. The arrival of oil or, more generally, fossil fuels never just empowers the existing homogeneous order; it also breaks it down.

Industrial agriculture, "the green revolution," is not the

same thing as a horse-driven agriculture; factory ships are not the same as traditional fishing. The railroad is not an upgrade of the dirt track; it is something qualitatively different. When the other three conditions prevail, and when the input of oil can be constantly increased, we get the mutational series exemplified by the last century: industrialization and post-industrialization, Fordism and post-Fordism, modernism and post-modernism, urbanization, globalization, mass society, the risk society. Only exceptional social circumstances (as in Cuba) or relative distance from important economic centers (as for some groups of craftsmen and -women and groups outside wage labor) can somewhat soften the state of exception.

The moment we are living in — the early years of the twentyfirst century, when the growth of oil production has stopped - introduces another state of exception. The first was the beginning of the age of oil; the second is its stagnating growth. A third state of exception is already looming: the decline of production. Now, during the second exception, demand grows but production stalls. A sovereign shock is felt as the normality of the past 150 years is slowly crumbling. The so-called Great Recession after 2008 has partially masked the energy crisis behind the financial crisis, which is real enough and has its own causes. However, behind the mask, economic growth is grinding to a halt when the automaton does not receive increasing energy inputs: the logic of economic growth does not function "normally." The new state of exception means the return of some old truths in new guises. When growth ends, exploitation is again exploitation. The economic gains of one person are the economic loss of another. The analyses of nineteenth century Marxism and anarchism gain renewed relevance.

For political economy the new normal means the problematization of the invisible hand. The habitual idea that the invisible hand, especially while armed with science and technology, will find a replacement for any commodity does

not work when the EROEI of the energy supply is falling. All commodities are not created equal. Some commodities are needed "in themselves," and there is no substitute. High EROEI oil is a good example. Artificial oil can be produced, but the production always takes more energy and raw materials than the product provides. The EROEI, transportability, transformability, and storability of oil cannot be replaced, especially not when industrial infrastructure has for decades been built for oil. This means that narrow-minded economics faces a surprising paradox: the price of oil goes up, and at the same time the price of alternatives and their development also goes up. The impeding scarcity of oil not only makes alternatives more appealing; it also makes them harder to find. Production becomes more expensive, capitals are missing, debt levels rise: the fog of war thickens. A good example is nuclear power, the construction of which demands massive amounts of special types of concrete and steel so that increasing oil prices push the price of nuclear up. Nuclear power is a phenomenon of cheap oil.

#### Acceleration

Oil does not only create change, but increasing rates of change. All that is solid melts into air, and the melting is faster, year by year. Futurism took up the torch of acceleration; various forms of romanticism opposed it. The sovereignty of oil has a privilege previously reserved for gods: it can change the way experience is experienced.

Oil did not only produce new types of experience: it changed the nature of experience itself. The basic properties of oil, transportability and transformability, created a way of life in which singularities can be overcome, exchanged, replaced. Local particularities literally do not matter when oil punctures through regions and limits, creating a cosmopolitan space where movement is the normal state. The basic experiential form undergoes a phase change from solid into liquid. In his collection *After the Future*, Franco "Bifo" Berardi has helpfully condensed features of the twentieth century, from the initial consciously iconoclastic cries for futurism in its aestheticosocial (Italy) and politico-economic (Russia/Soviet Union) forms, up until the corresponding provocation expressed in the punk slogan "No Future" in the late '70s. In Berardi's words, the past 150 years were the time in human history that *trusted* the future:

The idea of the future is central in the ideology and energy of the twentieth century, and in many ways it is mixed with the idea of utopia.... In the second part of the nineteenth century, and in the first part of the twentieth, the myth of future reached its peak, becoming something more than an implicit belief; it was a true faith, based on the concept of "progress," the ideological translation of the reality of economic growth.<sup>31</sup>

There was reason to trust as progress did, indeed, deliver many of the goods it promised. Investment and interest both presume more work being done in the future. The psychological energy that Beradi talks about, and the energy doing physical work, were mixed in an intoxicating orgy of increase: progress as the ideological translation of economic growth, nafthism as the phenomenologico-experiential translation of progress; and all of this motored by fossil fuels (together with the other conditions).<sup>32</sup>

Timothy Mitchell has added an epistemological dimension to this experience of acceleration. <sup>33</sup> Because ever greater amounts of oil were available, effortlessly, one did not have to worry about the availability of energy. This is a form of nafthism that in its extreme imagines energy "too cheap to meter." The automaton was lulled into trusting that its motion was, indeed, automatic. This trust, in turn, made possible a new calculability that did not have to deal with the issues of renewability of natural resources. Without hesitation, Mitchell sees the science of economics as one consequence of this nafthist trust. According to him, economics as an independent science is not born in the nineteenth century, but only during the early decades of the twentieth, when it

becomes possible to concentrate on the supposedly independent flows of money without the irritating and supposedly irrelevant connections to physical facts, such as non-renewable resources. Economics as science is born through con-distancing, when money is separated from the physical world and work. By the same token, economics gets separated from politics. The separator and the connector is yet again oil. The work performed by oil creates the distance between economics and nature; the same work conducts the industrial destruction of nature even though the two, industry and nature, were supposed to be separate.

The experience of acceleration can also be connected to late modernism. The phase transition from solid to liquid was not enough. Some claim that there is a further transition to gaseous form, in wait of the trans-humanist singularity of plasma. The social order based on oil work is not distinguished by how people see matter and meaning. The acceleration changes the meaning of everyday life. On a general level, the spheres of matter, spirit, economy, and nature can be separated because they have their own oil-based sciences and institutions. On a different level, the fragmentation of lives becomes universal culture, and commodified "experiences" are used as the building blocks of individual identities. For the individual, the experience saturated by oil is not affected by the arrival of spring — the experiential and meterorological hybridization of the seasons has accelerated the turn of years into quartile force vectors without qualitative differences or singularities. As future is condensed into a very thin layer just barely in front of us, history is pulverised. Access to past times and multigenerational experiences is bought as retroproducts that themselves are surprisingly often plastic.

Paul Virilio observes that the pyramid of wealth is the pyramid of speed.  $^{34}$  In other words, the ability to move fast — faster than the others — is synonymous with power and wealth. The link is clearest in war and in preparation for war, where the control over an area is dependent on control of movement and speed.

The connection between speed and power determines social formations and change. Virilio calls the study of the social and experiential effects of speed and acceleration *dromology* (from Greek *dromos*, "race"). Since speed, acceleration, and logistics are after the nineteenth century phenomena of oil, nafthology and dromology overlap: what kind of speed, acceleration, and logistics are given by oil?

The experience of acceleration is a clichéd description of the twentieth century.<sup>35</sup> The priorities of life and technological systems change several times during one lifetime, ever faster as the century progresses. However, the metaphor of acceleration, based on a Newtonian notion, is probably not the best characterization of the experienced rate of change. The speed does not only accelerate, but also decelerates, even stops. The change happens characteristically in a series of thrusts. Like the shock doctrine described by Naomi Klein, the change comes as a massive wave, breaking and causing a crisis — precisely because the change would not be possible without its suddenness and criticality.<sup>36</sup> The massive free labor of oil makes it possible to transform entire landbases and populations in a couple of years, if not months. No war is necessary since crises in peacetime and sudden changes that appear positive (how should one think of urbanization, for instance?) also break livelihoods and the life-worlds connected to them. But the thrust wanes and may cease altogether, even though these periods of waning often are left out of the histories of progress and development.

Like the eye of Sauron, the gaze of geopolitical centers turns from one place to the next. Once fixated, it pours a crushing surge of surplus energy onto the locality it wants to transform. Sauron was one and had only one eye; the regime of oil has many. This, finally, causes a situation in which we see not only the melting of all that is solid, but also quick solidifications, as that which has been set in movement has to stop, at once. Consequently, both escape and movement as well as stationary steadfastness can

function as antidotes to capitalism, depending on the situation. In both cases, staying put and escaping, the crucial thing is their experiential energy that must be heterogeneous with regard to the homogenizing and, in Weilian terms, inhumanizing energy of fossil capitalism. This is because fossil capitalism can easily recuperate forms of movement and stationariness. Only by being heterogeneous and by tripping the centralizing tendency of fossil work can any form of flight or resistance hope to be independent.

Both liquidification and gasification, as well as solidification, happen as wavelike changes in meaning and world. The phase transitions need enormous amounts of free labor that is focused from one place to the next. Capitalism can cause changes in speed without oil, and information technology has accelerated with relatively modest energy inputs.<sup>37</sup> Even so, the age of oil is characterized by a movement that like a hammer drill combines constant rotation with rhythmic hits that together with a constant increase in work are able to break the most determined resistance. The free labor that has increased year by year, together with the channelling of the work from one focus to the next, has over the decades been victorious over all forms of resistance, notwithstanding the support the resistance has gained from geographical distance, difficult terrain, bad weather, or a simple uncivilized spirituality. Being vanquished has been experienced as an acceleration interspersed with more or less recognizable moments of the world ending and, even then, surviving and going on.

#### The Will of Oil

In his book *Cyclonopedia*, Reza Negarestani presents a literary and analytic picture of the underworld of oil. The book connects the strongest of the fossil fuels with the deep recesses of human experience, with ontological terror. The landscape here is a metaphysical abyss, out of which oil pours out as the black reverse of the solar economy. For Negarestani, oil is the unconscious of

the device paradigm. It is irreversibly haunted, chaotic, and deadly toward all that lives. In this Lovecraftian universum the darkest and most corrupt sides of matter have been patiently waiting for their moment that has finally come. The Middle East of *Cyclonopedia* is not mystical in the Orientalist way. Rather, its water, dust, letters, and sounds are thoroughly possessed. Here the clash between Middle East and a West engaged in a "war on terrorism" is, in the final analysis, a chimera. In Negarestani's view, oil is more foreign to both the East and the West than they are to each other.

However, the West with its war is corrupted by oil since in the West the demonic side of oil has not been recognized, let alone taken into account. The protagonist of *Cyclonopedia*, Z, observes that in the West oil is poured into motors while in the East it is the lubricant for an apocalyptic Islamism — in each case the penetration is planetary. *Scyclonopedia* creates a new mythology for the societies in deep oil narcosis:

In a secret twist, fuelled by an enthusiasm more Islamic than Islamic entities themselves, the berserkers of capitalism rush towards Islamic Apocalypticism by fusing with its warmachines running through oil. When it comes to seeing through the pipeline, machines of enlightenment are particularly petromongoloid.<sup>39</sup>

Since oil in its various forms is omnipresent in contemporary societies — as residues in air, poisons in blood, and nanoparticles in water — Negarestani has reason to imply that our lifestyles have necessarily been corrupted by oil. For Negarestani, oil is decidedly non-human, and consequently outside the area of ethics. Likewise, the utilization of oil that forgets about its darkness is bound to be lethal. Energy — and especially oil — is incommensurable with the human; it is heterogenic with regard to anything "natural" or "cultural." What oil wants appears as demonic non-knowledge. In Negarestani's account, the demons and djinns get their names from Persian and Islamic esoteric traditions. Through pipelines and in the containers of the tankers,

they propagate their non-knowledge and fog of war overall.

Energy as the potential for work does also what it is not told to do. It does what it wills, incommensurably and unpredictably. In the Negarestanian world, oil is barely something to be experienced since it goes not only against humanity and life but also against all order. In oil, a restricted economy encounters the anarchic forces of the general economy in their most concentrated form. If this side of oil is not taken into account, economic growth based on oil, the convenience of the devices, and the comfort of individualistic liberalism all turn into an economics of living death.

In *Cyclonopedia*, oil, the *nafth* of Persian and Arabic languages, is a mystic and occult matter that forms the phantasmagoric collective and political subconscious of the Middle East. Like a myth formed when stories and legends fall deeper into the collective memory, the chains of hydrocarbon have festered below ground in the earth's crust. *Cyclonopedia* sees oil as a material transcendent, the "outside," populated by indescribable monsters. The sage of the story, Parsani, defines his studies *tiamaterialistic* after the Babylonian god of original chaos and fecundity. A dive into this active matter opens the dimension of chthonic sacredness, black with oil.

Negarestanian thinking might be characterized as a black vitalism. It is black in its opposition to the sun and the eye, and also because it sees life forms and cultures form the perspective of destruction and death. This perspective also opens for it a celebration of the profoundly inhuman, even inorganic life, proliferating under the sun-baked surface areas of the earth.

The demonic in oil is another name for the experientiality of oil: energy is fundamental, but it is pierced by black holes and blind spots that necessarily warp the seemingly (instrumentally) rational calculations of the automaton. The blind spots and black holes ooze a fog of war that distorts the means and hides the ends. No one rationally wanted the increase of carbon dioxide emissions and the concomitant super storms and hyperdraughts,

even though that is an inevitable consequence of burning fossil matter. No smoke without a fire, and no fire without smoke, as any rudimentary material reason knows. Seen through base materialism, the black smoke of fossil matter is visible, while both liberalist and Marxist materialisms and naturalisms fail to recognize it.

The demonic in oil also means that the simplest of deductions become impossible or fail to have any effect. They are isolated in the Freudian sense (Isolierung). The negative consequences of burning fossil matter are not only repressed in the sense that they are left to fester in the unconscious. On the contrary: the negative consequences can be declared in public, discussed in the media, and so on, but the declaration and acknowledgement fails to have the symbolic effects that avowed truths typically have. The truths of the blind spot do not have the symbolic power of truth, as if the truths of oil were in a class of their own, one con-distanced from the rest of the true. The experiential truths of oil are demonic non-knowledge, and the factual knowledge of oil is con-distanced, without effects. In this sense, the true day of oil has not yet dawned. The burning of fossil fuels, carbon dioxide, and plastic nano-particles in all water are the truth of industrial civilization. But what is the nature of this truth? The tension between the areas brought together by separating them is demonic.

*Cyclonopedia* keeps repeating a black joke: the rotten sacred monsters that were supposed to be the most alien and distant to humanity are present as a "universal telluric lubrication" everywhere. The jihadic, djinnic, and demonic darkness does not reside in the Middle East since internal combustion engines, chemical fertilizers, and plastic items proliferate it all over the globe, to the rich as well as the poor areas.

*Cyclonopedia* offers two tools for thinking about oil. First, oil does not contain abstract energy. Rather, it is an autonomous force.<sup>40</sup> Forces, energies, are qualitatively different and never

neutral. Second, one who utilizes a particular energy starts to resemble that kind of energy: we do not use oil as much as oil uses us. Industrial civilizations do not burn oil; oil burns them. At base, oil is not energy: it is blackness. It is not a source of energy but the fate and end of living things, one final stage in their transformation, composed in deep forgetfulness out of massive amounts of dead tissue in eons without progress.

The late-capitalist civilization based on the logistics of oil is squeezed between two energies. The subterranean black shine of oil and the golden splendor of the sun are the jaws holding the automaton in their grip. These two fires are neglected, unrecognized, as if the rational gaze would necessarily be averted not only from the maddening blaze of the sun but also from the slippery black globules of oil. The planetary film of waste, garbage, and rubbish is mostly composed of chemically transformed hydrocarbon refuse and residues of hydrocarbon burning. In the metropoles, the petrochemical undisclosedness is at its clearest. The earth is hidden under layers of bitumen and concrete, and the sky is hidden by smog.

The production — drilling, refining, mining — of oil, gas, and coal happens in one place, and their use in another place, and the distance between these two is the essential characteristic of fossil fuels. The logic of fossil capitalism covers vast areas, but it is still unitary. A thousand drill platforms stand for one way of focusing, whereas a house heated by wood, geothermal energy, and the sun already contains three. Here energies — sun, wood, oil — do not mean the technological and scientifically calculable units. All forces that can support and destruct ways of life are focal. As non-human, they are a-ethical, unpredictable, and noncommittal with regard to human purposes. From the human point of view, they are not symmetric, not harmonious, but rather rest on an Abgrund and thus define a one-way dependency. Human beings and the human orders are dependent on focal and local energies, on the non-ordering of base matter, but not vice versa. Base matter

proliferates oddity and makes multiplicities strange.

In terms of Bataillean general economy, and for the sake of the argument accepting the laws of thermodynamics: since the negentropy of a restricted economy, such as fossil capitalism, can be increased only by exporting an increase of entropy outside the restricted economy, an increase of work (in the restricted economy) produces more cool emptiness.<sup>41</sup> On the other extreme, nothingness can explode energy out of itself as an overflow of its non-existence. The chaos of base matter never ended, and focality as collective gathering practices is a way in which a species of ape tries to negotiate with it. But even the negotiation is not done by humans only, at least not by subjects deciding the time and the place of the negotiation and its agreeable outcomes.

Focality releases a human being outside the restricted subjective economy, and therefore, at best, may allow for a non-technological understanding of Being. Both Bataille, who emphasized the emancipatory function of waste, and Heidegger, who wanted to protect the fourfold at play in things, would, however, agree that finding a new way of disclosing Being is not something humans can do alone. One would insist on the sovereign quirks of base matter; the other would like us to start preparing for a time of waiting for a god. In both cases, focal practices are not possible if the connection of those practices to their energetic and working foundations — at the moment, fossil fuels — is cut off by blindness or even infused with the malignancy of oil's will.

Therefore the universal and homogeneous concept of energy must be questioned and energy redistributed among the forces abiding in different kinds of matter. For instance, wind power and oil are qualitatively so different — in terms of geophilosophy, local politics, mechanics, temporality, and so on — that experientially they are not cases of the same "energy." If one buys electricity from a power company, this experiential dimension is obscured together with the path of the energy from base matter and back.

Some so-called hard sciences and the theory of relativity may find the following claim problematic: energy and matter cannot, after all, be transformed to each other without residue. The abstract concept of energy that homogenizes all areas of life has to be abandoned as a modern form of ether.

#### Oil and Nihilism

Nihilism is one of the constant companions of economic growth, industrialization, and victorious capitalism. It is not only a phenomenon of accelerating change and gaps between generations, but also an experience of loss of meaning and inefficacy of values. Dostoyevsky and Nietzsche grapple with the question of whether God is necessary for meaningful human life or not. Dostoyevsky hopes and prophesizes that all is not lost, but rather lies ahead. In contrast, Nietzsche produces reports from the future by claiming that God is dead, whether we want it or not. Following Nietzsche, Bataille, Jünger, and maybe also Heidegger see the death of God as an on-going process in which humans are active participants. The situation is horrible, but maybe also somewhat promising.

God understood as an eternal and metaphysical *primum* movens, guaranteeing the presence of the world and its creatures, is in Bataille's view the most servile and unsovereign of all beings, therefore containing the seeds of its own abyssal fall. Seen this way, God is the highest point and foundation of homogeneity. Consequently, the death of God is for Bataille a condition for rejuvenating heterogeneous flows of experience.

The homogeneous and teleological God is the pinnacle of all that is bourgeois, a useful and certain *Bestand* of all energies, without any outlet for waste. Here Bataille's notion of heterogeneity is very close to a materialist "active nihilism," in which atheological non-knowledge and internal experience are not only autogenic and incommensurable, but also born out of excess homogeneity. For Bataille, a mystical structure of experience is still the best

sign of heterogeneity, but in the contemporary era of passive nihilism, mystical experience is hopelessly empty, attracted not by God but by nothingness, abyss, a space without oxygen, in which Nietzsche sees the last men hovering after the ontological earthquake.<sup>42</sup>

This is not new in that a similar anarchic and dialectically nihilist experience of the divine can be found from Meister Eckhart and St. John of the Cross. However, whereas the mystics of the Middle Ages sought for a salvation of the soul, today the task is to find an experiential and energetic way for collective life. Work in this abyss and the experiential investigation of nothingness is an active non-theological attempt to overcome lifeless nihilism and to get a ricochet by reaching the bottom. A similar method — overcoming nihilism by transversing its innermost core and by standing firm in the face of the gaze of its dead center — was proposed by both Jünger and Heidegger.

In this active nihilism, what Bataille calls the heterogeneous is very close to what Jünger calls the elementary (or the elementary forces). Jünger's interpretation of nihilism is based on very concrete experiences of the huge, fossil-powered battles (Materialschlacht) of the First World War. On the front line, the aristocratic and luxurious class of warriors was replaced not only by a technological storm of steel but also by the role of the soldier as "fodder for the cannons." The thoughts and feelings of such a soldier are determined by the titanic spirit of the war machine. Jünger wrote several texts on the First World War, trying to recognize the new type of humanity that performs its tasks without romantic ideals, "in cold blood." The war crushes the bourgeois world that was seemingly stable and secure, but also soft and lifeless. At the same time, in a "rush of red blood," it reveals energies greater than an individual. In Jünger's account, these energies can be corralled only by a manly will and discipline that is not constrained by petty formalities.

Friedrich Kittler has tried to analyze in detail the generational

experiences of the First World War that later crystallize into the existential categories of Jünger and Heidegger. <sup>43</sup> In the war, the separation between elite troops and regular soldiers diminishes as the latest in military knowledge and equipment is brought to all ranks; while overtaking enemy trenches, the troopers rush inside an on-going barrage of their own artillery, "thrown" into friendly fire; technology and production behind the lines decide battles; mechanization and machination in terms of automobiles and motorbikes accelerate the conduct of war; and so on.

This kind of nihilism does not mean chaos, the Dostoyevskyian state where everything and nothing is allowed, but rather a specific kind of order, a nihilating order. This because nothingness can be understood in at least two opposing ways: as an organizing principle without a "why" (titanic nihilism) or as an abyss that destructs fossil hierarchies and verticalities. Traditions of nothingness, such as Zen Buddhisms, have been used in propping up the hierarchy of imperial Japan as well as in lubricating post-Fordist Californian leadership. A nihilistic and groundless experience does not guarantee anything. But a Jüngerian (or a Bataillean-Heideggerian) reason might suggest that the groundlessness of nothing is neither an end, *telos*, nor a principle, *arkhe*, but rather an experimental, open, and gradated source of experience.

In a decisive way Jünger, who actually was looking for an aristocratic or heroic escape from the bourgeois world through war, finds a surprising escape: the nihilistic force of the battles of material, in which the bourgeois individual dissolves. After the war, he inteprets this phenomenon in more general terms. What is coming is not only a new kind of soldier, but a whole new human *Gestalt* that Jünger names the Worker (*Arbeiter*). The worker lives in close connection to elementary forces such as birth, death, and nature, whereas the bourgeois tries to create a distance between herself and everything that is dirty, dangerous, and unpredictable — the Jüngerian bourgeois is the Bataillean

homogeneous.

The bourgeois is also a phenomenon of increased energy inputs; bourgeois comfort and distance to the elementary is created by oil. The individual is a residue of fossil fuel inputs, a side effect of the very surplus that the bourgeois would dearly want to forget. The bourgeois lives in nafthism. In contrast, the worker does not shy away from the nearness of chthonic forces and is ready to sacrifice her/himself while working in their midst. This sacrifice has a new tone. It is not done in service to higher beings or noble values, not in the face of a new god, but rather happens in the key of the Niezschean will to power, which Jünger interprets as titanism. The work of the worker is technological, machinic, finally automatized. In the spirit of total mobilization, it sees everything it encounters as raw material — including itself <sup>44</sup>

For Jünger, the worker is a Gestalt that takes over the whole world in a revolutionary manner. Heidegger accepts Jünger's vision, and both are, in their own ways and for a while, convinced that the National Socialist Worker's state, Arbeiterstaat, is on the right path in trying to overcome the hopelessly antiquated bourgeois and liberal world — antiquated in precisely that it sees technology as the rational servant of humanity. Both recognize — from the Bataillean perspective correctly — that the National Socialist movement is connected to heterogeneity and that this connection enables a genuine revolution in which nihilism is taken into a total use and overcome through a rootedness in the Gestalt of the worker. However, both also get disillusioned with National Socialism: Jünger much faster when he sees the "low quality" of the National Socialists as from above, from the perspective of an aristocracy of spirit; Heidegger slower, but eventually he sees National Socialism under pressure turning into a servility to technology instead of overcoming it.

From the strategic perspective, despite all of its *Blitzkrieg* and the motorization of the army (that Heidegger in the context of the

French campaign celebrates as a "metaphysical phenomenon"), National Socialism was in some sense a backward undertaking. In a symptomatic way, the Nazis tried to produce synthetic liquids through the newly created Fischer–Tropsch process and the help of abundant slave labor. The newest and the oldest were combined. In terms of coal, Nazi Germany was dependent on French mines, and when the attack on Caucasus was stalled before the oil fields of Baku, it was clear that the material and energetic superiority of the Allied Forces would lead to the fall of the Third Reich in a matter of time. Great Britain created its imperium by occupying lands all over the world; the U.S. took over the lands of indigenous populations on its "own" continent. Hitler's attempt to create an empire by taking land and resources in Europe and nearby was at the same time audacious and strangely old fashioned.<sup>45</sup>

In a unfinished manuscript called "War" ("La guerre") from 1939-40, Bataille admits that Jünger has rightly recognized the structural affinity between war, sacrifice, and inner experience. 46 The inner violence that separates mystical experience from the bourgeois restricted economy has its outer counterpart in the front-line experience that dissolves the subject and, in Jünger's words, "breaks all bonds." Bataille criticizes Jünger for reserving this experience only for the warrior class and points out that in the total mobilization of the war, the reflection needed for inner experience is not present in full. He also suspectes that the mystical experience in war is too sudden and transitory to allow for attending to it and deepening its purchase. 48

In other words, Jünger's view is in Bataille's mind too pure, too bent on immediacy, without depth, layers, and gradation. In any case, these two experiential structures seem to have combined in the militaristic Zen Buddhism during the Second World War, where the reflection on nothingness (Bataille) met "the rush of red blood" (Jünger).

Maybe the disagreement between Bataille and Jünger is, in the end, minor since both agree that in war the features of a general

economy — waste, sacrifice, sovereignty, mortality — are clearly present. War becomes a laboratory of general economy. On the other hand, if the armies serve a homogeneous order, say a Kaiser or a nation, or, more deeply, modernization, progress, and the upsurge of the worker, it is not clear how war can enact general economy and sovereign experience. In a letter to Roger Caillois in 1946, Bataille admits that maybe war cannot do it at all — the admission was devastating to Bataille's thought at the time. The fascist/Nazi version of a twentieth century economy of sacrifice was, in the end, something quite different from Bataille's idea of an internally violent self-sacrifice developed in the circles of Collège de Sociologie and Acéphale. Bataille writes in the letter mostly about violence, but he might as well be speaking of oil: "The war showed for us the folly of Collège de Sociologie. The dark forces that we dreamt about were released, but the consequences were quite different from what we expected."49

In a similar vein, both Heidegger and Jünger presented new versions of their own thought and new interpretations of the historical situation after the Second World War. Jünger interprets his *Der Arbeiter* anew, not as an attempt to leap out of the bourgeois world, but as a description of the outpouring of chthonic and autonomous forces. He starts calling technological nihilism and its acceleration by the name of *titanism*, since like the titans, the worker is born directly out of the ground and does not follow human or divine measure. The titanic worker is a phenomenon of the earth, literally a surge of energy, unaware of any limits. Without mentioning the word, Jünger is in his description of the titanic worker describing the experience of oil.

In the essay Über die Linie, dedicated to Heidegger, Jünger describes the work of the worker as calculative and unifying (homogeneous in Bataillean terms). The work is global: in historical times, there were always resources that were left untouched, but now all localities are taken into use — which means the destruction of their locality. Here Jünger is close to

Bataille's analysis of Nazism: instead of being a heterogeneous and elementary force, enlivening and imbuing work with meaning, the work of the worker in the *Arbeiterstaat* was totalizing and homogenizing. However, Jünger hopes that the zero meridian of nihilism, the black hole that sucks all meaning, is already at hand and that the head of the snake might already be past it to the other side.

Heidegger accepts also this new Jüngerian account of work. It is precisely the global and homogenizing nature of work that makes it into a historical force that is only now bringing into fruition the perfection of metaphysics that Nietzsche predicted for his own age. Heidegger thinks that the kernel of Nietzsche's will to power is a will to will. This is a modern kind of will that based on itself makes itself — its presence and power — its goal. Jünger seeks a non-collective solution through the idea of the Anarch, a person who is in the world but as a sovereign does not take part in its petty power struggles. In contrast, Heidegger aims for a new kind of language and thinking, one that would be able to overturn (verwinden) the metaphysical tradition. According to Heidegger, the will to will strives for unconditionality, a guaranteed distance and untouchability — which, in turn, would require an unlimited input of energy. The Verwindung is supposed to create a way of saying and thinking that is able to make people responsible over and above their individual egos.

If the will to power and the will to will are seen as efforts at controlling, guaranteeing, and increasing the security of the will, the *Verwindung* can be seen as a revolution in which power is not taken (in a circular movement of changing governments) but rather annihilated as such (rolled back). While the will wants to dominate and imperate, the overturned and rolled-back power is a matter of bearing (as an area bears growth), affording (as in giving possibilities to flow), and prevailing. Not the overbearing of something human — an individual or a super-subject like a nation or people — but rather the bearing, presencing, and

prevalence of a locality as a locality. In bearing, a locality disrupts tendencies for centralization, hierarchialization, and totalization by proliferating living meanings. Humans may also be afforded such a place.<sup>50</sup>

For Heidegger, the will to will is nihilist also because it tries to get rid of the fact that human being hovers over an abyss, a groundless ground. Nihilism as such is, in Heidegger's eyes, the claim that human life has a particular and nameable guaranteed ground, aim, or purpose. All definite grounds, whether they be found in the spirit or in the genes, cover up the mystery and mortality of human being, and Heidegger calls them by the general name of *metaphysics of subjectivity*. Still, like many of his contemporaries, Heidegger might very well have been indifferent or even positive toward the acceleration of the crisis, toward the perfection of nihilism, so that finally something else might break through.

Both Jünger and Heidegger had an ambivalent relation to active nihilism, to the practices that produced the death of God. On one hand, they craved the overcoming of nihilism; on the other hand, they saw in nihilism a real historical phenomenon. As a metaphysical phenomenon, nihilism is something that liberalism, individualism, technology, consumption, value philosophy, and other similar half-measures are not able to challenge. Rather, nihilism must be borne through. The same goes for totalitarianism, which both saw as the only possible way of transcending individualistic, lowest-common-denominator democracy and, at the same time, as a higher form of technological unification. According to Heidegger, Jünger was never able to shake off the residues of metaphysical thinking (the worker as a Gestalt, nihilism as a zero meridian). In his turn, Heidegger was never free of a tendency toward purification and centralization, even statism (the work of art as the center of the polis, the polis as the highest form of human existence).

This kind of ambivalence is not a sign of a personal failing

or a random quirk. Rather, it is a characteristic symptom of neglecting an analysis of energy. Conservative revolutionaries like Jünger and Heidegger recognized in active nihilism an elementary and metaphysical force, but not its base-materialistic energy, the necessity and directive power of fossil work. In totalitarianism they admired its ability to bypass bourgeois calculation and to create new holistic and focal meanings, but did not fully recognize its drive for purification and hierarchy. However, only by attending both to the multiplicity and impurity of the new sacred meanings and to the physical and experiential reality of base-materialistic energy can the bearing of a locality be, in principle, understood. During and after the peak of oil production, a con-located rolling-back has to take place.

## Philosophy and Oil

How can the con-distanced be brought closer? We propose that an analysis and phenomenology of the experience of oil is needed. Nafthism needs to be counteracted by nafthology. This way we can start to grasp the historical situation of peak oil and our place in it. In order to take the experience of oil seriously, first a negative observation is needed: oil has not been noticed; it is in a blind spot, con-distanced. Second, a substantial positive description of the experience is needed. Such a description needs concepts that do not neglect experientiality in general, and the experience of oil in particular. These concepts will also have to evade one-eyed if not blinkered attempts at reducing the problems of the age of oil into any one cause, be that relations of ownership, technology — or oil itself.

The experientiality of energy is here understood in a double meaning. The first, human side, means that there is a continuum from the measurable, scientific notion of energy to experienced energies, and that the experiential dimension of this continuum is not registered in any scientific instrument; most parts of human energies can, indeed, be only experienced. Scientifically registered and physically described energy is only a part of the holistic and incommensurable field of energy. For instance, the scientific account of energy does not include phenomena like attention, conscience, grit, and forceful emotions—like falling in love, being elated or depressed—that clearly energize

that which is meaningful to humans. It is this unmeasurable experiential energy that gives power to life and that connects it with the sacred, whereas the measured kind has only a mediated connection through resources and survival.

Secondly, in the non-human part, the experience of energy is an experience that energy has of itself: in humans (and in animals, angels, demons, and gods) energy experiences and experiments with itself. This is the bearing of base matter. Seen from the perspective of base materialism, energy is asubjective, and experiential centers, such as subjects and objects, are formed as ebbs and whirls, temporary meshings of cosmic traumatic energy flow. Base matter is sovereign; therefore it cannot be troubled with fantasies of government. Any attempt to control the sovereign is bound to turn on itself, as when oil produced a normalized state of exception.

First steps toward a nonreductive and experiential account of energy were taken in Bataille's theory of general economy. Bataille thinks about the nonhuman flow of energy and also has an eye on the connection between energy and politics. From him, we can borrow the notions of general and restricted economy and the connected ideas of heterogeneity and homogeneity. Crucially, Bataille uses these concepts in one of the earliest philosophical criticisms of fascism, paving the way for an analysis of social structures and experiential energies. With the help of Bataille, we are led to the gate of the fourth condition, the existence of fossil fuels.

Bataille's thought on energy provides not only a critique of fascism but also intends to dislodge the capitalist automaton. He suggests that we strive for something sacred after the death of God. In a general sense, Bataille's attempt is compatible with Heidegger's philosophy of technology that also wants to prepare the ground for a new god. As discussed above, Albert Borgmann has developed Heidegger's analysis into a more explicit account of living within the device paradigm. Focal practices mesh

the practitioners into a collective and also non-human field of experience. According to Borgmann, this field also resists a totalizing understanding of Being that uncovers the world as resources. In this way, focal practices provide an example of dismantling the con-distancing through commitment and experiential sensitivity that is in direct (that is, non-cognitive) contact with action.

However, there is a deep contradiction between Bataille's account of heterogeneous energy and Borgmann's committed focal practices. The Bataillean heterogeneity (lawless, independent, sovereign base matter) leads to multiplicity also on the level of experience, whereas, true to its name, Borgmann's idea of focality implies a gathering and centralizing point, a focus, for experience. We do not want to synthesize away this contradiction since only its vitality will ripen a notion of practices in which energy as work is seen in its base materiality without at the same time losing sight of the important analytic accounts of the other three conditions of the automaton. Rather, we want to take one further step in the direction of the contradiction: the idea of focality has to be multiplied into a whole forest of foci, along roots of which lie in the base materiality of energy. By using the conceptual tools provided by Bataille and Borgmann, we want to provide an account of the birth of meaning: an account which resonates with the nonhuman force and heterogeneity of the age of oil while at the same time resisting its totalizing and atomizing tendencies. Our claim is that in this way it is possible to think the experience of oil without having to proceed in the name of the experience, accelerating it ever further.<sup>52</sup>

Thus it is that the dark powers of nature surge into our blood, profoundly, and of a sudden.

- Gustav Meyrink, "Petroleum, Petroleum"

# General Economy and Community

The sun pours energy heedlessly into all directions. So much of this energy hits the earth that matter begins to squirm and vibrate, becoming more complex and eventually alive. Plants receive so much energy that they grow and spread. There is so much plant matter that it can be eaten by animals. There are so many animals that they can eat each other. There is so much plant and animal matter that tons of hydrocarbons and other products of decay are created. Humans feel their existence as overflowing, superfluous, and so on. Having bubbled for a while as life and experience, all of this energy plunges into emptiness.

The waste of surplus energy is Bataille's starting point in *La Part Maudite* dealing with the general economy. Inside a general economy, restricted economies appear as attempts at limiting, damming, and reserving energy flows. This purifying and damming economy Bataille sees as a bourgeois and capitalist — and also as a technological — way of trying to persist, to guarantee, and to be secure. The general and restricted economies are not ontologically different — that is, they are not entities or groups of entities existing on their own right. Rather, they are different ways of acting and experiencing. They are incommensurable: what is important in one is not so in the other. Furthermore, what exists in one does not necessarily exist in the other, precisely in the way in which Newtonian gravity does not exist in the world of relativity, which accounts for the same phenomena through a curvature of space.

Bataille speaks of the experiential in energy and general economy. However, he does not notice the uniqueness, non-

renewability, and possible exhaustion of fossil fuels.<sup>2</sup> While the blind spot of most philosophers in general is that they do not recognize energy as a condition of modernity at all, Bataille's blind spot is particular, the omission of the fatefulness of fossil fuels. For him, fossil fuels are just another form of solar energy, and in the 1950s he supposes that nuclear power stations will soon produce more energy than humans can rationally spend.<sup>3</sup>

Instead of utilitarian bourgeois values, Bataille insists that communities always need useless and irreversible waste. Historically, surpluses have been squandered by groups and classes of extravagant lifestyles, such as the clergy, aristocracy, and the military. Bataille's analysis of the indigenous potlatch cultures of the Pacific coast is famous. According to Bataille, a specific problem for the bourgeois world is that it tries to increase production and productive forces without providing a good outlet for the waste of surpluses. Bataille praises one exception to the rule: the Marshall aid provided by the U.S. after the Second World War. To be sure, there were calculated and utilitarian purposes behind the aid, but still it provided a global outlet for the surpluses massing in the U.S. and thus created an exceptionally peaceful and prosperous time in both the U.S. and the rest of the so-called Western world.<sup>4</sup>

General economy is a materialist theory from which both narrow, reductionist physicalism and all idealist humanism have been banished. The nature that general economy talks about is internally heterogeneous and incommensurable with all things human. The narrative of solar economy is a philosophical metaphor for general economy, and general economy itself is a philosophical metaphor for the cosmos; it is not a theory that could be fully and rationally conceptualized because natural forces are not in human scales and not homogeneously expressible. Consequently, the general economy is outside classical natural science. Both the idea that nature is governed by laws and the idea that nature is random are human prejudices that can help in organizing experiential fields. Nature, whatever it is, does not have to pay any attention

to them.

Bataille presents an ironic picture of human knowledge by reminding that whenever humans celebrate their expertise, what we have is the self-appraisal of a group of grinning apes. For instance, in Nick Land's account of Bataille's thought, knowledge of the general economy is non-knowledge since it necessitates the dismantling of the structures of the subject, and unrepeatable and unique experience, which as such cannot be brought into the language of homogeneous utilitarian knowledge. In Land's account, this a-theological and a-teleological impossibility is symbolized by the concept of zero. Zero is indivisible and does not take part in dividing. As a nothingness it provides a groundless ground, the heat death of energy, which is outside homogeneous experience and therefore incommensurable and destructive.

Because Bataille's materialism is antithetical to all purposefulness and decidedly tragic, it can be called base. Similarly, nature can be called uncreated — or rather, unborn, considering the root nascere — in order to emphasize its incommensurability and anomia. In Bataille's thought, some of this base matter or unborn nature also lives in humans. As an example he discusses the big toe that makes possible the erect position and thus bipedalism. The big toe is a physiognomic prerequisite of civilization, but precisely therefore it is felt to be repugnant and clumsy, unlike, say, the fingers. The toe is in constant contact with the earth; it is functionally dirty and heterogeneous; therefore it is most often hidden and some cultures see it as disgusting. Whether we want it or not, we are partly base matter, as can be experienced when the borders of the body are broken from the inside out. When a human being shrinks back from her or his filth or when she or he secretes uncontrollably (and when does she or he not discharge through myriad openings, when does she or he not intake matter?), she or he is a part of general economy.

Energy has a direction independent of humans: to be wasted. This direction is unrecognizable and unknowable like death since where it is, rational humans are not. On the other hand, non-knowledge

and the experience connected to it can exist in aconceptual language and in asubjective states like ecstasy or various other forms of loss of self. Bataille himself concentrated on investigating these forms of experiential energies, the most important of which for him were erotic and mystical. His aim was to experimentally find ways to a binding sacredness after the death of God. He does not call for an overcoming of the technological automaton. However, any kind of binding sacredness leads to a more intensive life, beyond alienation and con-distancing. Experiential intensity and uniqueness provide traces of another (non-Christian) sacredness.

The opposite of calculative and utilitarian bourgeoisness is inservile and useless sovereignty. Sovereignty is, from the start, asubjective or collective even when it seems that only one human is present. Sovereignty means overcoming or subverting subjectivity through an experience that takes part in the flow into nothingness in the general economy. Therefore it does not serve any outside purpose, even in the case when the flow goes through subtle, complex, and positively Byzantine routings, as in sophisticated religiosity or eroticism. Both of these are for Bataille royal roads to a nothingness that receive everything and give sovereignty its uncanny capacity to be and want nothing, to be in the world without grounds, without clinging, without representation.

The dissolution of a restricted economy is no easy task. In a Marxist or, more generally, a sociological way, Bataille sees that social life is geared toward producing servile individuals. The automaton moves itself toward more production, unless it is tripped. Therefore we need new collective practices that enable sovereign experience and are able to distribute it against the pressure of unification. This kind of ecstatic community is needed also in politics, which otherwise sinks into the "servicing of goods."

Here Bataille's and Heidegger's analyses of the society dominated by the productive automaton converge. Existence that serves the preservation of the subject can only try to optimize the use of resources, also in democratic politics. Even though Bataille thinks

that a boring democracy is better than a murderous totalitarianism, like Heidegger he devises ways for a politics of asubjective forces beyond liberalism; this attempt can in both cases be understood as a proposal for a religion without or after God.

The search for binding forces beyond individualism takes Bataille uncomfortably close to fascism, for instance, in the sense of an aestheticization of politics. To lose one's subjectivity into a larger experiential field is not an uncommon phenomenon. National experience and other types of collective identities are often used in politics as a way of mobilization. The tenacity of these "atavistic" energies frequently frustrates Marxists, who like Marx himself already thought that the bourgeois revolution had released humanity from their grip. Consequently, Bataille has to look into binding collectivity in more detail than just as a phenomenon of overcoming bourgeois individuality. From the point of view of energy, the dissolution of a restricted economy may be enough for avoiding the automaton that needs homogeneous units and individuals, but such a dissoluted state is still in danger of returning to the service of a total mobilization.

### The Devices of Oil

Meaning binds as an energetic, intense experience. Meaning itself is experiential energy: it feels, it concerns, it burns. However, the energetic connection between experience and meaning is lost in the device paradigm that Borgmann describes since the device is not enlivened by experience and humans are unable to create meaningful relations to devices that are functionally opaque, designed for obsolescence and con-distanced. The vividity and multi-generational renewal of experience is in fossil capitalism replaced by non-renewable energy. Experience itself becomes petrochemical: it is transmuted, disposable, a part of the destructive consumption sold as — yes, experiences.

In the device paradigm, the automaton produces commodities that are "instantaneous, ubiquitous, safe, and easy." The

commodities have an increasing tendency toward immateriality, like the heat from a central heating system or, more centrally, the pleasure produced by buying something. At the same time, the devices that together form the automaton are obscured and become undecipherable. Who can still fix her car or knows how the smart phone works?

Focality lets people be other than technological subjects that in utilitarian ways treat themselves as resources; something other than technological objects to be used for a calculable purpose. Hubert Dreyfus has added to Borgmann's account the idea that committed and skilful focality makes it possible to uncover the world in a non-totalizing way so that it does not present itself as raw material for machinic efficiency. If technological nihilism means that one way of uncovering the world is normalized and totalized, then even just the possibility of opening the world in a different way is enough to unsettle the power of nihilism.

For Heidegger, the crucial thing in an understanding of Being is its non-voluntary and binding fatefulness: an understanding of Being concerns (angeht) Dasein. Meaningful things call and bind humans despite their individual and subjective plans — often precisely against them. Heidegger describes by the verb entleben — to empty of life, to un-liven — the liberal free-floating way of existing in which nothing binds the subject who is free to choose out of pre-existing alternatives the one that pleases her or him, or increases her survivability, or some such. In Heidegger's account, the binding aspect of an understanding of Being means that it is super- or sub-subjective. Borgmann describes the same aspect through the commitment, collectivity, and skillfulness embedded in focality.

On the other hand, Heidegger's account implies that experiential energy is gradated, scaled. Experiential intensity is not an on-off switch; it does not, in general, allow for binary oppositions. Rather, it is a field of increasing and decreasing tensions. An experience cannot be "wrong" or "incorrect." It

cannot fail to be experience, but it may be far removed from its energetic source. Therefore the logistics of oil is prone to dilute experiential intensity and bonds.

This process can be illustrated by observing how ordinary physical things carry in themselves not only their functional properties but also aesthetic and other immaterial features that reveal a focal and local uncovering of a world. Often traditional cultures are characterized by a recognizable set of artifacts in which functionality and aesthetics are combined. The functional is beautiful, and the pleasing is useful. This pleasing utility is often encountered as a part of a long, committed, and ecologically sustainable lifestyle that has evolved over several generations in a dialogue with the non-human environment. In traditional handicrafts, utility and beauty are created through the same hands. The energy needed here is very different from the inputs to the automaton. The process cannot be digitalized since particular, unique flesh has to be present for the meanings to accrue. This flesh carries a multigenerational practice so that the skill of the smith, weaver, or tanner is only figuratively and partially individual.

Also the things of the automaton — *devices*, as Borgmann calls them — can be interpreted in this way. The truth of the automaton lives in its devices. Typically, a part or a product of the automaton is not in itself aesthetic or skilful. Therefore they need specialized designers, consultants that can add aesthetic values and experiential meanings separately, with relative independence from function or manner of production: the solid thud of a closing car door, the "functionalistic" architecture of a building, in the extreme only the brand or the process of shopping.

Commodities of consumption tell of the experience of oil. Plastic mass products are smooth, clean, low maintenance. They do not rot or rust, do not support bacteria. When broken, a plastic item is not typically fixed — because it cannot be fixed and because another identical item is available. A plastic thing is

very seldom particular — it lacks thisness; it could be replaced with another identical one during the night and the owner or user would scarcely notice. However, replaceability, distance, and cleanliness do not stay away from experience. Osmotically they infect experience, con-distancing it from what is at hand. The abstract and non-local nature of plastic things can be experienced in their sometimes brutal and nonchalant, sometimes fully designed and detailed forms. The nihilistic cycle of these things from the oil well to the garbage dump is obvious, but the hygienic splendor of plastic aims to hide this self-evidence under a barrage of ahistoricity, unchangeability, and futurelessness. A plastic thing is a kind of material universal and artifactual absolute with no connections to time, place, or user. It enters the world and history only when it breaks down.

On the other hand, the things of oil are characterized by their perseverance and timelessness, sometimes downright toxicity — plastic things cannot exist without the trashcan, the garbage truck, and the landfill. A genuine plastic thing is always already trash. The choicest petrochemical product is already abandoned. The things of oil do not exist without the movement that disperses the raw material, the half-finished parts, and the final products around the world. Traffic and logistics are inscribed into the things as con-distancing, where the offset between production, use, and refusal are not felt but rather gathered together as ease and comfort.

In light of these con-distancings, the black dimension of oil becomes visible. The fields specked with drills, the steaming and burning refineries, the blackened and scarred mines, the pipelines slinking through marshes and deserts: all pushing their toxins, greasy trails, and slick tendrils further and further. Tankers on water and roads keep hauling the pungent and suffocating liquids where the pipelines do not reach. The black mass is divided into ever-smaller quantities until a fisherman carries a few liters in a jerry can to his outboard. There is no corner out of reach for the

tendrils, no surface able to repel oil. The infrastructure of oil, its macroeconomic things are massive and massively destructive. Even their outer figure portrays a nonhuman potency and utility.

## Focality and Locality

Since focality is connected to locality, it can also be compared to the perception of ecological wholes — for instance, in the way biological interconnected wholes are identified in so-called bioregionalism. Geographical forms like mountains and valleys, waterways, soil, and so on may give a recognizable ecological character to an area; it has its typical flora and fauna, microclimate, and so on. The predator and the prey, the born and the dying have their fluctuating relationships; good years and bad years follow each other. The area, its localness, may be characterized, for instance, by the shelter provided by a range of mountains, by the migration of salmon, by the prevalent vegetation, by the recurrant flocking of certain insects, and so on.

Sometimes such an area is so well defined that an indicator species can be recognized; the state and wellbeing of the indicator species reflects the state and health of the whole sub-ecosystem. Humans may name or talk about the area in terms of the indicator species ("the land of the bear," "the sea of grass"), but that does not mean that the locality has gathered around the species. The parts of the whole have their specificity and uniqueness despite human recognition and measures, and often — despite all of their professed ingenuity — humans are quite unaware of some necessary parts and their roles as has often been proven by the unexpected collapse of ecological systems.<sup>12</sup>

When a group of people lives for a long time — over several generations — in a locality like this, it can learn to know the flora and the fauna in some detail — of course, without knowing everything. It can learn to get its livelihood out of the area in a sustainable way. Often, one characteristic of such sustainability is the admission that humans do not know and control

everything. This admission, in turn, often appears in Western eyes as irrational taboos and prejudices. For the group itself, the livelihood and its meaning is a complicated mesh of yearly rhythms, sources of nutrition and shelter, threats and promises, experienced meaningfully and quite often with an awareness of the contingence and non-originality of the meaning, but not instrumentally. Typically, the areas habitated by groups of nonmodern indigenous cultures, such as tribes, roughly correspond to primary ecological areas. The correspondence is not one-toone. For instance, nomadic livelihoods make such correspondence impossible. However, at the very least such livelihoods that have, in some cases, persisted for decades, centuries, and even millennia without destroying their environmental basis contain as a meaningful part the recognition of localities — often coded in the language of the sacred. A skillful, multi-generational, and heterogenic existence in a natural area in a non-scientific way reveals the holistic interconnections of the area without reducing away the uniqueness of individual plants, animals, or inanimate objects. Humans, like other species, can through continuous experimentation find a way of life that enriches the area instead of destroying it.

The holistic nature of the locality disappears if an intruding civilization claims the area and carves it into pieces without respecting the ecological boundaries. Often this happens by drawing boundaries and borders. Where the civilizational border exists, the whole is destroyed, and consequently the sustainable livelihood becomes impossible. For instance, in Lapland, where the area has over the centuries been carved between Norway, Sweden, Finland, and Russia, nomadic reindeer herding by the Sami has accordingly become harder and eventually impossible. This also means that it is no longer possible to learn what the sustainable life was: since the whole is not there, its learning is impossible. A particular type of knowledge and skill becomes unlearnable and may, consequently, seem even non-existent or

phantasmatic. What is left is a crude reduction of nature into a competition over survival.

The idea of focal practices contains a similar idea of wholes that are more or less bounded in themselves and that can be learned. Heating a dwelling with a wood stove attunes the dwellers to an experience of the growth of trees, to the strenuousness and vagaries of manual labor, to the need for shelter that characterizes human life, to the affordances that nature provides for such needs, and so on. Likewise, various handicrafts, not to speak of Eastern do-traditions, may contain more than a skill and its artifacts: they include a whole way of seeing life and humanity that practicing the craft or the do teaches. If a crucial part of such a whole is carved off — say, the part of cutting trees is outsourced from the practice of heating with wood, or the part of spiritual growth is taken away from karate-do — the focal practice loses its guiding power. One gets wage labor in order to pay the bill for the wood and competitive sports.

Heidegger is famous for his claim that technology is not a tool and that humans do not control technology, but rather technology as an understanding of Being uses humans. The claim is even more true with regard to energy. To put it in Borgmann's terms, the problem with the massive utilization of fossil fuels is that when we use them, they use us. The burning and chemical manipulation of fossil fuels destroys nature and livelihoods on an enormous scale, but through its tendency toward con-distancing, complex hierarchy, and the device paradigm it also depresses and de-skills. Every intake stroke of a four-cycle internal combustion engine brings in an amount of con-distancing which the compression stroke prepares for explosion: every power stroke cuts threads of learnability and understanding connected to localities, and every exhaust stroke breathes a fog of war. The burning labor is experienced as efficiency and expertise, and its reverse: destruction and de-skilling. The consumption of oil consumes the holistic meaningfulness of a locality, depresses powers that could

intensify experience and widen synthetic abilities. Oil makes it easier to be one of the last men.

The blind spot of oil is not only a feature of theoretical thinking but also characterizes everyday life. Here the blindness is manifested in the opacity and primitiveness of the device. The energy that could belong to a human, an animal, or a plant, is given to a device, and the role of the human is to operate, maintain, and update the device into an ever more comfortable (i.e., more totalizing) version, as scheduled by the automaton. What is won in terms of ease of use is lost in terms of holistic understanding. The whole becomes visible only as a collection of con-distanced devices, held together by the invisible logistics of fossil surplus work. The conditions and meanings of livelihoods do not get inscribed into the things that take part in the livelihood. Rather, the devices write their own history, one that develops toxins into mother's milk and space junk into orbit, surprises near and far. Nafthism makes the plunge over the edge *normal*.

# Contradiction: Heterogeneity and Focality

Collective meaning thrusts paths out of nafthist individualism. However, the danger is a collectivity that re-totalizes meaning, seeks purity, and excludes otherness. Binding collectivity can be nationalistic, fascistic, Nazistic, and so on.

Traditional focal practices gather and foster social and ecological wholes. They let non-technological life breathe beyond atomized individuals. A focal practice, however, may sound like a phenomenon of restricted economy, as if everything good and positive could be separated and bound together into a skill and its artifacts, outside the flow of general economy.<sup>13</sup>

So, how do we get binding collective meaning without fascism? How is focality and locality possible in general economy?

The development of a focal skill can be interpreted as individual mastery. As Slavoj Žižek has repeatedly noted, even a skill like the Zen monk's liberation from the confines of the individual

ego has been used in militaristic and imperial purposes, as well as in accelerating the stressful job of Californian post-capitalist CEOs. <sup>14</sup> In a similar vein, the collectivity emancipated from liberal individualism can be turned against any other type of collectivity. In fact, hatred toward outsiders is one well-known and oftenutilized way of creating binding collectivity.

Human being that has been liberated from individualism and productivism can still be homogenized. The focality of a practice — the keeping open of a possibility for a non-technological understanding of Being — does not as such mean that experience will not be put into servility, even the servility of one particular entity. Quite the contrary: focal commitment may very well serve its purposes in the circumstances of total mobilization. One good example is the notion of a "national body" where each occupation and status has its own place and role so that performing one's role in one's own place serves the efficiency and supposed health of the whole. The better each performs her or his assigned role, the better the whole functions: this is the road to a frictionless totalitarian state.

And what would be a better tool of total mobilization than oil? The truth of the *Realpolitik* of the last century was the control of the world given by the logistic, military, and economic — in Virilio's terms *dromological* — control of oil. Even Nazi Germany, which operated with the help of massive slave labor, could not fill the gap in its need for oil. Oil was and is the center that unifies — let us think, for example, of the incessant destruction of indigenous livelihoods because of coal mines, gas and oil wells, the skyscrapers of Dubai, London, Shanghai, Dallas, the petrodollar system, the spin-off merchandise of films and games, the list goes on and on; the symbols heap on top of each other.

Like Altvater explains, globalization is a phenomenon of high EROEI energy. <sup>16</sup> With high EROEI energy, production can be cut loose from local circumstances, parts and commodities can be transported quickly over long distances. The eye of the fossil

capitalist storm is oil. The basis of globalism — which relates to globalization like totalitarianism relates to totalization — is the normalization of oil-produced con-distancing. The necessity of "there is no alternative" globalization is possible only with high EROEI oil, so that globalism is a subspecies of nafthism. For the global economy, the production and use of fossil fuels is an unrecognized (blind-spotted) focal practice and, if we are to believe Negarestani, that focality transcends rational technology and releases both well-known and unnameable demons.

Focality as gathering and centering does not save us from the productivist automaton — not even when the practice is embodied, committed, skillful, and bound with its own artifacts. Even though post-Fordist capitalism seems, at the moment, to favor playful and fluid identities, a chameleon-like selfhood, distributed networks, and social production rising from chaos, it is also fine with fanatic and ascetic skilfulness, dedication, Stakhanovian work-ethics, and masterful quality. All of these can be easily commodified, marketed, mobilized in terms of production and money. Focality is even less effective in saving us from the possibility of unification and totalization. What was the mythical and pseudo-biological society called SS if not a semi-conscious attempt to found a new focal practice, or a set of such practices, a new religion in which multi-generational skilfulness, camaraderie, and shared artifacts and symbols create non-individual binding meanings and a shared, holistic and local understanding of Being?

The problematic connection between focality and totalitarianism can be teased into the open by analyzing the account that Bataille presented on the psychological (in our language, experiential) structure of Nazism in 1933. As already noted, Bataille calls homogeneous all that is commensurable in terms of utility or money and that therefore is servile. Homogeneous production is another name for the automaton that Marx describes. Being is homogeneous when it is framed (*Ge*-

stell) by the monetary and epistemological measures (economics, bourgeois science in general) of the productivist automaton; here humans, too, appear measured in terms of the automaton. <sup>17</sup> In a Marxist vein, Bataille observes that in industrial production the owner of the means of production sets the homogenic measure (i.e., defines the price of work and its products). This in contrast to many forms of handicrafts, where the worker still sets the measure. However, compared with middle-class bourgeois people, workers have the epistemic and experiential advantage that they are parts of the machine "only" as producers and consumers. Politically they are shut outside the machine. This means that with regard to the dynamics of the automaton, workers are (potentially) heterogeneous; they have nothing to lose but their chains. <sup>18</sup>

Bataille sees the sciences and technology as ways of producing more homogeneity. They serve the organization of the automaton through creation of new areas of production, automatization, optimization, education of workers, ideological indoctrination, and so on. Homogeneity does not rise out of itself even though it is a feature and product of the automaton. Not everybody benefits from production, and there are persons who for various reasons do not — cannot or do not want to — take the measure of the productivist machine as their own. Like Marx, and foreshadowing Foucault, Bataille sees the modern state and its technologies of individualization as the most crucial producer of homogeneity.

However, for Bataille, the state is a tool, a mediator. In itself it is servile, not sovereign. Its authority and legitimacy are derived from something sovereign. The state as the Foucauldian machine of micro-politics is born when heterogeneous elements meet the productivist automaton, but the homogeneous measure of the automaton is dependent on a sovereign entity that is relatively independent from the state — such as the king, the people, the nation, religion. The state normalizes (through discipline, whether internalized or external, through democracy, argumentation, and

diplomacy) and uses force when necessary. Like Foucault, Bataille points out that individualization functions at the same time as counter-power: by becoming individuals humans may start seeing the state as a tool for each individual and her well-being rather than seeing each individual as a tool for the collective state.

From the perspective of philosophy of science, Bataille's account of heterogeneity contains an interesting observation. By definition, heterogeneity is incommensurable with homogeneity, but it is also internally incommensurable; heterogeneous elements are incommensurable with each other and with themselves. Therefore any kind of science that seeks to produce homogeneous knowledge has deep difficulties in dealing with the heterogeneous. In the extreme, science is structurally blind to the heterogeneous since, as Karl Popper has noted, (experimental and empirical natural) science has nothing to say about the unique because it only deals with the repeatable. 19 According to Bataille, when social sciences encounter something heterogeneous, they fail to reach their "functional satisfaction" (that is, they fail in producing homogeneous knowledge) and therefore the heterogeneous is *de facto* censured, non-investigated, unknown like the unconscious.<sup>20</sup> Bataille uses as an example Durkheim's attempt to define the sacred: the only sensible definition is that everything that is fundamentally different from the ordinary is sacred. However, the sacred can be experienced and brought into language — also in terms of some kind of science and art.

As examples of the heterogeneous, Bataille mentions in addition to the sacred various elements rejected — wasted, destroyed, ejected — by society. As is well-known in anthropology, such elements often hover between the status of the lowest and the highest: eroticism, madness, violence, birth, death, and so on. From the experiential point of view, Bataille's definition according to which everything that produces a more or less intensive affective reaction is heterogeneous is important. <sup>21</sup> To sum up: experiential intensity is the heterogeneous in us.

The homogeneous appears as common-sense reality, the collection of objects, individuals, things, and so on, whereas the heterogeneous appears as breaks, gaps, ruptures, overflows of intensity, experiential shifts outside the control of the subject. This is the root of Bataillean asubjectivity: the heterogeneous appears in inner experience with an intensity that is unique to a given experiential center — why precisely that erotic object is desirable and cannot be replaced, why precisely that rotten object is repulsive and cannot be forgotten. Despite its uniqueness, this kind of experience is not the subject's. Rather, it pulls the subject outside itself into the world of more extensive powers.

A crucial consequence follows: fascist leaders and fascist symbols are heterogeneous. Both in their own eyes and in the experience of others, the leaders are beyond conventional rules, laws, and manners. Heterogeneous powers are released through fascist leaders, symbols, and movements and are simultaneously channelled toward one focal point. The identification with the movement, its leader and symbols, all of which Bataille describes as an experience of the heterogeneous, can also be described in a Heideggerian way as the dissolution of the liberal individual into a national (völkisch) asubjective collective so that the rooted and binding calls of Being can operate beyond the confines of the individual. In a way, this kind of heterogeneous experience provides a focal practice that commits and situates a human being. The committed following of a binding tradition, the sacrifice of the individual skill and finite being to a bigger organism, creates a destiny.22

Because a fascist movement and a fascist leader are at least partially heterogeneous, they are also sovereign. They do not serve goals or principles outside themselves and are able to give a foundation and legitimacy to a state. The function of sovereign legitimacy is symbolic: the action as such stays the same, but when it is done because of itself and conscious of this self-founding, it is elevated into legitimacy. Killing is nasty and cruel, but when

done consciously for its own sake in war, it becomes legitimate and noble. Following rules and obeying is humiliating and boring, but when done consciously for itself as in a state bureaucracy, it becomes honorable. This symbolic transformation that can be observed in armies and bureaucracies also provides the route toward a two-step homogenization of the heterogeneous.

According to Bataille, without its uniforms and guns a group of soldiers would seem a wretched bunch, especially because soldiers are often recruited out of the poor. The transformation of this multiple and heterogeneous group into an ordered and homogeneous unit is the first step in the homogenization — but only the first, because an armed unit is still heterogeneous and dangerous with regard to bourgeois productivity. The second step is taken by giving the armed units the focal point of the commander, the commander-in-chief that endows the army with identity and purpose. A similar two-step homogenization can be seen in many hierarchic organizations, such as political movements. Bataille describes the dialectical transformation in the following way: "The mode of heterogeneity explicitly undergoes a thorough alteration, completing the realization of intense homogeneity without a decrease of the fundamental heterogeneity." 23

Homogenized heterogeneity powers totalitarianism when it is combined with a unitary command. Bataille calls by the name *imperative sovereignty* the relationship between a master and a slave, a parent and a child, a king and his subjects, where the upper is heterogeneous — untouchable, above the law.<sup>24</sup> There is no functional explanation for the authority of the master. The commands are valid because they are given by the master. But the slave is also heterogeneous. The slave is not a part of the community; she or he is excluded, outside, dirty. What is homogeneous is really only the relationship itself, the master-and-slave hierarchy that can be multiplied both horizontally and vertically by increasing energy inputs.

The two extremes of heterogeneity, the master and the slave, are

the two directions in which heterogeneity can be intensified. One is the direction of purification, nobility, and unquestionability, the other the direction of filth, valuelessness, and invisibility. Bataille notes that the first direction, the direction of purification, can cooperate with the homogeneous, for instance, when a sadistic absolute power (the church, the king, the emperor) lives side by side with a homogeneous productive machine. The other direction, that of filth, enters the homogeneous only as a rupture. Therefore the two heterogeneous extremes are not in balance: the filthy, impure, poor heterogeneous elements are seen as something to control and to eliminate, and here the society needs the forces of imperative violence. Consequently, societies that have formed states typically contain an unholy alliance between homogeneous production and a heterogeneous upper caste (money, law, violence) that together suppress everything that refuses homogeneity and purity. This creates a complicated exchange where sovereign ends and homogeneous means are intertwined and borrow features from one another. For instance, a homogeneous state may start to seem sovereign, and sovereign heterogeneity useful. However, the sovereign is always revealed in the fantasies of the subjects: "if only the king knew about this injustice, he would set it straight," "if only the party would adopt the right line, this all would be corrected," and so on.

The unholy alliance and the imbalance between the extremes have negative consequences for heterogeneity. Due to its own nature and due to the alliance, the upper, pure heterogeneity tends toward centralization and crystallisation; in Bataille's words it has a "tendency to concentrate" (la concentration tendancielle). Due to its own nature, it wants to appear as the highest and noblest, like the kings and aristocrats of old, as the purest, like the lords of the churches, or as the most expert and innovative, as the financial and technocratic elite of today. At the same time, the role as the sovereign basis of the homogeneous rule forces the upper heterogeneous into removing competition. The king and the Führer

have no peers.<sup>25</sup>

Today, this tendency toward concentration is visible in authoritarian capitalism where — despite all the talk about freedom of speech, freedom of markets, and the division of power — it "just happens" to be so that the political leaders and the owners of big semi-monopolistic companies are the same people. Putin's Russia, Berlusconi's Italy, and communist China are the paradigm examples. The development is driven not only by the accumulation of monopolistic capital, but also by the concentration of the sovereign basis of homogeneous production: the imperative sovereignty does not need and does not tolerate alternatives. <sup>26</sup>

In contrast, the fascism of Mussolini and the Nazism of Hitler were, according to Bataille, characterized by a traditional combination of spiritual (mystic-religious) and military command at the top—in fact, in one human. However, that human is not an individual in the traditional sense. He is at once a superman, both a spiritual and physical athlete, and not a man at all: he has no personal desires or qualities but rather directly embodies the will and aspirations of the people. The heterogeneous allure of the leaders is dependent on their connection with the proletariat and the downtrodden: class conflict is overcome by creating a fascist or Nazist human type in all social strata so that the class structure, as described in Marxism, disappears.

In general, in this social model the solution to all problems is in struggle, and the movement itself is seen as a collective of "those who struggle." This unification of political, spiritual, and military power Bataille calls "totalitarian." First the heterogeneous multitude of people and classes with their interests and conflicts is homogenized through fascist/Nazist movement and symbolism, and then the homogeneity is totalized in the leader. Bataille's use of the term "totalitarian" corresponds to the use by Heidegger and Jünger in that in total mobilization all resources are directed toward one goal and the direction happens in a way that bypasses

the calculations of the individual — in fact, the individual is sacrificed for something bigger.

Here, finally, we can see why the overcoming of the liberal individual is alone not enough to stop human experience from being servile. As a con-distanced and atomized subject, the liberal individual serves the automaton. As a part of an intensive fascist or Nazist asubjective collective, experience is still in service. This servitude may be less alienated and less technological, since it happens with the help of heterogeneous forces. But when the servitude is concentrated toward the upper end of the heterogeneous, it is purified, reduced, crystallized, and becomes a part of stable hierarchies.

A good example of this kind of "heterogeneous servitude" is Heidegger's anti-anarchistic account of the state as the highest form of human existence. For Heidegger, the state is not any collection of humans and their interests, but rather, according to the Greek word polis, it is a hierarchical whole gathered around the commanding presence of a center — such as a temple. It is hierarchic because uncovering the center of the polis — in the work of the artist or the deed of the politician — is a dangerous and partly inhuman task, possible only for artists, poets, and politicians in tune with Being itself. These exceptional humans (die Einzige, as Heidegger calls them) are able to reveal a new way of Being, symbolized and gathered in a new God, and then the few (die Wenige) can set an example for the many (die Viele) so that a people finds its destiny in following the new God, the new way.<sup>27</sup> In a sense, the new uncovered way becomes the focal practice for a whole nation in a state. The people finds its hierarchical rank (die Rangordnung) in following its leaders.<sup>28</sup>

This kind of statehood, living as a part of a committed and fateful collective, sets human experience free from the calculations of the rational individual and the projects of the free-floating Cartesian subject that realizes itself as a smooth and frictionless part in (Fordism) or as a self-organizing networked

mini-enterprise of the homogeneous productivist automaton (post-Fordism). But it is equally clear that such statehood sets up a hierarchy not only between people but also between different areas of experience inside people: a hierarchy that is not based on experiential intensity but on the tendency toward concentration and purification. Sacrifice and struggle contain elements of structural purification even though this purification is incommensurable with the calculative purities of utility and rationality. Consequently, sacrifice and struggle re-homogenize experience that was already set free toward sovereignty.

Part of the allure of totalitarianism is the essential holistic meaningfulness it gives to social life. However, the whole is possible only as a purified unity. From the heterogeneous point of view, the whole has no guarantee and no stability because in order to last over time it has to recreate meaning out of its groundless ground, out of the demonic abyss of base matter. Therefore Bataille sees an experiential problem in totalitarian fascism. Because experience in itself is a bundle of heterogeneous and incommensurable, even contradictory, elements, any attempt at purification means nihilism with regard to experience: "In this regard, it can be stated — without prejudicing any other political judgment — that any unlimited actualization of imperative forms amounts to a negation of humanity as a value that depends upon the play of internal oppositions." 29

The tendency toward concentration is not only a problem of political movements or states, but also characterizes the kind of inner experience that tends toward an alliance between "upper" heterogeneity and homogeneity and to the unification of imperative sovereignty. Bataille wants to convince us that the fascism in fascism is its attempt to channel all energies via one focal point. In this view, the core of fascism is not in the aggressive/dominant or passive/submissive psychological structures of individuals, but rather in the structure that channels the experiential energies moving the system. This energy is —

especially in the case of Nazism — chthonic, as evident in the *Blut und Boden* mythology or in the idea of Aryanness as an experience of a racial soul.

This chthonic energy is ancient and terrible, like oil. However, the blackness and hauntedness of this energy are not the reasons for the horrors of Nazism. If we are to believe Bataille, the reason is the particular kind of asubjective logistics of the energies. Structural fascism/Nazism is born through concentrating on one privileged focal point and by homogenizing heterogeneous elements in the name of that point. Totalitarianism, like fascism, can allow a surprisingly wide range of political and social tools in pursuit of its goals, but it can never allow for the multiplication of imperative command. In National Socialism imperative command was concentrated in Hitler: the hopes, fears, work, and worship of the nation was directed at him in a way that made a distinction between the homogeneous and heterogeneous impossible:

Thus, qualities characteristic of the two dominations (internal and external, military and religious) are simultaneously implied: qualities derived from the essential *heterogeneity*, imperative violence, and the positioning of the chief as the transcendent object of collective affectivity.... The chief as such is in fact only the emanation of a principle...<sup>30</sup>

In other words, focality does not guarantee an escape from totalization, and gathering, the dissolution of the subject, mastery, and focus do not as such eliminate the device paradigm. A monofocal system can be non-bourgeois or even anti-bourgeois, and it can be non-destructive toward nature up to a point (as an example one can take the relatively progressive laws of animal protection and welfare by the Nazis), but the holism it offers is totalized and its heterogeneity is controlled by a precise hierarchy of command. Any deep change in life needs heterogeneous energies. How, where from, and when these energies are tapped is another matter. Focality as such — the gathering of the world as whole in its key practical elements — is in an asubjective sense a deeply

contradictory and undecidable phenomenon that does not give guarantees of either good or bad. The internal tension and the fact that the tension cannot be subsumed into the device paradigm help in overcoming the megamachine. But if the overcoming is to be persistent, focality itself has to be overturned without losing the tension.

It is not enough to leave oil behind and to latch onto a focal practice. In addition one needs the multiplication of energies, especially the generation of experiences that proliferate foci that do not allow purification toward unity, into monofocality. In practice, this means forms of life that in one way or another thwart the excessive concentration of energy, power, and control. Often this can be done by nipping power claims in the bud, creating alternative forms of power and encouraging decentralization.<sup>32</sup>

### 4. Forest of Foci

The fecund soil: through you every breathing being Germinates, rises up, and sees the luminous sun!

— Rimbaud. "Invocation to Venus"

## The Unstructurability Principle

Let us imagine a sandbox in which the digging of a hole creates not only a corresponding heap of sand, but also several new holes and heaps in unpredictable and possibly distant places. It may be that the physical world contains no such sandbox. Maybe there is no physical description of multifocal base matter that never forms only one hole but always several. At least such a physical description would need action at a distance and non-locality.

However, in experience the situation is familiar. A change in one thing changes several others, unpredictably. Focality as the self-organizing guidance given by a practice has to be combined with incommensurability and heterogeneity without a tendency toward purification and concentration. We will call this kind of internally incommensurable and meaning-sovereign multifocality a *forest of foci*. Experientially, it means commitment and embodiment that already in itself contains, multiplies, and evolves focal practices and their values.

The models of classical physics are equally incapable of describing the temporal nature of a forest of foci. Its time is not a punctate now, squeezed between the past and the present. Rather, the temporality of a forest of foci is a series of non-concentric overlapping durations, as if an enlarged present, containing several past and future presents. This does not mean that the past, present, and future presents causally interact, but rather that now there are several presents happening, enduring; several experiential presents with their own rhythms, cyclicalities, and gradations. For instance, dreaming and memory show that this

kind of multitemporality does not need a divided personality; an everyday minor loss of subjective control is enough.

The multiplicity and gradation of time belongs also to the non-human. Monocultural, industrial, homogenized, and fossildriven agriculture is mostly based on one-year cultivars.<sup>3</sup> This necessitates that the land is given every year a relatively uniform quantity of external fossil energy and matter so that it stays productive and predictable. In a cultivation based on perennials, the productive pace and life-cycles of trees, bushes, and herbs are more complex, interactive, and often flourish with little or no external fossil energy inputs. They do not require the area to be cleared and the earth turned regularly and do not necessitate the complete elimination of animals and insects — quite the contrary. Here the land retains its quality as base matter. The time of a forest of foci is not the yearly cycle, but the interweaving over several human and non-human cycles. The focality of a forest of foci is in itself perennial. Therefore waiting for its fruit takes more patience and attention than the cultivation of a seemingly guaranteed fossil yield.

Despite its "unnatural" features that resist description in terms of classical physics, the multicentered experiential holism of a forest of foci is quite ordinary. For instance, a potentially monomaniacal experience like falling in love is often multifocal. The appearance of the loved one in the world of the lover changes everything. Existing centers of meaning disintegrate and new ones pop up uncontrollably. Even though it might seem that the world of the lover has only one focus — the loved one — in reality falling in love produces several marginal centers, epifoci, and practices around them. The stronger the experiential intensity, the more focused the upshot of new centers and the more complete the dissolution of old ones. Consequently, on the level of intense experience, there is no contradiction between focality and heterogeneity. Such an experience is all the more disruptive and shattering because of its simultaneous focusing

and dispersing of energies. When heterogeneity lashes out, it leads to the multiplication of focal practices, and those practices stay incommensurable unless they are again homogenized.

A single focal practice, such as heating by wood, creates a field of meaning. The practice guides the birth of understanding and meaning by the overall holistic shape of its artifacts and actions while at the same time in a non-stop manner luring them forward, challenging them anew. As embodied, material, and skillful, the practice engenders new fields of meaning, even though, in contrast to the technological automaton, its role is one of committed concentration. Despite their holism, these fields of meaning are not uniform (homogeneous). They contain continuous and step-wise changes in intensity, contradictory and conflicting elements, simply because the non-human (ecstatic) field of the practice contains heterogeneous and incommensurable entities and forces. A field of meaning can be homogenized, "wrong" elements may be eliminated, "impurities" cleared. In this way it becomes a signifier with a reference, a commanding symbol. As purified, it claims precision and effectivity and thus is amenable to the productivist logic and its descriptions of what language supposedly is.4

In contrast, multifocal base matter creates several centers of meaning as a forest of foci that is partially non-human but essential for human existence. Also inside humans, in inner experience, the forest of foci is independent and alive. Its linguistic impact is more complicated and more ambivalent than that of a signifier. It does not seek to reflect or pin down its referent; it does not create formalizable systems and does not eschew surplus meaning or lack.

Unlike a referential signifier or a symbol, a forest of foci is not precise. The criteria for its practicality and sensibility are different. Instead of precision and purity it aims at accuracy, taking into account the specific relations between entities and their inner uniqueness without commensurability or subsumption into pre-established categories. When shooting a bow, the purified referent is a pre-established mark, the bullseye, with a measured place and existence. In contrast, a forest of foci gathers the arrows into bundles without a singular mark. Here, the first arrow shot gives an embodied assessment of the situation, a feel for the shoot, so that the arrows that have already been shot delineate the foci for the ones to come. The ends are formed by the means, and the means are revised in terms of the goals. The mark appears only after a number of arrows have been shot.

At its best, human signification stays in contact with non-human forces, with autonomous and incommensurable meanings that together with an ongoing practice create a forest of foci. A forest of foci contains several interconnected but at least partially incommensurable centers of meaning with a tendency toward multiplication rather than concentration. Therefore the growth of a forest of foci necessitates that the representative structure of "a stands for b" disappears. The centers of a forest of foci (the "trees") multiply and decentralize in two ways. First, each of them is fractal so that focusing on any part of the center opens up a new forest of foci. Second, in touch with their environment, the centers spawn ever new centers. This kind of forest of foci does not allow for totalization. It is moved by several kinds of energy and covers several directions of movement.<sup>5</sup>

When the representative structure is not effective, destructive anthropocentrism turns into a more benign anthropomorphism. Humans meet the non-human elements (actors, movements, attractors) of the forest of foci using human prejudices and human senses, but without the possibility of forcing a human measure on them. For instance, gods, animals, plants, mountains, the stars, and so on traditionally have their own measures, but these scales that potentially intertwine — as in the ancient Greek conception of fate — are not a human matter, not to speak of

being controlled by humans. Late capitalism makes production and consumption the titanic measures of human being, but a forest of foci interacts with heterogeneous forces in temporary and experimental ways. The interaction with a non-human whole, such as an area of nature, does not get reduced into single goals (such as survival) or totalized into single foci (such as a symbolic leader) since all goals are contested and all leaders multiplied. Maybe a forest of foci always contains a hint of the sacred as the separation of the sacred from the ordinary already doubles the field of meaning.

At bottom, a forest of foci is a principle for unstructuring energy, not a collection of entities or values. Language has the possibility of functioning as a forest of foci: even when language is purified, systematized, mechanized, and automized, the amoebic tentacles of the forest of foci entangle with it. Unfortunately, language can be tampered with rather quickly. Whereas learning to live in a particular area without destroying it takes a long time, well over the lifetime of a single individual, language can be unified and purified in weeks — even though the tentacles, the fossils, and the traces persist with uncanny tenacity. Language is a furnace melting homogeneous and heterogeneous elements. Every speaker, no matter how competent, lets the unstructured in through the tone of voice, the posture, the rasp of spit, and so on. What breathing does to the structured in speech, poetry does to the purified in writing.

Of the five senses, smell may give the best indication of a forest of foci. Scents are recreated with every inhalation. In smelling, there is no privileged center, but several co-present strands with different intensities without the perspectival or distantial measures of vision and hearing. When a sense of smell together with the other senses of perception generates a scent, it can present several things at once, containing several overlapping centers of meaning without clear boundaries. Often vision is thematized as analytic and discrete, dependent

of distance (as in the Greek theorein). Hearing may be less prone to petrification, but it still deals with distance and direction. In contrast, scent tells of things hidden, things behind and inside something else, things without substance or core. With the lowest tendency toward reification — could an olfactory ontology be about objects and things in the first place? — the sense of smell has the lowest barrier toward asubjective experience, including memory and desire, which, in their turn, are obviously energetic. The connection between breath and smell shows how a forest of foci is born in and as movement: it has no existence without the pulse of time. A forest of foci reincarnates its meanings anew every time. Moreover, the movement, the pulse, is not voluntary. Neither the movement nor its meanings are ultimately controlled by the rational subject.

The analogy can be taken further by noting that a forest of foci, breathing, and the sense of smell are largely autonomous and auto-moving, in transit without deliberation. Also in the area controlled by the subject, they enter and linger sovereignly. Crucially, despite this independence, all three can be engaged with through practice and training. If the training is virtuous — for instance, if it embodies a bodily tradition with teachers and pupils — it can result in more than hyperventilation or madness. Just as breathing can be trained, and the training used in challenging human existence, a forest of foci can also enter into an interaction with practicing human being. In this kind of three-fold compact — human existence, the non-human, an independently mobile meaningfulness — the forest of foci grows and has the possibility of creating meaningful human lives.

Productivism and its energetic order can be overcome in a subjective experience that lives in symbiosis with a forest of foci. This kind of experiential setting does not recognize the supposedly essential energetic divisions of the calculative homogeneous order (such as the divisions between subjects and objects), but rather sees all energy as energizing. What it recognizes, instead, are the qualities of different types of energies and the rhythms in which meaning rises and falls. Understanding is not reached by the subject, but lived by the collective. The contradictions in a forest of foci are not solved, but meshed further. It is, of course, possible to say that a particular kind of energy production is measurably better, more renewable, causes less pollution than another, but the goodness of a form of energy is revealed only in an experiential context where the energy is a part of a nontotalizing multifocal practice. Beyond devices and utilization, energy needs to be localized through a forest of foci.

By living through a particular energy, humans can find out whether it can sustain life for non-individual durations. Can this or that type of energy support itself without bending humans into servility or making humans the oblivious slave-riders of others and themselves? We do not know — yet.

The homogeneous world is also the world of traditional ethics, where the acts and omissions of persons can be, at least in principle, measured against an ideal or calculated according to a system. In contrast, a heterogeneous forest of foci does not give discrete and distinct ethical rules. Here, the good and the bad are questions of practice, like in classic virtue ethics. A forest of foci does not provide general ideals, but rather specific examples. This is also true with regard to dealing with the fossil-powered productive automaton. In order to overcome totalizing focality, it is not enough to take into account facts about the availability of fossil fuels and the effects of the pollution they create and to optimize the automaton accordingly. The knowledge concerning curbing emissions and protecting nature, as urgent and important as they are, leaves the field of meanings unmultiplied. Consequently, it is at best stale, at worst further con-distancing.

#### To the Sauna!

The sauna has its functions. It has been used for tasks from meat curing to blood-letting, from domiciling to birth-giving.

Multifocality is here the polyvalence and multifunctionality of a single focal site, like the utility of a good knife that handles most of the tasks in daily household. However, this multiplicity is not arbitrary or free-floating (freischwebende), since the (outdoor) sauna works by virtue of its proportionate distance to the house, the yard, the forest, the lake, and so on. Again, the good knife is good because it is ready at hand, focalized by the body and focalizing the body. In its locatedness, focal practice dismantles specialization and compartmentalization. It is bounded by its internal virtues and consistency, yet at the same time open to experiential influx from the chaotic outside. Focality functions as a liberating constraint.

At the very outset, the sauna combines the spiritual and the material, the ritual and the everyday. It is at once public and private, open and intimate. As a focal practice, the ritual of sauna bathing can be made ever more precise, but in every case it sets particular demands on things and places. The common sauna implicates the whole body through nudity; there is a curious equality and non-liberal radical democracy that literally strips away the artificial symbols of civilization. There are, to be sure, utilitarian reasons for taking a sauna. However, dedicated bathers stay in the sauna for hours, serving no other purpose than the sauna itself, its exhausting enjoyment. It is impossible to call this enjoyment entertainment in the narrow sense. Taking a long hard sauna is not particularly comfortable or nice, and it is often combined with physiological elements of ecstasy: changed rhythm of breathing, vertigo, increased blood-circulation, the lowering of the sensory threshold, and a heightened bodily awareness, an awareness of finitude. As an embodied experience, the sauna meshes together heterogeneous elements: the near-painful heat and pleasure, the erotic tension through nudity and its denial, the traditional role of the sauna as the place of birth and death, silence, and the crucial deals made and decisive understandings reached in sauna, and so on.

The common sauna is a part of general economy. The commonality is supported by the remnants of ritual behavior. The sauna itself and the bathers radiate heat and steam; they have more than they need. The heat gathered in the hot löyly-room is poured out, most pleasurably into the open air. The kiuas with its stones focalizes a particular locality, and that locality enables energetic waste without the hyperlogistics of, let's say, central heating or oil burning with their measurable and commodifiable energy quantities. 7 In contrast, the sauna bather gathers surplus energy into her or his body only in order to emit it to space so that the being of the bather can also be released, emptied, like an animal at play. In this ritual of general economy, focality functions as a transit station for energy, not a store or a resource that could be preserved and taken into use at will. The more a human being emits the heat of the sun or the löyly, the looser the knot of ego becomes, and the greater the nonservile enjoyment. Focality opens a way for overcoming alienation: in the ritual of general economy there are no alienated selfhoods, only speaking organic meshings of energy.

The sauna experience intertwines fire, water, lumber, cleanliness and dirt, communality and silence, heat and coolness. Just a few decades ago, the common sauna was a necessity for the (Nordic) community, at the same time practical and a source of sociality. Through the overall medicalization of life, the sauna has been deprived of its role as the place of birth and death, which dilutes a great part of its multi-generational meanings, but the historical dimension of the practice is still visible in the details of the tradition. Even though almost all everyday commodities are today synthetic, a plastic birch whisk is out of the question, no matter how practical, hygienic, or cheap it would be. This is probably not so much because bathers want to retain the connection to a lost way of life, to the path to the sauna through the birches, but rather because of the resistance that the focality of the practice offers. The materiality of the

focal practice is one with its experiential meaning. There is no separation between the content and the vehicle of meaning (no abstract "birch whiskhood" that could be instantiated either through birch branches or through plastic). The meaning of sauna is embedded in base matter that in the focal points cannot be inert. Base matter in the foci is meaningful, narrative, and temporal. Herein lies another possible reason why a plastic whisk is disgusting: in the sauna the plastic comes alive when the condistancing characteristic of plastic disappears.

There is very little domination in the sauna experience. Instead, there are many things that *prevail*, many non-individual principles to be learned in the silence and rest of the sauna. The prevailing things include the landscape, the weather, the changes in light, language with its silences, and the four elements touching the skin. To take a sauna is to practice dwelling in prevailing; it is sovereign humility in the face of the meaningful breath of a forest of foci.

The common sauna creates a forest of foci in which communal meanings mesh around a focal practice. The foci are created as interferences on a field of tensions and contradictions. Human centers of meaning are also distributed on the field without permanent subjects. Paradoxically or not, nudity implies that everyone is present in his or her thisness, which dissolves individual boundaries.

What are the foci in a common sauna? How are they multiplied and intertwined? One constantly fruitful multiplier and enricher of foci is the combination of the spiritual and the material. The two are intertwined through changes in temperature, through nudity, fire, and water. A spirit cannot take a sauna, but it is also impossible to sauna without spirituality. The birth of a spiritual/material forest of foci is often described through metaphors of interface, as if the sprouts of meaning would shoot out of the conflicting connecting points of the two. However, the multiplying and localizing force is better described as a undifferentiated

compost that through death and dissolution transmutes base matter into life and back again. Another potent focus follows from the body-mind compost: the sauna connects to the dead and the unborn; the multi-generational is present in the particular. The multi-generational multiplies the foci and creates connections between them, up to the point of the dissolution of the ego.

At best, the common sauna creates new forests of foci without a totalizing vortex. The sauna itself deepens its energetic basis, carrying the conditions of multi-generational skills and local livelihoods. Like the scent that is renewed with every breath, taking a sauna recreates every time a new but potentially deeply familiar multiplicity of meanings.

### What Then?

Allan Stoekl has engaged in an exceptional attempt to bring together Bataille's ideas of general economy and sovereign waste with an awareness of the finitude of fossil energy resources. It is no easy task since the general economy cannot calculate, cannot look for gain or survival, whereas the finitude of fossil fuels and ecological thinking, in general, would seem to advise more careful reasoning, better planning and accounting so that life would be further possible. Consequently, Stoekl cannot advocate the kind of sustainability that ecological thought typically has in mind. Rather, he suggests a community of post-sustainability with an ethics of "unintended aftereffect."

Simplified, the idea is that uncalculated waste creates as an unintended aftereffect a community — more precisely, a set of focal practices, a sacredness that founds a community. The waste and sacrifice has to be uncalculated because otherwise it would not be sovereign. The community is an aftereffect since the sacrifice is sovereign. Instead of the economy that serves human measures with profligate use of fossil fuels, Stoekl aspires toward an economy after the death of God and man (because the age of man is the age of fossil fuels) where humans are finite

— but not measure-giving — parts of the general economy. He describes, for instance, how waste can through recycling be resacrificed, when the recycled item retains some of its history in the new use. This kind of "eroticised recycling" would, according to Stoekl, give a possibility for acknowledging the finitude and the sacrificial excessivity of human being without the need for an obsession over self-limitation. If as a consequence human communities would be more sustainable, gain in longevity, and lose in destructivity, so much the better, even though that cannot be a conscious goal.

It is difficult to stand on this slippery slope without sliding toward an "intended unintended aftereffect." There are, to be sure, many different kinds and forms of planning, design, use, and re-use. Like a war over resources, rational homogeneous use often contains irrational and self-defeating goals, such as a desire to destroy and to be destroyed. The alchemical cycle from waste to sacrifice that Stoekl suggests includes an important antihierarchical moment. In an oil economy, waste is the endpoint of all production. In the pyramid described by Virilio, shiny commodities belong at the top, waste at the bottom. The ability to move fast and to waste energy are signs and means of affluence. The lower one goes in the pyramid, the less one is able to waste energy, the slower one is able to move, and the more reliant one is on muscle labor and matter.

Likewise, production and commodities that take a lot of energy belong to the top of the pyramid. Waste and finitude are exported from the top. Energy, novelty, speed, commoditiness flow up in the pyramid, waste down. This order seems to the inhabitants of fossil cultures as natural as the order of violence described by the anthropologist David Graeber: violence from the top down is natural, nearly invisible, whereas violence from the bottom up inspires fear and panic. Stoekl's eroticized recycling moves objects and their embedded meanings against the grain of the pyramid, making waste into sacrificial and sacred

objects, and thus promises a source of meaning independent of the pyramid. Therefore it is not only anti-nafthist, but also creates a counterpower to the hierarchies of fossil capitalism. Experientially, meaningful recycling engenders independence and freedom from the servitude of the fossil automaton.

Another lesson from Stockl concerns the combination of finitude and excess. The combination is evident in the alreadymentioned unity of function and aesthetics, utility and beauty, in the artifacts of a local culture. In focal practices, these two tend together, but as one of its con-distancings, the age of the fossil fuels cuts them apart. The same goes for finitude and excess that are experientially one, unless they are cut apart through continuous inputs of extra energy. As an example, let us think about the kind of hunting that modern thought likes to call "primitive." Here the hunter is by no means out to acquire lumps of meat through her or his tools. Rather, she or he is faced with her or his own finitude and excessivity since the hunter and the hunted are meaningfully united, and the hunted sacrifices itself for the hunter. In an extreme case, the hunter kills a totem animal, essentially her/himself, or, more correctly, her/his whole family. This kind of "primitive holism" tells of a sophistication that the oil economy has not been able to afford.

In experience, the unity of finitude and excess, of utility and beauty, dispels nafthist forgetfulness. However, both are very demanding and a-intellectual tasks that need a local livelihood. Here we are, again, at the mercy of the fourth condition. If the age of oil was dependent on the fact that oil was present in big enough quantities, then the features of the post-oil age are dependent on whether there (still or yet) are localities. Partaking a forest of foci, humans can learn and maybe even understand locality, but they cannot create it.

The famous bioregionalist and poet Gary Snyder describes in *The Practice of the Wild* the importance of local natural conditions and a local viewpoint. Like Bataille and Borgmann, he recognizes

that an experience of the wild, of a sacredness separate from technological totalization, is a necessary part of both pre-modern and post-oil lives. In a Borgmannian way, Snyder sees the birth of a forest of foci as a phenomenon of skillful living in a local natural environment. Bioregionalism is combined with an inner path because for Snyder, who is also inspired by Eastern traditions, the connection with nature implies an abandonment of mistaken individuality, egoism, and collective pressures. Therefore, in focal practices the goal is not to take distance from nature, from base matter, but rather "to do away with arbitrary and delusive conditioning" — in our case especially with nafthism.<sup>10</sup>

Empirically, it can be noted that groups of people that have lived for long periods in nature without destroying it have formed their livelihoods in a sustained interaction with the environment — in extreme cases the interaction has been so tight that nameable and identifiable places have become holy. For a technological gaze, the limits of such livelihoods appear meaningless, primitive, unnecessary. The untouchability of sacred sites, the fact that they are outside economic utilization, such as mining, and the taboo-like rules on, for instance, suitable days for fishing seem backward and superstitious. However, the unneccessity and inutility of the holy may also signal another type of knowledge. In Finnish folklore, this type of knowledge is called *synnyt*, "the births." To know the births means to know how an existing and changing form of life is possible in an unstable environment. Sustained non-technological training can create artifacts with no separation between utility and beauty; likewise, sustained non-technological life can create knowledge with no separation between understanding and action (the cognitive and the ethical).

Knowledge of births appears as knowledgeable action. What is worse for the technological gaze, this kind of knowledge is not necessarily unconscious. The technological world might just be able to accept that by living for long periods in natural environments that do not change too much, humans might as if by

accident hit on a sustainable lifestyle. This primitive balance could then be written off as a fluke, as something that goes with the animality and uncultivation of such a state. However, empirically it seems that knowledge of the births can be both artificial (not originary, as if it had always been there) and conscious: someone knowing the births may know that she or he knows and also why and for what purpose the knowledge is.<sup>11</sup>

A certain alertness is needed for a knowledge of the births. The existence of a recognizable meaningful whole has a number of conditions, of bottlenecks, that cannot be changed without changing the whole. The nature of these boundary conditions can be illustrated by an example from the animal world. Let us think about a shrew, a mouse, and a rat. All have a roughly similar form, with an elongated nose, a low longish body, and narrow legs. A similar overall form appears in three different sizes from a minuscule shrew to a relatively big rat. However, the shape cannot be made arbitrarily bigger and bigger. At some point there is a limit, after which the narrow legs cannot hold the weight anymore or the long back gives way. The legs would have to be made thicker, which would entail other changes, too, in terms of blood circulation, bone structure, patterns of movement, and so on. Change — such as growth — can go on for some time within the boundaries of a recognizable shape until after a certain limit a set of holistic changes is necessary. 12

The existence of knowledge of the births does not guarantee the success of the community as the fate of the sage Väinämöinen in the epic *Kalevala* shows. Despite being the venerated sage of the community, its undisputed leader, in the slowly Christianizing world, Väinämöinen is diminished into a show number for weddings and other occasions until he decides to leave altogether. Because knowledge of the births develops in its own time, and life with its non-human elements develops in another, knowledge of the births can be unsuccessful, ill timed, superfluous. Life, also a form of life whose births are known, can always fail. The type

of knowledge in the knowledge of births may also be altogether missing. What its existence gives is a possibility for changing the shape of a form of life so that its meaning and non-destructiveness are retained under changing circumstances. Knowledge of the births can help avoid wrongdoings and mistakes that pull the conditions of the meaningfulness apart from the material conditions. In this way, knowledge of the births alleviates nihilism without guaranteeing successful life for either the community or the individual. On the contrary, a nihilistic way of life — one that does not know its material and spiritual conditions — can be very successful, even overpowering. There is no necessary connection between right knowledge, the good, and successful action, not even when knowledge of the births is present.

Knowledge of the births concerns the needed modulations in the whole as the surrounding and internal conditions change, both spiritually and materially. For local cultures and livelihoods the dialectical changes from quantity to quality, from spirit to matter are especially crucial. Growing materially, a way of life may encounter a spiritual limit where the whole as such is not anymore supportable. Here knowledge of births is needed so that a new non-destructive (toward the non-human and human alike) and meaningful (for the participating humans) shape can be generated. Correspondingly, when the environment changes, the material livelihood may turn spiritually impossible — as happened, for example, for the hunting and foraging form of life in Finland, or to small subsistence agriculture during the 1960s. When the holistic shape changes, knowledge of the births seeks in a collective-shamanistic way a new forest of foci rooted in breathing base matter. In a splendid example, the Sami people in Lapland managed this transition when the old hunting, fishing, and foraging become impossible and reindeer herding was adopted.

In the poems of the Kalevala, the celebrated fact that Väinämöinen (or Louhi) "knows the births" means that

Väinämöinen can tell how the holistic shape of the life of the Kalevala community (and Louhi, the Pohjola community) can change while still staying meaningful and materially possible. Likewise, he knows where the limits and bottlenecks of the way of life are. In the singing contest between Väinämöinen and Joukahainen, the knowledge of the births is revealed when Joukahainen's factually correct lists of the spawning times of fishes and famous features of geography appear as a type of knowledge unsuited for the Kalevala way of life.

One arbitrary and delusional piece of conditioning during the last century and a half has been the input of ever-increasing amounts of high EROEI fossil fuels to the productive automaton. Training away this conditioning is possible through collective practices that take seriously the features of natural localities. It is possible that the non-destructiveness of human cultures would be more effectively achieved through some kind of ecototalitarian system, such as the one proposed by Pentti Linkola. However, such a system would necessitate the homogenization and un-wilding of experience, the creation of new ego-logical conditioning. Therefore the collective practices need to be multiple on the level of meaningfulness; they need to be multifocal rather than totalitarian.

The experiential starting point for Linkola and many others relying on eco-totalitarian solutions is the rage and sorrow felt over the destruction of nature and the sense of urgency created thereby. Green totalitarianism could function. Indeed, it is very likely that something like it will be tried somewhere in the near future. But in Bataillean terms, it will be a homogenized economy for which the heterogeneousness of base matter and human experience will be problematic, possibly even antagonistic. Against this tendency toward centralization and purification, it is good to read Snyder:

There's no rush about calling things sacred. I think we should be patient, and give the land a lot of time to tell us or the people of

the future. The cry of a Flicker, the funny urgent chatter of a Gray Squirrel, the acorn whack on a barn roof — are signs enough. 14 This kind of patient, calm, and training-based relationship to the holy, willing to take its time, is evident also in the traditional belief found among many indigenous cultures, according to which the occupation by the white man will eventually cease. There will be space for new sovereignty, and some prophecies even foresee that the white man turns toward traditional knowledge in the hour of need. Interestingly, Heidegger, who saw the overcoming of technology possible only through the Western Greek-German tradition that had created technology in the first place, also spoke of cells of resistance (die Zellen des Widerstandes) that hold open a non-technological understanding which will be called to help at the moment of crisis. 15

From the point of view of political and experiential economy, this training means learning to live without fossil fuels, without their work and the artifacts manufactured out of them. This kind of training is already happening, in biggest scale among the cultures that have not been thoroughly industrialized and globalized, but also as conscious escape from fossil capitalism. Ecovillages, permaculture, transition movements, community-supported agriculture, resilient communities, and so on: all are characterized by a non-individual training and experimentation toward post-nafthist sustainability.

Berardi pinpoints both the nature of the task, as well as its moment:

We have to disentangle autonomy from resistance. And if we want to do that, we have to disentangle desire from energy. The prevailing focus of modern capitalism has been energy: the ability to produce, to compete, to dominate. A kind of Energolatria, a cult of energy, has dominated the cultural scene of the West from Faust to the Futurists. The ever growing availability of energy has been its dogma. Now we know that energy is not boundless. In the social psyche of the West, energy is fading. I think we should

reframe the concept and practice of autonomy from this point of view.<sup>16</sup>

There exists a form of rebellion growing out of meaningful labor, a connection to nature and a community enmeshed with local nature; a rebellion suspicious of centralized power and its tendency toward expansion, suspicious of progress and cultural unification, but still open toward cooperation over linguistic and cultural barriers. Typically, material and spiritual independence repels statehood based on social and economic hierarchy and the violent capture of land, human labor, energy, and so on. This kind of rebellion is largely absent from official historical records since it does not fit with imperialistic tales of victory or with the Enlightenment idea of a universal human nature.

When the growth of fossil fuel use stops and when the use eventually starts to diminish, this rebellion faces new paths. Meaningful labor and commitment to natural localities do not anymore seem as dead-ends, ideas past their due date. Many things that for a while seemed backward — like knowledge about the materiality of the land — become forward. At the same time, the reach of the industrialized centers grows shorter, and their grip loosens here and there. This despite the fact that the upkeep of the empire will in the near future mean crushing exploitation and disregard for natural and human life, a rising authoritarianism. Two tasks present themselves: the shaping of materially and spiritually self-sufficient livelihoods in cooperation with other groups insistent on the same and the stopping of destructive economic and political systems.

This rebellion does not imply a binary either-or, us-orthem, the-margins-or-the-metropol, the-past-or-the-future, even though it often appears in a situation where the center is trying to unify the margins and the margins resist. Rather, the rebelliousness tries to dissolve strict boundaries and borders and to create porosity. The both-and means accepting hybridity and impurity. A human being is not one; she or he wants contradictory things.<sup>17</sup> Often the circumstances decide which face is presented. The same goes for groups, communities, nations, cultures, languages.

Let us take two examples with different scales. In his book of essays Uralilainen ikkuna (The Uralic Window), Ville Ropponen describes the contemporary situation of the so-called Finno-Ugric peoples inside Russia, with special emphasis on their literary life. He calls these groups Uralic because the term Finno-Ugric gives too much prominence to Finnish and unnecessarily leaves out the Samojedic languages that share a linguistic root and the taiga as the main environment. Ropponen's goal is a "self-determined modernization" instead of a one-size-fitsall modernism — whether in terms of classic Europeanness, Stalinism, or neoliberalism. Movements like ethnofuturism take seriously the experience that minorities have with being human and with nature, without striving toward exclusive national identities. Waking in the midst of globalism, after colonialism, this combination of rebellion and Zeitgeist analysis seeks elements of the good life in phenomena that industrial civilization and technological reason have repeatedly deemed impossible, doomed, or non-existent.

Besides linguistic roots and natural environment, Uralic groups share a history of being colonized, of being forcibly Europeanized, Russianized, Westernized, and the consequent post-colonialist situation. People speaking Finnish can recognize a pressure toward Indo-Europeanization, as the speakers of other Uralic languages feel a pressure toward Russianization. The situation is further complicated by the historical attempts to integrate Finland with Russia, Finland's own, albeit relatively ineffective, attempt at Europeanizing its linguistic relatives, the complex relationship between Russia and Europe, and so on. Perhaps, these pressures of modernity can be best crystallized in a poetic way. In the words of Esa Kirkkopelto:

The modern began when the heavens came down to earth. The

result was not an end to the hereafter, a heaven on earth, but rather the mixing-up of all metaphysical spheres: a mix between heaven and earth, transcendence and immanence, life and death, eternity and time, infinity and finitude, divinity and humanity. The modern chaos created a powerful fantasy that still reigns. According to the fantasy, the juxtaposition of the spheres is overcome in humans: the modern bourgeois subject is the ground, synthesis, and goal of all metaphysical oppositions. Where that synthesis is not yet in effect, humans, the bourgeois world order, must create it.<sup>18</sup>

The bourgeois world order, or, using Pylkkö's term, the lifestyle of the *Weltbürger*, the world bourgeois, is the face of modernity for people that have lived in some other way.<sup>19</sup> The propagation of this lifestyle has been possible with the motor power of fossil fuels. Without coal, gas, and oil, the world bourgeois always runs the risk of being localized, of feeling the power of gravity.

# Two Concluding Examples: Ethno-futurism and Self-sufficiency on the Taiga

Right now, the energy needs of industrial civilization and the concomitant nationalistic resource politics in Russia are the everyday reality of Uralic peoples. Popponen suggests: In effect, it should be mandatory for every European to visit the Nenets Autonomous area in the Jamal peninsula. How else could she gain a connection to the area wherefrom the energy that heats her home and her garage comes from? He describes the city of Salehard, replete with towering ads for Gazprom and wilderness areas the size of half Europe, where the 800,000 reindeer of the area negotiate between a network of pipelines. The hybridity is everywhere. Soviet power disciplined and murdered non-Russian populations, but at the same time it gave them opportunity for education and written language. The energy companies poison the land but provide employment and cash for cultural activities.

The biggest oil exporter of the world, Russia, is not very

welcoming toward its minorities. However, the drive for oil and gas reveals the weakness of the winner. The hegemonic culture is victorious not because of its qualitative superiority, but because it burns subterranean substances. The burning — fossil capitalism or fossil socialism — made the hegemonic culture higher, bigger, and wider. The pretense of special universality is here, too, a consequence of unique con-distancing. The supposedly universal humanity, propounded with the confidence of the winner, unwittingly relies on an energy surplus, the *uniqueness* of which makes its dominance possible. Like a sign Ropponen sees in Naryan-Mar puts it: "Thank Lukoil, citizen of Naryan-Mar!"

If the universality of the world bourgeois is a uniqueness masquerading as universality, and if energy is recognized as one of its necessary conditions, we have to ask, with Ropponen: "Maybe history did not end in the world-historic victory and perfection of the Western-European culture, but continues on the slopes of the spiritual Ural?"<sup>22</sup> The question concerns cultural life in general. The historical moment, at the top of oil production and consumption, when everything is fresh, uncertain, and new, is a good place for recognizing the nature of rebellious self-determination:

The familiar European monologue is brittle when it comes to the Uralic: instead of universalism and arrogance we get multiplicity and dialogue. The gaze from the margins sees both the details and the whole. The surgically beautified faces of the hegemonic culture reveal their warts. The margins are a place for discarded ideas, unused energies, breaks, hysteria, and lust, a location where the hegemony of the centre is already waning, but not yet overtaken by the domination of another like it. The margins are a fruitful mess of independence.<sup>23</sup>

Recognition of the fundamental experiential importance of energy also gives a hint on how to orient in the jungle of globalism, nationalism, and locality. Ropponen points out:

More than the Soviet ideology or forced collectivisation, the gas

exploration since the '60s changed the nomadic culture that in the words of Markku Lehmuskallio is an "arctic high culture," the best possible form of life under the specific natural conditions. <sup>24</sup> We do not have to agree on the superlative "best" — why could not the Arctic culture be better, according to its own criteria? — in order to agree with the principle.

The world bourgeois cannot present a single example of a socially and ecologically sustainable way of life. Therefore the viewpoint of the marginal or of the indigenous — such as the view of an "arctic high culture" — reveals that the emperor of economic growth has no clothes. Industrial civilization is based on turning raw materials to waste without giving anything back; it is *Raubwirtschaft*. <sup>25</sup> The stolen materials, labor, and energies it presents as its own achievements. This trompe l'oeil is possible because the contribution of fossil fuels is so big that it makes the economy seem self-sustaining, autonomous.

The Uralic culture described by Ropponen typically contains a worldview in which the everyday and the mystical, reason and dreams, the past and the future exist side by side: "it is strictly logical to assume that shamanism, Christianity, and the scientific worldview are not contradictory, but rather symbiotic, like the boletes and the birches in Komi forest." <sup>26</sup> This noncontradictoriness is supported by (a) structural features of Uralic languages and, why not, also by the experience of nature one gets in the forest and on the taiga. <sup>27</sup> Ropponen discusses Kallistrat Zakov's limitism and observes that unlike in Aristotelian logic, there is no clear boundary between the forest and the village, between the lake and the shore. <sup>28</sup> These areas of the world interact in a similarly unregulated way as dreaming and waking.

Through this lens, nationalities also reveal their impurities and non-originality. Ropponen describes how Russianness was born in the clash between Slavs, Scandinavians, Turkmen, and Uralic peoples as they for centuries criss-crossed the plains and at times fought, at times lived peacefully together: "So Russia

became a mutagenic bear. Features of tens of different species can be found in it, yet it tries to be only a bear."<sup>29</sup> This mutageneity and originary multiplicity can be found, historically closer or further, in all nationalities. Europe begins in classic Greece that in turn borrows heavily from Egypt and Asia, and so on. Locality, as an open entity, is always impure and multiple and does not really set itself in opposition to the homogenized center. This is also because the centre, too, despite its pretensions, is local, particular, both because of its historicality and because of its unique claim to universality.

In order to cope with globalization, Ropponen suggests that minorities engage in local democracy, networked together without a hegemonizing center. The cooperation should be based on direct communication between the local entities:

Instead of trying to defend oneself, a more viable option might be to chain up as a swarm. When it comes to Uralic peoples, one often talks of a postmodern internationalist tribalism. This kind of -ism does not want to define things through exclusion, but through a combination of contradictions: an Uralic is always already both Finnish and European, both Udmurt and Russian. When local experiences and traditions are exchanged beyond national and state-borders, also the small Uralic peoples can partake in globalization, and in the best case the participation is self-determined.<sup>30</sup>

This postcolonial open localism is obviously tied with the kind of birth of meanings that we called a forest of foci. Striving toward a spiritual and meaningful independence means enlivening a forest of foci, of taking its vitality as a principal goal. The breathing of a forest of foci is anticolonialist both literally, as non-conformation with an occupying culture, but also in a wider sense: "We all have been colonised into believing that the materialistic and egoistic life is the only possible, and that nature should not be respected."<sup>31</sup> We cannot be independent in nature unless we are independent with regard to European hierarchical power structures and

independent of the worst reificatory and atomizing tendencies of Indo-European languages. And vice versa: even the smallest sapling of a forest of foci infuses these structures with a sense of — however limited — freedom.

Another example of self-determining independence is provided by Lasse Nordlund who has for years practiced a self-sufficient life on the taiga, first alone and now with a family. For Nordlund, the reason for being self-reliant is the need for a freedom of conscience. Relying on somebody else means that one cannot be fully responsible for one's actions; more specifically, one cannot be sure that one is not feeding the machinery of fossil capitalism. Self-sufficiency gives more opportunities for deciding what one is willing to support, and widens also the field of thinking:

When we develop self-sufficiency, our thinking becomes less dependent on the prevailing modes of thought. Practicing self-sufficiency means broad knowledge and skills that do not fall in the hands and become the property of universities and corporations, but remain with the people.<sup>32</sup>

For Nordlund, self-sufficiency is made possible by an economics of labor, a cumulated experience of what should be done when the field of possibility is human muscle labor in a natural environment without added fossil energy. The terrifying numbers of industrial agriculture, according to which the production of one calorie of food requires approximately ten calories of fossil fuels, show unambiguously that the economics of labor and efficiency are very different in muscle labor and fossil labor:

What we today call "efficiency," relates mostly to the amount of time used, but not to energy- input used: each tractor farmer in Finland supports 50 people, but it is done with an energy input that corresponds to 1,500 people working the fields manually.... In comparison, a single Stone Age person could sustain one to two people in addition to himself.<sup>33</sup>

In other words, the EROEI of industrial agriculture is well below

one. Primary production has become primary consumption. Nordlund describes the necessary blindness of the productive automaton in the following words:

Unlike animal communities, a great society may not fall for some time even though it is wasting energy. It may be able to fill its energy deficit by bringing in energy resources from outside its borders. This makes our society necessarily colonialist.<sup>34</sup>

Once more: the energy deficit is not obvious because of the massivity of fossil fuels. The mass creates two social illusions. First, it hides the colonialism, the nature of *Raubwirtschaft*. A person filling the fuel tank of her or his car or tractor does not care where the gasoline came from. Second, it makes the results of the colonialist economy seem like positive achievements, something that industrial society has created, especially because it has created the technological, scientific, spiritual, and social conditions for it. It is not easy to dismantle these structures:

Large and centralized structures in society's infrastructure, in political decision, and in production, speed up the emergence of more and more similar structures. The name of this process is globalization, when it has finally reached the multinational level. Due to their structure, they are energy deficient, they are aggressive, and in a problematic way they focus the environmental burdens they cause. Centralized structures can only exist relying upon the surrounding peripheries. The emergence of centralized structures, such as a gradual transition from a tribal culture into a state system, proceeds at its own pace, whereas dismantling these centralized systems by human choice is nearly impossible. <sup>35</sup>

Centralization has its own momentum, when extra energy tends toward hierarchies, pyramids. The tendency toward centralization goes also for structures of meaning. Centralized and purified structures of meaning, such as grammatical languages, are dependent on the meaning-resources of their peripheries. A centralized system of production and a centralized system of meaning enforce each other.

Despite the material and spiritual challenges, Nordlund has in an astonishing way shown that it is possible to live in Northern Carelia by a combination of agriculture, fishing, and gathering so that divided over the whole year, the labor time is circa four hours per day, and the livelihood of one person takes an area of five times ten meters of cultivated land.<sup>36</sup> The astonishment is only increased by the fact that Nordlund makes almost all of his tools, fishing nets, and clothes himself.<sup>37</sup> For instance, his spinning wheel is made entirely out of wood. Through his experiments, Nordlund has realized that animal husbandry is too labor-intensive:

Animal husbandry, excluding indigenous reindeer herding, is not necessarily advantageous in terms of energy collection especially here in the north. The long season when animals must be fed indoors means that preparing the animal feed takes a lot of work. Given the amount of work that is needed to keep animals, one can collect more energy by farming than by eating meat. On the other hand, wool and leather are superior materials for making clothes, and replacing them with linen causes a lot of extra work. Keeping animals imposes a very regular working routine making it more difficult to optimize other job complexes, which in turn reduces the efficiency of animal husbandry when compared to a livestock-free natural economy. Whether a natural economy prospers or not depends largely on weather conditions, and on one's ability to schedule tasks for the most suitable occasions. <sup>38</sup>

The quotation presents antidotes to the atomization and condistancing essential for fossil labor. Muscle-based work in a subsistence economy creates wholes with their own schedules and locations. The recognition, learning, and development of these wholes require labor-economic focus that has a rationality quite different from the optimatization of the fossil automaton. The different kinds of efficiency and reason show that muscle labor and fossil labor are experientially different, even though they can cooperate. Muscle reason is one thing, fossil reason another.

Nordlund emphasizes: "Real 'efficiency' is only achievable by relatively simple technical equipment, such as an old-fashioned spinning-wheel or a (wooden) shovel. The less iron they contain, the better." <sup>39</sup>

The difficulty of managing these wholes means that it is quite hard to transition from industrial agriculture to sustainable subsistence agriculture. A fossil farm would have to be able to shrink both its income and outlays simultaneously, which is exceedingly hard, especially in the current financial situation. Maybe here lies a wider problem. The circulation of the financial markets, independent of so-called real economies and labor, has created a situation in which indebted economies really have no alternatives but fossil ones. A simple will to escape is not enough. Even if one wanted to follow Nordlund's example, difficulties would follow. It is not enough to know his methods, one by one. One also needs to know the reasons for working in particular ways and the interconnections between the methods:

Some people think "So Lasse does it like this, let's do the same and it will work." However, I have to do 50 other things at the same time. Wholes cannot be sustainably changed bit by bit. If you do not recognize the connections between producing food, spiritual well-being, social life and bodily health, the attempt toward change becomes heavy and it withers away.<sup>40</sup>

A sustainable subsistence livelihood has its own wholes, its own forest of foci. Meanings move between the material, the social, and the spiritual, changing each other. Despite the difficulties, Nordlund hopes that his example is contagious. The alternatives in the future, as he sees it, are decentralization and collapse. Industrial society can collapse because of the failure of its energetic basis, which would mean a more or less violent transition. Alternatively, in "a semi-controlled and characterforming" way the transition can be softened:

Retreating from the consumer society is at heart a very gentle act that is easy to defend morally, and is also socially more or less

tolerated. This places it among the easiest of the difficult paths we can take as human beings, who carry with us the ties and bonds of our values and our culture.  $^{41}$ 

In order to understand wholes, one needs to be a generalist if not a polymath, to practice several different skills of thinking and acting. This kind of generalism is also a value in itself because it diminishes the dependencies based on specialization. One also needs experimentation and a pragmatic attitude. The practices have to be experimental since the transmission of skills over generations has fatally broken. Moreover, the traditional skills have to be tested since the tradition does not contain everything needed in the new situation. The tradition is not absolute: "what used to be is not necessarily wise."42 For instance, Nordlund has discovered a new way of preserving berries without using sugar or other preservatives. Likewise, he expects that climate change may quite soon require that a farmer is alert and observant and does not get stuck in old habits. Even though Nordlund's playful motto was "Not back to the nature, but back to the cave!" he does not aim for a past golden age, but rather experiments with creating a contemporary local subsistence livelihood. The focus is in the now and on the society, on its conditions and foundations, obscured by the fossil economy.

The self-sufficiency and independence in these examples is not self-centered. Quite the contrary. Nordlund, Snyder, Stoekl, Weil, and Bataille all agree that a crucial hurdle in the way of liberation is the ego. Snyder's Buddhist bioregionalism and Weil's sacrificial mysticism emphasize the importance of practice. It takes time and practice to get rid of hierarchies and to strike roots into nonfossil energy. Finding possible localities and founding sustainable traditions on them happens slower than fossil time-keeping can appreciate. Like Zen, these traditions may be aware of their own history and essentially uncertain nature. There are no guarantees of enlightenment or liberation, only a set of traditions, examples, and teachers, with a track record of guiding sustained practice

toward desired goals.

A practice aiming for a forest of foci has no ultimate ground or guarantee. Despite its ferocious insistence on atheology and immanence, Bataille's theory of general economy contains a whiff of the transcendental. In particular, the attempt to create a theory and experience of the sovereign echoes traditions of purification and unquestionability. Bataille sees the sovereign, the absolutely nonservile, as the binding principle in the new community. In the mystical writings, where he seeks a sovereign experience of a death that is conscious of itself, he describes nonservility as something beyond all everydayness and ordinariness. This separability of the sovereign makes it akin to the transcendent, rather than an extreme point of heterogeneity.

Likewise, treating and discussing the world of the productive automaton as an existing entity, rather than as a point on a continuous scale, the tip of an iceberg, takes the propaganda of the enemy too seriously. It is as if Bataille believed that the homogeneous world could be purified, cleared of everything heterogeneous, of base matter, as if capitalism really could create perfectly self-identical and servile individuals. Here we glimpse the uniqueness of oil once again: continuous growth, the nihilating power of work, the amount of which is bigger year by year, seems capable of escape velocity, of reaching a singularity of homogeneity.

In contrast, the non-foundational and non-guaranteed nature of base matter means that the homogeneous is never fully able to shake off all base matter, and, conversely, that the heterogeneous is never fully safe from homogenization. The tragedy of collective practices of training is that the homogeneous and the heterogeneous are present together, that the sovereign and the servile take place in the same experience and deed. The sovereign serves, however minimally, and the servile is marginally sovereign. This is not because the low, left-hand sacred and the high, right-hand sacred flow into each other, but because local

impurity is "vertical." The difference between sovereign and servile elements runs inside experiences and actions, not between them. This vertical hybridity is also the reason for the fact that the creation of local traditions can go terribly wrong. The result can be xenophobic nationalism if a sufficient multifocality is not reached or if a classical "external enemy" is able to mobilize all energies through one point.

After the fossil feast, what follows is not a return to nature where the *genius loci* gently but firmly directs the community toward a balance with the environment. The balance is always lost, the community always contradictory, human being always finite. The secret is that humans can live with these facts without the help of an illusion of separateness created by ever-increasing energy inputs. The secret is hidden from the fossil gaze because the nafthist cannot believe that creating socially and ecologically sustainable local lives can also happen consciously and artificially, not only by accident.

Seeds of local practices and sacredness can be found in old traditions like the sauna. But the sacred, the gods, and their names cannot be chosen at will. On one hand, an experience of the sacred is not liberal; on the other hand, it cannot be forced in a totalitarian way. The sacred is unproductive and it prevails. Forests of foci may or may not contain enough energy for calling the divine and for settling to a locality, but only after the landbase burned by the state of exception has started sprouting new practices. This moment is not in the future. The forests of foci are already alive, testing us both without our knowledge and through it.

The moment at hand is the end of the growth of oil production and its incipient decline. The place has changed; the bioregion is on the move. Carbon is not in the ground, but in the air. Base matter is finding new routes of influence. The earth shatters; seas and storms rise; water flows in strange ways.

In this situation, forests of foci cannot be what they once were. Post-industrial life cannot trace its steps back to the preindustrial since those paths have grown in or have been developed into motorways. However, a forest of foci can be created anew. During a state of exception, it is likely to appear as an aberration, as a mutation, and crash into a locality to be lived. A life with a forest of foci is not an alternative and not a responsibility, but hopefully it is fateful. A collapse into a forest of foci is as possible as any more pacific development. Moreover, a sudden fall and a slow process are not mutually exclusive. The birth of a forest of foci takes both crises and long steady times. Base matter is learned both as surprising, sudden, and as a familiarity from time immemorial, as a groundless ground preceding the community trusting it.

## Notes to 0. The Body Snatchers

- 1. The Chinese who else? had utilized oil and built pipelines out of bamboo hundreds of years ago, and the streets of Baghdad were topped with oil-based tar already in the eighth century. But we are here talking about the particular historical transformation, well condensed by the Catholic author Romano Guardini, who certainly cannot be suspected of Nietzschean sympathies: "Our age is different from what has come before. It is not different merely as the Renaissance is compared to the Middle Ages. The difference goes incomparably deeper. It often seems to me that the period from 1830 to 1870 is the watershed. All things before that, however different, belong together." Romani Guardini, Letters from Lake Como: Explorations on Technology and the Human Race, trans. Geoffrey William Bromiley (Grand Rapids, MI: W.B. Eerdmans, 1994) 75.
- 2. "Predicting the timing of peak oil," Wikipedia, 1 April 2015 <a href="http://en.wikipedia.org/wiki/Predicting\_the\_timing\_of\_peak\_oil">http://en.wikipedia.org/wiki/Predicting\_the\_timing\_of\_peak\_oil</a>. See also David Strahan, The Last Oil Shock (London: John Murray, 2008) 36-56. The OECD-supported International Energy Agency observes in its World Energy Outlook 2010 that global crude oil production has flatlined since 2005 <a href="http://www.worldenergyoutlook.org/publications/weo-2010/">http://www.worldenergyoutlook.org/publications/weo-2010/</a>.

### Notes to 1. The Fossil Machine

- Richard Beardsworth, Tekhnema: Journal of Philosophy and Technology 5 (1999) <a href="http://tekhnema.free.fr/5editorial.html/">http://tekhnema.free.fr/5editorial.html/</a>.
- Martin Heidegger, The Question Concerning Technology, trans.
   William Lovitt, (New York: Garland, 1977) 15.
- 3. See, for example, Jeffrey Sachs and Andrew Warner, "Natural Resource Abundance and Economic Growth," Center for International Development and Harvard Institute for International Development (November 1997) <a href="http://www.cid.harvard.edu/ciddata/warner\_files/natresf5.pdf">http://www.cid.harvard.edu/ciddata/warner\_files/natresf5.pdf</a>>, and Michael Ross, The Oil Curse: How Petroleum Wealth Shapes the Development of Nations (Princeton:

- Princeton University Press 2012).
- 4. Max Weber, "Asceticism and the Spirit of Capitalism," The Protestant Ethic and the Spirit of Capitalism, trans. Talcott Parsons and Anthony Giddens (London: Unwin Hyman, 1930) <a href="http://xroads.virginia.edu/~HYPER/WEBER/WeberCH5.html">http://xroads.virginia.edu/~HYPER/WEBER/WeberCH5.html</a>. "Fossilen Brennstoffs" appears also in Weber, "Askese und kapitalistischer Geist," Max Weber: Gesammelte Aufsätze zur Religionssoziologie (1986) <a href="http://www.zeno.org/nid/20011440546">http://www.zeno.org/nid/20011440546</a>.
- 5. Slavoj Žižek, For They Know Not What They Do (London: Verso, 1991) 215.
- 6. David Graeber observes astutely that alienation does not have to be seen as a loss of original unity (something distasteful to all forms of postmodernism) if we realise that unity and wholeness can be ideals for individuals and communities, imagined goals, even if they never have been realised as such. David Graeber, Revolutions in Reverse (New York: Automedia, 2011) 56-57.
- Karl Marx, "The Fragment on Machines," The Grundrisse, trans.
   Nicolaus Martin, (London: Penguin, 1993) 690-691.
- 8. Ernst Jünger, "Die totale Mobilmachung" (Dessau: Junker und Dünnhaupt, 1934) 7.
- Ernst Jünger, Der Arbeiter: Herrschaft und Gestalt (Stuttgart: Klett-Cotta, 2007).
- 10. Marx, Grundrisse 693.
- 11. David Pimentel, "Food Production and the Energy Crisis," *Science* 182.4111 (1973) 443-449.
- 12. Timothy Mitchell, Carbon Democracy (London: Verso, 2011).
- Vaclav Smil, Global Catastrophes and Trends (Cambridge, MA: MIT Press, 2008).
- 14. The world burns in a year a cubic mile of crude oil. Is that a lot or a little? A cubic mile is, as such, not a big object; for instance, the glaciers of Greenland lose several cubic miles each year. But the energy content of the cubic mile is stellar. 2500 nuclear power plants would produce a similar amount of energy; currently there are a bit over 400 plants in the world, and the number is declining.

What would the construction of 2100 new nuclear power plants mean in terms of investment, concrete, steel, uranium? 5200 coal plants of 500 megawatts would be needed; no one wants to calculate the resulting carbon dioxide emissions. See, for example, "World Crude Oil Consumption by Year," *Index Mundi* 21 April 2015 <a href="http://www.indexmundi.com/energy.aspx">http://www.indexmundi.com/energy.aspx</a>, and "Cubic mile of oil," *Wikipedia*, 7 May, 2014 <a href="http://en.wikipedia.org/wiki/Cubic\_mile">http://en.wikipedia.org/wiki/Cubic\_mile</a> of oil.

- 15. All indigenous peoples or groups do not, by any means, think that nature is sacred or try to avoid Western technology. However, there are several examples of rejecting civilization, both in the distant and the near past. For recent cases, see, for example, the journal Cultural Survival Quarterly, <a href="http://www.culturalsurvival.org/publications/cultural-survival-quarterly/">http://www.culturalsurvival.org/publications/cultural-survival-quarterly/</a>.
- 16. Karl Marx and Friedrich Engels, "The Communist Manifesto," orig. published 1848 <a href="https://www.marxists.org/archive/marx/works/1848/communist-manifesto/index.htm">https://www.marxists.org/archive/marx/works/1848/communist-manifesto/index.htm</a>>.
- 17. Another category are views that, following Marx and Engels, see positively the dissolving power of capitalism and want to empower it further, toward an anticapitalist or a hypercapitalist future. Here we find communists relying on the category of the subject, like Alain Badiou, as well as antihumanist nihilists like Nick Land. For both forms of accelerationism, the end of the growth of oil production and the return to coal gives an unpleasant signal that can, of course, be theoretized away as a temporary hiccup in the accretion of non-human productivism. Alan Badiou, Manifesto for Philosophy (Albany, NY: SU of New York Press, 1999) 3, and Nick Land, Fanged Noumena: Collected Writings 1987 -2007, eds. Robin Mackay and Ray Brassier (Edinburgh: Urbanomic, 2011) 623-628.
- 18. Therefore Heidegger's attempts to overcome modern division of labor in the '30s are philosophically more interesting than the post-Second World War ritualistic projects toward new sacredness.
- 19. Because of a long-standing embargo and the collapse of oil imports after the dissolution of the Soviet Union, the Cuban

- economy has been used to conditions different from the rest of the world. Consequently, it may not come as a surprise that in his autobiography Fidel Castro concludes: "Marx thought that the limit on the development of wealth lay in the social system, not in the natural resources, as we know today." Fidel Castro and Ignacio Ramonet, *My Life* (London: Penguin, 2008) 355.
- 20. For instance, roughly in the sense of bioregionalism: different ecological localities and the historical human livelihoods adjusted to them have different conditions that do not apply universally, nor necessarily even nearby.

## Notes to 2. The Experience of Oil

- On how flesh makes lives unique, see Juha Varto, A Dance with the World. Towards an Ontology of Singularity (Helsinki: Aalto U 2012).
- George Bataille, "Le bas matérialisme et la gnose," Œuvres complètes
   I (Paris: Gallimard, 1970) 220-26.
- 3. Allan Stoekl, Bataille's Peak: Energy, Religion, and Postsustainability (Minneapolis: U of Minnesota P, 2007) 5.
- 4. Bataille, "Le bas matérialisme" 217.
- of classical science or classical epistemology. They are shrouded in an epistemic mist. The "classical" is defined by Plotinsky; classical science and epistemology presuppose that the objects of knowledge exist independently of humans (realism) and follow the law of cause and effect so that something can happen only if caused, and so that particular causes have particular effects (causality and determinism). In contrast, quantum processes are non-classical: they cannot be given a description that is at the same time realist and causal-determinist. Arkady Plotinsky, *The Knowable and the Unknowable* (Ann Arbor: U of Michigan P, 2002) 1-2.
- 6. Nick Land, The Thirst for Annihilation: Georges Bataille and Virulent Nihilism (London: Routledge, 1992).
- 7. The scientific explanation for the high energy content of oil

is, naturally, that it contains the residue of millions of years of sunlight. Oil is "ancient sunlight," like the name of Thom Hartmann's book suggests. (Hartmann, *The Last Hours of Ancient Sunlight* [New York: Three Rivers Press, 2004]). On EROEI values, see Nathan Gagon, Charles Hall, and Lysie Brinker, "Preliminary Investigation of Energy Return of Energy Invested for Global Oil and Gas Production," *Energies* 2.3 (2009) 490-503.

- 8. For EROEI calculations of different energy sources, see David J. Murphy and Charles A.S. Hall, "Year in review EROI or energy return on (energy) invested," *Annals of the New York Academy of Sciences* 1185 (2010) 102-118. The calculations are complicated, and the values obtained depend highly on the details of the variables used and the particularities of the given energy source. (What costs are included in the calculation? Where is the well or the mine? How long is the road to the refinery? Are the railways in order? How much impurity does the crude contain? How much maintenance does the infrastructure take? What kind of education do the workers need? How will waste be managed?) Some reference values are: 5-15 for nuclear power, photovoltaics 6.8, biodiesel 1.3, ethanol from sugar cane 0.8-10, wind 18, hydropower over 100, coal 80, contemporary oil production approximately 35.
- 9. When does a habit turn into complacency, intelligence into *hubris*? The physicist Tom Murphy presents on his blog an interesting account of "ruthless extrapolation" under circumstances where something contingent is taken as "normal." The example concerns the travel time from Europe to the Americas. For a long time several centuries the travel by sail took roughly two months. Technological change did not affect the matter much, so the expectation was that the travel will always take around two months. However, after the invention of the steam boat, the travel time started shrinking, according to Murphy, by 1.2% per year. If that trend had persisted, now the travel would take 37 hours. But that extrapolation was put to shame by the invention of the airplane. The time shrunk even faster, by 5.7% per year. At best, the Concorde

crossed the Atlantic in little over three hours. After Concorde, one could ruthlessly extrapolate that in 2012 the crossing takes 19 minutes and that the travel speed overtakes the speed of light in 2200. Of course that is not what happened. Today, the crossing takes more than three hours since the Concorde has been laid down due to economic reasons. There are several lessons to Murphy's story. First, the extrapolation of trends is habitual and important, maybe even necessary. Second, extrapolation is treachery. Third, the error may happen in both directions, in being overly optimistic or pessimistic. Fourth, progress also moves backwards, like the travel time after the Concorde. Murphy, "Ruthless Extrapolation," *Do the Math: Using physics and estimation to assess energy, growth, options,* 26 June 2006 < http://physics.ucsd.edu/do-the-math/2012/06/ruthless-extrapolation/>.

- 10. Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: W.W. Norton, 1997).
- 11. Paul Virilio, Virilio Live: Selected Interviews, ed. John Armitage (London: Sage, 2001).
- 12. Even though Virilio also predicts a global accident, spread by the speed of light of information transfer (Virilio, *Live* 32).
- 13. The Prussian von Clausewitz does not use the expression "fog of war," but talks metaphorically of the dark light in a war situation, as if there were a mist or if the light came from the moon; the darkness distorts shapes and makes an overview impossible. Carl von Clausewitz, "Chapter Two: On the Theory of War," On War, Book Two: About the Theory of War, trans. James John Graham (London: N. Trübner, 1873) <a href="http://www.clausewitz.com/readings/OnWar1873/BK2cho2.html">http://www.clausewitz.com/readings/OnWar1873/BK2cho2.html</a>>.
- 14. Albert Borgmann, Technology and the Character of Contemporary Life (Chicago: U of Chicago P, 1984).
- 15. Borgmann's account can be supported by the pre-Socratic anecdote according to which a group of enthusiasts seeking the sage Heraclitus finds the old man in a modest room (possibly a cave), warming himself (possibly in order to take a bath) by a small fire

(in Latin, focus). Maybe the visitors expected to find the wise man in dignified surroundings engaged in deep thought, but Heraclitus — let us imagine him dishevelled, stained by sweat and soot — calmly welcomes the visitors by saying, "Here, too, are the gods." Heraclitus was involved in a focal practice in which basic everyday tasks pull together the divine and the gods. If the philosopher of fire is here directing his visitors, we can imagine that his gesture meant to say that philosophy is not made meaningful by lofty disengagement, but through practices that gather the meaning of the world in its parts and find the sacred in the most everyday and subjectively embarrassing situations. For Heraclitus's fire, see Charles H. Kahn, The Art and Thought of Heraclitus: A New Arrangement and Translation of the Fragments with Literary and Philosophical Commentary (Cambridge: Cambridge UP, 1979) 273-274.

- 16. Non-individual sustainability also in the animal sense: certain groups of animals, including species of mammals, have lifestyles in which individuals "altruistically" adopt roles in which they do not even try to breed, but rather perform functions (scouting, rearing the young, and so on) that have meaning for the group as a whole. Interestingly, sometimes these behaviors exist in some groups of the species and not in others: this indicates a focal/local intertwinement between the behaviors and the environment.
- 17. Elmar Altvater, "The Social and Natural Environment of Fossil Capitalism," *Socialist Register* 43 (2007).
- 18. Jussi Raumolin, "Entropologian kehitys ja kehityksen entropologia," Energia, kulttuuri ja tulevaisuus, ed. Ilmo Massa (Helsinki: Suomalaisen kirjallisuuden seura, 1982).
- Martin Heidegger, "Logik als die Frage nach dem Wesen der Sprache," Gesamtausgabe XXXVIII, ed G. Seubold (Frankfurt a.M.: Vittorio Klosterman, 1998) 81-83.
- 20. Martin Heidegger, "Das Ding," Vorträge und Aufsätze, Gesamtausgabe VII, ed. F.-W. von Herrmann (Frankfurt a.M.: Klostermann 2000).
- 21. Simone Weil, "The Iliad, or the Poem of Force," *Chicago Review* 18.2 (1965).

- While Weil was a committed revolutionary in her youth, later on 22. she started to doubt whether a violent revolution would be a good way toward liberation. She does not believe in a "return to nature," either, since in nature the effects of force (hunger, survival) are nakedly present. However, the analysis on the Iliad presents also a potential for liberation. The epic describes the goings-on in a way that understands their tragedy: both the victors and the vanquished suffer and disappear, both are under the rules set by force and try in their embodied and vulnerable ways to do their best. The distanced, partly bitter, partly sympathetic tone of the Iliad describes life without illusions, in a balanced way. According to Weil, this is its beauty that in turn makes it possible to discard the perspective of force. Beauty cannot and should not be eaten, so its very existence shows that humans contain something else besides the effects of force. At the same time, the *Iliad* shows that a kind of passive action can avoid the reifying tendencies of force. Weil sees beauty and awareness as ways toward understanding the mystical work of God. For her, matter is the nest of force and so an ineradicable part of human existence, so that liberation is possible by recognizing an area of necessity and form delimiting matter and revealing the hand of God — this, of course, in almost diametrical opposition to the views of Bataille. Weil and Bataille share a reliance on the power of example — for Weil the example of Christian saints, for Bataille the athletes of inner experience — and the concomitant collective sacrifice. This also means that Weil and Bataille take the uniqueness of their favorite exemplary practices too literally, as if similar practices did not exist elsewhere. For instance, when Bataille uses Tibetan mystical texts as inspiration, he unwittingly shows that many Eastern traditions have developed and trained exemplary traditions for several generations.
- 23. Reza Negarestani, Cyclonopedia: Complicity with Anonymous Materials (Melbourne: Re-press, 2008) 69.
- 24. For the structure and critique of pyramid societies, see Sigmund Kvaløy, "Complexity and Time: Breaking the Pyramid's Reign,"

- Resurgence 106 (September/October 1984). For the immobility caused by the auto-movement, see Paul Virilio, *Polar Inertia* (London: Sage,1999).
- 25. Plato, Laws 5.744e, Plato in Twelve Volumes, Vols. 10 & 11, trans. R.G. Bury (London: William Heinemann Ltd., 1967 & 1968).
- 26. As Bush Senior put it in 1992, "the American way of life is not negotiable."
- 27. This despite the fact that coal production currently is literally murderous. In China, thousands of coal miners die in accidents every year. See "List of coal mining accidents in China," Wikipedia, 17 June 2014 <a href="http://en.wikipedia.org/wiki/List\_of\_coal\_mining\_accidents\_in\_China">http://en.wikipedia.org/wiki/List\_of\_coal\_mining\_accidents\_in\_China</a>.
- 28. "Peak Oil. Sicherheitspolitische Implikationen knapper Ressourcen," Zentrum für Transformation des Bundeswehr, Strausberg 2010 <a href="http://www.bundeswehr.de/resource/resource/Peak%20Oil.pdf">http://www.bundeswehr.de/resource/resource/Peak%20Oil.pdf</a>>.
- 29. Ernst Jünger, Über die Linie (Frankfurt a.M.: Vittorio Klostermann, 1950).
- 30. For the connection between oil and the dollar, see W. Clark, Petrodollar Warfare: Oil, Iraq, and the Future of the Dollar (Gabriola Island: New Society Publishers, 2005).
- 31. Franco Berardi, After The Future (Edinburg: AK Press, 2011) 17-18.
- 32. Here is Marinetti, in the Manifesto of Futurism from 1909 (quoted in Berardi, After the Future 20): "1. We want to sing the love of danger, the habit of energy and rashness.... 8. We are on the extreme promontory of the centuries! What is the use of looking behind at the moment when we must open the mysterious shutters of the impossible? Time and Space died yesterday. We are already living in the absolute, since we have already created eternal, omnipresent speed.... 11. We will sing of the great crowds agitated by work, pleasure, and revolt; the multi-colored and polyphonic surf of revolutions in modern capitals; the nocturnal vibration of the arsenals and the workshops beneath their violent electric moons; the gluttonous railway stations devouring smoking

serpents; factories suspended from the clouds by the thread of their smoke." Just a few comments on the poetic dimensions available here: in a surefooted way, Marinetti talks about speed and energy. The terms are obviously used both in a concrete and metaphoric sense. As Berardi points out in his analysis, for the Futurists, energy has mostly the connotations of psychological enthusiasm, competition and (male) aggression. In a curious way, eternality and omnipresence combine with danger and revolutions. The reversal of the causal order in the factories that hang from the clouds reveals interconnections probably better than Marinetti intended.

- 33. Mitchell, Carbon Democracy 234.
- 34. Live 26.
- 35. Berardi sums up: "In the past century that trusted in the future, art was essentially involved in the business of acceleration. Futurism defined the relation between art, the social mind, and social life. The cult of energy marked the artistic zeitgeist, up to the saturation of collective perception and the paralysis of empathy. Futurist rhythm was the rhythm of info-acceleration, of violence and war." Franco Berardi, *The Uprising: On Poetry and Finance* (Cambridge, MA: Semiotext(e), 2012) 146.
- Naomi Klein, The Shock Doctrine: The Rise of Disaster Capitalism (New York: Metropolitan Books, 2008).
- 37. Not that they are negligible: the information and communication technology (ICT) sector has been calculated to consume between 3 and 5 percent of global electricity, and the number is rising rapidly with increased users of computers and hand-held devices. See Stephen Ruth, "Reducing ICT-related Carbon Emissions: An Exemplar for Global Energy Policy?" IETE Technical Review 28.3 (2011).
- 38. Negarestani, Cyclonopedia 20.
- 39. Cyclonopedia 72.
- 40. A lot needs to be said about the gnostic aspects of this active malice of matter: where is the Christian Negarestani?
- 41. For the sake of the argument only, since the conceptualization in

- thermodynamics shuts out the experiential and base materialistic aspects of energy. This also means that economic thinking based on thermodynamics has to be viewed with caution. Its (homogenic) conceptualization contains (heterogenic) blind spots.
- 42. Friedrich Nietzsche, Sämtliche Werke, Kritische Studienausgabe in 15 Bänden, Vol. 3, eds. Giorgio Colli and Mazzino Montinari (München: de Gruyter, 1980) 480.
- 43. Friedrich Adolf Kittler, "The Flower of the Elite Troops," *Body and Society* 9.4 (2003) 169-189.
- 44. However, in the contemporary state of total mobilization, the experiences of the worker and the bourgeois have mixed so that it seems to be possible to work as a worker and spend the free time as a bourgeois, and vice versa. The breaks produced by oil are more internalized: they do not separate classes of people, but rather the processes of production and consumption are con-distanced inside individual experiences.
- 45. Virilio sums up the matter nicely: "You cannot understand Nazi Germany without accounting for the fact that it had been deprived of colonies and embarked on a programme of colonization at home" (Live 43). For the Nazi economy, see also Adam Tooze, The Wages of Destruction: The Making and Breaking of the Nazi Economy (London: Penguin, 2007).
- 46. Georges Bataille, "La Guerre," Œuvres completes VII (Paris: Gallimard, 1976) 251-259.
- 47. Ernst Jünger, "Die totale Mobilmachung" (Dessau: Junker und Dünnhaupt, 1934) 16.
- 48. On the other hand, Bataille, too, craves a life without reflection, without the head, for a waste of energies and thought that would not feed back into rational and civilized insights over its own importance.
- 49. Georges Bataille, *Lettres à Roger Caillois*, ed. J.P. Le Bouler (Paris: Folle Avoine, 1987) 131.
- 50. As an example of this kind of prevalent bearing, one can think of the practices of permaculture. Whereas fossil-based industrial

- agriculture tries to dominate and control the recurrent circular flows of the land through intensive tilling, pesticides, and fertilizers, permaculture is based on reading the land and augmenting its prevalent circulations of nutrients, water, air, and so on.
- of experience (or meaning, feeling, consciousness). In this sense experience and consciousness are not properties of nature as seen in natural science, unlike, for instance, radiation (a Geiger counter) or calculable energy (a calorimeter). However, it is obvious that different experiences have different intensities, and that different states of mind contain different amounts of energy, power. Following the classical phenomenological critique of science, it can be noted that the physical concept of energy or power gets its *meaning* from the experience or feeling of energy and power, not the other way around. If we did not have experience and consciousness, we would not have the physical concept of energy (and no calorimeters, either).
- Clearly, we accept the description of the vortex of deterritorialization 52. and reterritorialization in Deleuze and Guattari's Mille Plateaux (Paris: Éditions de Minuit, 1980); this destructive-constructive double movement is the way in which the age of oil mauls localities. The movement detaches local meanings and retools them as parts of the automaton. However, we disagree with the contention, often resulting from the views by Deleuze and Guattari, that the road forward goes through an acceleration of this movement. The movement of de/reterritorialisation is not an ontological but rather a nafthological feature of our age, or, more precisely, naftha is a part of its existential constitution. Therefore the forest of foci discussed in chapter 4 is, despite the obvious kinship (heterogeneity, multiplicity), different from the rhizome in two important ways: its descriptive level is different, and the description itself is also partly dissimilar. The forest of foci deals with the birth of meaningful experience, whereas the rhizome is most often interpreted as a ontologico-epistemological concept describing the organization of

meaning. A forest of foci, like breath and a sense of smell, is reborn rhythmically in an unstable but possibly developing way. Second, it is non-local, containing a physically impossible action at a distance between non-connected phenomena. Third, a forest of foci is something non-human in humans, an asubjective phenomenon that matters despite systems of meaning or signification.

## Notes to 3. Focal Points

- Georges Bataille, La Part maudite, Œuvres complètes VII (Paris: Gallimard, 1976) 17-137.
- 2. There is a structural reason for this. In a general economy, the problem is the necessary surplus of energy and the need to waste it without producing yet more surplus. All productive use of energy, such as the growth of an animal or a plant, creates more surplus.
- Bataille's belief is based on his discussions with the nuclear scientist Georges Ambrosino, who argued that nuclear energy will give humanity an inexhaustible energy source. See Stoekl, Bataille's Peak 39.
- 4. Such as stopping the "red wave" and supporting U.S. hegemony in Western Europe; goals that were also explicitly stated. Mitchell claims that a big portion of Marshall aid was purposefully directed toward transforming European infrastructure from coal to oil (Carbon Democracy 29).
- 5. As above, by classical physics we mean, following Plotinsky, the kind of physics that sees its objects as unambiguously conceptualizable and, therefore, representable (*The Knowable* 1-2). Objects like this are typically idealized (in the sense that concrete details are abstracted away) and the model (the theory with its field of application) describing them is realistic, causal, and deterministic. Plotnitsky's definition of "classical" corresponds closely to Bataille's description of the "functional goal" of science, which is the increase of useful, homogeneous knowledge. Any science of the heterogeneous would, according to Plotnitsky and Bataille, be non-classical; that is, antirealist, non-causal, or indeterminist, or some

combination thereof.

- 6. Land, Thirst.
- George Bataille, "Le gros orteil," Œuvres complètes I (Paris: Gallimard, 1970) 200-204.
- 8. Borgmann, Technology 41.
- Hubert Dreyfus, "Heidegger on the Connection between Nihilism, Art, Technology, and Politics," The Cambridge Companion to Heidegger, ed. C. Guignon (Cambridge: Cambridge University Press, 1993).
- 10. With refreshing straightforwardness, Dreyfus suggests that the hippie movement exemplified by the Woodstock concerts contained seeds of a cultural change that could have engendered a new nontechnological understanding of Being, if the movement would have been sustained and long-lived enough (Dreyfus, Companion 290-95).
- This is the haecceitas, or "thisness," described by John Duns Scotus.
   See John Duns Scotus, Early Oxford Lecture on Individuation, ed. Allan
   Wolter (Bonaventure, NY: Franciscan Institute Publications, 2005).
- 12. Now the recognition that bees are necessary for food production, even in terms of industrial agriculture, is gaining widespread attention. How likely is it, really, that we are aware enough of all the species and kinds of bacteria, fungi, insects that may have equally crucial roles?
- 13. Our aim is not to argue over the correct interpretation of Borgmann's account of focality. Maybe commanding presence, communality, and an embodied skilful practice are, rightly understood, always multiple and internally incommensurable. It is true, in any case, that a connection with a focal thing is already ecstatic, drawing humans out of narrow subjectivity.
- 14. Žižek, On Belief (London: Routledge, 2001) 12, and Brian Daizen Victoria, Zen at War (Lanham, MD: Lowman & Littlefield, 2006).
- 15. The idea of an organic national/völkisch body (der Volkskörper), notoriously propagated by National Socialism, was based on a bundle of metaphors taken into political use in the late nineteenth century: a nation could be "healthy," "ill," and so on.

- 16. Altvater, "Fossil Capitalism."
- 17. In the essay on fascism, Bataille sees money as the characteristic measure, but after Foucault it would make sense to investigate the role of knowledge such as the knowledge of the self as a similar factor creating commensurability.
- 18. Like Marxists, Bataille thinks that social and political change is caused by contradictions appearing in the homogeneous order; the contradictions create friction, disagreement, and eventually the breaking up of the homogeneous. So also in the case of fascism. However, according to Bataille, the material reasons were different in Italy and Germany. In Italy the problem was between capital and labor; in Germany the problem was outside competition to capitalistic enterprise. Consequently, Bataille thinks that the psychological conditions rather than material circumstances explain the commonality between fascism and Nazism.
- 19. Karl Popper, *The Logic of Scientific Discovery* (New York: Basic Books 1959).
- George Bataille, "La Structure Psychologique du Fascisme," Hermès5-6 (1989) 68.
- 21. Bataille, "Structure Psychologique" 69.
- 22. Jünger has at least in retrospect claimed that in the 1939 published book On the Marble Cliffs (Auf den Marmorklippen) the character of the head forester depicts a totalitarian leader like both Hitler and Stalin. The head forester is charismatic, combining heterogeneous and elementary forces, promising liberation from levelled and boring bourgeois life.
- 23. Georges Bataille, Visions of Excess: Selected Writings 1927—1939, ed. Allan Stoekl (Minneapolis: U of Minnesota P, 1985) 151.
- 24. This structure can be compared with the structure created by the utilization of nuclear power. At a distance, it might seem that nuclear power exemplifies general economy as something fateful, virulent, and uncontrollable; uranium is a good example of base matter. However, nuclear power attempts to homogenize this fateful base matter through technologically hypercomplex power

- plants that are further enclosed in terror-proof concrete casks and evaluated by supposedly fail-safe expert knowledge. The necessary control think of how proponents of nuclear energy concentrate on "safety" and "cleanliness" reveals the fascist structure of nuclear power.
- 25. Further, Bataille points out that the functionally different powers of church, army, and royalty have a tendency to melt together, for instance, in the shapes of a lord of the church, or the head of state that is at the same time the commander in chief and the head of the church (like the Finnish president).
- 26. As a contemporary twist one may add David Graeber's observation that neoliberalism is more concerned about orthodoxy (i.e., spiritual sovereignty) than about economic flourishing, contrary to its official public image. What appears as the hegemony of economics austerity, unprecedented public support for private companies, financialization, growth in economic inequality is, in view of neoliberal economics, hopelessly contradictory and muddled but, in view of neoliberal orthodoxy "there is no alternative," "liberal economy is the least bad form of government" necessary. Imperial sovereignty is concentrated despite economic distress. Graeber, "Of Flying Cars and the Declining Rate of Profit," The Baffler 19 (2012).
- 27. Martin Heidegger, Beiträge zur Philosophie (Vom Ereignis), Gesamtausgabe LXV, ed. F.-W. von Herrman (Frankfurt a.M.: Vittorio Klostermann 1989) 96-7.
- 28. As an aside, Bataille separates the Islamic Caliphate from fascism even though it, too, combines political and religious power. In the Caliphate, the sovereign is God, represented by the Caliph, whereas in fascism the sovereign is the people, represented by the Leader. Fascism is born in a situation where the state already exists, so it takes the state in its own use. In Mussolini's Italy, sovereignty is personalized through a spiritual account of the nation, while in Germany, the pseudo-biological notion of race bears a part of the tasks of the sovereign.

- 29. Bataille, Visions 149.
- 30. Visions 154.
- 31. From a Bataillean perspective, all focal practices may, because of their inherent centralization, be too goal-oriented and totalizing. What is left is a "headless" (acéphale) community, even though there, too, Bataille is cautious ("Materilisme" 442-446).
- 32. There exists an anthropological literature on the systematic ways of counteracting concentration of power. See, for example, Pierre Clastres, Society Against State: Essays in Political Anthropology (New York: Zone Books, 1988); James C. Scott, The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia (London: Yale U P, 2009); and David Graeber, Direct Action: An Ethnography (Edinburgh: AK P, 2009).

## Notes to 4. Forests of Foci

- It might even be suspected that the idea of causality functions in covering up the phenomenon of multifocality in the physical sciences.
- 2. "Self-organizing" here means non-cognitive and non-anthropocentric.
- 3. A group of people living in a forest engaged in traditional forest gardening or shifting cultivation sees the forest as such as their livelihood. It provides everything needed by way of food, shelter, medication, company, and so on. No improvement is needed, and the role of humans is to mesh their activities with the activities of the plants and the animals. To an uncultivated eye, the forest garden may even seem wild, unused. Here, the forest is not "nature"; rather, it is "world." In contrast, in order to get a livelihood out of the same area, industrial agriculture has to erase the forest and turn into "arable land," which is fed with external matter and energy and still manages to produce only one kind of crop while constantly being impoverished and degraded in the process. Here, the land is not "nature"; rather, it is "material."
- 4. Consequently, a forest of foci shares some features with a

- parasite. It lives as a part of human being, but the relationship is not symmetrically symbiotic or reciprocal. A forest of foci as a parasite is not "the other" outside because it can be lived in the tensed body, where "the other" is already included as a condition of meaningfulness.
- The wild and untotalized energy can perhaps be exemplified by the many-breasted figure of Artemis; the wild feeds in many ways, sovereignly.
- 6. The question of asubjective experience is tied to the question of language: as many philosophers from Nietzsche to Bertrand Russell have noted, Western metaphysics seems to be connected to the structure of Indo-European languages (which, for instance, demand that every grammatical sentence has a subject and a predicate). In non-Indo-European languages on the fringes of Europe, the linguistic and metaphysical pressure may be more obvious than in the center. However, it is very difficult to discern the heterogeneous syntactic and semantic layers. If, following Pauli Pylkkö, we see the Indo-European subjectivity in a non-Indo-European language like Finnish as an occupying force, the task of the subject is clearly the homogenization, purification, and eventual totalization of heterogeneous experience. The increase in the level of subjectivity and the guaranteeing of the permanence of the subject mean a decrease in experiential intensity. From the perspective of heterogeneous experience, the subject is something that, for sure, is produced. (The means are well known in education - taking young children from their communities to boarding schools is one brutal way — even though the promises of what Borgmann calls the *device paradigm* with its ease and convenience seems to be more effective). The rise of the subject-object structure has been described by many philosophers and psychologists, but in experiential terms the attempts to create a permanent subject are counterproductive since there is nothing in the subject: "es gibt keinen Da da." Heterogeneous experience can be intensified only as a forest of foci, not as subjective purification. Pauli Pylkkö,

- "Merkillisyys ja herrastelu," niin & näin 1 (2006) 7-15.
- 7. To be sure, a sauna with an electric *kiuas* is better than no sauna at all. This kind of acceptance maybe tells, at the same time, of adaptation to the device paradigm and yearning for the ritual practice. Relatively few would, in the end, insist that the experience of an electric sauna is better than a wood-burning one.
- 8. Bataille's Peak 147-148.
- 9. Bataille's Peak 188.
- 10. Gary Snyder, *The Practice of the Wild* (San Francisco: North Point Press, 1990) 92.
- 11. For instance Leena Valkeapää presents material according to which reindeer-herding Sami seem to have consciously limited the number of children they have. Lenna Valkeapää, Luonnossa: Vuoropuhelua Nils-Aslak Valkeapään tuotannon kanssa (Helsinki: Maahenki, 2011).
- 12. See also Tere Vadén, "Oil and the Regime of Capitalism: Questions for the Philosophers of the Future" CTheory (June, 2010) <a href="http://www.ctheory.net/articles.aspx?id=658">http://www.ctheory.net/articles.aspx?id=658</a>>.
- 13. Pentti Linkola, Voisiko elämä voittaa. Ja millä ehdoilla (Helsinki: Tammi, 2004).
- 14. Snyder, Practice 96.
- 15. Martin Heidegger, *Zollikoner Seminare*, ed. Medard Boss (Frankfurt a.M.: Vittorio Klostermann, 1987) 352.
- 16. After the Future 147.
- 17. As an anecdote one can remember Stalin, a proponent and perpetrator of unification, industrialization, and homogenization if there ever was one, spending time as a prisoner along the river Jenisei in Siberia. According to many accounts, these were some of the happiest times for Stalin, who learned traditional crafts from the locals, preparing his own fishing gear out of natural materials, and at times forgetting himself on his hunting and fishing trips for weeks so that even his closest comrades did not know where he was. See, for example, Simon Sebag Montefiore, *Young Stalin* (New York: Random House, 2008).

- 18. Esa Kirkkopelto, "A Second Manifesto for Generalized Anthropomorphism," Other Spaces (2012) <a href="http://www.toisissatiloissa.net/">http://www.toisissatiloissa.net/</a>>.
- 19. Ville Ropponen quotes the Estonian philosopher Uku Maasing, according to whom the "'Standard Average European' way of thinking is characterized by the supposition according to which everything invented in the centers should be, as a norm, valid overall. [Standard Average Europeanness] sees itself as the pinnacle of evolution, with the right to assimilate or annihilate other cultures." (Ville Ropponen, *Uralilainen ikkuna* [Turku ja Tampere: Savukeidas, 2012]). For the concept of the Standard Central European linguistic area, developed by Benjamin Whorf, see "Standard Average European," *Wikipedia*, 21 February, 2015 <a href="http://en.wikipedia.org/wiki/Standard\_Average\_European">http://en.wikipedia.org/wiki/Standard\_Average\_European</a>.
- 20. As Ropponen notes, words like "nation," "people," and so on are all problematic in this context. Even though nationalism has often given some sort of shelter to small languages and peoples, it has far more often been a weapon in the hand of big languages and peoples. The same goes for phenomena like globalization, guaranteeing loose federative structures, but also resulting in ever-more binding unification and hegemony.
- 21. Ropponen, Uralilainen 118-119.
- 22. Uralilainen 45.
- 23. Uralilainen 44-45.
- 24. Uralilainen 122.
- 25. For plunder economy and its connection to entropy, see Raumolin, "Entropologian." The bioeconomics or ecological economics developed by Nicholas Georgescu-Roegen and Herman Daly contain detailed accounts of the role of entropy and energy in economy. For an overview, see Brian Czech, "Ecological Economics," Encyclopedia of Life Support Systems (Oxford: UNESCO-EOLSS Publishers, 2009).
- 26. Uralilainen 60.
- Compared to Indo-European languages, the Uralic languages are characterized by weak grammatical hierarchy, nominalism,

concretism, onomatopoetic description, the lack of genus, weak notion of subject, and a wide variety of subjectless or passive forms (Ropponen, *Uralilainen* 161-62). Languages are not static objects. Therefore they cannot be described unconditionally, absolutely; they can only be comparatively characterized, acknowledging at the same time that any characterization is bound to have an effect on the language itself.

- 28. Uralilainen 60-61.
- 29. Uralilainen 132-33.
- 30. Uralilainen 151-52.
- 31. Uralilainen 28.
- 32. Lasse Norlund, Foundations of Our Life: Reflections on Human Labour, Money and Energy from Self-Sufficiency Standpoint (2008) 14. <a href="http://design.antigov.org/txt/Lasse\_Nordlund.htm">http://design.antigov.org/txt/Lasse\_Nordlund.htm</a>. For Jünger, the difference between the worker and the bourgeois is that the worker does not want to escape from elementary forces in the name of convenience and does not want to "outsource" the tasks needed for her/his upkeep elsewhere (Ernst Jünger, Der Arbeiter: Herrschaft und Gestalt [Stuttgart: Klett-Cotta, 1932, 2007]). In an interview with Maria Dorff, Nordlund says, "I wanted to have back all these areas of responsibility that we had delegated to others" (Lasse Nordlund and Maria Dorff, Elämämme perusteista. [Nokia: Palladium 2009]).
- 33. Nordlund, *Foundations* 6. For food production see David Pimentel, "Food Production and the Energy Crisis," *Science* 182.4111 (1973) 449.
- 34. Foundations 10.
- 35. Foundations 10-11.
- 36. It is intriguing that according to some anthropologists, four hours per day is also the amount that certain gatherer-hunters use for obtaining food and shelter. See Richard B. Lee and Irven DeVore, *Man the Hunter* (Lontoo: Aldine, 1968), and Marshall Sahlins, *Stone Age Economics* (Chicago: Aldine 1972).
- 37. In the extreme, Nordlund used only 30-50 euros per year, mostly for medical bills, inner tubing for his bicycle, and flour for sweet pancakes.

- 38. Foundations 15.
- 39. Foundations 7.
- 40. Nordlund and Dorff, Elämämme 30.
- 41. Elämämme 14.
- 42. Elämämme 30.

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