

HOUSEHOLD ENERGY USE IN SWEDEN AND MINNESOTA:
INDIVIDUAL BEHAVIOR IN CULTURAL CONTEXT

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ABSTRACT

A central question still to be answered by energy researchers is the relative importance of behavior versus technology in determining household energy consumption. This question is vital to comparative research as well: To what degree can Sweden's lower residential energy consumption be explained by differences in Swedish and American "lifestyles?" And what are the respective socio-cultural forces which influence these individual decisions?

Household energy use is examined from a holistic, anthropological perspective in two communities: Foley, Minnesota and Munka Ljungby, Skåne, Sweden. Household and heating consumption totals are compared for samples of single family, owner-occupied dwellings.

Daily patterns of energy use emerge from activity records kept by families in each community. Energy use choices made by household members are examined in conjunction with household priorities, such as economic factors, social relations and expectations, considerations of time, stress reduction, esthetics, and standards of work. The contrast goes further to include broader social and cultural forces which work to promote residential energy conservation and those which mitigate against it.

The relative situations of household consumers in Sweden and Minnesota and their responses to energy conservation messages are compared. The tremendous successes of Sweden's energy campaigns are examined in the context of complementary technological and socio-cultural factors.

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ENERGY DEMAND AND THE QUESTION OF "LIFESTYLE"

In the late 1970s Sweden occupied a central place in comparisons of U.S. energy demand with that of other countries. Attention was drawn to Sweden in large part because of the new analyses of Swedish energy use such as those of Schipper and Lichtenberg (1976) and Hambraeus and Stillesjö (1977). From these reports came the tantalizing finding that Swedes used only 60% of the energy, per capita, that Americans did. How was this remarkable efficiency achieved while maintaining the notoriously-high Swedish standard of living?

A central question became the relative importance of behavior versus technology in determining Sweden's lower residential energy consumption (estimated to be 70% to 85% that of the U.S., per capita--Doernberg, 1975). That is, did Swedes use less energy because their daily lives were markedly different from those of Americans? --Or were Sweden's superbly-constructed houses and appliances primarily responsible for its lower consumption?

Researchers lacked the information necessary to answer this question, however. Although they had access to large-scale, technical energy flow analyses, the aggregated data produced by such studies were inadequate to answer more specific questions, especially with regard to residential patterns. Studies comparing energy consumption among households revealed dramatic individual variation (Darley et.al. 1979; Goldstein 1979; Lundström 1980; Gaunt and Berggren 1983). Yet, this variation could not be accounted for by the aggregate of technical variables measured, and not enough was known about activity inside the houses.

A critical gap existed in knowledge of everyday household patterns and their contexts, as well as the perceptions, attitudes, and values of the residents. Too often, differences in energy consumption were ascribed to differences in "lifestyle." This now-ubiquitous term was neither defined nor documented, however, and stereotypes were invoked to explain differences in energy consumption. Swedes were depicted as careful energy conservers, living simply, and doing tasks by hand. Americans, in contrast, were thoughtless energy gluttons, living on a lavish scale, and addicted to machines.

To what degree are these stereotypes based in reality? How much of Sweden's lower household energy consumption is explained by differences in Swedish and American "lifestyles?" And what are the respective social and cultural forces which influence the decisions of individual consumers?

To address these questions, I conducted anthropological fieldwork for six months in each of two towns: Foley, Minnesota (1980 and 1981) and Munka Ljungby, Skåne, Sweden (1982). The single-family dwelling was the unit of research. A mixture of quantitative and qualitative data was gathered from

a variety of sources, among them community-wide questionnaires; billing records of utility companies; and interviews with key informants, such as educators, government officials, and merchants.

In addition, a group of "core" households, numbering twenty-two in Foley and twenty-one in Munka Ljungby, participated more intensively in the research. These households completed additional questionnaires and gave lengthy interviews. Sociologist Michael Sobel's (1981) operational definition of "lifestyle" as "expressive behaviors that are observable" was adopted and applied in a detailed analysis of key energy-using activities of the core households. Each household member aged six or older kept daily records of engagement in nineteen specified activities during four different weeks.

In the discussion which follows, reported indoor and water temperatures and some related factors are presented for the Foley and Munka communities. Twelve of the energy-using household activities recorded by the core groups are contrasted for frequency and duration, and are weighed against prevailing national stereotypes. Following this quantitative review are comparisons of social and cultural factors which promote energy consumption, and those which promote energy conservation, in Sweden and in Minnesota. Finally, the sources of discrepancies between attitude and behavior in Foley and Munka are explored.

DAILY HOUSEHOLD PATTERNS

Based on comparative fuel consumption data gathered for one measurement year, Munka Ljungby core households used, on the average, 86% of the household and hot water fuel that Foley households did. This lower Swedish use was expected, although the percentage is higher than that reported by most studies or estimates. The factors behind this lesser consumption will be discussed shortly.

The relationship between the two communities is reversed for space heating fuel consumed. Here, after degree-day adjustment, Foleyites used 86% of the fuel, on the average, that Munka Ljungbyans did. This unanticipated finding can be accounted for by physical differences in the housing and by various consumer choices, some of which are presented below.

Indoor and Water Temperatures

Two weighty choices householders make in relation to total household energy consumption are indoor and water temperatures. Munka Ljungbyans belie the Swedish stereotype in these areas, choosing higher temperatures than do the Foleyites. The average indoor daytime temperature reported by the Munka heating fuel sample was 68 degrees F, one degree higher than the Foley sample average of 67 degrees**. Munka's nighttime average temperature, 66 degrees,

**The "fuel sample" in each community was those households which completed the community-wide questionnaire and for which reliable data on fuel consumption could be collected for the measurement year. Foley's fuel sample numbered 91 (for both heating and household energy); Munka's fuel sample for household energy was 63; for heating, 41.

was two degrees higher than Foley's 64-degree average.

Minnesota government and utility companies urged a daytime thermostat setting of 65 degrees. Foleyites set their thermostats to average two degrees above this. The Swedish state recommended daytime temperatures of 68 degrees and nighttime temperatures of 64 degrees. Most Munka Ljungbyans complied with the daytime recommendation but had nighttime temperatures which averaged two degrees above the guideline.

Heating practices should not be discussed for Sweden without reference to patterns of ventilation (v ddring), practiced daily by most householders. Sixteen of the twenty Munka core households providing information on ventilation aired their houses daily by opening some combination of windows and doors, but only half of them turned thermostats down or off while doing so. Ventilation periods lasted from five to twenty minutes. No relation was found between duration and thermostat adjustment.

Munka Ljungbyans also set their water heaters at higher temperatures. Two thirds (67%) of Munka's core households reported settings at 150 degrees F or higher, while only 15% of Foley's core households did so. In addition, Munka Ljungby water heaters had a greater average capacity than did those in Foley. The mode for Munka's household fuel sample was "greater than 60 but less than 100 gallons." Foley's household fuel sample's mode was 50 gallons, with the 30-gallon size water heater nearly as prevalent.

Energy-Using Household Activities

As can be seen from Table I, Foley and Munka core households demonstrated similar patterns of frequency of use of ovens, ranges, dishwashers, irons, and vacuum cleaners, but differed in other aspects of these activities, and for other activities overall. Differences in average household size should be kept in mind as these patterns are reviewed: Foley's household average was 3.0 persons; Munka's was 2.6 persons.

Many patterns of the Foleyites confirm the stereotype of a more energy-intensive American "lifestyle." While oven and range use are similar in terms of frequency and total energy demand (based on calculations involving temperatures, durations, and types of cooking fuels), ten of Foley's core households contained microwave ovens, while only one of Munka's core did so. Foleyites used their microwaves an average of 8.3 times per week. The ovens were used most frequently for tasks that could be performed equally efficiently by the range, such as heating leftovers or water, rather than for the more energy-intensive oven tasks of baking and roasting, where fuel savings would be realized.

Also, while Foleyites and Munka Ljungbyans used their clothes-washers the same average number of times weekly (3.6 and 3.7 times, respectively), Foleyites averaged 2.4 loads of clothing per laundry episode, while Munka Ljungbyans averaged half that much, 1.2 loads.

Table I. Selected activity patterns of core households, Foley and Munka Ljungby.

<u>Activity</u>	<u>Community</u>	<u>Average # of times per week</u>	<u>Average duration per time</u>
<u>OVEN USE</u>	Foley (N=22)	3.5	90 min. (350 DF mode)
	Munka (N=21)	2.5	53 min. (400 DF mode)
<u>RANGE USE</u>	Foley (N=22)	11.6	38 min.
	Munka (N=21)	11.9	33 min.
<u>DISHWASHER USE</u>	Foley (N=10)	7.6	not reported
	Munka (N=14)	5.8	not reported
<u>CLOTHES-WASHER USE</u>	Foley (N=22)	3.6	2.4 loads per time
	Munka (N=20)	3.7	1.2 loads per time
<u>CLOTHES-DRYER USE</u>	Foley (N=21)	3.8	not reported
	Munka (N=10)	0.7	not reported
<u>IRON USE</u>	Foley (N=15)	1.4	34 min.
	Munka (N=19)	1.6	40 min.
<u>VACUUM CLEANER USE</u>	Foley (N=22)	3.0	29 min.
	Munka (N=21)	3.1	37 min.
<u>SHOWERS</u>	Foley (N=17)	13.6	9 min.
	Munka (N=20)	11.6	11 min.
<u>BATHS</u>	Foley (N=17)	4.6	19 min.
	Munka (N=20)	0.9	39 min.
<u>TV-WATCHING</u>	Foley (N=22)	--**	27 hrs. per week
	Munka (N=21)	--**	13 hrs. per week
<u>RADIO-LISTENING</u>	Foley (N=22)	16.3	126 min.
	Munka (N=21)	12.0	78 min.
<u>STEREO-LISTENING</u>	Foley (N=21)	3.5	89 min.
	Munka (N=19)	2.2	58 min.

**Calculations of the number of times a TV was turned on each week proved impossible, due to overlapping viewing by household members.

Nearly all of Foley's core households, but only half of those in Munka, owned clothes-dryers. Where choice of dryer versus clothes-line existed, Foleyites chose the dryer 78% of the time. Munka Ljungbyans, in contrast, chose the dryer over the line only 8% of the time.

Foley households recorded a greater weekly average combined number of baths and showers than did those in Munka: 16.0 versus 12.5, respectively. (Here it should be mentioned that six adults in the Munka core household population showered regularly at their workplaces: two adults, 2-3 times per week; two, four times per week; and two, five times per week.) Where facilities for both showers and baths were available in the home, Foleyites (N=17 households) chose the more energy-intensive bath over the shower more often than did Munka Ljungbyans (N=20 households): 26.5% of the time in Foley versus 7% of the time in Munka.

Finally, Foleyites devoted a much greater percentage of time to TV-watching and to radio or stereo-listening than did Munka Ljungbyans. It should be noted that Foleyites could choose from five different television channels offering nearly round-the-clock broadcasting, while Munka Ljungbyans were limited to three State-owned channels and much shorter broadcasting hours.

Some of the patterns in Munka, however, run counter to the stereotype of careful energy conservation and lesser use of appliances in Swedish households. While Munka Ljungbyans chose showers over baths more frequently than did Foleyites, average durations of both showers and baths in Munka were longer. The average Munka shower lasted 11 minutes, two minutes longer than Foley's average of 9 minutes. Baths in Munka averaged twice as long as those in Foley: 39 minutes, as compared to Foley's 19-minute average.

Munka Ljungbyans ironed and vacuumed the same number of times per week as the Foleyites, but engaged in both activities longer. Although all core households owned irons, a greater proportion of Munka households ironed regularly: 19 of 21, as opposed to 15 of 22. Also, the electric mangle is common in Swedish households. Fifteen of the Munka core households owned such a machine; none in Foley did.

Two thirds of the core households in each community owned dishwashers, and they were used with equal frequency by both groups. Munka Ljungbyans, however, were more likely to use running water for washing and rinsing the dishes they did by hand. Of all core households, dishwasher owners and non-owners alike, 67% in Munka and 41% in Foley reported using hot running water for washing and/or rinsing dishes.

These findings regarding selection of indoor and water temperatures and household activity patterns are by no means clear-cut. They neither clearly affirm nor deny the stereotypes. Certain patterns are roughly parallel for the two core samples; Foleyites exhibited more energy-demanding behavior in some areas; and Munka Ljungbyans did so in others. This mixed pattern implies that it is structural factors and technology, rather than behavior, which predominantly determine Sweden's lesser household energy consumption.

SOCIAL AND CULTURAL FACTORS WHICH PROMOTE ENERGY CONSUMPTION

Core household members were interviewed about the reasons for certain "energy-intensive" choices they made. Examples of such choices are using a clothes-dryer rather than a line, selecting high indoor or water temperatures, bathing rather than showering, and using hot running water for dishwashing. A wide variety of rationales was given by each group, but within them certain themes could be identified.

Foley

The energy-intensive choices of Foleyites clustered around three central motivations: attempts to save time; needs to offset the stresses of daily life; and compensation for feelings of powerlessness and anger. These three rationales, furthermore, are culturally legitimated, and individuals citing them are never challenged by peers.

Foleyites try to "maximize" their time, to be as productive and efficient off the job as they are at the workplace. They embody Staffan Linder's (1970) "harried leisure class," attempting to achieve productivity in their "free" time through increasing the numbers of tasks completed, activities engaged in, or goods consumed per unit of time. In Foley, being "busy" is a status symbol; the statement "I know how busy you are..." is an ingratiating one. Below, some Foleyites articulate the ways in which they perceive time and energy to be related:

- You could cut energy use tremendously if you had lots of time to spare. But who does? We're always runnin'.
- The more energy you use, the less time it takes to get things done. You gain time through the energy you use.
- Using energy saves time. Like taking the car in the mornings, I save 20 minutes. Or her using all that [electric] kitchen stuff. Our whole society is based on that: time. "Let's get moving." Oh boy.

In order to save time, Foleyites use their clothes-dryers, microwave ovens, other electric appliances, and power mowers; and they drive independently instead of walking, biking, or car-pooling.

The degree to which Foleyites crowd their daily schedules and experience time pressures is revealed in the comments on the advantages of the dishwasher and the clothes-dryer made by two informants:

- You can rinse and load the dishes and then be free to go off and do something else. It's really efficient, time-wise. It can wash dishes while you sleep!
- With a dryer, you can do things in between loads, rather than commit all that time to the line. You can dry when you want to, not just when the weather allows.

In addition, another informant reported that she was always careful to set the dryer time for more than needed to dry her clothes:

--That saves me monkeying around to go down and check to see if they're dry. Otherwise, I used to waste time and waste a trip to the basement!

A fourth informant said she chose to rinse her dishes with "really hot" running water because they "dried faster" that way. This informant did not dry dishes with a towel, but placed them in a draining rack!

Foleyites state that time saved is used "for things we like to do" and for participation in the round of activities which community organizations offer. Scheduling interviews with core households was often difficult because of the households' unremitting appointments and activities.

This tight scheduling and hectic pace created stress and fatigue. A second rationale for energy-intensive choices in Foley was the need to relax. Baths, "long" showers, TV-watching, and radio and stereo-listening were all cited as ways in which Foleyites could "unwind," "have fun," and protect their "mental health." Foley households contained a greater number of small appliances than did those in Munka, and Foleyites were more likely to express their choices to use these in terms of the enjoyment they offered. One informant said that she bought and used an electric mixer and an electric can opener "because they are fun, something you don't get enough of, in the kitchen or anywhere else!"

Many Foleyites felt powerless and angry in the face of rising fuel prices and an uncertain energy future. They trusted neither government nor utility companies, which they felt gave them mixed messages about energy: the denial of an energy crisis by the Reagan administration; conflicting reports on existing fuel supplies and natural resources; and the sharp reversal of former encouragement to consume "penny cheap" fuel. Foleyites felt trapped as dependent fuel consumers. Many chose to reassert a sense of personal power through maintaining or even increasing their household fuel consumption levels. They legitimated these "rebellious" decisions with the third rationale, the argument that they were able to afford the consequences:

--I'm paying my bill. They're not. So I'll do what I damn well please.

--I'm not putting a sweater on. I have a right to comfort, inside my own house. I pay my own way!

--Why should I be cold for two dollars? It's hardly worth it.

--Wasting is a luxury. And like any luxury, you need it. It's a reward I choose to give myself. My own business.

Sobel (1981) depicts consumption as a "sacrosanct" area of American life, one in which feelings of power and control are experienced. Foleyites resented attempts to constrain their freedom of consumption, especially since the inalienable right to cheap fuel was being abridged.

Munka Ljungby

Time economy figured importantly in Munka also, but not to the extremes that it did in Foley. Munka Ljungbyans were more likely to state that they

were "rational" in their use of time, but not that they tried to "save" time. Nor did they engage in the elaborate, down-to-the-minute calculations of the Foleyites. Munka Ljungbyans planned, but Foleyites schemed, to order their daily schedules.

The strongest factor promoting energy consumption among Munka Ljungbyans was social relations and expectations. Certain standards of housekeeping, personal appearance, and entertaining are upheld in conformist Swedish society to a degree which amazes American observers. Central to these are notions of scrupulous cleanliness and tidiness, and these typified Munka rationales for energy-intensive choices. Munka Ljungbyans used hot water "to get the dishes really clean," vacuumed longer to "make sure the house is thoroughly clean," and took longer showers and baths to "get all the soap off" and to "get really clean." They used their kitchen fans religiously to get rid of "smells" and "fat" as well as smoke or steam.

More Munka Ljungbyans than Foleyites reported turning up their thermostats when expecting guests. They expressed concern that every guest be comfortable and content, even -- or perhaps, especially -- the one who "froze" most easily:

--It would be terrible if anyone were cold. Besides, they come in their fine clothes, which aren't at all warm.

Munka Ljungbyans were more likely to pre-heat their ovens to assure the quality of baked goods, and some Munka informants reported pre-heating an extra twenty to thirty minutes, to be sure that meals for guests would be served punctually.

Compensation for daily stresses and the need to unwind were not the prevalent rationales in Munka that they were in Foley. The Swedish emphasis on a clean and pleasant home environment discussed above stems in part from the need to counteract an outdoor environment that is inhospitable for much of the year. In many instances, Munka Ljungbyans chose to consume more energy in order to compensate for long, cold, dark winters. This consumption took the forms of higher indoor and water temperatures, "lots" of lights, "esthetic" fires in fireplaces, and long, hot baths. Interestingly, several Munka Ljungbyans said they also made many energy-intensive choices in the summer months. They drove their cars more frequently on excursions and used energy to hurry with household tasks so that they could get out into the summer sunshine. Attached to the ceilings of unenclosed porches of some Munka homes were radiant heaters, so that the summertime pleasure of sitting outside in the evening could be extended into the autumn.

As in Foley, the Munka Ljungby themes are legitimate in the eyes of those sharing the culture. No one questions the needs to be rational with use of time; to meet cultural standards of housekeeping, appearance, and entertaining; or to seek redress for an oppressive climate.

SOCIAL AND CULTURAL FACTORS WHICH PROMOTE ENERGY CONSERVATION

Foley

Certain social and cultural factors are also operant in each community which discourage energy consumption. In Foley, these factors are budgetary

concerns, agricultural heritage, and negative attitudes toward "waste."

Foleyites and Munka Ljungbyans shared concerns over household fuel bills, but Foleyites were without the security of subsidies and support offered by the Swedish welfare state. They regarded energy as a household budgetary problem, rather than a broader one; a kind of frontier individualism existed. As with their time calculations, most Foleyites assessed economic costs and tradeoffs involved in their daily choices. Technical and behavioral changes in energy use were made, in the main, to reduce fuel bills.

Foley, like Munka Ljungby, was traditionally an agricultural service center. In many Foleyites a sense of the need for conservation exists, but emphasis is on soil and water rather than on fuels, including local wood supplies. The farming heritage has a strong residual in many residents, who stressed that they had "always been conservative, of everything!" However, most Foleyites did not have a perspective on larger ecosystems and their places in them.

Interviews with Foleyites revealed another social factor which promoted energy conservation on the parts of many: an abhorrence of "waste." This general distaste usually encompassed waste of household fuels, especially electricity used for lighting. It carried the most gravity with regard to waste of time and food, however.

Munka Ljungby

In Sweden there was also concern over fuel bills and budgets at the household level. Munka Ljungbyans shared a perspective broader than that of Foleyites, however. They expressed concern for the health of their national economy and the dangers of its dependency on imported oil. "Solidarity" through efforts to reduce oil consumption was a theme of many interviews.

Social conformity, while encouraging energy consumption in order to meet the group standards and expectations discussed earlier, worked in other ways to discourage consumption. Swedes value being "good citizens" and supporting state policies. Munka Ljungbyans were aware of the national campaign to decrease oil dependency and the practices advocated by the national committee for energy conservation. They expressed nearly unanimous verbal sympathy with these efforts and guidelines, and some modified their behavior accordingly.

Another cultural factor promoting energy conservation is the moralistic nature of Swedish society, characterized as the "society of the 'shoulds'" by one ethnographer (Löfgren 1982, personal communication). More than twice as many Munka core households, fourteen as compared to six in Foley, believed energy use to be a moral issue, and that individuals have a responsibility to the collective good. Swedes believe that there is one "right" position on every issue, no matter what its size, and that once this position has been established, it is the moral duty of the individual to adopt it.

Likewise, the concept of lagom pervades Swedish life, buttressing social ethics. Variably translatable as "just right," "in moderation," and "appropriate," lagom is applied to the physical characteristics of objects (a jam can be

lagom sweet: "just sweet enough"), and also to characteristics of social institutions (local government can be lagom regulatory) and of individuals (a rude person is sarcastically called lagom friendly).

Lagom thus connotes both a quantity and a moral judgement on that quantity (Ruth 1984). Individual desires and impulses are brought into conformity with the common spirit, for the common good. Energy and resource use is tempered by the lagom code, both in terms of matching energy to task and in delimiting one's "fair share" of the common resources. This restraint prevents any "tragedy of the [Swedish] commons."

A major factor encouraging energy conservation is the Swedes' love of nature. Sweden experienced relatively late industrialization at the turn of the twentieth century, and the conservative agricultural heritage and ties to land are stronger there than in the U.S. Personal contact with the natural environment is intrinsic to the Swedish sense of place, time, self, and well-being. Most Munka Ljungbyans expressed concern about the ecological implications of fuel extraction, production, and use. A primary consideration mentioned in discussions of fuel alternatives was which fuel was cleanest and least disruptive to the ecosystem; that is, how miljö-vänlig (friendly to the environment) it was. This personal bond with the environment, combined with an ecological awareness, sense of collective identity (at both national and global levels), and assumption of moral responsibility, all work in combination as powerful forces for energy conservation in Sweden.

ATTITUDES VERSUS BEHAVIOR

More factors promoting conservation, then, are operant in Munka Ljungby than in Foley. Why is it that Munka Ljungbyans express more conserving attitudes but engage in fewer attempts to conserve energy than the Foleyites?

Three major factors in explaining this discrepancy between attitudes and behavior are: economic duress; the role and stature of government; and the self-image of the consumers.

Economic Duress

Economic considerations were primary in both communities, but critical for Foleyites. Ecological and socio-political factors were expressed concerns of Munka Ljungbyans, but these did not induce conservation efforts on their parts. Despite the thread of a general conservation ethic that runs through Foley and characterizes some of its households, the energy conservation efforts of most Foleyites were motivated by economic necessity. They turned down their thermostats, added insulation and weatherstripping to their drafty and often insubstantial housing, put on heavier clothing, monitored appliance and hot water use, and drove less -- but grumbled and chafed as they did so.

Role of Government

Adding time and money-demanding energy conservation practices to the demands already placed on schedules and budgets strained Foleyites even further. In addition, the availability of government fuel assistance was not dependable,

and the standards for qualifying for such aid shifted annually. Tax deductions for energy-conserving structural changes in housing were newly available in 1980, and much confusion about them existed. Foleyites did not have access to a central, authoritative source of energy information.

In contrast, Munka Ljungbyans could rely on extremely tight and well-built housing and efficient appliances to relieve them of the need for substantial changes or constant vigilance in their homes. However, a variety of financial aids, both grants and low-interest loans, was available to help cover fuel costs and to make any necessary or desirable structural changes (such as changing furnaces or heating fuel). The Swedish state established special energy advisors to aid consumers. These advisors were placed at the local level of government (the kommun, comparable in size to a large U.S. county). Most Munka Ljungbyans, therefore, voiced a placid concern about reducing energy consumption, but circumstances did not require them to make changes, either structural or behavioral.

The confidence which most Swedes place in their government and its policies contrasts markedly with the hostility exhibited by Foleyites in the face of energy ambiguities and with their suspicions of collusion between government and "big business" to profit from energy crises. The Swedish welfare state is based upon humanitarian and moral principles, and its policies result from an elaborate process in which academic and scientific specialists, labor unions, businesses, and all public interest groups are consulted. Decisions issued are thus based on consensus, and Swedes can accept them with confidence, knowing that the one "right" conclusion has been reached and that all Swedish citizens will be treated equitably. These policies quickly acquire moral overtones: wasting energy was soon regarded to be "bad" (dåligt) and "ugly" (fult) by the Swedes.

Self-image of Consumers

Foleyites and Munka Ljungbyans had themselves incorporated both the Swedish and American stereotypes described at the beginning of this paper: the temperate Swedes and the gluttonous Americans. Foleyites were apologetic, and Munka Ljungbyans smug, about their ways of life with regard to energy use. These attitudes helped to precipitate the changes made by Foleyites and to deter changes on the parts of the Munka Ljungbyans. As one Munka informant stated,

--Swedes think our way of life is good. We don't have to do anything about it.

Furthermore, Swedes were impressed with what they felt to be the small scale of the size of their country, national population, cars and appliances, and houses and families. Munka Ljungbyans spoke often of the negligible effects of "the tiny demand" and "the small influence" of their households on national energy consumption levels. Such statements were not made by Foley informants, although they did compare their consumption with that of other types of household consumers; namely, city-dwellers and the wealthy.

Munka Ljungbyans were not motivated to choose the clothes-line over the clothes-dryer or to bicycle or walk instead of drive by the desire to reduce energy consumption. They chose the clothes-line, for the most part, because they did not have a dryer, or because drying clothes outside conforms to the cultural

emphasis on ventilation of the household and its contents, or because they were not satisfied with the stiff clothes produced by the most commonly-owned type of clothes-dryer in Sweden, the torkskåp or "drying cupboard," in which clothes are draped over rods and blown dry. Bicycling or walking was chosen over driving mainly because it is "beautiful" (skönt) to exercise, rather than in order to reduce gasoline consumption.

The factors promoting energy conservation in Sweden -- ecological awareness and concern, love of nature, strong national and global identification, moralistic outlook, and the lagom code -- shape more directly the decisions of Swedish policy makers than those of individual consumers. The latter can depend passively on their energy-efficient technology and their government's social welfare and energy policies to control energy consumption and to maintain an equitable security.

Symbols of the energy contexts in Foley and Munka Ljungby might be the American "crazy quilt" and the "Swedish modern" chair. The quilt is home-made, and and richly textured, but unpredictable, without an overall design or plan, and a little too short: Foleyites struggle to keep it tucked in around their feet! The Swedish chair, in contrast, is streamlined, beautiful, and unambiguous, in which, due to skilled designers and engineers, Swedes relax with confidence.

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