

# Energy Conservation and Public Opinion in Finland

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## 1. SYNOPSIS

The paper describes various results of comprehensive opinion surveys on energy conservation in Finland.

## 2. ABSTRACT

In Finland, energy conservation has become more and more popular in the energy debate. Almost everyone seems to support conservation, a unique concordance in the Finnish energy argumentation. However, there appears to be a gap between the positive attitude and the action taken. This phenomenon has been investigated in a long series of annual energy attitude surveys dating back to 1983. In autumn 1993, energy conservation attitudes were surveyed in detail. With minor emphasis, the topic was included in the autumn 1994 survey, too.

The results reveal a positive trend toward energy conservation. However, this trend like all energy attitudes reflects the circumstances in society. Reviving from the recession can even be seen here - conservation, a virtue of bad times, is slightly losing its popularity. Moreover, this general pro-attitude seems to be both idealistic and sceptical. For example, the number of people seriously conserving energy seems to be small.

*In spite of the opinions that more stringent conservation measures would not jeopardize the standard of living, people believe that energy conservation is no substitute for the construction of new power plants.*

The motives of conservation seem mainly to relate to future generations, pollution and natural resources. It is seen how the conservationist attitudes relate to other societal values or dispositions. The support of alternative energy sources correlate highly with the positive attitudes toward conservation.

However, the obstacles to conservation seem to be many. The most important factor is related to one's indolence and incapability to change one's habits. Many believe that lavish users of energy are remote, not living in their own vicinity.

The operationalization of pro-conservationist attitudes is, however, difficult, mainly due to contravening dispositions of the very same people.

## 3. INTRODUCTION

The interest to investigate people's energy attitudes was raised in Finland in the early 1980s. At that time, the main focus was on various energy forms, mainly nuclear energy. The first results from autumn 1983 revealed that energy attitudes are closely connected with the complex values of life, beliefs and other general dispositions. Energy was found not to be a separate issue in people's minds. Moreover, attitudes, especially toward nuclear energy, were revealed to reflect ideas about economic growth and the future.

Since the first results, annual findings have strengthened the idea of complexity, and stability of people's energy attitudes. There is no simple way to explain the attitudes, nor a straightforward method to change them.

During the years, energy debate in Finland has got new ingredients such as the Chernobyl disaster, and conservation of energy. So in 1993, conservation was investigated in detail. From the debate it was easy to infer the need of versatile approach to an attitude survey.

## 4. METHODOLOGY

Every year, there has been a random, representative sample of 2 500 (different) persons from Finland's population of 5 million. They receive a questionnaire in their native language, Finnish or Swedish, by mail, and they can send it back anonymously. To increase the number of replies, the form has been remailed twice to those who haven't sent the answer back in due course. Using this method, the percentage of respondents has risen, for example, to 64 in 1993.

The topic of conservation has clearly many facets. That is why the questionnaire included several statements and questions about conservation and related issues. All this was imbedded in questions about energy in general, opinions on various energy forms, etc. So the research context was really appropriate. Moreover, the underlying tangible positiveness toward conservation in general led us to formulate the questions rather sceptically, in order to get, at least, some variance into the results.

The direct distributions of answers make up the main body of results. However, more advanced methods have also been used, like factor analysis, to process the data into a more concise form. And, thanks to a long history of surveys, trends can be easily followed.

## 5. RESULTS

### 5.1. Idealism and scepticism

Since 1983, there has been a statement "Energy conservation can't solve the energy problem". The result indicates an indisputable trend towards pro-conservationist direction, in spite of the sceptic formulation of the statement. Figure 1. Interestingly enough, also attitudes toward conservation reflect societal changes. The Finnish economy has suffered under the years of recession. However, there have been signs of better times since the beginning of 1994. Conservation and savings being a specific virtue of bad times, there is a change in the general attitudes reflecting also here. In fact, the reversal in trend is remarkable, and, once again, it reveals that energy related attitudes are not separable from other societal dispositions.

There is only some variation in different population groups toward this statement. On one hand, older people and supporters of nuclear energy are more sceptical to the power of conservation, and, on the other hand, nuclear opponents, together with the supporters of the Greens, the environmental party, share a clearly different view. This finding penetrates the whole survey, as can be seen later.

"Although there is a lot of debate on conservation, personally I don't know a single person sincerely conserving energy" reveals indirectly, and speculatively, that the amount of conservationists is, at best, small. Figure 2. "I would like to conserve energy but I don't know how or where to start" shows that there is a connection with education, age and position, and room for information, too. Those with higher education or position feel that the will of conservation does not depend on information. Figure 3.

"In spite of the fact that a single household has only limited chances to conserve energy the sum of small savings results in a considerable total" reveals the strength of belief in the issue. Almost everybody agrees with the statement, Figure 4. Similar belief and distribution is seen in the result of "In the future energy conservation will be a solid part of the way of life, irrespective of the standard of living." Figure 5.

"The standard of living in our country wouldn't fall substantially, due to more stringent conservation measures" is an example of stability, and positiveness of the attitude. Figure 6. This disposition holds, even if the statement is inverted: "Recession in our country would become deeper if conserving of energy would be more effective than before". Figure 7. The attitude is clear, not only on the national level but even on the household level: "Energy conservation will inevitably lead to worsening of living comfort at home". Figure 8. Two thirds disagree with the statement.

"Effective conservation can't be reached because people won't, in fact, accept scarcity of nor bargaining their easy life" is another example of the obstinate trend. Figure 9. This distribution also explains why most of the statements must have been very scewed into a sceptical direction. More positive questioning wouldn't get any deviation from total acceptance and harmony of opinions.

### 5.2. Conservation and power plant construction

"Instead of constructing new power plants, one should put more emphasis on conservation" reveals how clearly Finns connect this issue to nuclear power. The proponents of nuclear power disagree when a clear majority of population as a whole accept the statement as such. Figure 10. On the other hand, "It is unrealistic to challenge the need for new power stations totally by energy conservation" shows that people are, to some degree at least, realistic. In fact, the consumption of electricity increased in Finland in 1994 more than 5%, indicating, in the long run, the coming shortage of generating capacity. Figure 11.

### 5.3. The means to enhance conservation

Interestingly enough, "Results in conservation can be achieved only by force, education is no good" shows again a trend, and people seem to prefer information, not mandatory regulation or norms. Figure 12. "Remarkable increase in price is the only efficient way to conserve electricity" is rejected by a clear majority. Again, an example of stability of opinions. Figure 13.

### 5.4. Results of correlations and factorizations

The large amount of statements makes it possible to compare the pro-conservationist attitude with other energy-related attitudes. Comparing correlation factors and using factor analysis one can draw a clear picture of energy attitudes and the role of conservation. Pro-conservationist attitudes correlate positively with the support of alternative energy forms, the concerns of future generations, the support of the use of domestic fuels, the will to decentralize the energy system, the environmental concerns in general and the desire to respect public opinion in energy decisions. Correlation is negative with economic growth, energy companies' goals and large, centralized power plants.

The so called soft energy strategy, or paradigm, consists, according to the factor analysis results, of those aspects with positive correlation, for example, with risk aversion and employment. Hard strategy gets its components from growth, viewpoints of industry, corporations and energy companies, economic aspects, secure supply of energy, and large, centralized power plants.

The conservationist's image becomes sharper when conservationism is compared with attitudes toward various energy forms. Those opposing both the use of coal and nuclear power tend to share the view that conservation hasn't been taken enough into account in energy policy. The energy forms supported by conservationists are gas and hydro electric power. However, the stand on nuclear power correlates more strongly with other issues than conservation. So, conservation is by far not among the best determinants of nuclear attitudes.

In Finland, from the conservation point of view, the difference between soft and hard paradigms isn't very clear, however. There are, at least, two explanations here. Attitudes toward energy conservation are, in general, very positive. It doesn't divide the nation like some other issues, for example, nuclear power. Moreover, during the years, environmental protection has won wide acceptance in Finland.

### 5.5 The reasons and obstructions to conserve energy

Why should energy be conserved? The three most popular reasons are: future generations, environmental pollution and energy resources. However, people clearly disagree on the contention that conservation were merely a fashion. Figure 14.

What are the reasons explaining that conservation doesn't work in practice as well as one could anticipate from the above mentioned results? Why doesn't conservationist information bridge the gap between the attitudes and the actions?

The empirical method described here doesn't try to solve the problems by theories but by asking people straightforward why. However, it is psychologically better to ask why other people, not oneself, don't conserve energy. The results reveal that the problem doesn't lie in technology, economy or circumstances. It lies in the human behaviour, as can be seen from Figure 15. Convenience, inability to change old habits and idea that lavishness is remote, not a personal problem, are the top three explanatory determinants. Interestingly enough, the last in queue is the statement that energy in Finland is too inexpensive.

5.7 Figures

Figure 1. Energy Conservation Can't Solve the Energy Problem

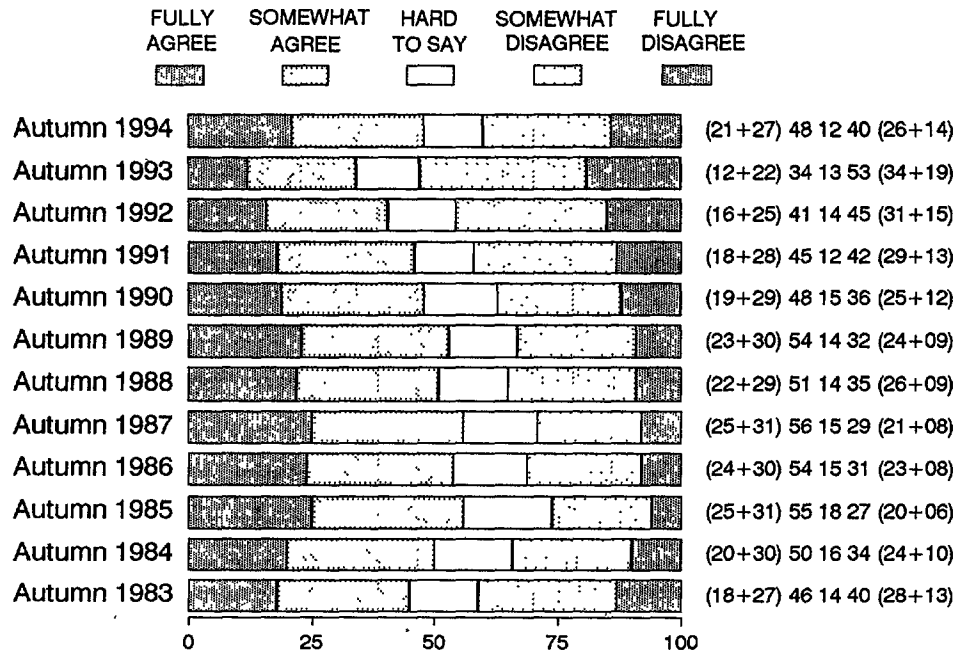


Figure 2. Although There Is a Lot of Debate on Conservation, Personally I Don't Know a Single Person Sincerely Conserving Energy

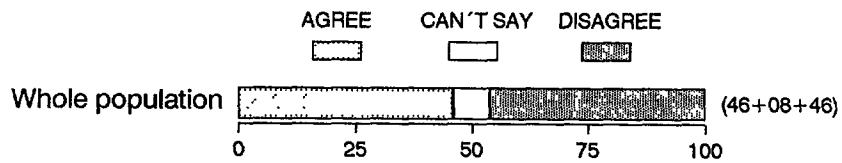


Figure 3. "I Would Like to Conserve Energy but I Don't Know How or Where to Start"

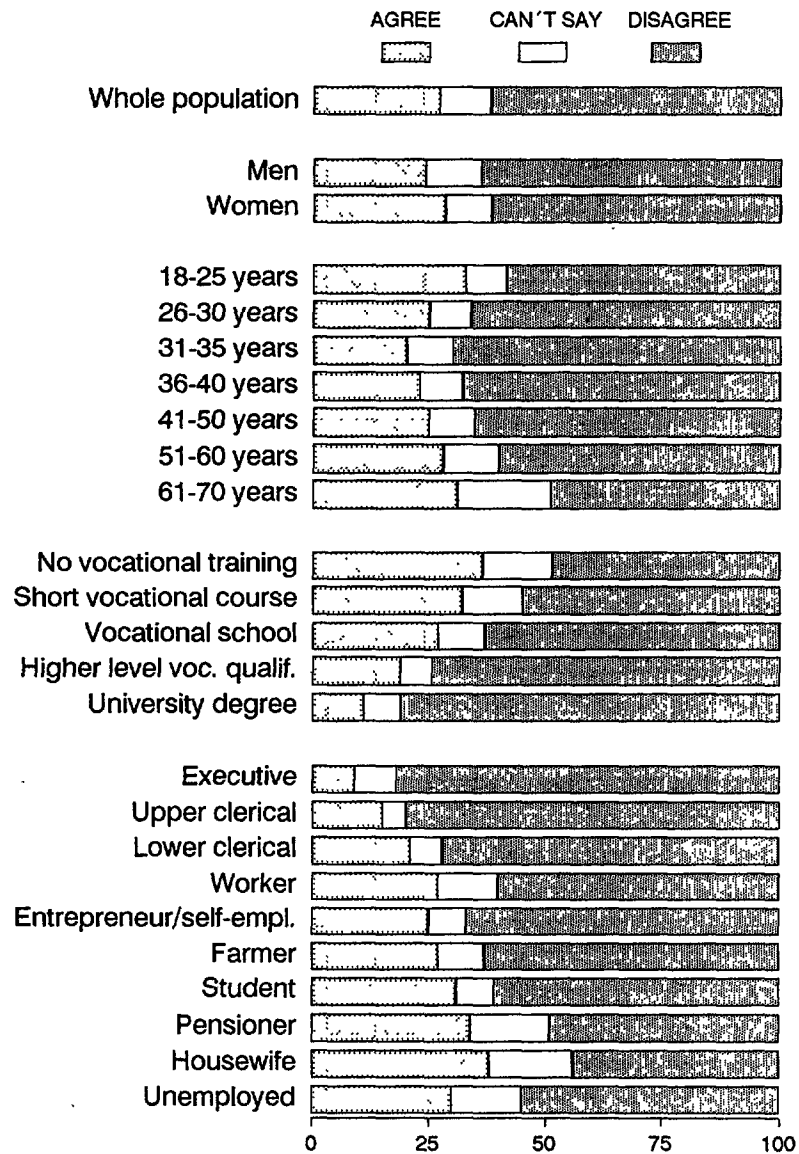
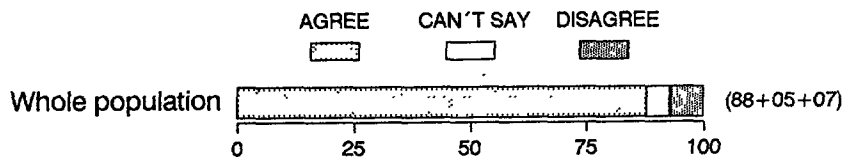
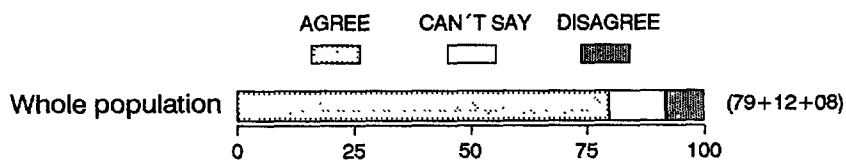


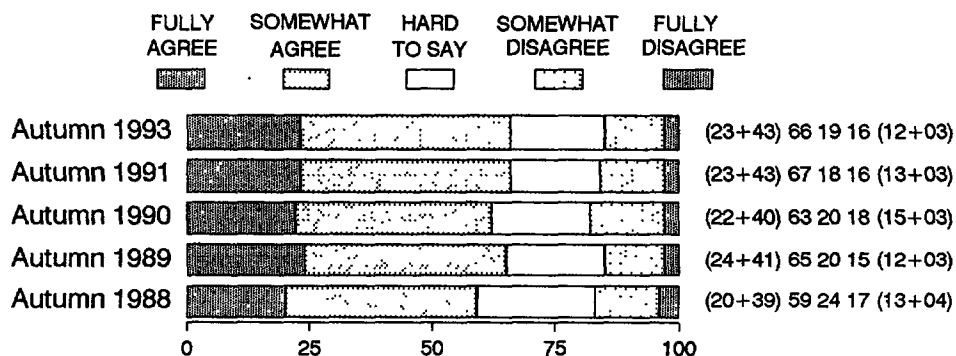
Figure 4. In Spite of the Fact that a Single Household Only Has Limited Chances to Conserve Energy, the Sum of Small Savings Results in a Considerable Total



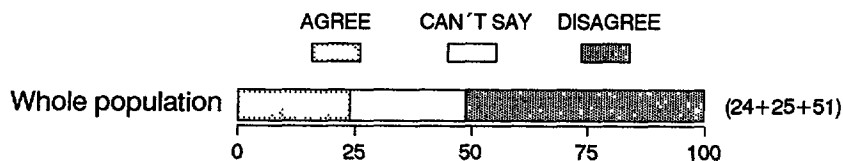
**Figure 5.** *In Future, Energy Conservation Will Be a Solid Part of the Way of Life, Irrespective of the Standard of Living*



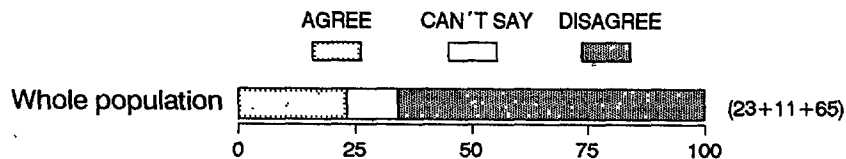
**Figure 6.** *The Standard of Living in Our Country Wouldn't Fall Substantially, Due to More Stringent Conservation Measures*



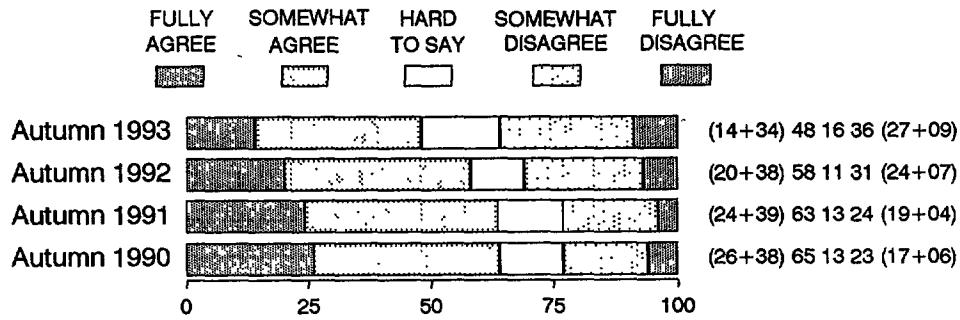
**Figure 7.** *Recession in Our Country Would Become Deeper if Conserving of Energy Would Be More Effective Than Before*



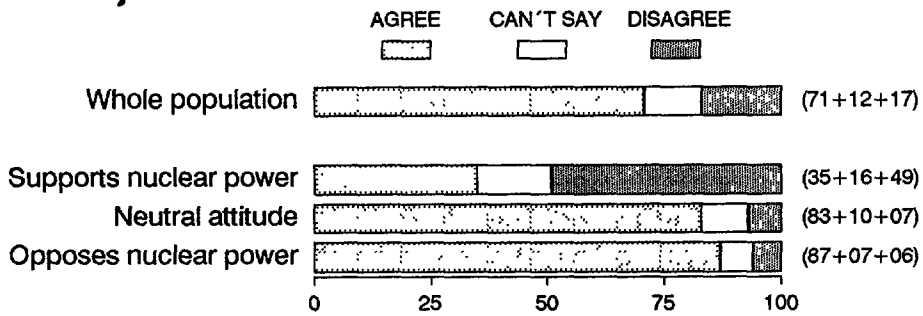
**Figure 8.** *Energy Conservation Will Inevitably Lead to Worsening of Living Comfort at Home*



**Figure 9.** *Effective Conservation Can't Be Reached Because People Won't, in Fact, Accept Scarcity of Nor Bargaining Their Easy Life*



**Figure 10.** *Instead of Constructing New Power Plants, One Should Put More Emphasis on Conservation*



**Figure 11.** *It Is Unrealistic to Challenge the Need for New Power Stations Totally by Energy Conservation*

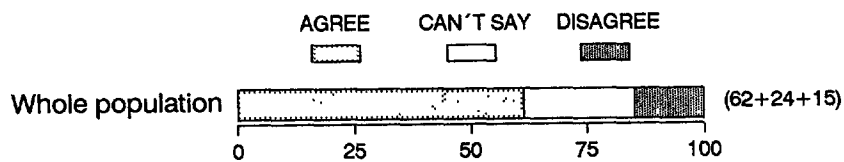


Figure 12. Results in Conservation Can Be Achieved Only by Force, Education is No Good

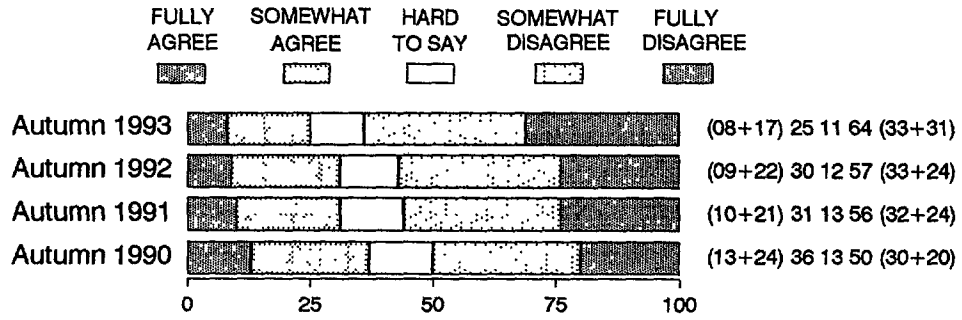


Figure 13. Remarkable Increase in Price Is the Only Efficient Way to Conserve Electricity

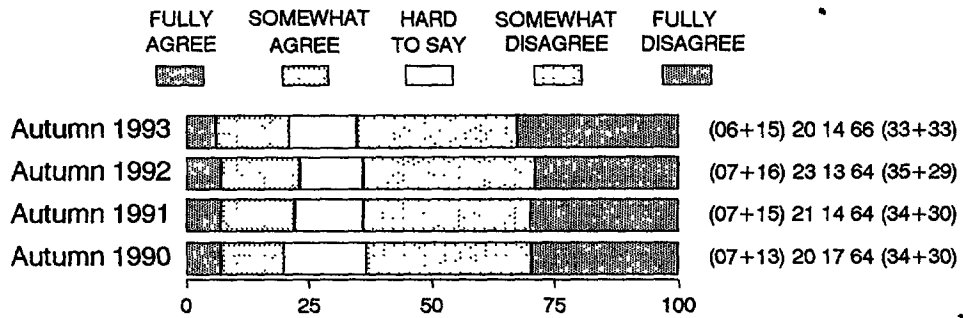




Figure 14. The Motives of Conservation

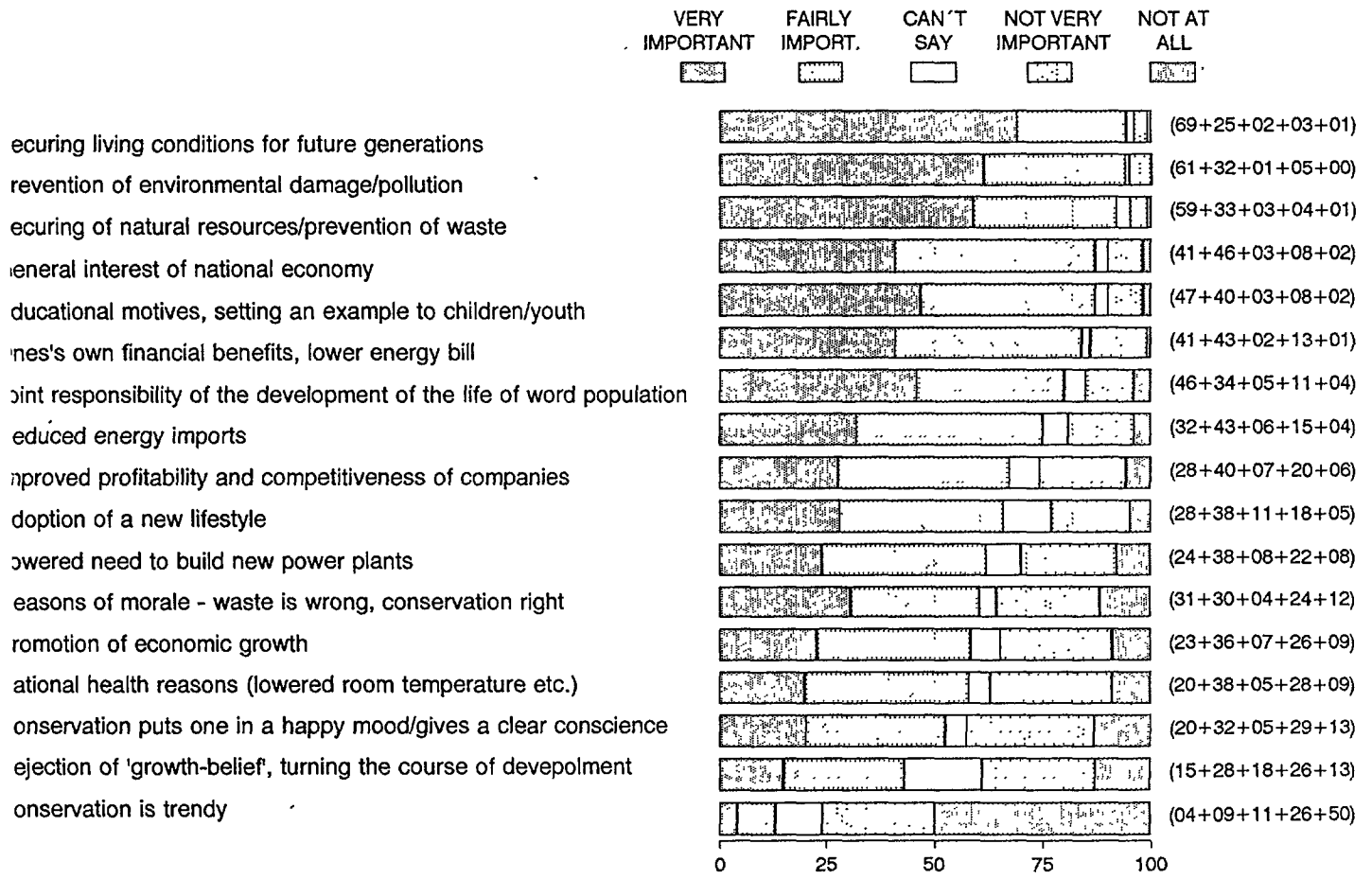
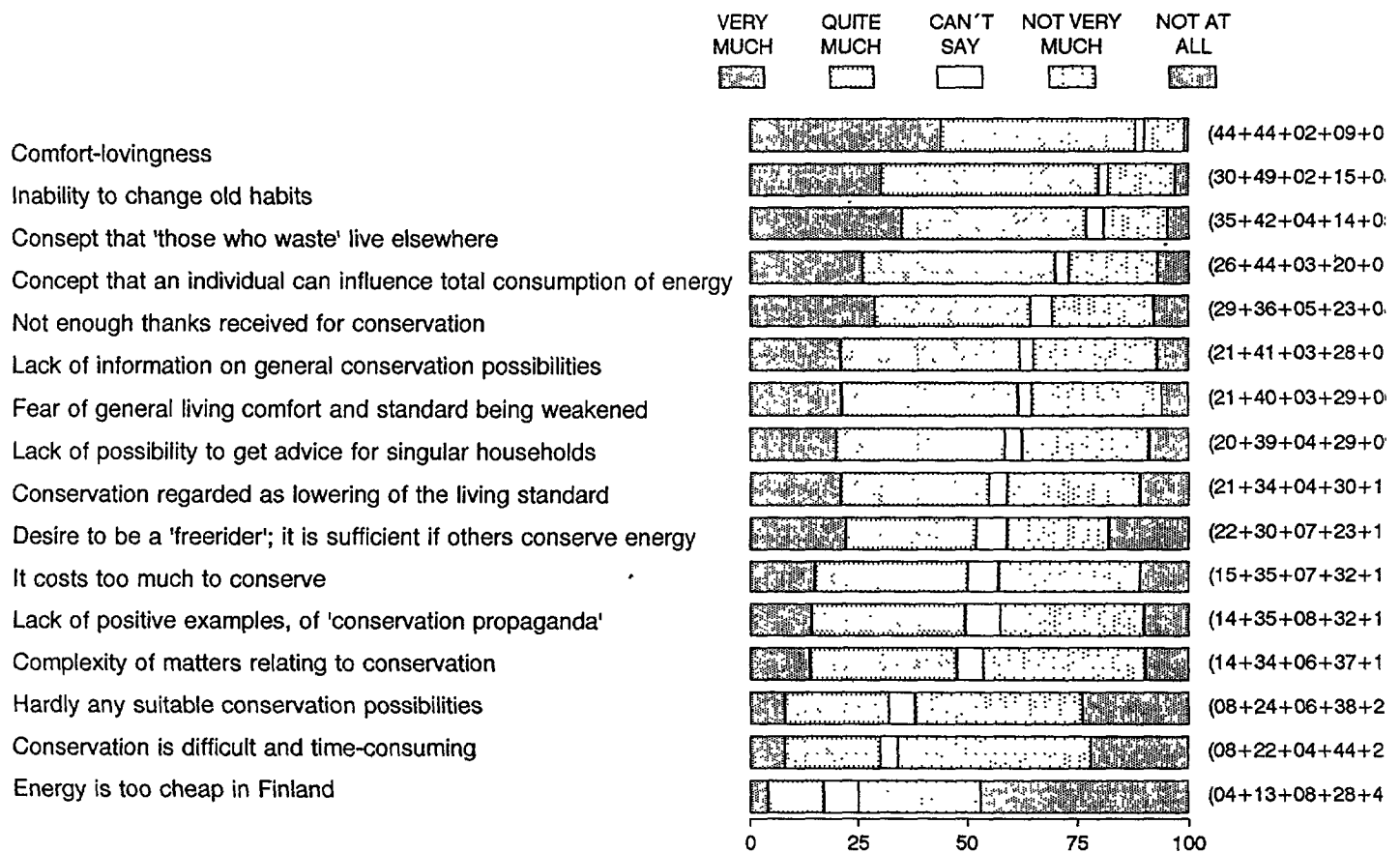


Figure 15. How Much Do Different Factors Prevent People Personally from Executing Energy Conservation Measures



## 6. CONCLUSIONS

Two main conclusions can be drawn. Firstly, energy conservation is not a separate issue and it can't be treated isolated from a larger context. It is one facet of energy which, in turn, has many interwoven facets. Secondly, communicators of conservation don't have to reach for changing attitudes. Their big challenge is to activate the positive attitudes into action. This cannot be achieved easily, because the obstacles are also facets of a complicated behavioural nature.

The practical benefit from energy attitude surveys has been the increased awareness of the nature of problems related to energy conservation. As one conclusion, it would be waste of money to try to solve the complex issues by such simple means as straightforward advertisement.

## 7. ACKNOWLEDGEMENTS

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## 8. REFERENCES

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