

# Technological Invasion

## “The Snowmobile Revolution”

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Note to Web version: In the print edition this article is erroneously attributed to Coquilles St. Jacques.

The invasion by technological civilization of indigenous societies, be it through massive industrialization or through seemingly innocuous “microtechnologies” in the form of commodities, undoes a society overnight.



Reindeer served as a substitute for the horse, cow, sheep, and goat, and were trained to draw sledges, or pulkas, as the Lapps called them. A full grown reindeer can pull a weight of 300 pounds and cover 100 miles in a day.

so-called “pre-capitalist” societies. Entire societies collapse overnight under the onslaught of relocation, industrialization, clock time, television, guns, pots and pans, motorcycles. The “old ways” are burst not only by the massive changes but by the little things which leak into a culture from civilization. Eventually the culture and the people are destroyed; the physical “survivors” become more proletarians of the technological civilization, usually at its very bottom rungs. As Jacques Ellul writes in *The Technological Society*, “Technical’ invasion does not involve the simple addition of new values to old ones. It does not put new wine into old bottles; it does not introduce new content into old forms. The old bottles are being broken.”

The unquestioned authority of the technological way of life in the modern world of the West derives much of its power from the fact that the destructive effects of its emergence are no longer apparent to those who now live entirely within its shadow. Memory is short, and people do not necessarily long for something which has disappeared from their experience. But a look at emerging industrialism at the rise of technological civilization shows that even though these forces grew relatively gradually in the western milieu which gave birth to them, the results were fatal to human community. How much clearer this is then, and how flimsy the argument based on this universal amnesia that declares the neutrality of technology, when one considers the technological invasion of primitive,

## The Bikini Islanders

An extreme example of this process can be seen in the relocation of the Bikini Islanders from their atoll in 1946 by the United States government in order to use the area for nuclear weapons tests. The Bikinians had already suffered cultural crisis from many sources, including Japanese military conquest and the conversion of the islanders to Christianity by missionaries. In 1946, the U.S. Navy convinced the Bikinians that they should sacrifice their island

for the good of all humanity, using the Bible to compare them to the Israelites, “who the Lord saved from their enemy and led them to the Promised Land.” The Bikinians, awed by the power of their American sponsors and accustomed to the authority imposed by outsiders, consented to abandon their homeland.

Robert Kiste, in “Relocation and Technological Change in Micronesia,” in a collection of articles entitled *Technology and Social Change*, edited by H. Russell Bernard and Pertti J. Pelto, describes the process of deculturization of the Bikinians. The islanders were first moved to the uninhabited island of Rongerik, but it was unlike their home and they could not adjust. New ecological conditions and government intervention demoralized the people. Houses and canoes deteriorated for lack of raw materials. Their traditional forms of organization, work and distribution were destroyed by a committee-form of delegation and authority.

Rationing was implemented. The Bikinians were reduced to starvation. After two years at Rongerik, they were moved once again to Kwajalein where they were fed, housed and clothed by the military which contributed to a growing sense of dependence and inferiority. Some were put to work, and many came to like the soft drinks, ice cream, candy and Hollywood movies which they were offered by the Americans. When a permanent location was found for them on Kili (all of the islands are in the Marshall islands), their canoes had deteriorated to such a degree that they were left behind. An essentially fishing people (Which had done some minimal agricultural activity) was completely cut off from its former way of life. Kili was not even appropriate for fishing, with few marine resources, no lagoon or sheltered fishing area, no protective anchorage for vessels, and heavy seas. The Bikinians had to change their entire way of life if they were going to survive on Kili. Attempts to engage in agriculture were only minimally successful, in part because of the traditional lack of interest in such work, and also

because the islanders received assistance and a trust fund from the U.S. Government. When in the 1950s the houses on the island needed repairs, rather than using pandanus leaf thatch, their original material on Bikini (which in any case was relatively scarce on Kili), they had come to prefer imported building materials and demanded supplies.

Their outbursts of dissatisfaction were generally accompanied by demands for an increase in their trust fund, along with demands to return home. “The past at Bikini,” writes Kiste, “became something of a Golden Age in the stories told by the elders.” A song reflecting their longing for Bikini was composed: Nothing can be right for me, I cannot be happy./ As I sleep on my sleeping mat and pillow, I dream about my atoll and its beloved places./ When in dreams I hear the sounds I once knew my memories make me “homesick.”/ It is then that nostalgia overwhelms me and makes me weep because it is more than I can stand.

The Government has begun to return the peoples of the atolls to their homelands, and already the problem of radiation contamination is beginning to be felt. But even if the radiation could be cleaned up and the atoll restored to its original state, the people have been changed. A whole generation grew to maturity during the “Diaspora,” and the old ways and the old skills have more or less disappeared. Technological civilization cannot put back what it has taken away.

## The Snowmobile Revolution

A less extreme example is that of the “snowmobile revolution” above the arctic circle, among Lapps, Eskimos and other northern peoples. “In places where the snowmobile has been integrated into major parts of the economic sys-



In with the new—Utsjoki Lapps stop off at the gas station to fill up their snowmobiles. Gone are the old ways and now the Lapps face the modern world complete with Esso gasoline, a cash economy, class stratification, and the loss of their independence as the Finnish state increasingly encroaches on their lives.

tem, significant changes are occurring in practically all aspects of culture,” write Perth J. Pelto and Ludger Muller-Wille in the same book. We will concentrate on the Skolt Lapps. Snowmobiles are first introduced into Finland in 1961 through 1962, and within a year, westernized people such as schoolteachers and forest rangers begin buying them. Later, wealthier Lapp reindeer herdsman buy snowmobiles, initiating a trend in which increasing numbers of herdsman purchase the machines and sell their previously indispensable draught reindeer to Finns who want the animals for racing. (Odd as it may seem, this happens the same way when Eskimos sell their dogs to Canadians who want them for racing.)

The introduction of snowmobiles rapidly changes the lives of Lappish people affecting immediately the character of the traditional annual reindeer roundup. The age-old methods of herding are abandoned in favor of the quicker method of stampede herding with snowmobiles. The early owners of the vehicles derive tremendous economic advantages, but the normal rhythms of the seasonal roundup are so disrupted that the fertility and population of the herds plummet sharply. As more herders are forced to buy machines to keep up with the new herding methods and as the herds shrink the advantages enjoyed by the earliest owners diminishes.

But the situation of those who purchased machines late is even worse. Many are forced to sell their stock and eventually give up herding altogether. “Because the later purchasers are poorer in reindeer herds, material goods, wage incomes and nearly every other economic index, they would appear to be in further economic jeopardy now than they were before the snowmobile revolution,” write the authors, revealing along the way that it isn’t simply a question of a single technology, but a complex of techniques and social relations which are becoming more and more prevalent among the Lapps.

But something else has taken place in the course of these events. The snowmobile has passed from being “simply” an innovation to being an advantage for a small group, later to a generalized phenomenon, and finally to a necessity for survival.

“Economic activities have become enormously speeded up in Lapland,” write Pelto and Muller-Wille, “especially in reindeer herding, and each individual is locked into a very complex association system in which he does not have the possibility of setting his own work pace. This lesson was brought home when we interviewed the most traditional herdsman of the Skolt Lapp community in Sevettijarvi. He told us that he dislikes the snowmobiles, but next year (1968) he must purchase one in order to get around to all the roundups and other important herding events. Those men who cannot buy snowmobiles appear to be at a serious disadvantage under present conditions...Each individual reindeer herder is practically forced to acquire a machine, just to keep up.”

## **Class Society Emerges**

Pelto observes in a subsequent book, *The Snowmobile Revolution: Technology and Social Change in the Arctic*, that distinct groups of “winners” and “losers,” a class society, emerges from the process of technological invasion among the Lapps. Those who have adapted best to the new technology and to the necessities of the new money economy become the most powerful group in the society, while those who cling to the old ways end up “unemployed” (a category which was unknown before the advent of technology), and without herds, are forced to become wage laborers. Langdon Winner, who discusses Pelto’s research in his book *Autonomous Technology*, writes, “The development of a more complex system of socioeconomic differentiation was accompanied by the rise of ‘needs’ associated with a more modern style of life—washing machines, household gas, telephones, and chain saws. How successfully a Skolt adapted to the snowmobile determined, by and large, his access to these goods. Hence, what had previously been a highly egalitarian society became inequalitarian and hierarchical almost overnight.”

The ecological impact of snowmobiles has become well known in the last few years. In Finland, for example, hunters using snowmobiles wiped out most of the bear population in a single season. Other aspects of the snowmobile besides the massive decimation of animal life are the noise pollution, the “junkyard effects” of worn out machines, the air pollution from the combustion engines, and the overall impetus it gives to the commodity production and consumption cycle of technological civilization. But it is also taking its toll on the Lapps and other northern peoples and their cultures. The comment is frequently made, by snowmobile owners and non-owners alike, that “those machines are eating the reindeer.” As the reindeer go, so go the Lapps. Their growing technologi-

cal and economic dependence on civilization assure their integration into it and their cultural annihilation. As they forget their old skills and former modes of life, they will simply become shattered fragments and victims of capital. They will become like us, alienated “modern citizens.”

## Cultural Maturity

A note on Anthros: Anthropologists have traditionally ignored the question of technology because they take for granted the process of development which has invaded every sector today, and because they see technological civilization as the norm, as the stage of cultural “maturity” which all peoples and cultures are destined by the “historical process” to reach. If on the one hand they have generally seen the technics of a given society as central to its being (because the society which has engendered them functions in this way), on the other hand they see technology as universal and independent of culture (such a point of view has difficulty in distinguishing between hydro-planes and canoes and understanding what the differences mean for all of a society). They view “adaptation” and “acculturation” to modernization (one of their central concerns) as simply the exchange of one set of technics for another. They barely perceive that the intervention of civilization and its technology immediately begins to undo the modes of life of a people with its gadgetry as well as through the mediation of the omnipotent, state power by which it functions in determining their lives.

As anthropologists have come to realize the unprecedented manner in which people’s lives have been changed, they have, in the fashion of all academics, turned the study of this process into a professional domain. Of course by the time they arrive the victims of civilizational invasion have already undergone precipitous transformations, so one cannot be exactly sure what it is they are trying to accomplish apart from research for its own sake. They usually discover commonplaces which were obvious from the beginning—such as that technology is changing everything in “uncertain” ways—and conclude by proposing further unending studies of the process. To begin to oppose technology would be unthinkable for them since technological civilization is the wave of the future, and to oppose it would in any case upset their precious “objectivity.”

## Technological Progress

The editors of *Technology and Social Change*, for example, write in their introduction, “We may be aware of the possibilities for dislocation and disorientation of human cultures faced with massive technological input, but this is simply no guarantee that we will know how to modify their effects...There is a need for knowledgeable anthropologists who are not doctrinaire relativists to the point of making living museums of isolated peoples in the name of sparing them the agonies of contact with ‘modern’ ways of living.”

This statement not only reveals the many prejudices of anthropologists regarding “technological progress,” but also their central concern, which is simply to “modify” the effects of an inevitable modernization. They are squarely on the side of the civilization they represent and cannot even imagine another possibility for human life. Their collection of useless, ever-changing data keeps them in jobs and university chairs because technology is obsessed with studying everything minutely. They function as the research vanguard for the sociologists and the ‘social workers’ who will follow them—helping the non-civilized peoples to “adjust” to the necessities and the conflicts of civilization. Admitting that “some tales of technical modification can be real horror stories,” editors Pelto and Bernard maintain, “Because few of us would prefer to give up our ‘civilized’ comforts to return to a hunting and gathering existence, it would be fatuous to assert that all technological change throughout history has been bad.” But the question is not our “return” to modes which have been destroyed, but the contemporary destruction of these modes where they remain, what the process of this civilization means, and whether or not there are possibilities outside this form that human life is taking. The “we” they use in their sentence makes modern civilization the norm by which all things must be judged. They never seem to question who this “we” might be and what its presuppositions are.

To maintain their false image of objectivity, they claim, in the case of the snowmobile for example, that its effects “are not at all clear yet.” But the effects are crystal clear—only a fool would quibble about the details. They conclude, as always, that since “the long-range effects of snowmobile ownership and use have not been played out... Ongoing research throughout the next few years—in several different locations—is essential for an evaluation of the full impact of snowmobiles on arctic populations.” Why bother? one is tempted to ask. The results are transparent. The anthros will get grants and fellowships to study the integration of the arctic peoples into the modern, undifferentiated way of life. But they will eventually study themselves out of a meal ticket since no one will be interested in knowing the culture of a third-generation civilized Lapp who works in a gas station and gets his ideas from national television. The anthros will either disappear along with the “quaint” peoples they study or become engineers of social control and technicians of psychological conditioning.

Anthropology must start from the beginning, turn away from its methods of quantification of human experience, and move towards an open, total critique of the society and civilization which gave birth to it. It must break with the ideology of “scientific objectivity” and technological progress, and put an end to its cannibalistic mania for research.

Anthropologists must put their instruments away, cease to act as the agents of civilization, and get on with the business of relearning (if it is possible) how to live on this earth; the physicians, in other words, must heal themselves. Of course then they will no longer be anthropologists, but like the rest of us, mere human beings.

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