

Jacques Binet

DEVELOPMENT:
TRANSFER OF TECHNOLOGY,
TRANSFER OF CULTURE

Lately, the issues of "transfer of technology" seem to have become fashionable. However, they cannot be considered at length until those of DEVELOPMENT are clarified: transfer of technology is a means, development is an end, and, if we are not careful, we risk—in all good faith—being carried away by the example of the development and techniques of the "Northern countries," while the needs and possibilities of the "South" may be quite different.

Efforts toward development have been essentially centered on the economy: development of production, development of consumption and development of wealth, all of which conforms to the tendencies of our age and its predominant ideas. Marxism gives priority to wealth and its distribution, while "capitalism" is concerned mainly with economics. Ingenuously or on purpose, development neglects all that is connected with psychology, moral codes, metaphysics or sociology. All efforts are directed toward

Translated by Jeanne Ferguson

13 AVRIL 1986

19

O. R. S. T. O. M. Fonds Documentaire

No : 20 038

Cote : B

Development: Transfer of Technology, Transfer of Culture

wealth and the acquisition of objects, an extremely reductive and caricatural view of man and his aspirations.

Giving complete attention to economy is justifiable when material conditions impose it: the hungry man must be fed before we can speak to him on any subject. For the most part, we have not arrived at that extreme. Food rations may be meager and not balanced, but people are not dying of hunger. We must reflect before taking urgent measures, because generosity in giving may conceal adverse effects. For example, milk is sent during a famine: will mothers become accustomed to nourishing their children by other means than breast-feeding?

Everywhere, serious efforts have been made toward schooling. Minds are broadened through learning. Schools have certainly developed an aptitude for rational thought, but their effectiveness on other human faculties is limited: it is above all the family that must educate, reveal affective values and develop social or moral life. Now, the development of the school leads to a weakening of the role of the family: there is less available time, less prestige.

Finally, when the agents of development envisage man, they consider the individual rather than the groups of which he is a part. These groups are multiple, going from the family—which at times is very large—to the village, to age groups or initiating associations.

In any human society there is a delicate balance to be maintained between the individual and the community.

History shows that by concentrating their attention on different values other periods or milieus realized different kinds of development. In the Middle Ages religion was an essential value, and the monastery materialized this social ideal. Land was the basis of power; feudal rights and the bonds of vassalage were its manifestations. From the 16th to the 18th century power was in the hands of the nobility. In the 19th and early 20th centuries power was money. Today, according to some sociologists, the era of capital is over and that of technostructures and organizers is on the march.

Defining the objectives of development is completely justifiable, but even when a primary role is given to economy, several ways are open. The West has advanced through liberal capitalism, but Russia or China have adopted a different kind of social and economic organization. Finally, according to the times, technical

orientation changes: mechanical, physical and chemical procedures have successively made up the panoply of industry. Computers or robots may perhaps be the pivotal instruments of tomorrow, unless biology is not the key to the engineering of the coming century, as it was at the beginning of the Neolithic revolution that invented agriculture, animal husbandry, basket-making or pottery.

The paths of the future are not entirely marked out: all kinds of solutions are conceivable. Certain needs are essential: the human organism needs a certain amount of protein but it may be furnished by *foie gras* as well as by smoked fish. Almost everywhere in underdeveloped countries two economic channels exist side by side. One, supplied by local agricultural and artisanal production, furnishes requirements at moderate prices (traditional housing, clothing from cotton that is locally spun and woven, earthenware pots); the other, supplied by imports or industry, satisfies at a higher price analogous needs that are enhanced by the prestige of being European.

For several years attention has been focused on the transfer of technologies, and conferences elicit the ceding of patents, as if these patented and later appropriated discoveries and techniques were the "secret" of an evolution. In fact, there is probably more than one way to evolve. Other procedures, other objectives, other ways of thinking could perhaps improve living conditions. The "secrets of manufacture" are as fascinating as a myth: the secret and the esoteric are at the heart of all magical thought; their affective echos are deep within us.

In reality, technologies that have become public domain or are not protected by a patent would permit enormous transformations in Black Africa. Examining various sectors of human life—economic, political or psychological—we see that evolution, following the direction indicated by 20th-century Europe, is not always desired by nor desirable for Africans. In fact, technology is not usually a neutral element in the cultural mosaic: it is linked to a system of laws, to a conception of man. The introduction of tools, of scientific knowledge and a way of dividing wealth may make the civilization that receives them obsolete. The greatest prudence is thus imperative.

Development: Transfer of Technology, Transfer of Culture

AGRICULTURE

At present, improvements in agriculture do not require a complex technology, but innovations must be accepted by the people without uneasiness or regret.

The African, who in most cases has a quasi-religious respect for his ancestors, is sometimes bewildered by the idea of doing things differently from them. For him, the nourishing Earth is often an almost divine power with which he has filial ties. Good harvests are granted by the earth when they are earned through sacrifices or prayer: they do not occur through technique, there is always uncertainty. To consider the earth and the elements as things to be commanded or manipulated at one's will would certainly appear strange and blasphemous to any man brought up in an agricultural tradition. The Neolithic revolution brought to his unconscious mind sentiments of respect and love for the goddess of fertility and a fatalistic submission to her omnipotence. To go from this attitude of devotion to an attitude of conquest would be a difficult step to take.

The methods of modern agriculture are solidly and clearly based on intelligent reasoning, whereas the rites of traditional agriculture came from the distant past. Mysterious and fragmentary, they did not form a coherent doctrine; there was a place left for poetic imagination. By repeating the actions of his ancestors, man felt close to the supernatural powers. Agriculture was a ritual; modernity makes it a secularized technique. Some African intellectuals revolt against the science that they claim will bring about a "cultural genocide" by substituting a rational way of thought and action, efficient but prosaic, for an action that makes man an interlocutor of the gods.

Many, in fact, do not want progress in agrarian techniques and ways of life. For urban dwellers, especially those who suffer the restrictions and overwork of modern life, the "bush" is a sort of paradise lost, a refuge. Our epoch is quick to accuse imperialism and exploitation. More than anyone else, intellectuals who do not have a realistic view of the country make of it a bucolic Utopia. They have a poor comprehension of the demographic pressure. In order to merely maintain the mediocre standard of living of 1958, all agricultural production would have to be doubled, since the

population has doubled in a generation, but the people, especially young urban intellectuals, have hardly taken account of this fact.

Since governments have statistics at their disposal, they are more aware, but they do not inform the people. The agencies for rural services and classes for informing and educating the people prefer to avoid the facts, taking an attitude of mistrust and criticism.

Projects for dams do not arouse enthusiasm: there is a feeling of unexpressed uneasiness about them, as well as a fear that the country people may become employees and proletarian, that they may have to abandon foodraising cultures that assure independence and that they may be exploited. Irrigation would permit cultivation in the dry season, and an increase in production would not be threatened by a lack of cultivatable land—except in the case of over-population—or an unsuitable use of the land but by the limited duration of agricultural work. At present, with crops dependent on rainfall, the work period is no more than three months in a tropical climate and nine in an equatorial climate. With irrigation, it would be possible to cultivate more fields and have several harvests beyond the usual period.

Mechanization of farming, with equipment similar to that of European farmers, would certainly have its advocates. The prestige of machines and the ways of the Whites is enormous. However, the switchover would be inconceivable without a powerful and restrictive organization: the example of the *kolkhoz* is well known. The African village is too small to be the base of such an organization; a state structure would have to be superimposed on the villages. We can imagine the dangers inherent in such a solution—a strict discipline, politicization and difficulties in management (the state would exhaust itself meeting the deficits), the technical problems of working vast expanses of land.

Non-traditional farming eases restrictions in another way. Ploughs, seeders and cultivators permit a more rapid accomplishment of work that must be done at a precise moment to prevent bottlenecks.

But do the people feel the need? Inquiries in the field have shown that young people reproach the “Whites” with “forcing the farmer to go into debt.” The training of oxen or horses, the purchase of material (modest) and fertilizers seem to be a constraint. Should not

Development: Transfer of Technology, Transfer of Culture

the people then be left to reflect and discuss the matter until their wishes are clearly known?

An interesting Senegalese film deals with these questions. Its author believes that the farmers should stop growing peanuts—a crop for exportation—and devote themselves only to millet. Is this return to a total autarchy possible and desirable for the farmer who would like to have a bicycle or a transistor radio, for the State that would like to sustain its finances through export taxes? A problem of economic organization arises: do the buyers for cooperatives perform their duties honestly, or do they cheat the farmer? The agricultural price level, the “deterioration in terms of exchange,” is also brought up, but the myth of an idyllic past, of a self-sufficient village, is quickly established.

To arrive at a transformation—which should be a progress—with such distrust is dangerous. It would be better to renounce it, at least until the need for an increase in production or monetary profit were clearly expressed.

In fact, increased production and monetary gain assume and bring with them the development of inequalities. African societies are quite diverse; inequality is not unknown, but in the past hierarchies rested on physiological facts such as age, seniority and in some cases birth. Societies bound to wealth are rare. Up until now, inequalities corresponded to a difference in social prestige and the more or less superior aptitude for power. We may assume that the farmers who became wealthy used their wealth for ends proposed by traditional society. However, the development of states brings with it a concentration and new nature of power. These are double: political power and technocratic power. State employees of all kinds have authority because of their technical knowledge, the prefect because of his knowledge of law or the nurse because of his medical knowledge. Politicians are supported by public opinion. The newly-rich are in competition with the traditional men of importance.

On the other hand, it is fairly obvious that the development of wealth will be accompanied by avarice, which is rarely found in most cultures of the Black world. Almost everywhere the most highly esteemed quality is generosity, to the point where wastefulness is often recommended. In the Dyola society funerals are accompanied with a great slaughter of cattle and an excessive

amount of rice, to such an extent that Senegalese law has had to regulate the practice. In Gabon the custom of *bilaba* was common: important men were rivals in generosity, overwhelming each other with more and more sumptuous gifts until one of them was outdone and unable to offer more than the other. Saving, control of expenses, avarice, are unthinkable in most cases.

To create resources in kind or in money is certainly desirable. In addition, this surplus of production should be directed toward a reasonable and efficient application of development. In countries where Islam is strong, alcoholism is probably not a threat, but elsewhere?

When we see things in these perspectives, we realize that restructurations are required. If the shops of Senegalese cooperatives are empty, of what use to the farmer is the money he has earned from his harvest? What good does it do to have a surplus if commerce and transport are inefficient or do not deliver produce to the interior market?

INDUSTRY AND DEVELOPMENT

Industrialization seems the key to all development. The myth of the colonial past is probably at the origin of this concept. We know that in the 18th century colonies had to furnish their home countries with raw materials and receive all their manufactured products from them. The revolt of the American colonies was born from this restriction when the "rebels" refused to permit their activities to be thus limited. Historians of colonization who have thought that this division of charges between home country and colony was still in use in the 19th and 20th centuries in the new colonial empires have neglected the importance of local industries in the latter. The oil producers of Bordeaux or the soap-makers of Marseilles would probably have liked to preserve their monopolies of the transformation of peanut or palm oil. However, this did not prevent the installation of an oil-mill—due to the merchant Jaubert—at Saint Louis in 1881; De Dietrich's automobile assembly shop for Sudan Auto at Kayes in 1899; a textile mill at Bouaké in 1920. To explain the mediocrity of development by obstacles present in local industries is thus inexact.

Development: Transfer of Technology, Transfer of Culture

The desire to have a national industry, expressed and repeated many times over by intellectual writers and politicians, is so well interiorized that it becomes a sort of reflex: development will come with the arrival of industry, it is thought.

In reality, the question is more complex. To set up industries is to inevitably open the door to the multinationals, who are so feared. In fact, nationals have neither the capital nor the necessary competence to organize enterprises on the technical and juridical level.

It would not be impossible to find capital: this is the role of the banks, and states have created banks expressly for development. We could also imagine institutions for pooling savings and directing them toward productive investment. The bank of Abidjan is one attempt in this direction, the *Crédits Mutuels* are others. Nevertheless, acceptable projects are very rare.

In the Ivory Coast, where all types of efforts have been made, we find barely a hundred "businesses" going beyond the artisanal level as understood in Europe, that is, employing a dozen workers in commercial bakeries, carpentry or masonry. We must accept the evidence: for the moment, there are no businessmen willing to set up industries. It would be possible and easy to find workers or managers, but no organizer has appeared.

On the other hand, it is obvious that other activities may justifiably tempt ambitious men: a managerial career in a foreign enterprise would be less risky; a career as civil servant or political man opens broader and more prestigious perspectives.

To create industries is to create employment, but it is also essential to know how workers would adapt to being employees: would they accept the restrictions of stability and discipline? Would they support without too much difficulty the inevitable depersonalization connected with large organizations? Would they feel torn between having to make friendships in the factory and in so doing slacken in their family or tribal relationships? The passage into the world of techniques with its rigid and implacable logic, with the rejection of all affective warmth, is apparently a severe test, all the more so because the worker, once he enters the factory, finds a world in which he can compromise with supernatural powers and go beyond the laws of causality.

European industrial organizations or multinationals are cold.

There is no place in them for affectivity. The hierarchical structure is restrictive. The factory was born of the industrial revolution in a world in which money was the only recognized value. In this world of exploitation, class struggle brought distrust and depersonalization of relationships. Is all that inherent in industry? The Japanese example proves that it is not, since the employees of the large *daibatsu* find a family atmosphere and an *esprit de corps* in their plants. An African industry could perhaps set up relationships of this kind; a multinational risking it would be immediately accused of paternalism.

EXCHANGES AND COMMERCE

Even limited in area and without currency, exchanges transform living conditions. In fact, objects or food produced by man take on an autonomous importance in this perspective. They have a value in themselves, independently of their creator or his needs. In the framework of exchange it is possible and even useful to produce more than is used. For example, the tailor who made clothes to order will now prepare them in advance. This production of "ready-to-wear" marks an important step: the tailor must learn how to stock, buy materials in advance and predict his market. The client becomes an abstract personage.

International commerce magnifies this abstraction as far as caricature. In the forest the villagers keep palm nuts after the oil has been extracted; they break them up and sell the kernels, often without knowing what they will be used for. We have seen the surprise of Cameroonian notables visiting a margarine factory and understanding the use of cabbage trees.

To the frustration of producing things whose use is not understood is added that of receiving a price whose justification is not grasped. Even if the latter corresponds to the just remuneration for a particular work, the mystery of its determination arouses suspicion and uneasiness.

In a monetarized economy a new difficulty is added to all the above: currency itself is a mysterious instrument for the majority of the "economic agents". The people have a poor understanding of questions arising from this domain which are rarely explained

Development: Transfer of Technology, Transfer of Culture

to them in clear terms. Even the literate members of the middle class, such as primary school teachers or instructors, are uninformed on these problems and, it must be said, seem to be little concerned with them.

In view of the major upsets that the diffusion of exchanges—especially monetary ones—has brought to the entire population, the installation in some rare businesses of refined techniques such as that of the computer has little importance.

SOCIAL GROUPS CONFRONTED WITH TRANSFERS OF TECHNOLOGY

The State is a form of adapted technology, not for the management of tools and products, but of social groups. This juridical technique has inevitably been transferred overseas without a critical examination. The colonizers transmitted powers and institutions that had developed in their own countries. The nation-state, born in Western Europe after centuries of dynastic states and kingdoms, became accepted in Africa. Naturally, regroupings are always possible, but that does not change the facts of the problem.

States have precise views on development. They intend to insure the stability of their power through the growth of economic activity. Indeed, a market economy based on exportation is an easy source of revenue: export taxes are not difficult to collect. The development of interior commerce could equally improve the activity and prosperity of the inhabitants. However, the stream of exchanges of this nature is divided into a multitude of rivulets: it is as difficult to make their inventory as it is to tax them. Outside commerce, on the contrary, is concentrated in the port; it is governed by a small number of easily-controllable organizations.

The State, or more exactly, those who hold the levers of command, wants to insure its power. An extended administration is the instrument of this power. Costly, it requires financing and thus development. Mainly, it has a tendency to neglect rural areas so as to occupy itself solely with urban centers that are nearby and exert constant pressure.

Civil servants form a veritable social class. Chosen because of their education, they marry women belonging to the same cultural level as themselves; all schooled, their children are in the best

possible position to confront competitions for recruitment. Such a caste can easily take power and make its authority felt on the rest of the country.

State power may feel challenged by traditional societies, the old chiefdoms or tribes. These ancient solidarities have, however, lost their importance. They have an odor of the past which is disliked, and their influence seems too diminished for an Africa that wants to be on a level with the rest of the world. Some states have limited the powers of the great chiefs, others try to operate around an assembly of one or several ethnic groups. The question of national unity arises.

Unification, in addition, runs the risk of basing itself on superficial foundations. The ancient cultures are bound to ethnic groups, and the search for common denominators risks the elimination of everything that has depth. Knowledge, philosophies, rites are protected everywhere through secrecy, but the esoteric makes any civilization fragile. The number of those who possess knowledge is submitted to all sorts of restrictive conditions. A few premature deaths are sufficient for entire sections of traditional culture to disappear forever. All development, whatever its form, risks to have a harmful effect. During travel or work, people mix with each other. The exodus from rural areas takes the young people away from their tribal milieu and makes them sceptical: strangers they meet live differently without suffering prejudice because of it. Favored by modern means of diffusion, a world civilization tends to impose itself, everywhere conforming to itself.

When it is a matter of smaller groups, problems are different. In the village or patriarchal family, development leads the individual to a personal awareness. With money, each becomes independent. Travel, made easy, allows the acquaintance with cities and the possibility to live there, thus escaping the authority of the elders and the rigid hierarchy of the village.

Although development is not limited to the economic level, it is obvious that, taken in its entirety, it brings about an increase in the economy of exchange and, particularly, currency. All development, on the other hand, assumes a certain diversification of poles: an effort must be made to create new areas of activity so that exchanges are not all concentrated in one or even several cities. Nevertheless, urban centers are inevitably privileged; it is difficult

Development: Transfer of Technology, Transfer of Culture

to avoid an exodus from rural areas to the city.

Villages are losing the most dynamic members of their population. Even if the emigrants return, they are changed: they have lived far away from the constraints of tradition, and their earnings guarantee them their independence; they feel more modern, more efficient and stronger than their elders. Even if they learned nothing constructive during their stay in the city, they have seen a different world from that of their ancestors. They will not accept with good grace finding themselves in a subordinate position. The esotericism with which the old people invest all traditional culture disheartens them. Why suffer, apply oneself and waste one's time in initiations whose interest does not seem evident?

On a certain technical level, reciprocal aid used to be indispensable. New equipment gives a farmer more strength and more time and spares his having to call on groups for reciprocal aid. The one who owns a tractor or, more simply, a pair of oxen may carry out his work without being obliged to anyone. He isolates himself, and the solidarity of the group diminishes.

Monetary economy is progressing. Money has been present for a long time. As long as the sale of crops was the principal source of currency, wealth was tied to the social hierarchy. The heads of families, the elders of the clans, had resources at their disposal. With emigration, it is the young who become rich: the hierarchy is turned upside down. Besides, commerce spreads through the villages. Currency becomes a daily means for those who have it to succumb to attractive purchases. It is important to have money, and its lack may be strongly felt. Formerly, inequalities were linked to social status, fixed by birth or age. They did not engender a difference in a standard of living. Everyone ate the same millet and similar sauces. Because it allows the purchase of consumer goods, money brings about a feeling of inequality.

Changes arising from economic development are the same in every family: rural exodus, upsetting of the hierarchy because of money. Collective goods are in the hands of the elders and, since there is always the risk that these goods will serve for the personal use of the latter, the younger people feel injured. The family used to be a refuge against illness or death. Now, money can buy medical care. Family support was indispensable for negotiating marriages. The work of the elders supplied the benefits demanded by the

parents-in-law. The amount of the dowry is now fixed in money, and the young man attempts to meet it by his own means.

There again the solidarity formerly imposed by circumstances tends to disintegrate and may only be found again through a family spirit freely experienced by each member.

Restrictive social institutions are inevitably transformed under the pressure of economic evolution and the awareness of individual liberty. They must be modified to take the new facts into account.

Progress in the economic domain is not enough. It must be preceded or followed by transformations in the social order. The people must be informed of it and led to reflect and discuss all aspects of the problems.

PSYCHOLOGY AND METAPHYSICS

The adoption of new technologies and development imposes or brings with it particular attitudes toward time, rational thought and abstraction. Those who rush toward progress must know that their conceptions, particularly in those areas, are almost certain to be modified. One might even say that any progress supposes and brings on a certain number of modifications in the ideas of the population.

In most African cultures, the ideal time, the Age of Gold, is located in the past. This is perfectly logical in the prevailing gerontocratic or ancestrolatric perspective. The Ancestors, founders of the tribes, transmitted to man the civilization coming from the Creator. Their knowledge, their virtues are, by definition, superior to ours. The distant age in which they lived was the ideal: the entire task of the living is to try to preserve the heritage and maintain the tradition.

The ancient time is the one sought for. Problems can be solved if things are returned to their former state. One can hope to find in myths and daydreams of the past what must be aimed for in the present. On the contrary, the task of one who looks toward the future is more difficult: he does not know where he is going. He must ceaselessly innovate, try, without illusions, erase the rough copies, continually start over. To maintain or to find again is less exalting but easier than to create without respite and worry about success or defeat.

Development: Transfer of Technology, Transfer of Culture

Europe long ago abandoned its attachment to the past. By stressing Paradise, the reward of the Chosen, monotheism created an eschatological expectation. The development of knowledge proved that mankind was growing in wisdom and power. Optimism—at times ingenuous—always foresees better tomorrows.

This orientation of the mind is indispensable for bringing about any change. There must be faith in the future.

A willingness to reject the present and the past comes naturally from this faith in the future. A denial of the past shows distrust of the original culture. It may also show, in a less instinctive way, the desire to examine dispassionately all that is transmitted through heritage. Studies made on industrial workers in Douala have shown that this philosophic attitude severely traumatized some employees. Living far from the village, working in the city in modern situations, they feel guilty about having in some way denied their ancestors: some are racked by remorse because of it. We may ask if a "will to fail" is not adopted as a just self-punishment for this denial.

Faith in future progress has another serious consequence. Those who accept it live in a constant instability, looking continually for the latest fashions, the most recent revelations, the most modern manners.

Change, in itself, requires difficult adjustments and destroys all intellectual or moral certainty.

Europe and America suffer from it. Young people who no longer know what values to devote themselves to are testimony to an increase in disoriented individuals. A receptiveness to change is at the same time useful and dangerous.

Things are even more difficult for Africa. Europe since the Renaissance is accustomed to rejecting the old and tends toward the new. Africa still has an attachment to the past. In addition, to accept change is to open up to modern currents that come from the outside and to renounce cultural originality.

The attitude toward time and the future thus poses serious problems. The development of nationalism is still more strongly felt (and rejected in some milieus).

To participate in industrial life means to apply oneself to keeping conscious control over every action. The machine does not tolerate daydreaming. Perceptions must be strictly measured: the

red light changes to green, a gauge shows mounting temperature. The worker must know how to govern his affectivity. Accidents often occur when a worker, preoccupied with his family, is no longer able to put it from his mind. Modern man is forced to adapt himself to living by putting up partitions between the sectors of his personality. This is perhaps indispensable for giving complete attention to his work, but the price of this efficiency is a fragmentation of consciousness, a rupture and an incoherence.

Separating his personal cares from his work, the man from Dakar or Abidjan increases the rupture of his Self by adopting two contradictory philosophies: in the workplace he lives in a scientific, precise and rational world in which causes and effects are linked; at home with his family he again finds the traditional world in which the supernatural is present, in which mysterious beings can revenge unknown errors. Sleep is peopled with sorcerers sent by enemies. Capricious and unpredictable powers exercise their tyranny. One can make these forces harmless, use trickery with the spirits and make them change their intentions.

The traditional world is bathed in mystery. The intelligent scientist knows that the magic of the unknown is immense and that he is far from having demystified the universe. However, he undertakes to dissipate the obscurity. On the contrary, the man who lives in the cult of tradition takes pleasure in the mystery: he appreciates it as a poet and the very word "traditionalist" evokes a contact with the sacred.

Participation in the industrial and scientific world leads to a rejection of magic. Of course there are always margins of chance and the unexplainable, but habitual technical actions lead to the conviction that causality is rigorous. There is sometimes a reaction in Black students when they are faced with an excess of scientism and the icy coldness of Reason: they pretend to see the "science of the ancestors" in magic and reject as genocide any rationalizing position on this point. The man of development and technology is *Homo faber* in the strongest sense of the term: he intends to "dominate nature", "harness rivers" and "extract minerals from the bowels of the earth". Promethean will resounds in all these metaphors.

Until they become parts of an exchange economy, objects and products are so bound to their proprietor or producer that they

Development: Transfer of Technology, Transfer of Culture

have no existence outside him. When a man dies, custom provides that his possessions are burnt; in other cases, they are transmitted to his successor, not as inheritance but to complete the latter's new role as a replacement for the defunct. The destruction of cattle or harvests as a celebration of mourning is often explained in this way. The proprietor being dead, his herd must follow him. Recent laws in Senegal have tried to stop this waste that is only the manifestation of a different philosophy. The herd of cattle is still marked by subjectivity: cows are not interchangeable objects; they are appreciated according to their esthetic qualities, according to the herd in which they originated, according to the personality of the one who gave them. They are saleable, because no more than anywhere else can the attraction of money be resisted, but they are not entirely objects.

The earth is not an instrument of work or capital for production. The European had a visceral attachment for it; peasant dynasties handed down covetousness in order to round out their land. In Black Africa land has a sacred character: sacrifices had to be made before crops were sown, and the first fruits had to be deconsecrated before the crops were consumed. An "earth priest" was there to celebrate these rites, to settle disputes and prevent crimes that would have sullied the fields and made them infertile. If the sexual act took place in the bush, if human blood fell on the ground, sacrifices of propitiation were needed. Conquerors usurp political power, but power over the soil remains with the heirs of the first inhabitants.

In some regions of Senegal the entire village is Moslem, but one old man remains outside Islam in order to make sacrifices to the "*tur*", on the altar at the foot of a tree. In Casamance the "rain king of Enampore" celebrated rites of his ancestors and assured the fertility of the seasons. He wanted to convert to Islam, but torn between his traditional duties and his religious convictions, he went mad.

If it becomes no more than an instrument to produce crops, the land is deconsecrated. The gods are chased away from the world and materialism becomes dominant.

All this is not in accord with African culture, which instead is respectful of land and water and submitted to the will of the gods and the ancestors. American or Soviet literature has exalted man's

seizure of the world and has glorified gigantic dams or monstrous machines. The African farmer asks forgiveness from the earth or water for taking their fruits from them.

Here economic development clashes with metaphysics. Before any transformation of nature the people must feel assured that what they are participating in is right; the God of the Bible gave man dominion over creation. Can African divinities or ancestors encourage this dominion? Must the world be deconsecrated in order to develop it? Can harmony be achieved with the sacred world?

It will be said that all these questions are very complicated and are not really relative to workers or peasants. Actually, they are perhaps not expressed consciously or explicitly, but at the level of the unconscious they run the risk of being even more disturbing. An unconscious malaise is more serious than one that is expressed. If it can be expressed, it finds answers and outlets; if it remains buried, it engenders a vague sense of guilt. Now, in order to create a new society, which is not without risk and without difficulty, man needs all his enthusiasm.

CONCLUSION

Development is a complex undertaking: technical and economic modalities are not always mastered, and their consequences are quite different.

A civilization is a more or less coherent collection of techniques, law, social organization, beliefs, values and knowledge. The mere introduction of a new and strange element into such a mosaic may well destroy it altogether. Africans feel to a greater or lesser degree their cultural fragility: all the discussions on negritude, authenticity and African-ness are evidence of this.

When a cultural void appears it is filled by world civilization. America, China, the USSR and Europe have dynamic ideologies in common. The primacy of economy and materialism, scientific rationalism, the confining of all affective values to the private sphere, state control, priority of the individual over intermediary communities are all part of the dominant ideas.

We could wish for local cultures to be solid enough to oppose

Development: Transfer of Technology, Transfer of Culture

certain doctrines. At least, we should like nuances or variants to appear in the proposed design. The world tends toward uniformity; it is all the more desirable to preserve the possibilities of choice within the international monotone that threatens mankind. This is why it is not enough to call for negritude: there is an urgent need to define and forge an adapted civilization, integrating the values we hope to preserve and promote, discarding those that are undesirable and incompatible with the proposed aim. In the end, it is the people, informed by political leaders, writers and intellectuals, the "voices of the nation", who must decide.

A re-examination of the question has already occurred under the impact of crises and wars. Progress is no longer the rigid and ineluctable mechanism that was seen in operation at the beginning of the 20th century. Now man is perhaps in the position to make a balance-sheet of his acquisitions and reject their doubtful elements.

However, if no conscious effort is made, the errors of the 19th century may reappear. Industrialization will bring about a rural exodus and proletarianization. Social classes will become differentiated and in opposition to each other. In the place of a moneyed middle class there will perhaps be a middle class having public powers, but the result would be the same. Cities will develop, rural areas will stagnate, withdrawing from the national and international community. Driven by a consumer society, materialism is already engendering insatiable covetousness and invented needs. Men become conscious of their liberty and their responsibilities, which is good in itself, but they let themselves be dominated by egoism; old, familial and ethnic social ties are broken and not replaced by new community attachments. Groupings on a human scale disappear before mass organizations, in the social and political domains as in the economic domain.

This evolution is already in progress in the large cities. The modernization of rural areas, indispensable for maintaining a certain equilibrium, runs the risk of introducing it into the rural population. Demographic growth demands increase in production, but prudence is essential.

Before approaching any element of social mechanization, a very sensitive subject, we must be certain that the people really want change. Technocrats are usually perfectionists in their respective

fields; they are reluctant to accept the fact that man may be a hindrance to material development. They are in a hurry to launch operations and programs and feel offended if everything does not go according to a pre-established rhythm.

However, the people must have all the time they need to make their voices heard. It is not easy. The rural population is dispersed, far from roads, slow to react and timid. Nevertheless, the initiative must come from them; if not, success is uncertain.

Two voices are raised: the spokesmen for the state are generally favorable to modernization. They see in it an immediate means to furnish capital and count on an economic development that will bring affluence to public finances. The large-scale projects are usually financed by foreign countries or international organizations. This kind of support confirms the state receiving such aid in its idea of importance and good management.

However, the emigrants or intellectuals, who are often dissatisfied and in opposition, cause another voice to be heard, echoed by Third-World intelligentsia. The age is fertile in suspicions; every action is viewed as colonialism, capitalism or imperialism, for example.

As long as there is a reticence toward them in public opinion, a commitment to developmental operations is counterindicated. Even when they are thoroughly studied on the technical level, they may have unexpected consequences. If the people want them, they will be able to adapt, innovate, draw a profit from what is presented to them; if it is imposed, on the contrary, the project will be ill-received and will crystallize all sorts of uneasiness and criticism.

Our age has learned that the development of consumerism is not an end in itself, that production has limits, that the enjoyment of life has a value. Scientific progress has been reconsidered since Hiroshima. Many old certainties have been shaken.

In reconsidering this subject, it would be profitable to encourage creativity wherever it may be found. The transfer of technologies is good; inventing new ones is better, and in any case, the true needs of man must be defined. He must not be permitted to merely drift along paths that are already marked out.

By following the technico-scientific track, he risks abandoning a close contact with nature in order to live in an abstract world. Let us not forget that a simple tool permitted the farmer to act directly

Development: Transfer of Technology, Transfer of Culture

on matter. Our peasant fathers measured with their muscles the compactness of the earth, like the Senufo with his hoe. The use of horses or oxen did not eliminate his walking in the furrows of his field.

The worker is more and more distant from the material with which he deals. He must handle machines whose functioning he does not entirely understand: he must trust in processes over which he has no control.

The economic world is abstract: products whose manufacture and origin are unknown, a network of producers, consumers and distributors that remain faceless initials or statistics. Like it or not, man is committed to a growing abstraction.

Jacques Binet
(Paris)

JACQUES BINET

DEVELOPMENT: TRANSFER OF TECHNOLOGY,
TRANSFER OF CULTURE

Diogenes 126
(Offprint)

B - 20 038 -