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## ARTICLES

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### *Underdevelopment in the Pre-industrial Era. The Case of Declining Economies*

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#### I

The concept of underdevelopment, as it has been elaborated by various modern economists, is almost without exception modelled on patterns which correspond to the economic situation of the former colonies of the western powers.

The notion of underdevelopment refers mainly to countries whose natural resources were not exploited, or at least not by their inhabitants. This indeed constitutes their backwardness, and is due to a low level of education, lack of capital and entrepreneurial spirit. The underdeveloped country experienced long centuries of subsistence economy before commercial relations with industrialised regions were established. Before this turning-point (the « opening up ») productivity had been on a very low level, and there had been no significant progress in the national economy.<sup>1</sup> A new period in the history of the country begins when foreigners establish commercial contacts with other parts of the world. The impact of their activities on the national economy is upsetting. After the « opening up », which mostly takes place

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<sup>1</sup> H. MYINT, *The economics of the developing countries* (London 1964), p. 115.

after a long period of colonial rule, foreign entrepreneurs develop some sectors of the economy. Progress in these sectors is very great, the economy of the country as a whole begins to change. But despite this progress, the difference between the *per capita* revenue in the underdeveloped country and in the industrialised regions with which it had come in contact increases steadily. On the other hand, the activities of the foreign businessmen have far-reaching consequences. The economic and social life of the underdeveloped country is upset in so far as it loses the uniformity and equilibrium it had enjoyed in the past. The economic (and social) sector in which the foreigners make their investments and those which remain more or less untouched become almost two different worlds. This is what is called a « dual economy ». The sector (or sectors) in which the foreign businessmen are active (and which are often organised by them) and produce for export have a relatively high technological level and their economic organisation is more modern than that of the other sectors.<sup>2</sup> The economic behaviour of various classes of the population undergoes a great change. For instance, peasants who produce for export must buy the victuals they need. So they go over to a money economy. Ways of life change, people begin to acquire industrial products which are imported by foreign businessmen and of which one had no knowledge before.

The foreign entrepreneurs remain in control of the developing sectors for a long time. They are in fact, economically speaking, the ruling class of the country. They establish authentic monopolies.<sup>3</sup> Just as the colonial regime, before a country becomes politically independent, had built up a new administration, so the foreign entrepreneurs organise certain services, e. g. health services and communications. These new services, which function much better than those the country had before, bring about decreases in mortality so that the population grows. The steady and considerable growth of the population is indeed a characteristic

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<sup>2</sup> *Op. cit.*, p. 40.

<sup>3</sup> *Op. cit.*, p. 121.

feature of social and economic life in the « developing countries ». <sup>4</sup> The growth of the population is a major reason for the low *per capita* income and the widening gap between the underdeveloped countries and the industrialised ones. One can even say that the whole problem of underdevelopment, of inferiority, did not exist before the opening up, and that there was no awareness of underdevelopment before contact with the industrialised West.

A pattern of stages in the history of the underdeveloped countries has been sketched by W. W. Rostow. <sup>5</sup> This scheme does not include the intervention of foreign businessmen. The first stage is that of a primitive, hierarchic society where the technological level is very low. Then an elite begins employing capital which had been accumulated by saving for technological innovations. This group of native entrepreneurs also encourages the education of skilled specialists. There then follows as a result of their activities the « take off ». One or two important industries, whose output is steadily increasing are developed. At the same time the social class to which the group of entrepreneurs belongs builds up a political and social system which is in keeping with technological and economic progress. Later on this introduces new methods of production in all other sectors of the national economy. The last stage is the age of the consumption of high class products by the masses, such goods as cars and television.

This concept of underdevelopment is very partial and is shaped from the conditions of certain African or Far Eastern countries, which became independent after World War II and whose economy is still dominated by the activities of foreign entrepreneurs. As a result they cannot serve as a basis for the analysis of underdevelopment in former ages. The fact of underdevelopment in the pre-industrial age cannot be doubted, as there have always been more and less developed regions. But the meaning of underdevelopment was very different from that given it by the modern economists.

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<sup>4</sup> See H. MYINT, *An interpretation of economic backwardness* (Oxford Economic Papers, 1954); repeated in A. W. AGARWALA - J. R. SINGH, *The economics of underdevelopment* (Oxford University Press, 1958), p. 107 f.

<sup>5</sup> W. ROSTOW, *The stages of economic growth, a non-communist manifesto* (Cambridge University Press, 1960).

## II

As in our own times, the problem of underdevelopment did not arise in the Middle Ages (and in other pre-industrial periods) before countries whose economies were primitive came in contact with relatively developed regions. Before such contacts were made under the influence of the more developed one. But whereas all the contemporary underdeveloped regions are more or less of the same type (as outlined by the economists we have quoted above), the less developed countries in the past could be on very different levels: some had an almost exclusively primitive agrarian subsistence economy, others differed little from the countries with which they came in contact, a third category consisted of countries whose economy had once been on a high level — meaning that they once had relatively well developed industries producing for export — and which had later (before the « opening up ») began to decline. In our period the so-called underdeveloped countries were usually very weak as far as their military power was considered. This weakness is indeed one of the aspects of their technological backwardness. On the other hand, in the Middle Ages and down to the modern period the economically primitive regions in which foreign businessmen established commercial relations could also be strong powers whose armies were a match for their own. In the middle of the thirteenth century when the import of European textiles into the Near East was already of a significant volume, the armies of the Moslem rulers of Egypt and Syria were able to defeat the French invaders.

There is an even greater difference between the contemporary agents of the industrialised Western countries in the « Third World », on one hand, and the foreigners who in the pre-industrial age established commercial exchanges with more primitive regions or came in to control their economic resources, on the other hand. Today these foreigners are types of trader-financiers or capitalist industrial entrepreneurs. In the Middle Ages and down to the present such foreign merchants belonged to very varied social groups. Some were nomadic warriors, others merchants (but not at the same time industrialists), but both could become entre-

preneurs in the territories of whose economies they had obtained control. The impact of the activities of these different groups of foreigners in different regions was therefore as diversified as the colours of the rainbow.

The conquest of regions with primitive economies by warlike foreigners had economic consequences which depended on the nature of the new rulers. Sometimes they came from economically more developed countries, sometimes not; from settled peoples or nomads. But whatever their origins, the new rulers introduced a systematic and reckless exploitation of the country's economy. Conquerors who originated from sedentary peoples were interested mainly in acquiring land and in exploiting the revenue of agriculture. They were often land-hungry nobles, who had not succeeded, for various reasons, in finding a place in their home country. Nomads usually became involved in commercial activities and tried to obtain the greatest advantage from trade. This was also true for those conquerors who were not themselves nomads but who belonged to a nomadic society and for those who had been engaged in piracy and raiding.

A number of examples of this can be found. When Central and Southern America were conquered by the Spaniards at the beginning of the sixteenth century these vast regions were underdeveloped in comparison with Spain. Their economy was primitive and the level of technology was very low. Wheat and barley were unknown, the peasants had no knowledge of the plough. Animals were not used for draught or for carrying burdens.<sup>6</sup> Such an elementary mechanical device as the wheel was unknown.<sup>7</sup> Industrial production was not developed, and very simple looms were used for weaving.<sup>8</sup> Metallurgy too was very primitive.<sup>9</sup> The low level of industrial production was certainly the concomitant of wide-

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<sup>6</sup> S. G. MORLEY, *The ancient Maya* (Stanford University Press 1946), pp. 74, 82.

<sup>7</sup> *Op. cit.*, p. 90.

<sup>8</sup> *Op. cit.*, p. 406; A. H. VERRILL - R. VERRILL, *America's ancient civilizations* (New York 1953), pp. 78, 84; V. W. v. HAGEN, *Das Reich der Inkas* (Vienna 1958), p. 101.

<sup>9</sup> MORLEY, *op. cit.*, p. 453.

spread illiteracy, and in vast areas the knowledge of writing had indeed not been developed. The Incas, for example, had no knowledge of writing,<sup>10</sup> nor did the people use money for commercial transactions.<sup>11</sup> Certain modern scholars have arrived at the conclusion that the pre-Columbian civilisations in America were on the level of the Stone Age<sup>12</sup> or on that of the ancient Sumerians.<sup>13</sup> The conquistadores were typical soldiers from a settled society, and true to type, they carved out vast estates, the great latifundia,<sup>14</sup> and used forced labour and to slavery.<sup>15</sup> But the Spaniards in America also began exploiting the mineral resources. They developed mining, without caring for the lives of the Indians they employed. On the other hand, they did not develop textile or other industries, but preferred to import English cloth.<sup>16</sup> This is typical of the behaviour of resident soldiers who became masters of an empire with a primitive economy.

The Scandinavian Vikings and the Turkish Khazars who in the Dark Ages succeeded in subduing vast territories of what is now Russia also found themselves in control of primitive economies based on agriculture and hunting. But as they had long experience of nomadic life and raiding, which involved some commercial activities and almost no agricultural background they began to establish international trade. The Vikings engaged in trade themselves, while the Khazars fostered the activities of other traders, and raised taxes on them. When the Tartars conquered Persia and Irak in the middle of the thirteenth century they wrought havoc on the flourishing agriculture of various regions. On the other hand, they really did « open up » these countries to international trade, and provided facilities and privileges for Italian traders.

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<sup>10</sup> V. HAGEN, *op. cit.*, p. 85.

<sup>11</sup> *Op. cit.*, p. 88.

<sup>12</sup> MORLEY, *op. cit.*, p. 448.

<sup>13</sup> V. HAGEN, *op. cit.*, p. 113.

<sup>14</sup> A. JARA, *Tierras nuevas, expansión territorial y ocupación del suelo en America* (siglos XVI-XIX) (Mexico 1969), pp. 28, 62.

<sup>15</sup> CH. E. CHAPMAN, *Colonial Hispanic America* (New York 1933), p. 151.

<sup>16</sup> *Op. cit.*, p. 146 f.

The arrival of nomad warriors used to a settled agricultural economy had different consequences. They were interested in the acquisition of land like the conquerors from sedentary societies. In the case of the conquest of a developed country by such warlords the consequences would be damaging as they would try to exploit not only agriculture but all the sectors of the national economy.

The process of "opening up" in the Middle Ages was very different in character when true merchants, as opposed to raiders and pirates, established commercial relations with countries which had great natural resources and a relatively primitive economy. Usually they engaged only in trading the industrial products and other articles of their home countries for the precious goods of the primitive regions. Arab traders would exchange salt and Egyptian linen fabrics for gold dust in West Africa, and in later periods they offered cowries. On the Malabar Coast they exchanged textiles (partly bought from European traders) for the Indian spices. The Italian traders in the Near East traded metals, such as copper, tin and lead, and textiles for spices and silk. As the regions where the traders carried on their activities were very far from their home countries and were ruled by warlike lords, they could not aspire to establish political control, nor in fact were they eager to become the rulers of these countries. But the need for efficient protection, both for themselves and for their merchandise, often induced them to build strongholds where they could be safe<sup>17</sup> They would try to obtain control over a town or a part of a town, either by a grant from the king of the country or else through the military force of their home country. When this was achieved they would then found there a colony which was independent from the surrounding state and often even from their home country. Famagusta was handed over to the Genoese by the king of Cyprus, and later the whole of the island came under Venetian rule in a peaceful way. Crete too fell to the Venetians by cession. On the

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<sup>17</sup> Cf. J. Hicks, *A theory of economic history* (Oxford University Press 1973), p. 51.

other hand the Genoese took Chios by force. But the possession of Phocaea was ceded by the Greek emperor Michael Paleologos to the Genoese Manuel Zaccaria. Caffa, the great emporium of the Genoese in the Crimea, had been granted to them by the Tatars of Kiptcchak. In the same way the Venetians obtained Tana on the Sea of Azov.

The "opening up" by colonisation or conquest of underdeveloped and military weak countries by merchants (linked to the ruling class of a strong power) often had the effect that the country became a colony (in the modern sense of the word) which supplied cereals and raw materials and bought from the foreigners industrial articles. This was the case of various countries where the Phoenicians, Cartaginians and Greeks settled or established their rule. The Greek settlements on the shores of the Black Sea and in Thrace led to such a commercial structure.<sup>18</sup> But the foreigners also brought new settlers to engage in agriculture,<sup>19</sup> and Greek colonisation took this form in various regions, in Asia Minor and in Sicily. Many Greek and Macedonian settlements in the Seleucid empire were agricultural, and these colonists represented the category of conquerors from settled societies primarily interested in land. But Greek colonies established in the Eastern countries conquered by the Macedonians everywhere ushered in more lively commercial exchanges and intensified industrial production. Alexander's colonisation opened a new era in the economic life of the ancient world, and allowed the spread of Greek methods of business and generally of modern economic structures.<sup>20</sup> Archeological findings prove that the Greek colonisation in Syria resulted first in massive imports of Greek products and later in the flourishing of local industries.<sup>21</sup> New and more efficient methods were used in all branches of economic life.<sup>22</sup>

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<sup>18</sup> M. ROSTOVITZEFF, *The social and economic history of the Hellenistic world* (Oxford 1964) I, pp. 92, 111.

<sup>19</sup> See S. MOSCATI, *Fenici e Cartaginesi in Sardegna* (Milan 1968), chap. V.

<sup>20</sup> ROSTOVITZEFF, *op. cit.*, pp. 133, 158.

<sup>21</sup> *Op. cit.*, II, p. 538 f.

<sup>22</sup> *Op. cit.*, II, p. 541.

The contact between foreign traders representing a technologically and economically developed society and a region whose level of industrial production and economic structures was, if not absolutely inferior, at least different had other consequences than those mentioned before. They forcibly brought about true commercial exchanges: the foreign traders exchanged goods which were not produced in the region, and were therefore in demand, for those which they needed themselves. Such trade followed the "opening up" of China and Japan by Western merchants. The Orient also bought from the European traders certain industrial products which they did not have, such as mechanical clocks and pieces of artillery.<sup>23</sup>

But it also happened that foreign traders came to control countries which had well developed industries and whose agriculture was based on relatively advanced processes. It goes without saying that these merchant-rulers looked for the best ways of protecting their interests. This might involve imposing preferential tariffs in order to prejudice their competitors, or else, their understanding of economic problems and their broad outlook often led to the flourishing of traditional industries and generally an expansive tendency in the national economy. Technological innovations were made, industrial production increased and commercial exchanges were established with regions with which there were no connections before.

The difference between the phenomenon of contemporary underdevelopment, as outlined by modern economists, and the effects of "opening up" in the pre-industrial age is especially conspicuous when one considers the case of declining economies. These were countries whose populations declined for various reasons so that the demand for victuals and hence for cereal production decreased. As there was a shortage of labour, the price of labour was high. Industrial production declined because of technological stagnation, and was itself the effect of out-dated structures. When military

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<sup>23</sup> C. M. CIPOLLA, *Guns and sails* (London 1965), p. 109; idem, *Clocks and culture 1300-1700* (London 1967), p. 80 ff.

rulers came to control such economies the impact of their rule was disastrous. It was marked by heedless exploitation and caused the destruction of their industries. Contacts with merchants coming from other developed countries led to the flourishing of those branches of agriculture which produced for export. Even in that period these contacts proved unbalanced, but less so than today. The branches of agriculture which produced for export had a much more limited volume than they have nowadays in, say, an African country whose economy depends almost exclusively on the export of agricultural products.

Anyhow, in these different cases of underdevelopment in the pre-industrial age some features can be discerned which are also typical of underdeveloped countries in the twentieth century. There were large imports of foreign industrial goods, which often became real dumping. Further the underdeveloped country became more and more dependent on the services supplied by the foreigners, such as communications, especially shipping. Finally, in common with underdeveloped regions of our own period, their trade balance was in deficit.

Modern economists, when speaking of underdevelopment, generally think of regions which were for long periods more or less isolated, and had not come into contact with foreigners, who either as agents of other economic powers engaged in commercial exchanges or else as new rulers changed the course of economic development. But in the pre-industrial age it also happened that a country was "opened up" more than once. A country would first come under the rule of merchants and then later would undergo exploitation by a new military aristocracy. The successive arrival of foreign merchants often resulted in the complete breakdown of the local industries.

### III

A survey of certain phases in the economic history of the Near East in the Middle Ages will illustrate what has been said above

in a very general way. Similar phenomena could certainly also be discerned in the economic history of certain regions of Europe and elsewhere.

The conquest of the Mediterranean world and the greater part of Western Asia by the Moslems was the great achievement of the Meccan aristocracy of the *Ḳuraish*. Although the conquest was made in the name of the new religion, the dynasty of the Umayyads represented an old aristocracy of merchants. From the end of the sixth century the *Ḳuraish* had controlled the great land routes from Arabia to Mesopotamia and to Syria and had also engaged in seaborne trade. Modern Islamists have argued that the scheme of customs which was fixed by Moslem jurists was purely theoretical. But in fact the rules laid down by the lawyers, granting Moslems (Arabs) the privilege of paying a fourth of the duties imposed on foreign merchants (2.5% against 10%) and other privileges too were apparently adhered to.<sup>24</sup> Conquest by the Moslems meant for several countries a true "opening up". Underdeveloped regions came in contact with those countries of the Near East which had industries and whose agriculture was on a high level of technology. Cultivation of lemons and oranges spread in the Mediterranean countries, and sugar cane too was introduced in the Near East. The Arabs distinguished themselves by their commercial sense and their spirit of enterprise. At the end of the eighth century they founded paper manufactures in Mesopotamia and later in Syria and in Egypt, and they developed the sugar industry, producing refined white cubes of sugar. For the old textile industries a new period of growth began. New techniques were introduced and methods which had been used for a long time in other countries were imitated. Linen was produced in Khuzistan and in Egypt, and Armenian upholstery manufactures were developed in Egypt. The silk industry which

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<sup>24</sup> I deal extensively with this question in my lecture "Il regime portuario nel califfato", to be printed in the Acts of the 25<sup>a</sup> *Settimana di studi* of the Centro Italiano di studi sull'Alto medioevo (Spoleto).

the Arabs founded in Mesopotamia employed methods developed in Southwestern Persia.<sup>25</sup>

The dismemberment of the Caliphal empire did not mean that its former provinces discontinued their commercial exchanges. The great economic unit which had come into being under the rule of the Abbasids did not break up, but the various countries followed their own paths of economic development. Many of them were however reunited in the middle of the eleventh century by the Seldjuks. The rule of the Seldjuks was the last phase in a process which had begun a hundred years earlier, in the middle of the tenth century, when the Buyids granted fiefs to their knights. The foundation of the Seldjuk empire meant the final replacement of civilian rule by an Oriental brand of feudalism. As tribesmen who had originated from the sedentary, peasant populations, these new Turkish rulers were eager to have great landed property. Their rule over the peasants was much tighter than that of preceding lords. Conditions of the peasants worsened very much, and resulted in the abandonment of land and depopulation. As in the underdeveloped regions of our own days, the majority of the population (both the peasants and the town people) had to spend more than half of their income for food.<sup>26</sup> The masses of working people were so badly fed that one can readily believe the accounts which Arabic chroniclers have left us about the enormous numbers of victims of the frequent epidemics. The feudal rulers disrupted industrial production by imposing new taxes and establishing monopolies. The effects of this reckless exploitation were technological stagnation and the decay of industries. There is also strong evidence of technological decline in other branches of economy.<sup>27</sup>

The policy adopted by the Seldjukids served as a model for

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<sup>25</sup> See R. B. SERJEANT, Materials for a history of Islamic textiles up to the Mongol conquests, (in) *Ars Islamica* 13/14 (1948), p. 109.

<sup>26</sup> See my paper "Essai sur l'alimentation de diverses classes sociales dans l'Orient médiéval", *Annales E.S.C.* 23 (1968), p. 1031 f. Cf. R. E. BALDWIN, *Economic development and growth* (New York 1966), p. 4 ff.

<sup>27</sup> See my *Social and economic history of the Near East in the Middle Ages* (London 1976), pp. 178, 216, 244 f.

the dynasties which succeeded to them in various parts of their empire and in neighbouring regions. The effects of their policy were the same. The famous textile industries of Lower Egypt broke down at the end of the twelfth century and at the beginning of the thirteenth century. The Arabic writer Yākūt who compiled his geographical encyclopedia in (about) 1220 no longer knew where Dabīk was, probably because production in this once famous industrial centre had been discontinued as early as the end of the twelfth century.<sup>28</sup> After the great famine and pestilence in 1201-1202 labour had become much more expensive than before and the factories of Tinnīs, another great centre of the Egyptian textile industry, had to be closed. According to al-Makrīzī, Tinnīs was abandoned and destroyed in 1227 when the Crusaders approached and has since remained in ruins. The Arabic author also used the past tense when speaking of other industrial towns of Lower Egypt, e.g. Tūna and al-Ḳais. Even Shatā's manufactures were closed.<sup>29</sup> The account of the medieval author must be accepted with a grain of salt. If the factories had been profitable, they would have been reopened after the withdrawal of the Crusaders, perhaps in other towns. In fact production was discontinued because it was no longer profitable. Wages had become too high and technological stagnation made the competition with cloth imported from Europe impossible. In course of the thirteenth century the import of European textiles, both woollen stuffs and linen, began to flourish. The Venetians, Genoese and other South European merchants imported ever larger cargoes of European textiles to all the countries of the Near East.<sup>30</sup>

But the textile industries of the Near East did not cease production altogether at the beginning of the thirteenth century.

<sup>28</sup> Mu'djam *al-buldān* II, pp. 546, 548.

<sup>29</sup> *al-Kitāb* I, p. 181<sup>2b</sup>, 311. 182<sup>2</sup>, 226<sup>2b</sup>, 464 II, p. 104.

<sup>30</sup> Quatremère, *Histoire des sultans mamlouks* I, 1, p. 252; C. DESIMONI, Actes passés en 1271, 1274 et 1279 à l'Aias (Petite Arménie) et à Beyrouth par devant des notaires génois, *Archives de l'Orient Latin* I (Paris 1881), pp. 454, 506; SILVESTRE DE SACY, Pièces diplomatiques tirées des archives de la république de Gênes, *Notices et extraits* 11, p. 36.

Alexandria, for instance, remained till the end of the fourteenth century a flourishing centre for weaving. The firm government of the first Mamluk sultans resulted in a temporary recovery in the Near Eastern economies. But in the second half of the fourteenth century the general economic decline brought about a real catastrophe and at the same time, because of changes in the political situation, the South European trading nations intensified their activities in the Levant. When the papacy ceased to oppose trade with the Moslems, Levantine trade became a major branch of world trade. The Near East experienced something similar to contemporary investments by Western businessmen in certain countries of our own days, its backwardness was the consequence of decline. The Near East was, when compared with Italy, Southern France and Catalonia, an underdeveloped region, but unlike the underdeveloped countries of our own days, its backwardness was the consequence of decline.

The medieval Arabic historian al-Makrīzī was aware of the fact that the economic situation of the Near East had changed completely. He recounts how at the beginning of the fifteenth century the Egyptians changed their customs of dressing and began to wear European cloth, especially woollen cloth, imports of which had an ever growing volume.<sup>31</sup> According to him the crisis and the breakdown of Egypt's economy were brought about by bad government. The modern economic historian's interpretation of this cataclysm needs to be more complex, however.

#### IV

The basic phenomenon of the economic life of the Near East in the later Middle Ages was depopulation and this phenomenon was also the main cause of its underdevelopment, which hence differed greatly from underdevelopment in our own time. Syria at the beginning of the eighth century had some 4 million inhabitants,

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<sup>31</sup> *al-Khitat* II, p. 217; translation in French: R. Dozy, *Dictionnaire détaillé des noms des vêtements chez les Arabes* (Amsterdam 1845), p. 128.

and the Turkish scholar Ö. L. Barkan, using data found by the Ottomans in 1520-1535, concluded that the country had no more than 571,000 inhabitants at that time.<sup>32</sup> As to the demographic development of Egypt in that period, one can only quote the vague and unreliable data provided by medieval authors, and any supposition is merely conjectural. Anyhow, it is worth quoting Ibn Iyās who maintained that in Cairo 900,000 inhabitants fell victims to the Black Death within two months. A contemporary Arabic writer, Ibn Ḥabīb, says that Egypt lost a third of its population by the Black Death.<sup>33</sup> If these accounts are true, Egypt's population shrank from 4.5 millions at the time of the conquest by the Arabs to not much more than three millions in 1348 (before the Black Death). After this terrible pestilence other epidemics diminished the population of the Near Eastern countries continuously.<sup>34</sup> The Iraqi province of Diyālā (which included Baghdad) had, according to the findings of an American archaeologist, in (about) 800, 870,000 inhabitants, and after 1258 (the conquest by the Tartars) only 60,000.<sup>35</sup>

As the number of consumers decreased, followed by demand for cereals, prices sank and agriculturalists went over to cotton growing. This was, however, also the sequel of other changes. When the Mamluks destroyed the towns which the Crusaders still held on the Mediterranean coast, the wheat-growing farmers of the surrounding countryside lost markets and began to plant cotton. A comparison of the descriptions which are to be found in the various travelogues and in other sources of some districts of Palestine show that this change took place at the end of the thirteenth century and at the

<sup>32</sup> H. LAMMENS, *La Syrie* (Beyrouth 1921) I, p. 120; Ö. L. BARKAN, *Essai sur les données statistiques des registres de recensement dans l'empire ottoman aux XV<sup>e</sup> et XVI<sup>e</sup> siècles*, *JESHO* I (1957/58), p. 20; but this total includes the population of four provinces in Asia Minor (the ancient Cilicia).

<sup>33</sup> See the texts translated by G. WIET, *La grande peste noire en Syrie et en Egypte*, *Etudes d'orientalisme à la mémoire de Lévi-Pronvençal* (Paris 1962), p. 367 ff., 384; *Orientalia* (éd. Juynboll-Roorda-Weijers) (Amsterdam 1840-46) II, p. 388.

<sup>34</sup> See the list in my *Social and economic history etc.*, p. 302.

<sup>35</sup> R. McC. ADAMS, *Land behind Baghdad* (University of Chicago Press 1965), p. 115.

beginning of the fourteenth century.<sup>36</sup> The Turkish tax registers of the first half and the mid-sixteenth century contain reliable data on the proportion of cereals and cotton in Palestine. These show that cotton growing was very important both in Galilee and in the district of Jaffa.<sup>37</sup> Cotton, destined for export to Europe, was even grown in Egypt. Whereas cotton had been imported into Egypt in the days of the caliphs and in the period of the Crusades, several travellers (and other authors) of the later Middle Ages mention the cotton plantations in Lower Egypt.<sup>38</sup> Many cargo lists of the end of the fourteenth century contain shipments of Egyptian cotton to various ports of Southern Europe. The export of cotton, however, was never a major branch of Egypt's economy. On the other hand, cotton exports from Syria were sizeable. Information in the Venetian chronicles clearly show that our ideas of Levantine trade in the later Middle Ages should be modified, because the share of cotton in comparison with spices, a transit commodity, was much more important than has been believed. The investments which the Venetians made in the Levantine cotton trade amounted in the first half of the fifteenth century to as much as 100-200,000 ducats a year. This was the value of the capital and merchandise sent on the Venetian cogs to the two cotton fairs in March and in September in 1418, 1419 and 1420.<sup>39</sup> But in certain years it rose to 350-450,000 ducats, as in 1405, 1417, 1426, 1429 and 1442.<sup>40</sup> Certain deductions should be made because these sums were also destined for the purchase of certain commodities in

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<sup>36</sup> See my paper "The Venetian cotton trade in Syria in the later Middle Ages", *Studi Medievali* 17 (1976), p. 680 f.

<sup>37</sup> B. LEWIS, *Notes and documents from the Turkish archives* (Jerusalem 1952), p. 18; idem, *Jaffa in the XVIth century, according to the Ottoman tahrir registers, Neçati Lugol Armağani* (Ankara 1969), p. 437.

<sup>38</sup> *Traité d'Emmanuel Piloti sur le Passage en Terre Sainte (1420)* ed P.-H. Dopp (Louvain 1958), p. 69; *Die Pilgerfahrt des Ritters Arnold v. Harff* (Cologne 1860), p. 159. Cotton growing had however begun in Egypt in the period of the Crusades, as it is mentioned by Marino Sanuto the Elder in his *Secreta fidelium crucis* (Hannover 1611), p. 24.

<sup>39</sup> *Chronicle of Antonio Morosini*, MS. Vienna, c. 341, 353, 355, 359, 367, 373.

<sup>40</sup> *Op. cit.*, c. 326, 331, 432, 447, 493, 504; *Chronicle of Zorzi Dolfín*, MS. Marciana VII Ital. DCCXCIV, f. 391b.

Cyprus and Crete and secondly for other Syrian goods such as potash and sugar. Anyhow the investments in cotton were not much smaller than in spices, for which (both in Syria and in Egypt) 250,000 ducats were spent in a year on an average. Syrian cotton was exported mainly by the Venetians, although they also bought cotton in Greece and in Turkey. The figures we have quoted show that these exports had become a flourishing branch of Levantine trade. Syrian cotton was in great demand as a raw material for the fustian industry in Lombardy and Southern Germany, where it had developed greatly in the early fifteenth century, in Flanders and in England.<sup>41</sup>

Syria also exported another raw material which was used in several European industries. The commodity, which was called *lume* by the Italians (or more exactly *lume catina*, in order to distinguish it from alum),<sup>42</sup> *allume*, *botassa*, etc., was the ash of two plants, *Salsola soda* L. and *Salsola kali* L., and contained about 20% sodium carbonate. It was used both for the production of soap, the so-called "hard soap" (low foam soap, also called Venetian soap) and, secondly, for glassmaking. In Italian treatises about glassmaking written in the later Middle Ages, this commodity is often mentioned. It is called *allume di Soria*,<sup>43</sup> *allume catina di Soria*<sup>44</sup> etc. Whereas the glass industry had one great centre - Murano - the soap industry had several. Its great centres in Italy were the towns and villages of the March of Ancona, Gaeta, Naples and Venice. So the export of this raw material from Syria (and also from Egypt)<sup>45</sup> was, unlike the cotton trade, not monopolised by the

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<sup>41</sup> Export of cotton to Cremona and Piacenza: ASV, Misti 35, f. 46a (a. 1375); to Pisa and Northwestern Europe Misti 40, f. 115a f.

<sup>42</sup> Zibaldone da Canal, ed. A. Stussi (Venice 1967), p. 66.

<sup>43</sup> See *Dell'arte del vetro per mosaico*, tre trattatelli, ed. G. Milanesi (Bologna 1864) II, 1, 2.

<sup>44</sup> *Op. cit.*, II, 4, 5, 10, 11, 12.

<sup>45</sup> Egyptian potash was however less appreciated, see PEGOLOTTI, *La pratica della mercatura*, p. 380. Some freight lists of the end of the fourteenth century include cargoes of Egyptian *lume* or *allume*, but one can never be sure if potash or alum is meant. Often *lume catina* is called *allume* and alum is called *lume*. PEGOLOTTI p. 70 indeed mentions alum as an article exported from Egypt and this passage may not

Venetian, and traders from Genoa, Florence and Ancona also engaged in it. Both the Venetians and the Genoese exported it, sometimes directly to Gaeta.<sup>46</sup> It was a cheap and bulky article, and was also used as ballast, but as it was so much in demand considerable sums were invested in its purchase.<sup>47</sup>

Egypt still exported flax, although much less than in earlier periods and also much less than cotton. But the cargo lists of Italian, French and Catalan ships of the end of the fourteenth century,<sup>48</sup> and the freight tariffs fixed by the Venetian Senate in that period,<sup>49</sup> give data on the export of flax from Egypt. Notarial deeds and other sources from the fifteenth century indicate that it was imported in Sicily and in Genoa.<sup>50</sup> In the second half of the fifteenth century the export of raw silk from Syria greatly increased, but it was still a transit good.<sup>51</sup>

So the Levantine countries began to supply raw materials to the industries of various regions in Europe, just as the underdeveloped countries do in our own day. However, for various reasons the European merchants did not come to control the production of these raw materials, as Western entrepreneurs have done in our own period. Cotton was grown (although on a smaller scale) for a long time before the great exports to Europe began and "lunæ"

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necessarily be an anachronism. Cahen's statement that in the later Middle Ages alum was not exported from Egypt, see "L'alun avant Phocée", *Revue d'histoire économique et sociale* 41 (1963), p. 444 ff. is unwarranted. The Venetian freight tariffs of the fourteenth and the early fifteenth century include the mention of alumi (and lume). see Misti 32, f. 131a 33, f. 110b and on the other hand 23, f. 23b, 58a.

<sup>46</sup> ASV, Giudici di petizioni (G.d.P.), Sentenze a giustizia 20, f. 122a, 71, f. 55a ff.; AS Genova, Carat. Vet. 1552, f. 152a.

<sup>47</sup> See my paper "The Venetian supremacy in Levantine trade etc." *JEEH III* (1974), p. 45; J. HEERS, "Il commercio nel Mediterraneo alla fine del sec. XIV e nei primi anni del XV", *Arch. Stor. It.* 113 (1955), p. 172.

<sup>48</sup> See my paper "The volume of Levantine trade in the later Middle Ages (1370-1498)", *JEEH IV* (1975), p. 587 f.

<sup>49</sup> Misti 38, f. 127b 39, f. 92a 41, f. 92b 43, f. 130b f.

<sup>50</sup> AS Messina, Notai, Mallono, Franc., f. 472b (a. 1433); J. HEERS, *Le livre des comptes de Giovanni Piccamiglio, homme d'affaires génois 1456-1459* (Paris 1959), p. 248; AS Genova, Notai, Costa, Lorenzo, 10, c. 97 (a. 1476).

<sup>51</sup> Although it was mainly Persian silk it should be mentioned here, because the industrial products of the Latin West were exchanged for it, see *ASV Senato*, Mar 11, f. 121b 12, f. 136b; G. P., *Terminazioni IX*, f. 13a.

was used by the Oriental painters, soap makers and others. But the feudal structure of the Moslem Near East (the Oriental type of feudalism) was strong. The organisation of production by the European traders was therefore impossible. Consequently one should not be misled by documents referring to the purchase of cotton by Italian merchants in the villages of Syria.<sup>52</sup> Even in the period of the Crusades merchants bought flax in Egypt from the land-owners and therefore sometimes visited the villages.<sup>53</sup>

The consequences of the growth of the export of raw materials on the economy of the Near East can easily be identified. Although cotton was planted where cereals had been previously grown, the Near Eastern countries were still self sufficient. But because the number of consumers had diminished more than the cultivation of cereals, their prices went down. In the second half of the fifteenth century they were not higher than five hundred years before.<sup>54</sup> Egypt and Syria could in "normal years" still export grain, but dearth was a much more frequent phenomenon than in preceding periods and in those years, as there were no reserves, wheat had to be imported from Southern Europe. Many documents refer to the export of wheat from Augusta-Catania to Syria.<sup>56</sup> Ragusan ships in 1450 exported wheat from Cyprus to Egypt.<sup>57</sup> The deeds of an Anconitan notary show that in the year 1469 three ships sailed to Syrian and two both to Syria and Egypt (or to one of these countries) and that in 1470 six ships departed from Ancona to Syria and one to Egypt, whereas in other years only one ship

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<sup>52</sup> G. P., Sent. 15, f. 48a ff.

<sup>53</sup> S. D. GOITEIN, *A Mediterranean society I* (University of California Press 1968), p. 224.

<sup>54</sup> See my *Histoire des prix et des salaires dans l'Orient médiéval* (Paris 1969), p. 80, 454; further my paper "Prices" in the *Handbuch der Orientalistik, Wirtschaftsgeschichte*, chap. 1.

<sup>55</sup> The following quotations should be considered as supplementary to the data which have been quoted in my paper "Quelques problèmes que soulève l'histoire des prix dans l'Orient médiéval", *Studies in the memory of Gaston Wiet* (Jerusalem 1978), chap. 1.

<sup>56</sup> AS Messina, Notai, Andreolo, Tomaso, sub 13 May 1417.

<sup>57</sup> B. KREKIĆ, *Dubrovník (Raguse) et le Levant au Moyen Age* (Paris 1961), no. 1192, 1201, 1258.

sailed there. In many deeds referring to these shipments it is expressly said that they included wheat.<sup>58</sup> The Venetians in 1469 and in 1470 also shipped wheat to Egypt and to Syria.<sup>59</sup> In 1481, again, wheat was exported from Ancona to Syria.<sup>60</sup> In 1487 Venetian merchants shipped grain from Apulia to Alexandria.<sup>61</sup> These sources are very important, for the shipment of grain from the big developed countries to the poorer regions which supply them with raw materials is a characteristic feature of the relations between industrialised and underdeveloped countries in our own time.

Another feature of these relations in our period is the "dual economy" of the underdeveloped regions. It was also a concomitant of underdevelopment in the Middle Ages. Certain groups of the Near Eastern populations purchased high-class victuals which were imported from Southern Europe. Olive oil was imported from Greece, Southern Italy, Sicily, the Provence and Andalusia.<sup>62</sup> The Genoese exported great quantities of oil from Southern Spain to the Near East,<sup>63</sup> and the Venetians too were very active in this trade, so that the Senate time and again ordered that this commodity should be carried on every ship.<sup>64</sup> The imports of olive oil in the Levant were of great volume: in 1512 the Mamluk sultan Ẓānsūh al-Ghūrī maintained that in the past the Venetians had imported 3-4,000 botte into Egypt every year.<sup>65</sup> The difference between the

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<sup>58</sup> See my paper "Il commercio levantino di Ancona", *RSI* 88 (1976), pp. 230, 237; AS Ancona, Notai, Angelo di Domenico IX, f. 11a f., 44a ff., 71a f., 193b, 195a f., 206b f., 222a, 231a f. On the dearth in the Levant see the sources quoted in my paper *Quelques problèmes que soulève l'histoire des prix* I. c. and especially 'Alī b. Dā'ūd al-Djauhārī, *Inbā al-ḥaṣr bi-anbā al-'aṣr* (Cairo 1970), p. 59, 114.

<sup>59</sup> Senato, Mar IX, f. 16b, 78a.

<sup>60</sup> AS Ancona, Notai, Giovanni di Giacomo 29, f. 72b f.

<sup>61</sup> *Fontes aragonesi* a cura degli archivisti napoletani VI (Naples 1968), p. 70 f.

<sup>62</sup> Export from Apulia: Misti 34, f. 47b 41, f. 92b; from Sicily: AS Messina, Notai, Andreolo, Tomaso, s. l. 6, 7 and 9 Oct. 1424; from the Provence: Marino Sanuto, *Diarii* III, col. 1122 f. VII, col. 712.

<sup>63</sup> AS Genova, Notai, Cairo, Andreolo, IV, c. 211a/b, 216b V, c. 87a/b and see also AS Genova, 2774 C, f. 18b.

<sup>64</sup> Misti 42, f. 5b 43, f. 130a 44, f. 6a f., 48a 45, f. 90a.

<sup>65</sup> M. REINAUD, *Traité de commerce entre la république de Venise et les derniers sultans d'Égypte*, *JA* 1829, II, p. 32 and cf. p. 28.

prices of the local (Syrian) and South European olive oil was considerable.<sup>66</sup> European traders also imported into the Levant honey from Greece, Apulia, Southern France and Catalonia.<sup>67</sup> It goes without saying that even this European commodity was much more expensive than the local one.

The data concerning the price differentials between victuals imported from Europe and those locally produced do not point to different qualities, but to two levels of expenditure: a part of the population could afford high quality food, but the wheat growing peasants and the manual workers not connected with the export trade lived on subsistence levels. The classes which consumed the imported victuals were army officers, government officials and merchants engaged in foreign trade.

## V

The picture which emerges from the analysis of the data on the import of European textiles is different. The import of European linen and woollen materials, silk fabrics and velvet in the Near Eastern countries came in the last quarter of the fourteenth century to constitute authentic dumping. The Florentine traveller Leonardo Frescobaldi who visited Cairo in 1384 recounts that the women in the Egyptian capital wore garments of Reims linen.<sup>68</sup> The Manuals of Merchants compiled by various European authors in that period contain data on the prices of Florentine cloth of various kinds. The volume of the import of Florentine cloth in the Levant must have been very great. Florentine cloth was imported into Egypt and also Syria by Venetians,<sup>69</sup> Anconitans<sup>70</sup> and

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<sup>66</sup> See in my *Histoire des prix et des salaires*, p. 319 and the paper "Quelques problèmes que soulève l'histoire des prix", chap. II.

<sup>67</sup> Misti 34, f. 47b; *L'Égypte au commencement du XV<sup>e</sup> siècle d'après le traité d'Emmanuel Piloti de Crète, incipit 1420*, ed. P.-H. Dopp (Le Caire 1950), p. 66; *Histoire du commerce de Marseille* II, E. BARATIER - F. REYNAUD (Paris 1951), p. 246, 346 f. 649, 776; Marino Sanuto, *Diarii* III, col. 1198 cf. 1571.

<sup>68</sup> *Viaggi in Terrasanta*, ed. C. Angelini (Florence 1944), p. 48.

<sup>69</sup> G. d. P., *Terminazioni* III, f. 102a ff.

<sup>70</sup> AS Ancona, Notai, Ant. Giovanni di Giacomo 28, f. 134a f.

Genoese.<sup>71</sup> The Italian traders also imported fustian, produced with the Syrian cotton.<sup>72</sup> This is the counterpart of underdevelopment in the modern period! The upper classes of the Oriental society were customers for fine woollen fabrics in scarlet and brocades. But also the lower classes bought European cloth. The great quantities of Catalan and Brescian cloth were destined for them and were imported by Catalan and Venetian merchants. Whereas the costly olive oil imported from Southern Europe was sold to the Mamluks and rich bourgeois, cheap woollen fabrics were sold to the peasants who had become cotton planters. They are certainly the customers for whom the cheap *loesti* fabrics were shipped by the Venetian firm Donado Soranzo in 1431, 1433 and 1434.<sup>73</sup> The accounts of the firm Alvise Baseggio-Polo Caroldo contain data on the sale of cheap Italian cloth in the cotton growing villages of Galilee in the 1470s and 1480s.<sup>74</sup> The size of the imports of European textiles is borne out by the data provided by a Venetian chronicler. According to Marino Sanuto in Alexandria in 1500 a Genoese ship imported 4,600 pieces of fine woollen fabrics and three French ships another 13,000.<sup>75</sup> The value of these cargoes represented some hundred thousand ducats.

The import of other products of European industries was less important as far as the balance of trade of the Near East was concerned. But the data which are to be found in various sources shed light on the true character of the commercial exchanges between the Levant and Southern Europe in that period. They show convincingly that the Levant had become an underdeveloped region.

Owing to the considerable decrease of the sugar production both in Syria and in Egypt and the closing of many sugar factories at the

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<sup>71</sup> AS Genoa, 2774 C, f. 35b.

<sup>72</sup> Misti 60, f. 249b; G.d.P., Terminazioni III, f. 103a.

<sup>73</sup> S. SASSI, *Sulle scritture di due aziende mercantili veneziane del Quattrocento* (Naples w.d.), pp. 236 ff., 242, 248.

<sup>74</sup> ASV Proc. S. Marco, Commissarie miste, Ba 117, fasc. 16. For many other data concerning the import of European textiles in the Near East see my paper "L'importation de draps occidentaux dans l'Orient médiéval", in *Studi in memoria di Federico Melis*, Napoli, Giannini, 1978, vol. II, pp. 303-377.

<sup>75</sup> *Diarii* III, col. 684, 1198.

end of the fourteenth century and at the beginning of the fifteenth century, much less sugar of the medium quality, called *babilonio* and *musciatto* by the Italians, was produced. Boiled sugar (*mukarrar* in Arabic and therefrom in Italia *muccaro*) had never been destined for the middle classes. So began the import of molasses from Cyprus and from Sicily, where the sugar industry had meanwhile very much developed as a consequence of technological innovations. The lower classes of the towns and cities and probably a part of the peasantry were the customers.<sup>76</sup> This change in the consumption of sugar was also however a result of the impoverishment of the Near Eastern populations.

In the later Middle Ages the Levantine countries imported not only victuals and cloth, but also products of industries which had been introduced or developed in the countries around the Mediterranean by the Arabs. These imports from European countries are surely a sign of underdevelopment consequent on decline. The Near Easterners bought from Italian merchants the fine paper of Fabriano and of other towns where its manufacture was imitated.<sup>77</sup> Considerable quantities of soap were imported from the March of Ancona,<sup>78</sup> Venice<sup>79</sup> and elsewhere. This was the hard soap made with the *lume* which had been imported in Italy from Syria. Sizeable shipments arrive in the Levantine ports from Gaeta<sup>80</sup> and the merchants of Gaeta themselves exported to the Near East.<sup>81</sup> This is another example of the new character of trade between the European countries and the Levant. Finally the import of Venetian glass and glass vessels should be mentioned. Glass making had very much decayed in the Near East in the fifteenth century, whereas this craft was at its apogee in Murano. So the Venetians

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<sup>76</sup> See the data quoted in my lecture "The Levantine sugar industry in the later Middle Ages", (in *Israel Oriental Studies* VII (1977), p. 226 ff.

<sup>77</sup> See Misti 46, f. 94a and the data in my paper in *Israel Oriental Studies* VII, p. 270 ff.

<sup>78</sup> AS Ancona, Notai, Bernaba, Melchior, II, f. 124b.

<sup>79</sup> Misti 41, f. 127b 42, f. 113b 43, f. 8b, 64b, 130a; G.d.P., Sentenze 73, f. 94b ff. 129, f. 153a ff.

<sup>80</sup> ASV Proc. S. Marco, comm. miste, Ba 180, Com. B. Dolfin, fasc. 15 (a. 1418); J. Day, *Les douanes de Gènes 1376-1377* (Paris 1963), p. 268, 351, 527.

<sup>81</sup> ASV Cancelleria Inferiore, Notai, Ba 222, Antonello de Vatacis sub 18 July 1406; Chronicle Ant. Morosini c. 340 (a. 1417).

found customers in the Levant for their glass produced with the Syrian *lume!* Orientalists and art historians have discussed whether certain lamps in the mosques of Cairo are of Venetian origin. But the judicial acts in the Venetian archives and the protocols of the Senate refer expressly to the export of glass to Egypt.<sup>82</sup> The paper, soap, and glass industries in the Levant did not, however, discontinue production altogether, but their products were much less esteemed than the European ones. Their import in the Levant is a feature of the "dual economy" of underdeveloped regions.

## VI

Another feature of the Near Eastern economy in the later Middle Ages, the use of South European transport services, is also a striking feature of underdevelopment. The decline of shipping in the Near Eastern countries must have been a major factor in their economic plight. There were fewer ships built and those which the Moslems had could not compete with the Italian and Catalan cogs and galleys, with the result that the traffic between Turkey and the Levant was carried on by Italian ships. They transported Turkish passengers<sup>83</sup> and carried Turkish copper to Syria and to Egypt.<sup>84</sup> Syrians too sailed on Italian ships and Venetian vessels were chartered for transporting wheat.<sup>85</sup> The transport of both travellers and merchandise from Tunisia to Egypt and *viceversa* was in the hands of the Venetians and the Genoese.<sup>86</sup> The appendix to a deed by a Genoese notary in that period contains the names of 208 Moslem merchants who sent their merchandise on a Genoese ship from North African ports to Alexandria.<sup>87</sup>

The great expenses involved in the manufacturing of industrial goods and the services of European commercial fleets would not have

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<sup>82</sup> G.d.P., Sent. 130, f. 45b f.; Senato, Mar VIII, f. 97b, cf. f. 103b.

<sup>83</sup> Senato, Mar VII, f. 190b f.

<sup>84</sup> Misti 42, f. 21b.

<sup>85</sup> Misti 46, f. 33a 47, f. 63a.

<sup>86</sup> AS Genoa, Primi Cancellieri, Ba 88, c. 314-318. On Moslem passengers on a Genoese ship off Malta see ASV Senato, Secreta 20, f. 90a.

<sup>87</sup> AS Genoa, Notai, Caito, Lercaro, 10, c. 185.

<sup>88</sup> al Makrizi, *as-Sulūk* III, p. 965 IV, p. 19, 30, 116, 606, 645, 646, 767, 934, 938.

constituted an absolute loss for the Near Eastern economy, had the capital spared been invested in industry. But the Arabic chronicles which refer to the taxes imposed on high ranking officers and other rich men leave no doubt that even in that period hoarding was a characteristic feature of the economic behaviour of the well-to-do in the Levant. The chronicles also point to another phenomenon: the general impoverishment of the Moslem Near East in the later Middle Ages. The fines imposed at the end of the fourteenth century and at the beginning of the fifteenth century on a general, a high official or a rich merchant would generally amount to 10-30,000 dinars.<sup>88</sup> Contributions (the *musādara*) amounting to 200,000 or 300,000 dinars are seldom mentioned.<sup>89</sup> A comparison of these contributions with the fines extorted from the rich in the period before the Crusades shows clearly that the general level of income and wealth had considerably declined.<sup>90</sup> The fines in the later period were much lower even when compared with those imposed on rich people in the first half of the fourteenth century.<sup>91</sup>

Consequently the gap between *per capita* income in the Near East and in those countries which it supplied with raw materials was becoming wider, and this is a well-known phenomenon of underdevelopment. The supposition of declining *per capita* income is borne out by data (or estimates) on the decline of the population and the volume of production. Many remarks by al-Maḳrīzī, an Arabic author of the fifteenth century who had a real interest in economic problems, point to a considerable decrease in the cultivated area. Time and again he recounts that many of the peasants had left the villages and that the land was no more cultivated.<sup>92</sup> The decrease in industrial production too was greater than depopulation. Whereas the population of Cairo decreased, according to Clerget, from 600,000 at the beginning of the fourteenth century to

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<sup>88</sup> *Op. cit.* III, p. 172 IV, p. 250, 354 (later reduced, see p. 355), 467. The sum of 964,000 dinars found in 1409 in the possession of a high official, see *Sulūk* IV, p. 113 was exceptional.

<sup>89</sup> See my *Social and economic history of the Near East in the Middle Ages*, p. 142.

<sup>91</sup> See my monograph *Les métaux précieux et la balance des paiements du Proche Orient à la basse époque* (Paris 1971), p. 36 ff.

<sup>92</sup> *Traité des famines*, transl. G. Wiet, p. 49; as-*Sulūk* IV, p. 19 f.

430,000 at the middle of the sixteenth century,<sup>93</sup> that means by 30% in two hundred years, the number of sugar refineries in the Egyptian capital had by the beginning of the fifteenth century declined by 42%.<sup>94</sup> The data in the first Turkish tax registers which show an increase in barley growing,<sup>95</sup> reflect this impoverishment and are in keeping with this conclusion. They fit the pattern of underdevelopment drawn by modern economists well.<sup>96</sup>

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<sup>93</sup> M. CLERGET, *Le Caire* (Cairo 1934) I, p. 240.

<sup>94</sup> See my paper "Levantine sugar industry in the later Middle Ages", table III.

<sup>95</sup> B. LEWIS, *Studies in the Ottoman archives*, *BSOAS* 16 (1954), p. 490.

<sup>96</sup> R. E. BALDWIN, *Economic development and growth*, p. 6.