

The Urban Settlement of Denmark.

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(With one map).

At the beginning of historic times in Denmark — in the IX Century A. D. — there were a few towns on which trade was concentrated. In the XIII Century the kings began to grant privileges to the towns. These privileges gave them local government, the right to administer justice, monopolies of trade and of most of the crafts. Later, some of the craftsmen were permitted to establish themselves in the country, but only at a certain distance from the towns, about 7½ to 11 kilometres. In the beginning of the XX Century these regulations as to distance were abolished by some of the towns, and finally by them all in 1920, and now there remains only one difference between urban and rural areas, in that the urban "communes" have wider liberties in the administration of their revenues and property and the right to contract loans. The so-called market-towns (in south of Jutland called "Flækker") occupy a mid-way position between urban and rural communes, although most of them have been given borough standing within the last few years.

Six of the Danish towns are definitely known to have existed prior to the year 900: Aarhus, Viborg, Ribe, Odense, Ringsted and Roskilde. In those prosperous times in the XII and XIII Centuries under a number of able monarchs the population and wealth of the country, and with these the possibilities of trade, grew apace and a number of new towns arose, so that in the year 1300 they had increased to 50. Then came a period of decline, when only few new towns were founded; but about the year 1400 better times set in again and with them new urban communities, and when the year 1500 arrived they had reached the total of 67. In the centuries that followed this total was only increased by some few towns; in 1860 for instance there were 82 towns (and market-places). Round about 1850 began the great increase of the popula-

tion which was due to the heavy decline of mortality. Simultaneously, the new farming methods and the technical progress made in industry brought about a complete change in all occupations and the whole life of the population, which created possibilities of founding new towns in the intervals between the old ones. By 1930 the number of urban communes had risen to 87.

This increase in the number of towns from 82 to 87 during the last seventy years does not actually reflect the real growth of the towns in that period. The terms "urban commune" and "town" have never really been synonymous. Before the towns have received their privileges as such they have mostly existed for some time as embryonic centres of trade and handicraft. The town of Sorø, for instance, arose in the Middle Ages round about the monastery built in the middle of the XII Century; it was always a small town, however, and only long after the monastery was closed did it acquire town privileges — in 1638. In 1682¹⁾ there were 75 urban communes in Denmark, a number which has fairly well corresponded to the number of urban settlements. If we examine Christian the Fifth's register, in which for the various rural communes the totals are given of dwellings with and without farm-land, it nevertheless appears that one of the rural townships, Dragør on the island of Amager, had only two farms, whereas it had 65 houses without farm land. Then as now the inhabitants have mainly lived as seafaring people, and thus in this settlement we have an example of an embryonic town of about 300 inhabitants, almost the same population as the smallest urban communes of that period. The register does not include the islands of Bornholm and Fanø or the southern part of Jutland; but presumably Nordby on Fanø and Marstal on Ærø have even then been seaman towns like Dragør, so that the number of urban settlements then has been 78. In the next century a few other settlements assume the character of small towns; Pontoppidan's "*Danske Atlas*"²⁾, besides the towns of the period round about 1750, mentions some places about which it says, that they are built like towns and that the inhabitants live by trade, shipping and handicraft.

In olden times the towns were very small. At the time of the earliest census (1769) København (Copenhagen) had 80,000 inhabitants, and only one other town, Aalborg, had more than 5000. On the other hand 39 of the country's 76 urban communes had less than 1000 inhabitants, among them being 13 with even less than 500. At the same time, however, Marstal, which had no town privileges, had 760 inhabitants.

With the exception of København, which was already growing rapidly in early days, the character of the towns in 1769 was almost the same as it had been during the previous five hundred years. An urban commune consisted of the town and its fields, where the townspeople carried on agriculture as a not inconsiderable side-line to their occupation in the town. At the close of the XIX and the beginning of the XX Century matters in this respect had changed entirely. Nearly all the towns had expanded so that all the fields had been built upon, and from it building had spread to the adjacent parts of the rural communes. Now and then a town incorporates suburbs of larger or smaller size, with the result that the commune suddenly increases considerably in size without the geographic town having grown. In 1918, for instance, the town of Holbæk incorporated its suburbs and thereby grew from 8000 to 10,000 inhabitants. In 1932 the suburbs were incorporated in Odense, which raised the number of inhabitants of that commune from 57,000 to 76,000. In 1901—1902 København incorporated a number of its suburbs with 40,000 inhabitants, whereas Frederiksberg, a commune that is actually built on to København, was not incorporated, nor were the large suburbs on the north. In the last thirty years København has spread farther out over the surrounding rural communes; in 1930 København had 617,000 inhabitants, but to this must be added Frederiksberg borough-commune, which forms a fully built enclave in København, with 106,000 inhabitants, and finally Gentofte commune, with 48,000, and five other suburbs with 25,000. Thus geographic København has 796,000 inhabitants. In all, Danish urban communes in 1930 had 1,559,000 inhabitants, in addition to which it should be observed that the two largest urban communes, København and Frederiksberg, are both part of the same geographic unit. This shows with sufficient clarity how misleading it would be, as far as Denmark is concerned, to identify urban communes with towns.

Round about the urban communes lie the rural communes, which, as far back as information about them can be traced, consisted of a number of villages and individual farms. On the Danish islands and in East Jylland village settlement predominated; on Bornholm and in certain parts of West Jylland there were no villages, isolated farms being the sole feature¹). In those parts of the country where there were villages, they were small and lay very close together. In the XII and XIII Centuries, when the rural population increased rapidly, and the cultivated area was extended, the fields of the already existing villages were only expanded to a

certain extent; instead, new villages were formed in the intervals between the old ones¹). On the island of Falster, for instance, in 1682 there were two urban communes and 28 rural communes with altogether 112 villages and 19 isolated farms, nearly all manors. The average density of the villages was thus 26 to every 100 sq. kilometres, or the average distance between them was rather less than 2 kilometres. The largest villages were Vaalse with 67 dwellings, and Gedesby with 66. Each of them had about 300 inhabitants. If for comparison we take Sardinia and Sicily, where many villages have more than 5000 inhabitants, in fact some have more than 10,000, but with distances that are often 10—15 kilometres between them, the difference in the type of settlement is obvious. And Sardinian and Sicilian villages are almost exclusively inhabited by farmers and farm labourers. We see then that in the Middle Ages people in Denmark already were aware of the advantage it was to the agriculturist to live close to the land he cultivated, and not to waste time and labour on the long distances. Even if considerations of safety might make it desirable to live together, they distributed themselves in small communities.

In the XVIII Century the largest villages and the smallest urban settlements have almost equalled one another in a size of 300 inhabitants. The vital factor is not the size of the settlement, however. The limit of 300 inhabitants may have been suitable to Denmark and to the XVIII Century, but at other times and other places conditions may have been different. Both where the villages are small and where they are large, there will be settlements where urban occupations decidedly predominate over agriculture, but which are smaller than the largest villages. Consequently it would also be misleading to fix upon one certain size-limit and to regard all settlements exceeding that size as urban settlements, whereas settlements under that limit were reckoned as villages. The deciding factor for what in a geographic sense we may call a village or a town can only be whether the population mostly earn their living by farming or by urban occupations (trade and industry).

If rural and urban settlements are defined in this manner, there will be a conspicuous difference in their appearance in Denmark. The villages of Denmark are old, and only few of them were founded later than the XIII Century. About 1800, however, common farming among the peasants of the villages was done away with and the farms were shifted, so that the land belonging to each farm was made to form a complete whole and did not, as in former times, lie scattered in many small allotments each in its

own place¹). From that time commenced a moving-out of the farms from the villages to the open country²). Farms which were rebuilt after a fire or on account of age were moved from the villages out into their field, where new farms which had arisen out of the division of the old ones were also built. When a farm lies in the middle of its field the farmer can survey it all and the cattle grazing on it, and he saves time and labour by the shorter distances. Therefore the villages are standing still or declining, and old half-timbered, straw-thatched houses are characteristic of them. On the other hand the greater part of the houses in the urban settlements are recent. Most of them arose towards the end of the XIX and the beginning of the XX Century. Nowadays houses are built with neither half-timbering nor thatches. Good timber is too expensive, and for thatching a man requires hand-threshed straw, which in an age of machinery is dear and difficult to obtain. The houses of today have brick walls and tiled roofs, a type that is as characteristic of the new urban settlements as of the scattered farms built within the last few years out on the open land.

Fishing hamlets occupy an intermediate position between village and town, and of a large number of towns we know that they began as fishing hamlets, grew into trading centres and at last became towns. This is true, for instance, of Svendborg, Kolding, Løgstør, Nibe and others. In earlier times the fishing villages differed only very little from the agricultural villages. It appears from Christian V's register that they nearly all consisted of medium and small sized farms and houses with land, and that there were only few houses that had no farm-land. Fishery was practised from the farms as a supplementary occupation to farming, while farming was practised from the houses as a side-line to fishing. Only a very few fishing hamlets consisted of some fisher-houses without farm-land. On the other hand "Danske Atlas" refers in 1750 to some fishing villages of an urban character and, besides the fisher population, an urban population whose means of livelihood was trade and handicraft.

By towns, then, we must understand settlements where the inhabitants mostly live by urban occupations (trade and industry), regardless of the size of these settlements; and by a town we must also understand the collective settlement without regard to communal boundaries. For the present day it is easy to acquire particulars of these, as in all recent censuses the Department of Statistics has published both the population of the various communes and the towns with their suburbs, and all individual urban settle-

ments in the rural communes. It is just as easy to obtain information as to the populations of the urban communes at all the earlier censuses back to 1769¹). It is otherwise as regards urban settlements which were not independent communes but formed parts of the rural communes. Some information is available, however, from descriptions of the country and various provinces²), and, even if they only give approximate figures or particulars as to the number of houses or the like, it is possible to form an idea of the number of these urban settlements and an approximation of their total population, so that the errors in these figures cannot amount to more than one or two per cent. of the total urban population.

In the following a comparison has been undertaken between the growth of the urban population and that of the rural population in 1769, 1801, 1860 and 1930. For the purpose of making a survey of conditions in the principal parts of the country it has been divided according to geographical principles into: the Islands, East Jylland, West Jylland and North Jylland. To form a boundary between East and West Jylland a line has been chosen where the ice-cap during the last Glacial Period for a long time had its terminal margin. The moraines east of that line were formed by Swedish ice as on the Islands, and consist mostly of fertile boulder clay. In West Jylland, certain stretches on the east — where the Swedish ice for a time made an advance beyond the main stationary line — have a thin deposit of Swedish moraine from the last Glacial Age, whereas other parts consist of very washed-out and little fertile moraine. A characteristic feature of West Jylland is, furthermore, the extensive, unfertile fluvial plains formed by the glaciofluvial waters of the last Glacial Age. Accordingly, West Jylland is that part of the country where fertility and density of population are poorest. North Jylland comprises the country from a point west of Viborg and on westwards to the North Sea, and eastwards to Mariager Fjord. In North Jylland the moraines are of Norwegian origin and occupy a midway position with their alternation of very fertile and less fertile areas.

Regarding the rural population there is this to be observed, that material for the southern part of Jylland from the 1769 census is almost entirely lacking except for what is cited by Pontoppidan and Nieman. In this same part of the country there was a census in 1803, i. e. two years later than in the rest of the country. This material, too, is incomplete. Nevertheless, from the material available, and what is cited by Gudme, it is possible by means of interpolation to arrive at fairly correct figures for those parts which

are placed to East Jylland and West Jylland, so that it may be taken for granted that the figures for these two parts do not deviate more than some few per cent. from reality.

The following tables give a survey of the growth of the towns and the proportion of their growth to that of the rural populations¹).

		Islands (Øerne)	East Jutland (Østjylland)	North Jutland (Nordjylland)	West Jutland (Vestjylland)	Denmark (Danmark)	
I.	Area Sq. km. (Areal km ²).	13370	9969	9735	9941	43015	
II.	No. of towns (Antal Byer)	1682	44	17	8	77	
		1769	52	17	11	8	88
		1801	54	19	14	8	95
		1860	61	22	17	9	109
		1930	252	176	131	81	627
III.	Towns per 1000 sq. km. (Byer pr. 1000 km ²)	1682	3.3	1.7	0.8	0.8	1.8
		1769	3.9	1.7	1.1	0.8	2.0
		1801	4.1	1.9	1.4	0.8	2.2
		1840	4.6	2.2	1.7	0.9	2.5
		1930	18.8	17.7	13.4	8.1	14.6
IV.	Urban population in 000's (Bybefolkningen i Tusinder).	1769	130	29	10	9	178
		1801	161	34	14	9	218
		1860	290	80	32	17	419
		1930	1325	407	219	133	2084
		V.	Urban pop. in % of whole pop. (Bybefolk. i % af hele Bef.)	1769	29	12	10
1801	30	13	12	9	21		
1860	32	19	12	10	24		
1930	68	54	41	39	59		
VI.	Rural pop. in 000's (Land Bef. in Tusinder).	1769	317	214	94	77	702
		1801	383	227	99	90	799
		1860	618	336	233	149	1336
		1930	602	352	308	204	1466
		VII.	Rural pop. on each sq. km. (Land Bef. paa hver km ²).	1769	24	21	10
1801	29			23	10	9	19
1860	46			33	24	15	31
1930	45			35	32	21	34
VIII.	Rural pop.'s growth in % (Landbefolkn. Tilvækst i %).			1769-1801	21	6	6
		1801-1860	61	48	133	66	67
		1860-1930	-3	5	32	37	10
No. of farms. (Antal Landbrug)		Arable land (Agerland) 1000 ha		Fallow (Brak) 1000 ha	Untilled pasture (Udyrket Græseng) 1000 ha		
IX.	1682	71	164	1682	1063	530	-
	1860	162	226	1861	1854	178	414
	1905	197	668	1907	2370	110	397
	1929	-	-	1929	2644	24	206

The last table does not include South Jylland, nor do the figures for 1682 in this table comprise the islands of Bornholm and Fanø, which, however, only form 1.6 per cent. of the total area of the country, so that their omission does not disturb the general impression. Prior to 1864 South Jylland belonged to the Duchy of Slesvig, which formed a part of Denmark under a separate government. In 1864 this ancient Danish province was seized by the Prussians, but in 1920 the Danish speaking part of South Jylland was given back to Denmark. In all the tables with the exception of the last (IX) the figures are so calculated that they hold good for Denmark within her present boundaries.

Danish towns have never manufactured large quantities of industrial products that were intended for export abroad, and therefore they have mainly had to sell imported and home-produced commodities to the rural population, and to buy the commodities produced by the latter for their own consumption and for export. Consequently, the prosperity of the towns has always been closely bound up with the prosperity of the rural population and has at all times been governed by it.

In the foregoing it was stated that a large number of the Danish towns date their origin from the XI and XII Centuries, and that after a long period of stagnation some more towns were founded in the period round about 1400. These two periods designate eras of general progress and prosperity. In particular the progress of the rural population made its mark in the large number of new villages which, especially in the XI and XII Centuries, arose in the intervals between the older villages, and in the widespread restoration of village churches and the building of new town churches which took place round about 1400. Therefore, if we are to understand the progress made by the towns in the later centuries it will be profitable to consider the development of the rural population in the time for which statistical data are available. It appears from Tables VI—VIII that in the years 1769—1801 the rural population grew slowly, whereafter from 1801 to 1860 it increased rapidly. For 1682 we have no figures to show the size of the rural population, but it is to be presumed that it was also growing slowly during the period 1682—1769. The number of farms increased considerably from 1682 to 1860, especially the small ones. The area cultivated increased very greatly: In 1682 triennial rotation held exclusive sway, and about one-third of the fields lay fallow, so that the fallow land has totalled about half as much as the area of the arable land. By 1860 the fallow land had been reduced to less than

10 per cent. of the arable land. In 1682 there were large areas of untilled pasture land lying round about the village fields. In 1860 large parts of these lands were under the plough and used as farm land, which had also expanded at the expense of the timbered land. The widespread cultivation of previously little-productive soil provided housing possibilities for the growing population, and the towns grew simultaneously in number and size in almost the same proportion as the rural population. In 1769 21 per cent. of the country's population lived in the towns, and in 1860 the urban population had only grown to 24 per cent. After 1860 the extension of the cultivated area continued, partly at the expense of fallow land and uncultivated pastures, partly by means of the cultivation of heath and other quite unproductive land. This latter, however, could only go on for a certain time, and it will be seen that in the period 1907—29 the entire growth of arable land has been made at the expense of the fallow land, which by 1930 had been reduced to less than 1 per cent. of the arable land, and uncultivated pastures. The small areas of heath and bog which still remained and have been cultivated have only just corresponded to the areas which have been lost to farming through the growth of the towns. Since 1860 the rural population has been at a standstill on the Islands and in East Jylland, whereas its growth has continued in North and West Jylland. This stagnation of the rural population has taken place despite the fact that the number of farms has constantly been increased by the parcelling out of larger farms, and despite the greatly increased intensity of the farming and the size of the gross yield. It is a consequence of the fact that mechanical power has replaced manual labour to such a great extent, of the constantly increased use of chemical dressings, of improved strains of both culture plants and domestic animals, of the immense increase of the herds of domestic animals, whereby the quantity of animal manure is increased very considerably, and of the other circumstances which, together with those named, constitute modern farming.

Although since 1860 the rural population as we have seen has only grown very slightly, the urban population has increased rapidly, especially since 1870; the cause is the complete transformation that has taken place in all trades and in the whole mode of living of the population through the introduction of mechanical power. In 1847 the first railway, 80 kilometres long, was laid from København to Roskilde. South Jylland acquired its first railway in 1854, and North Jylland in 1862. The first steam engine came to Den-

mark in 1784, but in 1810 there was still only one, in 1839 there were 23, in 1880 some hundred factory steam engines. In 1923 in agriculture alone there were 39,600 electro-motors in use, 14,800 internal combustion engines, 674 stationary steam engines, 16,600 wind motors, 2000 tractors, 7400 steam locomobiles, whilst 89,200 factories of various kinds in 1925 were using power machines totalling 437,600 horsepower, of which steam engines represented 182,400 and electro-motors 184,800 horsepower. In addition there were the railways with (1929) 1041 locomotives and 143 motor-locomotives; and besides these, there are in this country 110,000 automobiles and 23,000 motor cycles. These figures do not, however, exhaust the total uses to which mechanical power has been put. It is beginning to make its way into private homes — although to a modest extent — especially for vacuum cleaners.

Industrialization has made its way in everywhere and has changed the mode of life entirely, a change that is not least perceptible out in the country. In 1890 it was still the general custom to sow and reap the corn by hand. Now, even on the smallest farms, both sowing and reaping machines are in use, whilst the old horse driven threshing machines have been replaced by steam threshers, which are driven from farm to farm and thresh the whole crop in one or very few days. At the end of century bread was still being baked and beer brewed on the farms; now practically all baking and brewing goes on in industrial establishments. The flour was ground in windmills which were run by millers in the villages or on the open land. Now the production of flour is left to steam mills in the towns. In earlier times butter and cheese were products that were made on the farms; now the manufacturing of both butter and cheese takes place at the co-operative dairies, the first of which was established in 1882, whilst their number in 1925 had risen to 1777. Some of the dairies are in the villages and on the land, but many of them have been built in the small urban settlements, and 229 in the urban communes. Slaughtering, which once proceeded on the farms or on the premises of small butchers, for the most part is now carried on industrially in the large bacon factories in the towns and in the slaughter-houses at the cattle markets in the towns. The making of wool and flax into yarn, as also the weaving of cloth nowadays, is all taken care of by the mills. And so we could go on indefinitely.

The consequence of this relaying of the industrial culture has been sweeping everywhere, and has created a large number of new occupations for the production, sale and repair of the new articles

of consumption. Likewise, the great change in agriculture, which took place in 1870—80, has given rise to increased trade. Whereas the farmer once sold his grain for export, he now uses it as feed for his livestock, in addition to large quantities of foreign grain and other feeding stuffs, just as there is a large consumption of chemical fertilizers. The trade in fertilizers and feeding stuffs therefore plays a great part in the country's trade as a whole.

The enormously increasing demand for new industrial and trade establishments has created the basis for the rapid growth of the towns and for the appearance of the many new urban settlements.

We have seen in the foregoing that the rapidly increasing number of towns in the XII and XIII Centuries was conditioned by the great growth of the rural population. Later the urban population grew together with the rural population, so that the relative size of the town population from 1769 to 1860 increased no more than from 20 to 24 per cent. In the closing part of the XIX Century and the beginning of the XXth there has again been a tremendous increase of the urban population; the cause does not lie in a corresponding increase of the rural population, however, but in the industrialization of all the occupations. Whereas the rural population only grew by 10 per cent from 1860 to 1930, the urban population had in 1930 become very nearly five times as large as in 1860. A common feature of the whole development is that the towns arise when and where there is a need for them.

It is natural that new towns arise at places where there is tributary country for them and where traffic conditions are favourable. On the other hand, various matters of detail will also be of weight, differing at different times, and it may be worth while to examine these more closely.

Of the fifty towns that are older than the year 1300¹), 33 are at the coast, and 14 of them stand at the head of the narrow fjords which cut more or less deeply into the land. There they lay comparatively well sheltered from pirates, and there they had the benefit of the fact that they had tributary country all round them. In contrast to these towns, Stege, Korsør and Skelskør were built at the crossing places over the narrow entrances to fjords which widen out further in. Aalborg, Sønderborg, Middelfart, Svendborg, Nykøbing on Falster, and Vordingborg stand at the crossing places over the narrow straits which separate the different parts of the country. Aarhus and Køge stand by open bays of the sea and, like many of the fjord towns, used river mouths as harbours. Higher up the rivers which were navigable for the small vessels of the

Middle Ages stand 7 towns: Grenaa, Randers, Ribe, Varde, Tønder, Næstved, Odense, and possibly Skive belongs to the same group. To some of these maritime towns other circumstances may also have had a say in their origin and growth. In pagan times Odense was a sacred place frequented by many people. For many of the towns which used a river mouth as a harbour it is the rule that the town stands at a place where the river could be crossed, where the higher land on both sides comes nearer and narrows the marshy valley (Aarhus, Randers, Næstved, etc.), and the same considerations may have determined the situation of inland towns such as Holstebro. At such places the roads had to meet in order to pass the obstacle formed by the marshy valley of the river. The origin and growth of several other towns were due to castles — the business which flowed to merchants and artisans on account of the immediate vicinity of the castle, or the safety it afforded against piratical attacks. The names Sønderborg, Nyborg, Kalundborg, Vordingborg and others bear witness of an origin of this kind. København was already a fishing and trading centre when in 1167 Bishop Absalon built his borg and thereby created security for trade, so that the town was able to profit from the favourable conditions which lay in its situation. There remain the nine inland towns. Of these, Viborg and Ringsted arose in pagan times near places of sacrifice; there were held the folk moots for Jylland and Sjælland respectively, and as such they were the meeting places of the population. Norborg on Als rose up in the XII century round a castle, Løgumkloster round a Cistercian monastery founded in the same century.

In the XIII and XIV Centuries 15 new coast towns and two inland towns arose. Their origin was conditioned by the same factors as before. Nevertheless, none of the new coast towns secured a site at the head of a fjord, for there the situation was already occupied. The two towns, Mariager and Maribo, grew up round Bridgetine monasteries, and both are still among the very small towns. From 1500 to 1860 8 coast towns and 7 inland towns were founded. Of these, Frederikshavn was a fishing hamlet, where a flourishing trade gradually developed with Norway. Nibe too was a fishing hamlet originally. Frederiksværk arose round some factories which were started on the canal between Arresø Lake and Roskilde Fjord in the beginning of the XVIII Century. Of the inland towns, Augustenborg, Hillerød, Skanderborg and Frederiksberg grew up around castles. Kristiansfeld was a colony of Moravian Brethren established in 1772, Silkeborg was founded near a paper mill built

in 1845. Sorø had already arisen in the Middle Ages round a Cistercian monastery, but was on the wane, and was only recognized as a town commune in the XVII Century.

A few of the towns which arose in the Middle Ages have since disappeared. This is true, for instance, of the two seaports Skibbinge and Skibby in Sjælland. Their nature as ports is indicated by their names (Skib — a ship). Skibbinge stood at the head of a small inlet stretching from Præstø Nor to the south. Silt, and later the formation of peat, have gradually entirely choked up the inlet, so that shipping was forced to go elsewhere. On its site there is now a boggy meadow through which a stream flows. In the XIV Century the town of Præstø was then founded on a small island at the mouth of the cove, and in 1403 it was granted town privileges. Skibby met a similar fate; it stood on an inlet which cuts from Roskilde Fjord into Horns Herred, the peninsula which juts out northwards from Roskilde. The inlet silted up, and Skibby became a village. Of inland towns that are now gone, Ry, south of Silkeborg, will be referred to below. In North Sjælland the town of Søborg had grown up 20 km west of Helsingør (Elsinore) round a borg which was built on Søborg Lake. It is mentioned in the XIII Century as a town, but in the XVI Century had declined again to a village. Slangerup, in Sjælland between the later towns of Hillerød and Frederikssund, is a very ancient town and was already in existence in the XI Century. It was continually on the decline, however; in 1769 it had 404 inhabitants, in 1801 only 336. In 1809 its privileges were taken away, but it continued to exist as a small trading centre, whose population had risen to 1090 in 1931.

In 1860, besides the towns there were already a number of small urban settlements, some of which had about 1000 inhabitants and thus in population were not inferior to the smallest of the towns. Among them were a number of small seaports and "skipper" towns, such as Dragør on Amager and Nordby on Fanø, Hals at the entrance to Limfjord, Bandholm on Lolland. Inland, too, a number of small towns were growing up. The largest of them was the manufacturing town of Lyngby, north of København; others were Hørsholm in Sjælland, Herning and Odder in Jylland. Those years saw the rise of more and more urban settlements in the rural communes. In 1901 there were 110, with 95,000 inhabitants (excluding South Jylland), and in 1931 their number had increased to 539, with 389,000 inhabitants.

As late as in 1860 the great majority of urban settlements in all parts of the country still lay by the coast, and on the small islands

this is true to this day. R. Tack has made the settlement of Bornholm the subject of a special study¹). He mentioned the fact that of Bornholm's ancient towns only a single one, Aakirkeby, lies inland; all the others are on the coast. Of the new urban settlements three stand near railway stations in the interior of the island, whereas on the coast there are 9 fishing villages which are growing up into trading and industrial towns. He points out that most of the coast towns and fishing villages lie at the marine edge of the granite terrain on the north, where numerous small indentations provide natural anchorages, whereas the little-indented sedimentary coast on the southern half of the island has only few settlements. This applies particularly to the stretch from Hasle on the west coast along the south coast to the mouth of the Melaa on the southeast; on practically the whole of this 45 km stretch the coast consists of blown sand, interrupted only at few places by other formations. On this coast, apart from a small group of 8 fisher houses at the middle, there are only the town of Rønne and the two fishing villages of Arnager and Snogebæk, whereas on the rest of the 60 km stretch there are 4 towns and 7 fishing hamlets. At Rønne and Snogebæk two points of land, which continue as submarine reefs, form sheltered anchorages between them. At Arnager an anchorage is formed behind a reef rising out of the sea on the southeast. At all three places there are nowadays artificial harbour works. That Aakirkeby, as the only one of the ancient towns, lies inland, is naturally explained by the fact that the fertile south land had no town at the coast.

In a treatise²) Anna Kristoffersson has dealt with the geographical conditions in a belt lying across Jylland between two lines from west to east, one north of Aarhus, the other south of Horsens, and has referred to both the rural and the urban settlement.

The treatise is an example of what mistakes can arise when one regards every incidental coincidence as a causation, without knowledge of the diametrically opposite conditions prevailing in neighbouring areas. For instance, the author considers that a scattered rural settlement is the result of unfertile soil, village settlements the result of fertile soil; actually, one would be inclined to believe this if one only looked at conditions in the area investigated; but as a contrast we find the scattered settlement on the coast-land south of the Limfjord coast just on the most fertile soil, and the village settlements mostly on the less good soil. It is not at all a simple matter, and not one that can be settled by a couple of phrases.

Regarding urban settlement, the situation of Aarhus is considered by the said author to have been determined by the old sub-glacial valley, at the mouth of which the town stands; but attention is drawn to the fact that neither roads nor railways follow the valley into the country. The simple explanation is that the valley has a river running through it, the mouth of which was deep enough for a harbour in olden and mediaeval times. It is quite immaterial in this connection whether the valley is sub-glacial or of any other nature.

The cause of the great growth of Aarhus is, it is averred, the town's fertile upland and its situation by the open sea, and not at the head of a fjord. Here it should be interposed that a town at the head of a fjord of course has "upland" on all sides, whereas a town on the open coast has it only on one side. Besides, the fjords are deep, well marked, and nowadays lighted up at night. Coming from the north one gets quicker to Randers than to Aarhus; coming from the south, Vejle and Horsens are nearer; but surely no one believes that a couple of hours' sail up the fjord will increase the freight-rate! The real advantage enjoyed by ports on the open coast is not mentioned, namely, that even in severe winters their waters are hardly ever frozen over, whereas this does happen with the fjord harbours, which in some years are closed for several weeks at a time.

In other parts of the country, too, we find that a town lying far inland and with tributary country on all sides, yet provided with a sufficiently deep harbour, has all the advantages in the competition with its neighbours. On the island of Fyn, for instance, Odense is much larger than the towns that lie by the sea or on short fjords, and the same applies to Nakskov on Lolland and Nykøbing on Falster. On Sjælland, Roskilde is the seaport which is most of all an inland town, and it is also the largest of the Sjælland towns next after København.

It will, however, be of advantage to take a closer view of the development of the most important East Jylland towns in the past two centuries, with their varying possibilities for urban occupations. The following table shows the growing population of the towns from the first census in 1769 till now. The figures are in thousands.

	1769	1801	1840	1860	1880	1911	1930
Aalborg	4.4	5.6	7.2	10.1	14.2	38.4	56.8
Hobro	0.5	0.5	0.8	1.9	2.4	4.8	6.4
Randers	2.9	4.6	6.6	9.7	13.5	25.5	35.0

	1769	1801	1840	1860	1880	1911	1930
Grenaa	0.7	0.8	0.9	1.6	2.9	4.5	6.1
Aarhus	3.8	4.1	7.1	11.0	24.8	64.6	98.7
Horsens	2.7	2.4	4.9	9.0	12.5	23.8	29.4
Vejle	1.0	1.3	2.7	4.9	7.1	18.7	27.0
Fredericia	2.8	3.5	4.4	6.3	8.3	14.2	19.4
Kolding	1.5	1.7	2.6	4.0	7.1	15.6	22.0

As the table shows, there are two towns which always have been among the smallest: Hobro, which stands on the innermost end of Mariager Fjord, and Grenaa, on a navigable river which empties into the open sea. The reason why Hobro in the XVIII Century was among the smallest towns may be found in the fact that the fertility of its hinterland is not first rate, but especially in the circumstance that the mouth of Mariager Fjord is crossed by a bar which was only dredged out to 3 metres in 1879 and to 5.7 metres in 1912. Thus the harbour of Grenaa is not accessible for large vessels. In addition, Hobro now has competitors in three other towns which have grown up on the same fjord. As early as towards the close of the Middle Ages Mariager rose up on the south side of the fjord round a newly established monastery. East of Mariager arose Assens, close to a cement work. And further east is Hadsund at a ferry crossing (later a bridge) over the fjord. In all, the four towns on Mariager Fjord in 1930 had 11600 inhabitants.

As a consequence of its position near the open sea, Grenaa has a much smaller hinterland than the fjord towns. The harbour in the mouth of the river was not deep, but still it was of service to the small vessels of the time, and it scarcely ever became ice-bound in winter. In 1874 a new harbour was completed outside the river mouth. But with its depth of 4,4 metres it is behind the other seaports in East Jylland, and owing to its remote situation Grenaa is precluded from taking any large share in the trade with the small towns that are growing up inland.

Among the other towns Vejle and Kolding were also among the very small ones in earlier times. Both are fjord towns and have a large and fertile upland. The inner end of both these fjords is, however, very shallow. Ships had to anchor 3 km from Vejle and 2 km from Kolding, and the goods had to be carried to and from the towns in barges. In 1827 a harbour was completed close to Vejle with a depth of 3.5 metres, and since the extension in 1926 it has been 6.9 metres deep. In 1843 Kolding built a 2.8 metre deep harbour, which afterwards was extended. The latest works (1910) gave the harbour a depth of 7 metres. This deepening of

the harbours is the cause of both these towns' having grown very rapidly since the beginning of the present century.

Fredericia lies on the open coast and has a very small upland, but an ice-free harbour. As a fortress, however, it had a considerable garrison, which explains its superiority over its neighbours in former times. In 1872 came the steam-ferry connection between Fredericia and Strib, lying just opposite on Fyn. This made Fredericia a junction for the railways and the residence of a large number of railway servants. The presence of the garrison and the many railway men is doubtless the chief reason why Fredericia only slowly fell behind its two neighbours, and was only outstripped by them both in this century.

There remain Aalborg, Randers, Aarhus and Horsens. Of these four, Horsens and Randers lie at the inner end of two fjords, and both enjoy the advantage of having tributary country all round them. The old harbour at Horsens was formed of the mouth of a river. The Gudena, Jylland's largest river, was deep enough for Randers harbour and town to be situated a short distance above the mouth. Aalborg stands by an old ferry crossing (now a bridge) over Limfjord, and the harbour was in the mouth of a river. Thus Aalborg shares with the other two fjord towns the advantage of having upland on all sides, but it had the particular advantage that the fjord runs on and forms a navigable connection with the towns right out in West Jylland, so that Aalborg was able to act as a centre of distribution for goods to those towns¹). The east end of Limfjord is very deep, but the entrance is encumbered with a bar which, prior to dredging, was 3.5 metres deep, which was quite sufficient for the ships of those days. Aarhus stands by the open sea and thus only has a hinterland on one side; but the harbour, which originally was formed of the mouth of a river, was not blocked by ice in hard winters when the fjord harbours froze up. These advantages could not, however, out-balance Aalborg's favourable position, and until 1840 Aalborg was the largest of these towns; in 1801 even Randers was larger than Aarhus.

Like the inland towns, the coast towns from early times have had the object of being the trade and industrial centres of their upland, but they have also had the particular object of being intermediaries between more distant parts at home and abroad and the inland towns where these existed. In this respect Aalborg had the advantage of her maritime communication with the west. After the middle of the XIX Century, when industry started on its tremendous growth, the factories concentrated particularly in the coast towns

on account of their easier access for the importation of coal and raw materials and better chances of disposing of the products, and, whereas the old handicrafts worked mostly for the local upland, many industrial establishments now grew up which endeavoured to expand their sales areas over more distant parts of the country, while some of them also produced with a view to exporting. To the development of the East Jylland coast towns, communication with the large numbers of distributing centres arising in the inner part of Jylland therefore became of essential importance, next after which was communication with other parts of the country, and in this respect the accessibility and depth of the harbours became the vital factor. In 1860 the towns of Aalborg, Randers, Aarhus and Horsens were little different as to size, but then Aarhus decidedly began to take the lead. In 1862 a railway was opened from Aarhus to Randers, and in 1865 the line from Langaa to Holstebro. The towns south of Limfjord had by this railway acquired railway communication with both Aarhus and Randers, but here Aarhus had the advantage of an ice-free and deeper harbour. Originally the depth was 1.9—2.5 metres, but in 1872 a new harbour was completed with a depth of 5.6 metres, in 1890 the depth was increased to 6.3, in 1894 to 7.5, while the harbour that was completed in 1925 is no less than 8.3 metres deep, so that it surpasses all East Jylland towns in this respect, with the exception of that port of refuge, Frederikshavn, which has the same depth. Randers harbour and the entrance to it were first deepened in 1909 to 5.7 m. The next railway to join Aarhus with West Jylland was the line from Skanderborg to Silkeborg, opened in 1871, and afterwards prolonged to Skern. The country along this line was thus brought into communication with the seaports of Aarhus and Horsens, but once again Aarhus had the advantage. At first the harbour at Horsens had only one metre of water, but had already been deepened to 3.8 m in 1857. This work was continued in 1893, when the depth was increased to 5.5 m, in 1898 to 6.0 m and later to 6.9 m.

Next after Aarhus the largest of the East Jylland towns is Aalborg. The rapid growth of this town dates from the establishment of a cement works in 1891, followed later by several others. The cement industry in Aalborg has its natural basis in the rich deposits of chalk and the favourable shipping conditions compared with other places in Denmark where chalk is obtainable, and the cement industry is one of the few in this country that, besides supplying the needs of home consumption, produce large quantities of goods for export. The bar at the entrance to Limfjord had already been

deepened to 5.3 m in 1889, and was deepened still more in 1908 to 7.5 m. Cement is also made in the neighbouring town of Nørre Sundby on the north side of the fjord, so that the two towns comprise a whole complex with 70,500 inhabitants.

As will have been gathered from the foregoing, there has been considerable activity at all the East Jylland towns in the building of deep harbours, and the same may be said of the Islands. With the exception of the west coast of Jylland there is an abundance of places in the country where good harbours can be built and the soft nature of the ground makes deepening relatively easy. That such a large number of towns have gradually acquired up-to-date and deep harbours is mostly due their mutual jealousy and the keen competition between them. It would have been much cheaper if the country had been content with three or four first-class harbours in Jylland and a few on the Islands, and concentrated the traffic on them. Now many towns are plagued with heavy taxes in order to cover the expenditure on harbour works whose usefulness to the country as a whole is very problematical.

It remains to consider the towns on Øresund (The Sound). Øresund is the shortest route from the North Sea into the Baltic, and from very early times has been one of the busiest waterways in Europe; but whereas the other two straits between the Cattegat and the Baltic have depths of more than 17 m everywhere, the depth in the Drogden originally was only 6.9 m and in Flinterenden 7.2 m. In both channels, however, the bed is covered with scattered boulders, so that it was difficult for ships to navigate them with a draught of more than 6 m. During the past few years, however, both channels have been dredged out to a depth of 8 m. The inner part of the port of København has a depth of 7.5 m, whereas the deepest basins in the northern part of the harbour are 10 m; thus the largest ships can only enter the port from the north.

Two towns lie on The Sound, Helsingør (Elsinore) and København. Helsingør is mentioned as a borough in 1231 and was protected by the castle of Flynderborg, which stood just south of the town. Helsingør, however, has not a good position, standing as it does on a corner where there is sea on three parts of the horizon round, so that its hinterland is very small, and trade was likewise anything but large. In the beginning of the XV Century, for instance, it is recorded that the people in Helsingør subsisted mainly on fishing and pig-breeding; the latter was favoured by the large oak forests which surrounded the town. The introduction of the Sound Dues in 1429, however, brought the town new prosperity. It was a charge

collected from all ships passing the strait, and it gave the town a profit on the trade carried on with the vessels which had to call there for the purpose of paying the dues. The Sound Dues were not cancelled until 1857. At the end of the XVI Century Helsingør's population was estimated at about 5000, and in the year 1700 it had fallen to about 3400. At the first census in 1769 the town had 3700 inhabitants, in 1880 it had 9000, in 1931 18,700. Its principal occupation is industry, and the large shipyard which was started there in 1881 has especially helped towards its progress.

København¹) was originally a village and fishing centre. The ancient name of the town, Havn (the port) also indicates trade. At an early date the name in popular speech was altered to Købmanna-havn (the port of the merchants), which still more underlines the importance of the town as a trade centre. København is mentioned for the first time in 1043 as a centre of trade and fishing, but its growth only dates from the year 1167, when Archbishop Absalon built a castle on one of the small islets between Sjælland and Amager, so that the town acquired a defence against hostile attacks. In the early period, when the towns had mainly to exist upon their local surroundings, København had this advantage over Helsingør that its hinterland was larger. Next, København had a deep and safe harbour between Sjælland and some small islands in the fairway between Sjælland and Amager. In the year 1416 there happened an event of great significance to the town, in that the King took possession of it, whereas previously it had lain under the Bishop of Roskilde, and it then became the capital of the country. In 1479 it acquired its university. All these factors combined to make København the largest town in the country and the principal port for its trade with other lands. In 1633 the population was estimated at 25,000, at the census in 1769 it had 80,000 inhabitants, in 1801 it had 101,000, in 1901 454,000, and in 1930 796,500, so that it houses twenty per cent. of the country's total population and is the centre of Denmark's industry and trade as well as of its learning.

In the latter third of the XIX Century and the part of the present century that has so far elapsed a large number of small towns have grown up, some on the coast, most inland, and their situation has for the most part been determined by the railways. Nevertheless, even before the coming of the railways there had already been signs of a great development of trade and handicraft in certain villages. It was the increasing population, and the commencement of industrialization, which produced the need for new centres for trade and industry, and in those days these arose especially in places

where the lower courts held their assizes. There the rural population often had business to transact, there lived the lawyers who wrote contracts, arranged transfers of property and the like, and so it was natural that merchants and craftsmen settled at these places. This is true for instance of Odder, Herning and Holsted in Jylland, but there may also have been other causes. Thus Ruds Vedby has grown up between Kalundborg and Slagelse at the junction between two highways, and Fuglebjerg between Slagelse and Næstved likewise. Of all the villages which first grew up and began to assume the character of a town it may be said that they lay almost midway between the old towns, where the need of them was greatest. Most of these new towns have since obtained railways and have grown in population; some, like Fuglebjerg, have never had a railway and have therefore remained stagnant.

In 1847 the first railway¹) was laid between København and Roskilde, and by 1931 the system had grown to 5293 km of track. Many new towns have arisen at the railway stations, but it was not the railway that created the towns; it was agriculture's development that created the need of both railways and new towns, and, once the railway had come, it was natural that the new settlements gathered round the railway stations where the rural population frequently came to fetch and dispatch goods, and where it also was easiest for the growing industry to get its supplies of raw materials. Here were promising places for traders and craftsmen to set up a business. Still, it was not at all at every station that a new town grew up. The first of all conditions for the commencement of a town is that there is a tributary country for it and therefore a need for it. And so we see that the station-towns that arose first and have grown most, actually lie almost midway between the ancient towns, for instance Brønderslev in North Jylland, Herning, Haslev and Jyderup in Sjælland. Since then new and smaller settlements have appeared in the intervals, but there are many railway stations where the settlements have not grown to more than a few houses.

Even if the railway alone does not create a basis for the formation of new towns, it is of great importance to the productivity of the neighbourhood and, consequently, to the prosperity of the towns. In the meagre, non-calcareous areas in West Jylland the laying down of a railway means cheaper access to marl, which multiplies the productivity of the soil. In all districts the railway to the farmer has meant improved chances of disposing of his produce and cheaper conveyance of implements and feeding stuffs, until the automobile in recent times has made a number of railways super-

fluous. And the prosperity of the rural population is accompanied by that of the towns. What it has meant to an embryonic town to get a railway is best illustrated by the town of Grindsted in West Jylland, on the high road almost midway between Vejle and Varde. In 1906 it appears for the first time in the census as a town with 307 inhabitants. In 1911 it had grown to 460. In 1914 it received a railway connection with Vejle, and by 1916 had grown to 1060 inhabitants. In 1917 and 1919 new lines were added, Grindsted becoming a junction for lines in six directions. In 1921 it had 1724 inhabitants, and had then become adapted to the requirements of its hinterland. Since then the town has grown only slowly and in 1930 had 2051 inhabitants. Brande, on the high road between Vejle and Herning, has gone through a similar development. In 1906 the town had 491 inhabitants, in 1911 it had 658; the railway from Herning to Brande and on to Vejle was opened in 1914, and by 1916 the town had already grown to 1202 inhabitants. In 1917 the railway between Silkeborg, Brande and Bramming was opened, so that Brande became a junction between the two lines, and in 1921 it had grown to 1989 inhabitants, and to 2301 in 1926; since then, however, it has declined a little, and had 2213 inhabitants in 1931. In the last few years, however, the importance of the railway has begun to decrease, as a large part of the local passenger and goods traffic has been taken over by the motor services. A few small local lines have already been closed, and others are awaiting their turn. Hereafter it will once more be the highways that will achieve importance in the siting of any new towns that may arise.

In the foregoing it has been said that many of the growing town-embryos have received a railway and that this has accelerated their expansion; in the case of other towns the jealousy of the older towns was instrumental in getting the railway laid round them, so that the new settlements went elsewhere. An example of this is Fuglebjerg, which, however, is still larger than the three small towns which have formed along the railway between Næstved and Slagelse. Nevertheless, most of the new towns have arisen since the railway was laid. In many cases the railway station was sited close to a village, and there was formed a town of a mixed type, with an urban quarter near the station and a village quarter with some farms at the other end. Still, the small original size of the villages and the moving of the farms from the village out to their fields are gradually giving the urban character the upper hand everywhere. In other places the railway station lies rather further away from the village, in which cases the trader and craftsman have settled

both in the old village and near the station, so that two small urban settlements have arisen, and these grow together only slowly. This has been the case with Nørre Alslev on Falster and Vejen in Jylland, whereas in other instances the two towns are still separated by a short, open stretch, as for instance Haarlev in the east of Sjælland, Jyderup in Northwest Sjælland, Bredebro in Southwest Jylland. The station town generally assumed the name of the village, whereas the original village is designated "Gammel" (old) or "Kirkeby" (church village). The case is different at Holsted in Jylland. It has already been mentioned that, before the time of the railway, an urban settlement had commenced to form in the church village at the junction of two roads. Later, three kilometres further south a new settlement has arisen at the railway station, but it has never equalled the church village in size. For this reason the latter has retained the name of Holsted, whereas the new settlement is called Holsted Stationsby. The opposite has been the case with Ry, south-east of Silkeborg. In the Middle Ages it was an important town, possibly even a borough, but declined later and sank down to the character of an ordinary village, although it still retained two annual markets. When the railway came to the district in 1871, Ry Station was built 4 km from the village, and at the station an urban settlement quickly grew up; it inherited the name of Ry, whereas the church village is called Gammel Ry. In the latter town, however, some fradesmen and craftsmen settled too, so that it has assumed an urban character, but it is stagnant and in recent years has even declined. In 1930 Gammel Ry had 323 inhabitants, whereas Ry Stationsby had 1293.

Tack's investigations into the settlement of Bornholm have already been mentioned. Regarding the new towns he draws attention to the fact that already before the railway came an urban settlement had been built at Øster Marie Kirke, where, after the laying down of the railway, the station town of Godthaab developed. The other two station towns on Bornholm arose after the railway came; but, of Bornholm's 29 railway stations outside of the boroughs, only three of them have attracted urban settlement, viz. where there was a tributary country for it. Tack refers to other four station towns, but as they all have less than 20 houses, they can scarcely be called towns. Small groups of houses like these are to be found all over the country, both along the roads and near the stations. Possibly they may develop into small towns, possibly nothing more will come of them.

The result of this investigation is, then, that the many new towns

have risen up where was need of them. The laying of a railway alone has not been able to create towns, but at the stations, towns have appeared where was a hinterland for them. Something of the same kind applies to harbours, whose importance to the East Jylland towns has already been referred to. Frederikshavn, in Vendsyssel, is also of interest; originally it was called Fladstrand and was a fishing hamlet and crossing-place to Norway, and it also traded. In 1769 it had 587 inhabitants, in 1801 the number had fallen to 463. In 1818 it became a borough, but by 1840 had only grown to 1247. In 1841 a new harbour, 4.5 m deep, was completed, to act as a port of refuge and a harbour for ships waiting for favourable winds to get round Skagen (The Scaw). The great development of the fisheries in recent times, and the introduction of larger fishing vessels, made Frederikshavn the most important fish-port in the country, and very soon industries also began to spring up. Thus the growth of the town was principally due to the building of the harbour, which in 1914 was deepened to 8 m, and by 1930 it had grown to 13,000 inhabitants.

The origin of Esbjerg is solely due to the harbour, which was begun in 1874 but was only completed in 1878. Before the harbour came there were only two farms, where in 1860 30 people lived. In 1874 the railway was finished, and in 1880 the town had 1529 inhabitants. Esbjerg has to serve as an export harbour for agricultural produce to England as the one good harbour on the west coast of Jylland, and it quickly developed into an important fishing harbour and centre of industry. The harbour was originally 4.5 m deep, but it has several times been extended with deep basins, where the maximum depth is 6 m. The population of Esbjerg has grown with great rapidity and in 1930 had reached 32,600.

We see, then, that the building of a harbour may create new towns and promote the growth of those already existing, when there is a need for the harbour for trade, fishing and industry. A sorrowful example of the opposite is Rødby Havn, which the town built at great expense, although the good harbours of Nakskov and Nykøbing can quite well cope with all the traffic from Lolland and Falster. Now Rødby Havn is lying bare of ships and the great outlays on its building have ruined the town.

Finally, a glance at the map will show that the environs of the large towns are places where new small towns arise. This is especially noticeable in the surroundings of Copenhagen, where small towns lie in a dense ring, but on a smaller scale we see it in the case of Aarhus, Aalborg and Odense. This is really a phenomenon

that repeats itself at all the large towns of Europe. Sometimes they are due to factories that are built in the country, where sites are cheaper than in the town, and sometimes they are due to the building of "garden cities", as many people prefer to live under semirural conditions; furthermore, taxes in the rural communes are usually lower than in the towns. Some of these "outer suburbs" will sooner or later merge with the main town. The Danish form of urban settlements, with a large number of small settlements centres, which are decidedly commercio-industrial in character, is a consequence of the mostly scattered rural settlement. We find it again in the other Scandinavian countries and in the United States of America, where the agricultural population also live on isolated farms. In countries with a pronouncedly village form of rural settlement, a greater or smaller part of the populations of the villages will, under modern conditions of culture, be industrial, so that the difference between village and towns will be less conspicuous.

In respect of nature, occupations and settlement the Faroe Islands differ greatly from the rest of Denmark. Nowhere else does the mainland rise to 200 m above sea level, and, with the exception of Bornholm, the hard rock is only visible at very few places. The Faroe Islands, on the other hand, consist of 18 rocky islands of volcanic origin and with steep rocky coasts, which often on the west side rise almost perpendicularly 500 m out of the sea. Compared with the rest of Denmark the summer is very cool, so that grain ripens only rarely. Consequently, farming on the Faroes consists almost exclusively of sheep-rearing. In combination with the wealth of fish in the sea, the many natural anchorages in the fjords and coves running into the land from the ocean form the basis for the other occupation in this archipelago: fishing.¹⁾

There were 4475 inhabitants on the Faroe Islands in 1763. In 1850 the number had risen to 8157, in 1901 to 15,230, and in 1930 to 22,835. Originally, agriculture was the occupation which formed the livelihood of most of the people, but later it had to yield to the fisheries. The following table contains a summary of the development of the principal occupations in percentage of the population:

	Agriculture (Landbrug)	Fishing (Fiskeri)	Industry (Industri)	Trade & Traffic (Handel & Trafik)
1850	65	15	6	0,2
1901	29	40	11	8
1921	14	45	12	12

At the middle of the XIX Century the majority of the Faroese

lived on agriculture. But besides sheep-farming, nearly all the farmers carried on fishing as a secondary occupation, just as most of the fishermen had a little land and a few sheep. There was a single borough, Thorshavn. Of the dwellings of the rural population some lay isolated, others were collected in small agglomerations. Their formation was greatly favoured by the fact that the cultivated area is very small and lies in small patches where there is low and otherwise suitable soil. Of the 1399 sq. kilometres represented by the islands, 1484 hectares were sown with grass in 1924, mostly for hay, 126 ha with potatoes, 16 ha with barley, 7 ha with oats, 10 ha with beet. In all, only a little more than 2 per cent of the total area of the islands is under cultivation. The small patches of arable are thus each divided between several farms, which naturally lie close to one another. Outside the cultivated area lies the uncultivated land, used as pasture for the sheep.

In the latter part of the XIX and the beginning of the XX Century the population of the Faroe Islands increased very greatly, but the farmers, have not shared in this growth. They have declined in number, whereas the other occupations, and among these fishing especially, have increased considerably. Of independent providers (1921) 574 are shown as living on farming, 1688 on fishing, whilst 338 earned a living in both occupations. In the table above the latter are divided between the two groups, half to each. Whilst the number of farmers is decreasing, this is still more the case with those shown with both occupations. Occupations are becoming more and more specialized.¹⁾

In former times fishing was carried on in small open boats which, on returning to harbour, were hauled up on the beach. Open boats are still widely used, and motor-power is employed in many of them; but in addition (1928) there were 180 large motor-boats and 161 large smacks. The use of larger fishing vessels, together with the development of trade and the steamship traffic, has necessitated the building of harbours, of which the Faroe Islands already have 10, as well as a number of small wharves at fishing and trading centres.

Industry has been growing by leaps and bounds. In several places there are boat-builders and repair yards for ships, in addition to which there are establishments for curing fish, margarine works and several other establishments.

This development of occupations has made some of the small agglomerations grow considerably and assume an urban character. Thorshavn has 3200 inhabitants (1930), whilst Klagsvig, Tveraa

and Vaag each have reached more than 1000. Twenty-six other settlements have from 200 to 1000 inhabitants. At these places live a few farmers, but the majority of the people are fishermen, craftsmen and tradesmen.

NOTES

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| 6 | 1 | Henrik Pedersen, <i>De danske Landbrug</i> . København 1928. |
| | 2 | I—VII København 1763—1768. |
| 7 | 1 | Vahl, <i>Landbebyggelsen i Danmark</i> . Svensk Geogr. Årsbok 1930. |
| 8 | 1 | On the growth of a settlement on a single island see Vahl, <i>Landbebyggelsen paa Øen Falster</i> . Geogr. Tidsskr. 1931. |
| 9 | 1 | In the south of Jylland, however, the farms were shifted so that their field were not brought together, but still lie in different places. Only in recent years, since South Jutland was released from German yoke, has a more sensible shifting been begun here too. |
| | 2 | Vahl, <i>Landbebyggelsen i Danmark</i> . Svensk Geogr. Årsbok 1930. |
| | | Vahl, <i>Landbebyggelsen paa Falster</i> . Geogr. Tidsskr. 1931. |
| 10 | 1 | Folkemængden i Februar 1911 i Kongeriget Danmark. Statistiske Medd. København 1911. Contains the population for all communes at all censuses back to 1769. |
| | 2 | The most important of these descriptions are: Pontopidan, <i>Den danske Atlas I—VII</i> , København 1763—68. |
| | | A. Niemann, <i>Handbuch der Schleswig-Holsteinischen Landeskunde</i> . Hamburg 1799. |
| | | A. C. Gudme, <i>Die Bevölkerung der beiden Herzogthümer Schleswig und Holstein</i> . Altona 1819. |
| | | J. von Schröder, <i>Topographie des Herzogthums Schleswig</i> . Schleswig 1837. |
| | | Chr. Wollesen, <i>Hertugdømmet Slesvigs Topografi</i> . Oldenburg 1854. |
| | | Th. Gliemann, <i>Den danske Stats Beskrivelse</i> . København 1862. |
| | | A. Baggesen, <i>Den danske Stat</i> . 2. Udg. København 1862. |
| | | I. P. Trap, <i>Statistisk-topografisk Beskrivelse af Kongeriget Danmark I—V</i> . København 1856—59, last ed. I—X. København 1920—32. |
| | | I. P. Trap, <i>Statistisk-topografisk Beskrivelse af Hertugdømmet Slesvig I—II</i> . København 1863—64. |
| 11 | 1 | The boundaries between the geographical provinces in Jylland are marked on the map with hatched lines. |
| 15 | 1 | Regarding the mediaeval town, and especially the significance of the mediaeval road-system to their situation, cf. Hugo Mathiessen's excellent book: <i>Middelalderlige Byer</i> . København 1927. |

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| 18 | 1 | Bornholms Besiedlung. Rostock 1929. |
| | 2 | Regionalgeografiska Studier i Mellersta Jylland. Svensk geografisk Årsbok 1931. |
| 21 | 1 | At certain times in the Middle Ages the neck of land which on the west separates Limfjord from the North Sea has been breached, so that Aalborg has had a waterway in that direction. Later on this channel silted up. In 1825 the sea again broke through, but the outlet again closed, a new outlet forming at the same time a little more to the south. This outlet has since been deepened to 3.8 m and thus has acquired importance to the towns on the western part of the Limfjord, whereas only small ships from Aalborg can pass the shallow stretch at Løgstør. On the history of the port see O. Smith, Aalborg. København 1931. |
| 24 | 1 | Reumert, J.: The commercial-geographic importance of the situation of Copenhagen. Supplement to „Geografisk Tidsskrift“ 1929. |
| 25 | 1 | On the map the railways are shown with double lines. It is striking that the great majority of the small urban settlements lie along the railways, and most of them have only arisen or started to grow after the laying of the railway. |
| 30 | 1 | In recent years the fisheries have grown enormously and the local grounds are no longer sufficient. The Faeroese now pursue fishing on distant banks as for instance off Iceland and Greenland. |

RESUMÉ

Af danske Byer vides 6 at have eksisteret før Aar 900. I den store Opgangstid i det 13. og 14. Aarhundrede opstod en Række ny Købstæder, og i Aaret 1300 var deres Antal steget til 50. Omkring 1400 kom efter gode Tider med Dannelsen af nye Bysamfund, saaledes at Byernes Antal Aar 1500 var steget til 67. Herefter steg Antallet langsomt, og 1860 fandtes i Danmark 82 Byer (og Handelspladser). Omkring 1850 begyndte en stærk Tilvækst af Befolkningen, og samtidig betingede de ny Agerbrugsmetoder og de tekniske Fremskridt i Industrien en Forandring i alle Erhverv, hvorved der skabtes Betingelser for Opstaaen af nye Byer i Mellemrummene mellem de gamle. Naar imidlertid Bykommunernes Antal i 1930 kun er steget til 87, giver dette intet Billede af Byernes virkelige Vækst i Antal. Begreberne By og Bykommune har aldrig dækket hinanden. Før Byerne fik deres Privilegier, har de næsten altid eksisteret nogen Tid som smaa Centre for Handel og Haandværk. I den sidste Menneskealder er næsten alle Byerne vokset ud over de kommunale Grænser. Af og til, naar Forstæderne indlemmes i Byen, faar Kommunen en pludselig Tilvækst, uden at Byen i geografisk Forstand er blevet for-

øget. Bopladsens Størrelse er heller ikke det, der sætter Skellet mellem Landsby og By. Paa Sardinien, Sicilien og andre Steder findes Landsbyer med 5000—10,000 Indbyggere, næsten alle Landmænd, medens der kan findes Købstæder med mindre Indbyggertal, men Centre for Handel og Industri. Dette er det afgørende for Forskellen mellem de to Bebyggelsesformer. Ved Byer forstaar vi da i det følgende Bebyggelser, hvis Indbyggere væsentlig lever af Handel og Industri, i Modsætning til Landsbyerne, hvor Landbrug er Hovederhverv.

Tabellen Side 7 viser Bybefolkningens Vækst i Forhold til Landbefolkningen siden den første Folketælling, 1769. Vi ser af disse Tabeller, at det dyrkede Areal og Landbefolkningens Størrelse tiltog meget stærkt indtil Tiden omkring 1860, derefter var Tilvæksten kun langsommere. Bybefolkningen tog ogsaa til, og Landbefolkningens Vækst skabte Opland for flere Byer, men i Forhold til hele Landets Befolkning var Bybefolkningen kun vokset fra 20 pCt. til 24 pCt. Medens Landbefolkningen efter 1860 kun er vokset meget lidt, paa Øerne endog gaaet tilbage, er Bybefolkningen derimod taget stærkt til og udgør 1930 59 pCt. af Landets Indbyggere. Aarsagen til Bybefolkningens uhyre Vækst er den Omdannelse, der er sket i alle Erhverv ved Maskinkraftens Indførelse. 1784 kom den første Dampmaskine til Danmark. I Nutiden bruger alene Landbruget Tusinder af elektriske Motorer, Eksplosionsmotorer og Dampmaskiner, foruden hvad der bruges i Landets 90,000 Fabriker. Hertil kommer Jernbanernes Lokomotiver og Motorvogne og endelig Automobilet og Motorcykler. Industrialiseringen er trængt ind overalt, ogsaa i Landbruget, og mangfoldige Ting, der før gjordes med Haanden, udføres nu paa Maskine, medens mange Arbejder, der forhen udførtes i Landmandshjemmene nu udføres udenfor disse paa Værksteder og Fabrikker.

Hele denne Omlægning af Erhvervskulturen har skabt en Mængde ny Erhverv til Fremstilling, Salg og Reparation af ny Brugsgenstande, og det mægtigt stigende Behov for ny industrielle og Handelsvirksomheder har dannet Betingelser for Byernes stærke Vækst og for Opstaaen af de talrige ny bymæssige Bebyggelser. Det er klart, at Byerne kom til at ligge, hvor Trafikforholdene var gunstige, og hvor der var Opland for dem. Af de 50 Byer, som er ældre end Aar 1300, laa de 33 ved Kysten, og af disse de 14 ved den inderste Ende af Fjorden, hvor der var Opland til alle Sider. Nogle af Byerne ved det aabne Hav laa ved Mundingen af Aaer, som kunde tjene til Havne, 7 Byer anlagdes højere oppe ved Aaer, som var sejlbare for Middelalderens Smaaskibe. I det 13. og 14. Aarhundrede opstod 15 ny Kystbyer og 2 Indlandsbyer, fra 1500 til 1860 8 Kystbyer og 7 Indlandsbyer. I 1860 var der allerede foruden Købstæderne en Del mindre købstadsagtige Bebyggelser, af hvilke enkelte havde 1000 Indbyggere, og altsaa ikke i Folketal stod tilbage for de mindre Købstæder. En Del af disse var Havnepladser, men ogsaa i Indlandet var en Del Nmaabyer i Fremvækst. I de følgende Aar opstod flere og flere byagtige Bebyggelser, 1901 fandtes der (Sønderjylland ikke medregnet) 110 med 95,000 Indbyggere, 1931 var deres Antal steget til 539 med 379,000 Indbyggere.

Som omtalt er en Del af de ny Byer ældre end Jernbanerne og opstaaet i Mellemrummene mellem de ældre Byer, fordi der var Trang til dem, men efter Anlægget af Jernbanerne, var Jernbanestationerne den gunstigste Plads for Anlæg af de ny Bebyggelser. Der var dog mange

Stationer, hvor Bebyggelsen ikke blev til mere end nogle faa Huse. Selv om Jernbanerne har stor Betydning for en Egn's Produktionsevne og derved for Byernes Trivsel, kan den alene dog ikke skabe ny Byer, hvor der ikke er Opland for dem. Foruden Jernbanerne har ogsaa Havneanlæg været virksomme ved Dannelsen af ny Byer.

Alle disse ny Byer afviger stærkt fra Landsbyerne i Udseende. Landsbyerne gaar tilbage derved, at Gaardene efterhaanden flyttes ud, eller ogsaa omdannes de til Byer, idet den agerbrugende Befolkning efterhaanden overfløjes og erstattes af Handlende og Haandværkere. I de rene Landsbyer bygges sjældent nyt, Husene er gamle af Bindingsværk og med Straatag. I de ny Byer er alt nyt. Husene er af Grundmur og med Tegltag, ligesom de nyopførte, spredt liggende Gaarde og Huse.

Den danske Form for Bebyggelse med en Mængde smaa Bebyggelsescentre, beboede af Handlende og Haandværkere, er en Følge af den overvejende spredte Landbebyggelse. Den genfindes i det øvrige Skandinavien og i de forenede Stater, hvor den agerdyrkende Befolkning ligeledes bor paa enkeltliggende Gaarde.

Paa Færøerne boede Befolkningen oprindelig dels paa enkelte Gaarde, dels i større og mindre Landsbyer. I de sidste Menneskealdre er imidlertid Landbruget stadig gaaet tilbage, medens Fiskeriet er blevet Befolkningens Hovederhverv, samtidig med at Erhvervene her som andre Steder er blevet mere og mere industrialiserede. Landsbyerne har derved mere og mere antaget Karakter af Fisker- og Havnepladser.

Tabellen Side 26 viser det Antal Mennesker paa Færøerne, som levede af de forskellige Erhverv 1850, 1901 og 1921. Tallene angiver Procent af hele Befolkningen.

The Urban Settlements
of Denmark.

- Inhabitants:
- less than 500 .
 - 500-1000 .
 - 1000-2000 .
 - 2000-5000 .
 - 5000-10000 .
 - 10000-20000 .
 - 20000-50000 .
 - 50000-100000 .
 - more than 500000 .

