

Britain for its cutlery, though a great deal of attention is devoted to this department by all the chief Continental nations. Austria, for example, produces yearly about 600,000 scythes, more than 1,000,000 sickles, and about 200,000 straw knives, and of the first it exports a large number, especially to Russia. Vienna has a great manufactory of fire-proof safes, and ranks with Steyr, Letten, Ferlach, Weipert, and Prague, in the production of military weapons. Prussian pens and needles are well known throughout the continent; and still better her cannon and needle-guns. In the manufacture of copper, brass, and lead, the first place belongs to France and Great Britain; and in that of zinc to Belgium, Great Britain, and Prussia. In bronze France is distinguished both by the quantity and variety of her productions. Great Britain, France, Austria, and Germany are the only countries in which scientific instruments are made in large numbers, and with excellent finish; in the manufacture of musical instruments the same countries stand high, but have a greater number of competitors. In watchmaking Britain, France, and Switzerland carry off the palm; the Belgian clocks are accounted excellent; and the products of the Black Forest in the same department are too well known to need even a passing mention. The ruder branches of the ceramic art are almost universally cultivated, but only a few countries furnish a large export of the finer wares. Porcelain is largely manufactured in Bohemia, at the royal potteries of Meissen and Berlin in Prussia, at Dresden in Saxony, at Limoges in France, at Copenhagen in Denmark, at the imperial potteries of St Petersburg, and at Stoke-upon-Trent and Worcester in England. Freiburg in Breisgau supplies the markets of a large part of the world with porcelain button knobs and beads; and the Thüringerwald and Sicily are noted for their little porcelain figures and ornaments. The manufacture of glass is also of the widest distribution. Austria-Hungary numbers about 300 glass-works, Germany rather more, Britain upwards of 220, France 175, Italy 70, and so on. Bohemia gives its name to a well-known class of goods; France takes the first place for its beads and glass-jewellery; and Belgium is perhaps even better known for supplying the common wants of the glazier. The polishing of precious stones is carried to greatest perfection in France; but Vienna, St Petersburg, London, Dublin, Berlin, and several other great cities also rank high. Amsterdam has long been the principal seat of the diamond trade. Bohemia and Baden find a valuable industry in the working up of their garnets and rock crystals; and Oberstein in Oldenburg is remarkable as the source of nearly all those fancy articles in agate which, under various names—Scotch pebbles and the like—are sold throughout Europe. Rome is the principal seat of the production of cameos and mosaics, and marble-cutting has attained its greatest development in Tuscany. It is impossible to enter into detail on the various industries which use wood as their raw material; almost every country and district has its share, and they differ not so much in the nature as the finish of the articles which they produce. In the produce of the turning-lathe Austria, Germany, England, and France rank highest, and they also keep their position in the department of wood-carving. Italy is first in straw-plaiting, which is of prime importance in Tuscany; and next come Switzerland and Belgium. Leather-making and its associated industries are of universal distribution; the brush-manufacture has reached its fullest development in England; and hair is most successfully turned to artistic account in France.

In the great department of spinning and weaving Britain stands *facile princeps*. Of the cotton manufacture, especially, it has long been the greatest centre, not only in Europe but in the world; but within the present generation the

industry has been rapidly developing in Germany, France, Russia, and several other Continental countries. The relative position of each is indicated by the following table of the number of spindles employed in the trade:—

England.....	39,500,000	Spain.....	1,400,000
France.....	5,200,000	Belgium.....	650,000
Germany.....	5,100,000	Italy.....	500,000
Switzerland.....	2,060,000	Scandinavian states.....	300,000
Russia.....	2,000,000	Netherlands.....	230,000
Austria.....	1,600,000		

In wool-spinning and cloth-weaving the chief countries are again Britain, Germany, France, and Belgium, and to these succeed Austria, Italy, Russia, Sweden, and Spain. As minor or domestic industries both branches have a very wide distribution. The greatest amount of silk is spun in Italy and France, and the latter country holds the first place in silk-weaving, though she has powerful competitors in Germany, Britain, and Switzerland. Great Britain again outstrips all her rivals in the general manufactures of flax, hemp, and jute; in linen thread she is excelled by France, and in the extent of its rope works by Russia. Linen weaving is widely distributed as a domestic industry, and is rapidly developing as a factory industry in Germany, Belgium, and the Netherlands. The state of the paper trade may be gathered from the following statistics for 1874:—

	Paper works.	Produce Cwt.
*Germany.....	423	3,535,000
*Britain.....	274	3,535,000
*France.....	404	2,907,000
*Austria.....	130	1,414,000
*Italy.....	67	943,000
Russia.....	66	658,000
*Belgium.....	19	442,000
*Norway and Sweden.....	20	265,000
*Spain.....	17	255,000
*Holland.....	10	141,000
Portugal.....	19	117,000
Denmark.....	5	70,000
Switzerland.....	30	19,000

The countries marked by an asterisk export part of their production. In paper-staining France ranks first, and Britain in the making of papier-maché. Sugar-refining is of most importance in Britain, France, the Netherlands, Belgium, and Germany; and the more modern manufacture of chocolate flourishes best in France and Spain. Britain brews a greater quantity of beer than any other country, and Germany, Austria, and Belgium come next in order, Germany and France are the greatest manufacturers of brandy, and Holland has almost given its name to one of the principal liquors; but this whole department of industry is of the very widest distribution. Among the more peculiar and local branches may be mentioned the Kirsch-wasser and Eau de Cologne of Germany, the plum brandy of Roumania, Serbia, and Bosnia, the aniseed liqueur of Albacete in Spain, and the famous productions of the monastic establishment at Chartreuse. Vinegar is most largely and successfully manufactured in France. In the preparation of tobacco, Germany stands first; and the Netherlands are indebted for a large trade in this department to their East Indian colonies. The soap manufacture has reached its highest development in France and Britain; while the greatest exporters of tallow are Russia, Roumania, and Serbia. Sweden is especially famous for its matches, which are sent to all parts of the world. The preparation of ultramarine is of great importance in Germany; and Austria has unrivalled manufactures of white lead in Carinthia.

Such are a few of the main features of that wonderful industrial activity which is daily acquiring a more varied aspect and extending over a wider area. The younger

nations are developing their resources, and turning their attention to industries that they had long neglected; and in the older nations almost every year sees an addition to the bewildering multiplicity of human occupations.

While most of the several countries, as appears by the accompanying table, are on the whole fairly supplied with internal railway communication, and a few have developed a nearly perfect system of primary and secondary lines, much has still to be done before the general international system will be approximately complete. Of natural obstacles the mountains are the most formidable, and at the head of the mountains in this respect, as in others, stand the Alps. Between all the countries of northern and central Europe regular traffic is easily maintained: the north of France, Belgium, Holland, and the north of Germany are practically one as far as the great network of railways is concerned. Between France and southern Germany the connexion is not so close, though the Franco-German frontier is crossed by four or five lines, and the Swiss system, which is well developed, affords several additional routes. Between Germany and Austria there are almost equal facilities, more especially along the borders of Bohemia and Saxony. Eastwards and southwards in Poland, Russia, and Austria, the meshes of the net grow very wide, but the main threads are knotted together and satisfy the necessities of international communication. Such is the state of the case in the countries of central Europe; but if the traveller wishes to proceed by rail to any of the three southern peninsulas, he finds himself in a very different position. From France he can enter Spain only by two routes, one of which takes him round the western end of the Pyrenees, and the other, opened in 1878, round the eastern end; at all other parts of the frontier the mountains bid defiance to the engineer. From Spain, where he will find the internal system still very incomplete, the traveller may cross the Portuguese frontier and proceed by rail direct to Lisbon, but if he wish to reach Oporto without visiting Lisbon he must resign himself to the old-fashioned road. His case is better if he turn in the direction of Italy: from France he may glide into Italy through the tunnel of the Col de Frejus, or as it is popularly called Mont Cenis, which was completed in 1870 and opened in 1871; or from Bavaria he may traverse the other extremity of the Alps by the Brennerbahn, and reach the Lombard plain by the valley of the Adige. By all other routes he must in the meantime accept the service of the diligence; but workmen have been busy since 1871 under the massif of St Gotthard, and within a few years he may be able to pass right through from Zurich to Bellinzona and Milan. It has also been proposed to effect a communication between the railways of north Italy and the line of the Rhone valley by means of a tunnel through the Simplon; and one German engineer at least, Sturm, has a scheme for boring under Mont Blanc itself. Once in Italy, the traveller can proceed as far as Otranto at the eastern end of the peninsula, or to Reggio at the western. If, instead of Italy, it be his desire to visit the countries to the south of the Danube, the railway altogether fails him. By Austrian lines he may reach Sessek on the Save, Essek on the Drave, or Bazias on the Danube; or if he go round by Galicia, he may proceed south through Bulgaria, cross the Danube at Rustchuk, and continue as far as Varna on the Black Sea. But at no point is there any connexion with the Turkish system, or rather fragmentary beginnings of a system: the lines from Constantinople and Aghatch which meet to the south of Adrianople, stop short in the valley of the Maritza, and the line from Saloniki proceeds only as far north as Uskub. In Greece there is but one little line, from the Piræus to Athens. By the Russian railways the traveller can journey direct

south to Odessa, Nicolaieff, or Sebastopol on the Black Sea, to Taganrog or Rostoff on the Sea of Azoff, or even to Vladikavkas in the Caucasus. Eastward he may advance as far as Tzaritsin or Saratoff on the Volga, and to Orenburg at the end of the Ural range. North-eastwards his limits are Nizhni-Novgorod and Vologda. According to the plans of the Russian Government, a few years will see the construction of lines of communication with eastern Siberia on the one hand and the new provinces of central Asia on the other. It is sufficient to mention the projected tunnel between France and England. The following table gives the length of the railway lines in the several countries for 1860 and 1875:—

	1860.		1875.	
	Kilometres.	Miles.	Kilometres.	Miles.
Great Britain ..	16,791	10,433	26,870	16,696
Belgium.....	1,729	1,074	3,517	2,185
Germany.....	11,253	6,997	27,980	17,386
France.....	9,316	5,790	21,587	13,413
Austria.....	5,402	3,436	17,368	10,792
Russia.....	1,384	869	18,488	11,488
Italy.....	1,705	1,055	7,704	4,787
Spain.....	1,916	1,190	5,796	3,601
Sweden.....	467	290	4,138	2,571
Netherlands.....	259	160	1,895	1,177
Switzerland.....	936	598	2,066	1,283
Turkey.....	...	...	1,537	955
Roumania.....	...	...	1,233	766
Denmark.....	109	677	1,260	782
Portugal.....	131	814	1,033	641
Norway.....	68	42.2	555	344
Greece.....	...	...	12	7.5

Since 1875 the railway contractors have not been idle. At the end of 1876 there were 16,872 miles open for traffic in Great Britain, and upwards of 5000 miles in course of construction. In the beginning of 1877 the Belgian lines amounted to 2228 miles or 3580 kilometres, and the French lines to 14,078 miles or 22,671 kilometres.

The telegraphic system, as appears by the accompanying table, is well developed throughout the continent, more especially in Switzerland, Great Britain, Belgium, Bavaria, and Württemberg. As far as it is international, it is largely indebted to British enterprise and capital, and many of the most important companies have their centres in London. All the maritime countries have submarine cables. Norway has no fewer than 193, with a total length of 1233 nautical miles; Denmark 29, with a length of 101 miles; and Holland 18, with a length of 36. The three Russian cables of the Baltic have a total length of 62 miles, and unite Cronstadt with the capital, and the islands Osel and Aland with the continent. Of the 12 Italian cables the most important, about 118 miles long, communicates with Sardinia; and of the 6 Spanish three are devoted to Ivica, Minorca, and Majorca. Most of the 26 French cables are short, with the exception of that which stretches across the Mediterranean from Marseilles to Algiers. Great Britain has a large number communicating with various parts of the continent, as well as with Ireland, the Channel Islands, Orkney and Shetland, the Hebrides, &c. Of prime importance to the continent at large are the great transatlantic cables, four of which have their European termini in the west of Ireland, while a fifth, the longest yet laid down, stretches from Brest in Brittany 2585 miles to St Pierre near Newfoundland, and a sixth from Lisbon to Pernambuco in Brazil. Two others are projected—one from Portugal, and another from the Shetland Islands round by the Faroes, Iceland, Greenland, &c. Direct communication is maintained between England and India by the lines of the Eastern Telegraph Company, and other lines continue the system as far as Australia on the one hand and Japan on the other.

Telegraphic Communication in Europe in 1875.

	JINES.		WIRES.		Stations.	No. of instruments.	Telegrams.
	Kilometres.	English miles.	Kilometres.	English miles.			
Great Britain and Ireland.....	38,858.0	24,145	176,352.7	109,515	5607	11,988	21,062,978
France.....	51,614.9	32,072	185,944.3	84,478	4266	5,069	10,981,863
Russia (1874), including Asiatic lines.....	62,350.0	38,719	120,522.0	74,844	1615	1,754	3,777,641
German Empire.....	45,779.5	28,446	157,912.4	98,128	5550	6,429	13,896,925
Austria and Hungary.....	36,262.4	22,532	108,147.6	67,200	3099	2,956	6,803,549
Italy.....	20,756.0	12,897	62,224.0	38,664	1953	3,200	5,571,846
Turkey.....	25,232.0	15,678	48,650.0	30,230	444	1,240	1,210,756
Spain.....	11,754.0	7,308	26,728.0	16,608	222	385	1,283,907
Belgium.....	4,959.0	3,081	21,094.0	13,107	536	1,088	4,117,437
Sweden.....	7,959.4	4,945	19,377.4	12,040	521	475	1,387,717
Switzerland.....	6,334.0	3,925	15,442.6	9,595	1002	1,849	2,896,925
Norway.....	7,175.0	4,458	12,405.0	7,708	172	297	781,482
Netherlands.....	3,440.4	2,137	12,332.0	7,662	330	379	2,374,926
Denmark.....	2,760.0	1,727	7,653.0	4,755	203	233	912,310
Portugal.....	3,533.0	2,195	4,656.4	2,898	147	225	461,971
Roumania.....	3,820.6	2,373	6,842.4	4,251	167	212	977,269
Greece.....	2,565.9	1,593	3,165.0	1,966	60	120	249,678
Servia (1874).....	1,461.3	907	2,145.0	1,332	37	52	165,256
Luxembourg.....	290.0	180	445.0	276	38	26	62,809

Within recent years fresh attention has been directed to the older canal-system, which was by many regarded as having had its day. Not only are the canals which had fallen into partial decay being in many cases restored, but new canals are either constructed or planned. Without entering into the details of the separate national systems, some idea may be formed of the extent of this means of communication by the following facts. We may pass from the Rhone to the Loire, and from either river to the Seine; the Seine in its turn is connected with the Meuse and the Rhine; the Rhine communicates with the Danube in the south, and with the Ems and the Weser in the north; the Weser is already in communication with the lower part of the Elbe, and it is proposed to construct a line of canals to unite these rivers further inland; from the Elbe we pass by the Spree system to the Oder; the Oder, by means of its tributary the Wartha, gives access to the Vistula; and the Bug, a tributary of the Vistula, brings us to the great Russian network of rivers and canals by which we can journey from the Baltic to the Black Sea or the Caspian, or from either of these to the White Sea in the north. Thus it appears in brief that water highways exist between all the great river systems and all the principal seas. It was only in the summer of 1876 that the Dutch opened a new canal between Amsterdam and the sea; in 1877 the senate of Finland voted 200,000 rubles for a canal between the Baltic and the White Sea; and very extensive additions are proposed to the German system. A scheme has even been started by an American engineer, H. C. Spalding, for connecting the Black Sea and the Caspian, and thus increasing the area of the latter at the expense of the neighbouring steppes; and a less quixotic proposal contemplates a canal from the Don to the Volga across the ridge of nearest approximation. In France there is already a line of water-way between the Bay of Biscay and the Mediterranean, but it is only available for inland traffic; and the proposal is now entertained of constructing nothing less than a ship canal. An earlier and more extravagant project to make such a canal through Spain from Bilbao to the valley of the Ebro has naturally remained a dead letter.

Since the 18th century, there has been great advance in the general educational condition of Europe. That it is the duty of every state, if not to provide instruction for the rising generation of citizens, at least to see that it is provided, is a principle more and more thoroughly recognized and acted upon; and the obscurantist doctrine that the lower classes become more revolutionary and dangerous by becoming more intelligent and better in-

formed is less frequently employed as an open argument. Even in Turkey a law was at least passed in 1869 requiring the establishment of secondary schools and gymnasiums in the principal towns; and education is one of the matters dealt with in the proposed reforms of 1878. How slow the movement has been even in the more civilized countries is strikingly shown by the fact that England has not yet realized the far-sighted schemes suggested more than a thousand years ago by her wise West Saxon king, Alfred. The educational reformers of almost every country have had a hard battle to fight in their endeavours after a satisfactory organization, and compromise and half-measures have frequently been the order of the day. From time immemorial the clergy have had, and they certainly for a long time had a right to have, a predominant share in the control of all educational matters throughout Europe; the sacred books of the various forms of religion or doctrinal compendiums of individual sects have been the most familiar manuals of primary instruction; and even when the teacher has been a layman, ecclesiastical supervision more or less efficient has been added. The present tendency, even in countries like Italy on the one hand, and Sweden on the other, where there is little difference of creed among the population, is decidedly in favour of the teachers being laymen and the instruction secular. That the clergy do not readily acquiesce in the changes that diminish their influence is excusable; but at the same time their demands have occasioned the most lamentable obstruction to educational progress.

In order that primary education may be rendered universal, it has been found necessary to make it compulsory; and this has been done either directly or indirectly in all the great countries of Europe. It is now easier to name those that have not adopted direct compulsory measures than those that have adopted them. The former list includes France, Russia (with the exception of the Baltic provinces), Finland, Belgium, Turkey, Servia, and Montenegro. In England, the gradual extension of the school-board system practically involves the extension of compulsory education, though the question is left in the hands of local authorities instead of being decided once for all by the central legislation. Owing to the differences existent between the organizations of the several countries, it is impossible to institute an exact comparison; but the following table, revised from Brachelli's, presents an approximate survey:—

¹ The numbers for Great Britain represent those schools only which are under Government inspection, and do not include the statistics for Ireland.

	Year.	Schools of popular instruction.	Scholars.	Scholars to every 1000 inhabitants.
Switzerland.....	1872	5,088	413,789	155
German empire.....	1872	56,000	6,000,000	152
Luxembourg.....	1874	644	28,437	142
Norway.....	1873	6,502	243,969	138
Sweden.....	1875	8,123	606,876	138
Netherlands.....	1873	3,790	500,059	136
Denmark.....	1867	3,064	226,679	135
France.....	1872	70,179	4,720,000	131
Belgium.....	1872	5,678	618,937	123
Austria.....	1875	15,166	2,134,683	100
Hungary.....	1872	16,300	1,464,775	94
Great Britain.....	1876	17,787	2,340,277	88
Spain.....	1873	27,760	1,381,972	82
Italy.....	1873	42,920	1,827,381	70
Greece.....	1874	1,227	81,449	50
Finland.....	1873	1,382	76,477	42
Portugal.....	1870	3,500	140,000	32
Roumania.....	1873	2,221	82,145	17
Servia.....	1874	517	23,278	17
Russia.....	1873	23,183	1,009,037	14

The countries of southern and eastern Europe are all very low in the scale; but several of them, and notably Italy, Greece, and Russia, are making rapid advances. The last of these has great difficulties to contend against in the extent of its territory and the sparseness of its population; but such a fact as the following speaks for itself: "In 1866," says M. Hippeau,¹ "in every 100 conscripts only one could read and write; in 1870 this number had risen to 11 in the 100." Several of the local boards have recommended the adoption of obligatory attendance at school. Much less hopeful is the condition of Spain, where at the last census (1860) 72 per cent. of the population could neither read nor write. Yet even there the movement is in the right direction. A fine contrast is afforded by the Scandinavian countries, where the peasantry have long been accustomed to relieve the tedium of their winter nights by reading the sagas of their native land, and by some of the Swiss cantons, where there are only 4 per cent. of the population totally uneducated. In France, according to the official statistics of 1875, there are 30 persons in every 100 unable to read or write; and in Belgium, according to the results of the census of 1866, 42 in every 100 above seven years of age are in the same condition. The high position of the German empire is mainly due to Prussia, which may be regarded as the forerunner of educational progress in Europe. Among the other states the differences are very considerable. Brunswick, Anhalt, Oldenburg, Saxony, and Thuringia rise above the average of 152 scholars to the 1000 inhabitants; Mecklenburg and Bavaria sink as low as 121 and 126 respectively. A high position is held by the free city of Bremen, where the public expenditure for education has risen from 0.60 of a mark in 1847-51 to 8.45 marks in 1872-76 for each head of the population. In Austria the contrasts between the provinces are enormous,—every thousand inhabitants in Silesia, Bohemia, Moravia, or Tyrol sending from 130 to 136 children to school; while in Galicia, Dalmatia, and Bukovina the numbers are only 29, 23, and 19.

If statistics are unsatisfactory in regard to the condition of primary schools, they are still more unsatisfactory as regards the institutions for the training and education of the primary teacher. Till some approximation be made between the systems of the several countries, it conveys almost no information to say that in Prussia there are 107 and in Russia 45, in Switzerland 32 and in Portugal 6. And still more impossible is it to institute a comparison with respect to the secondary schools and the various insti-

¹ M. Hippeau's volumes, *L'instruction publique en Italie*, 1875, *L'instruction publique en Russie*, 1878, &c., afford a convenient popular account of the education of most of the principal countries.

tutions devoted to instruction in special departments of art or science. In all the more advanced countries they are increasing in number and in the specialization of their work.²

In Germany there are twenty-one universities, including the academy of Münster, with about 1983 professors and teachers, and a total attendance of 19,000 students. The best known are Berlin, Leipsic, Göttingen, Halle, Tübingen, Bonn, Heidelberg, Jena, and Erlangen. In Austria-Hungary there are ten, with 1018 professors, and upwards of 12,000 students. Italy numbers one more than Germany, with 1093 professors, and not far from 10,000 students. Russia has nine, including the Finland university of Helsingfors, and the practically German university of Dorpat. The total teaching staff numbers upwards of 600, and the students more than 7000. The four Scandinavian universities of Upsala, Lund, Christiania, and Copenhagen, count 280 professors and 2700 students. There are four in Holland, inclusive of the Amsterdam Academy, and four in Belgium, the number of professors being respectively 149 and 229, and that of students 2056 and 2272. Since the addition of Geneva, Switzerland has the like number, with a teaching staff of 250 to 300, and an attendance of upwards of 1200. Spain boasts of ten universities with 400 professors, and, if her statistics are correct, has more than 15,000 students. Portugal, in its one famous institute at Coimbra, has about 1000 students, many of whom are from Brazil and the colonies. A university was founded at Athens in 1837, another at Belgrade in 1838, and a third and fourth at Bucharest and Jassy in 1864. The professors number in all 128, and the students upwards of 2000. In France the organization of the higher education is peculiar: Bordeaux and Lyons are the only two cities besides Paris which have all the five faculties of theology, law, medicine, science, and literature, and it is only in Paris that they are incorporated into a "university." In sixteen other towns there exist one or more of the separate faculties. The professors in France exceed 420, with 14,500 students. The Catholics have free "universities" at Angers, Lyons, and Paris. Making allowance for defective statistics, it may be said that continental Europe has about 7000 persons engaged in university teaching, and that the students number from 88,000 to 90,000. In Britain the universities differ greatly from each other in constitution and arrangement. Oxford and Cambridge have together about 80 professors and over 5000 undergraduates. London university, which is merely an examining board, had 17,312 candidates for matriculation in 1877. Durham numbers 5 professors and 109 students. In the four Scotch universities there are 102 professors and about 5000 students. The Queen's university, Ireland, has 54 professors and 745 students, and the Dublin university 39 professors and 1200 students.

Europe, and especially northern and Germanic Europe, has long been distinguished from eastern and southern countries by the greater social and educational equality existing between the sexes; but in this, as in so much else, there is still abundant room for improvement. A powerful movement has set in towards a fuller recognition of the rights of woman; and the right to instruction is recognized as one of the most fundamental. A greater assimilation is in most of the more civilized countries being effected between the education given to boys and girls; and a powerful party, with powerful arguments, support the thesis that equal opportunities should also be afforded to young men and to young women. In Prussia the general movement is represented by the Victoria or Lette Union at Berlin, and the Otto Petter Union at Leipsic, both of which have

² See an interesting Report on Weaving and other Technical Schools of the Continent, presented to the Clothweavers Company of London, 1877.

founded institutions for the higher education of women. The Jews of Frankfort-on-the-Maine have established two important schools—the *Philanthropinum* and the *Müster-schule*; and the city of Carlsruhe has had a superior school for girls since 1826. The university of Zurich has set the example of the free admittance of women; the London University opened its gates to them in 1877; and the older universities of England and Scotland have at least sanctioned extramural lectureships and condescended to examine if not to teach them. A women's college has been opened at St Petersburg by Catherine Dikhovala under imperial patronage; Hungary has a similar institution; and so the innovation is becoming familiar, and within a generation or two the condition of female education at the beginning of this century bids fair to appear a semi-barbarian state of things hardly credible at so recent a date.

To recapitulate, European education is being more widely diffused, is passing from the control of the clergy or the private citizen into the hands of the state, is becoming more secular and less sectarian, and in its higher departments shows a growing catholicity towards the more modern aspects of thought and life.

Europe is pre-eminently the country of monotheism, which forms the central doctrine, not only of its dominant religion, Christianity, but also of the minor rivals Judaism and Mahometanism. To none of these three religions has it given birth; and, what is more remarkable, its peculiarly Aryan population have adopted their religion from a Semitic people. The various nations of Europe were still polytheistic when they first entered within the historic horizon; and this polytheism has left more numerous traces of its influence than superficial observers might imagine. Not only have the gods of the Greek and Roman pantheons and their ruder rivals of the north obtained an immortality in the literature and art of all the cultured nations of Europe, but amid the manifold traditions and half-unconscious beliefs of the common people there are fragments of older and baser creeds. Much has still to be done before the amount of such survivals can be estimated with anything like accuracy, but that their number is considerable has been already well established.¹ Nor need it be matter of surprise when we consider how recent the introduction of Christianity into Europe really is, and how, to vast masses of men it came, not as a conviction of the intellect or a captivation of the heart, but as the infliction of a conqueror or the command of a king; and how, even when it was adopted through the persuasive eloquence of genuine missionaries, it obtained, in many cases, but a divided allegiance, and had to accept and sanctify as best it might the rites and symbolism of the religion which it expelled. That the English still speak of Wednesday and Thursday, that the French have their *Vendredi* and *Mardi*, the Italians their *Venerdi* and *Martedi*, is of purely historic interest, and implies no lingering attachment to Woden or Thor, to Venus or Mars; but there is no country in Christian Europe in which the popular ideas about supernatural agency in general are not the mongrel products of paganism and Christianity.

Christianity in Europe is broken up into three main divisions,—the Roman Catholic Church, the Greek or Eastern Church, and the Protestant or Evangelical Church; and each of these has received more or less numerous modifications and subdivisions under the influence of different political and social environments. Roman Catholicism not only can boast of the greatest number of adherents, but has the greatest claim to unity, at least in its external organization, and stands in direct contrast to many portions of the Protestant Church, which, while maintaining the superiority of their respective creeds, ac-

knowledge the local and temporary character of their constitutions. The unity, however, has all along been more nominal than real,—rather the beau-ideal of the administrative hierarchy than the actual condition of the organization which they control. Discordant elements have frequently threatened a disruption; severe contests have taken place between the spirit of centralization in Rome and the desire for local independence in individual countries; and in the present century the irreconcilability of two great parties has given rise to the so-called Old Catholics in Germany and Switzerland, who in the latter country at least seem likely to break up into two distinct sections. There are two religious communities in Europe which occupy a special relation to the Roman Catholic Church, the United Greeks and the United Armenians, otherwise known as Catholics of the Greek rite and Catholics of the Armenian rite. They both acknowledge the supremacy of the pope, but they are permitted to retain many peculiarities of organization and ritual. The United Greeks have an archbishop at Gran in Hungary, and another at Lemberg in Galicia. The United Armenians are found in Russia and Austria, but are still more numerous in the Ottoman empire. A schism not unlike that of the Old Catholics broke out amongst them in 1869. The pope by the bull *Reversuris* claimed to exercise certain rights which his predecessors had never enforced, and the Armenians not only rebelled, but drove their patriarch Hussan into exile because he supported the papal authority. The small church of Utrecht, which dates from the year 1704, retains the doctrines of the church of Rome, but emphasizes the superiority of the councils over the pope, and has no connexion with the papal organization.

The Greek Church has been divided by political influences into several independent communities, each with its own organization, but all united by a common creed, and the consciousness of a common historic origin. The head of the whole church was at one time the patriarch of Constantinople; but he never had the same supremacy as the pope, and has gradually sunk to be little more than the head of that branch which is subject to the Porte. The Greek Church of Russia began to establish its independence in the middle of the 13th century; till about the middle of the 15th it sent its nominees for the office of metropolitan of Kieff to the patriarch of Constantinople for consecration; afterwards the consecration was performed by a council of Russian bishops; and in 1589 the metropolitan was raised to be the ecclesiastical peer of the patriarch. Peter the Great allowed the office to lapse, and supplied its place by a council or synod, which still remains the central authority in the Russian church, the emperor being recognized as the supreme defender of the faith, and practically holding the place of chief administrator. The Austrian branch of the Greek Church is also governed by a general synod composed of all the bishops under the presidency of the patriarch of Carlowitz, and three provincial synods, the Austrian proper meeting at Czernowitz, the Servian at Carlowitz, and the Roumanian at Hermannstadt. After the declaration of the political independence of Greece, it was natural that there should arise a desire for the independence of the national church; and the patriarch of Constantinople was obliged to recognize its autonomy in 1850. A similar movement took place in Bulgaria in 1870. Though the Greek church is dominant in Russia, there is a very considerable number of sectarian communities. Chief of these are the "Raskolniks" (separatists or non-conformists), who seek to maintain a more scrupulous accuracy in the ritual than the state church enforces. Of totally different character are the heretical sects, some of whom, as the Molokani, show great reverence for the letter of scripture, while others, as the Skoptsi or

¹ See Tylor. *Primitive Culture*, vol. ii.

Eunuchs, profess the wildest anti-scriptural doctrines, and are carried into excesses of practical fanaticism.

The Protestant churches of Western Europe, which have so marvellously exemplified what naturalists call propagation by fission, may be doctrinally divided into two great groups,—the "Lutheran," which maintain the platform of the great Reformer; and the "Reformed," which have advanced further in their divergence from Roman Catholicism. Politically there are three great classes—state churches, free churches enjoying state endowments, and free churches which either from necessity or choice are entirely independent. To the Lutheran group belong the state churches of Sweden, Norway, and Denmark, and that form prevails also in Prussia, Hanover, and the Baltic provinces of Russia; the "Reformed" includes the Calvinistic churches of Holland and Scotland, and a great number of ecclesiastical organizations in England, Scotland, Switzerland, Germany, and France. The established church of England, though frequently classed with the Lutheran group, has so many points of contact in doctrine and ritual, both with Calvinism on the one hand and Roman Catholicism on the other, that it may be allowed to stand by itself. In Prussia, Baden, and a few of the smaller German states, the two parties are associated under the title of the United Lutheran Church, and have very close relations with the political administration. It is impossible to do more than mention the minor subdivisions of Moravians, Episcopalians, Presbyterians, Methodists, Independents, Quakers, Unitarians, for which the reader may consult the separate articles, and such works as Stäudlin's *Kirchliche Geographie*, Waggener's *K. Statistik*, Döllinger's *The Church and the Churches*, and De Mestral's *Tableau de l'Église Chrétienne*.

Mahometanism or Islam has comparatively few adherents in Europe, and has moreover ceased to be aggressive. If it still occupies in Constantinople one of the noblest of Christian churches, it is more than six hundred years since it surrendered in Cordova one of the noblest of its mosques. Its adherents are mainly Turks, Tatars, and Slavonians; and outside of Turkey they are nowhere very numerous except in southern Russia. Judaism, which at one time had no small proselytizing energy, has for a long period in Europe been nothing but the religion of the people of Jewish descent. It is divided into two great organizations, the so-called orthodox party representing traditionalism, and the reformed party representing freedom of thought. Even among the orthodox considerable laxity of observance is creeping in, and marriages with Christians are growing more and more frequent. Buddhism is still professed by the Calmucks of southern Russia; and the Tcheremisses, and several cognate tribes, and part of the Lapps, Finns, and Samoyedes, still preserve their pagan creeds and customs. The following table from Brachelli gives approximately the numerical strength of the various religions:—

Countries.	Catholics.	Greeks.	Other Christians, chiefly Protestants.	Jews.	Mahometans.
Germany.....	14,867,500	3,000	28,630,700	512,200	100
Austria.....	27,904,300	3,052,700	3,571,000	1,375,800	500
France.....	35,338,000	...	610,800	49,400	3,100
Great Britain...	5,500,000	...	25,900,000	40,000	...
Russia.....	6,755,000	54,000,000	4,157,000	2,277,000	2,092,000
Italy.....	26,750,000	...	25,000	40,000	...
Switzerland....	1,084,400	...	1,577,700	7,000	...
Belgium.....	4,320,000	...	15,000	1,500	...
Netherlands....	1,313,000	...	2,138,000	68,000	...
Luxembourg....	197,000	...	400	600	...
Denmark.....	1,300	...	1,865,000	4,300	...
Sweden.....	600	...	4,203,300	1,800	...
Norway.....	350	...	1,704,800	25	...
Spain.....	16,500,000	...	...	...	...
Portugal.....	3,950,000	...	...	...	...
Greece.....	10,000	1,442,000	3,500	2,600	...
Turkey.....	650,000	11,000,000	...	100,000	4,500,000
Total (approximate)	145,850,000	69,500,000	71,450,000	4,500,000	6,000,000

The political history of Europe begins with the Greeks; but while they contributed more extensively than any people have done since to the theory of government, they have left practically no trace of their political organization in the present association of states. From first to last, in spite of religious and political confederations, and of the unifying influence of the Macedonian hegemony, they retained what in modern phraseology would be called their particularism,—each city or state working out its own political development and testing the value of the various forms of political life for itself. The Greeks were not a conquering people; they felt nothing of the land-hunger of modern nations; and even the great conquests to which they were led by the Asiatic genius of Alexander the Great did not present themselves as acquisitions of territory. They were great founders of cities, and their colonies were distributed along the coasts of Europe from Spain in the west to the Black Sea in the east; but if all the ground that they thus occupied were added together, it would form a comparatively small country. The city, wherever it was, continued an integral part of Hellas, but Hellas was rather the name of a people and a civilization than of a country or a state. In this respect no greater contrast could be found than that afforded by the next people of European history. The history of Rome is almost from its beginning to its close a history of conquest; the limits of its territorial advance were no sooner fixed than the period of decadence set in. Where the Greeks had planted a city the Romans subjugated a region. And thus it is that to the present day the lines of Roman organization are as distinctly traceable on the political map as the lines of Roman roadway in local topographies.

As the Greeks had been the great defenders of Europe from the encroachments of Persian ambition, so the Romans repulsed the Semitic power of the Carthaginians; and as the defence against the Persians was the great determining factor in later Greek development, so the repulse of the Carthaginians was the prime factor in the later Roman development. The Punic wars led to the conquest of Sicily and Spain; and the conquest of these gave at least a new emphasis to what was already perhaps a national tendency. In 227 B.C. proconsuls were appointed for the province of Sicily and the province of Sardinia and Corsica; the second Punic war left Rome master in 201 of the greater part of Spain and supreme in the western Mediterranean; the capture of Numantia in 133 put the rest of Spain in its power; the battle of Pydna secured the subjugation of Greece; the campaigns of Julius Cæsar added the vast territory of Gaul to its domain; and when Augustus effected the great change in the constitution which left its effete nomenclature to the 19th century, he was able to adopt the Danube, the Rhine, and the ocean as the north-eastern boundary of the European part of his empire. His rule was paramount in all the region which now comprises Portugal, Spain, France, Belgium, western Holland, Rhenish Prussia, parts of Baden and Württemberg, most of Bavaria, Switzerland, Italy, Tyrol, Austria Proper, Western Hungary, Croatia, Slavonia, Servia, Turkey in Europe, and Greece. The populations of many of these countries had already begun to be Romanized in language and customs, but most of them were still distinctly aliens. During the succeeding centuries of the empire a few comparatively unimportant oscillations of frontier took place, and a few additional elements were added to the motley conglomerate of Roman citizenship; but the main features were still the same when Constantine introduced his new administrative distribution, and fixed the seat of government in the city which still bears his name. Christianity, which now received the sanction of the civil power, had gradually changed from an organ of