an "Asiatic" almost as if he were a different animal, while he will be disposed to regard another "European" as necessarily as virtuous and charming as himself. He will, as a matter of course, take sides with Europeans against Asiatics. But, as the reader of this history must realize, there is no such difference as the opposition of these names implies. It is a phantom difference created by two names. . . .

The main mediæval controversy was between the "Realists" and the "Nominalists," and it is necessary to warn the reader that the word "Realist" in mediæval discussion has a meaning almost diametrically opposed to "Realist" as it is used in the jargon of modern criticism. The modern "Realist" is one who insists on materialist details; the mediæval "Realist" was far nearer what nowadays we should call an Idealist, and his contempt for incidental detail was profound. The Realists outdid the common human tendency to exaggerate the significance of class. They held that there was something in a name, in a common noun that is, that was essentially real. For example, they held there was a typical "European," an ideal European, who was far more real than any individual European. Every European was, as it were, a failure, a departure, a flawed specimen of this profounder reality. On the other hand, the Nominalist held that the only realities in the case were the individual Europeans, that the name "European" was merely a name, and nothing more than a name, applied to all these instances.

Nothing is quite so difficult as the compression of philosophical controversies, which are by their nature voluminous and various and tinted by the mental colours of a variety of minds. With the difference of Realist and Nominalist stated baldly, as we have stated it here, the modern reader unaccustomed to philosophical discussion may be disposed to leap at once to the side of the Nominalist. But the matter is not so simple that it can be covered by one instance, and here we have purposely chosen an extreme instance. Names and classifications differ in their value and reality. While it is absurd to suppose that there can be much depth of class difference between men called Thomas and men called William, or that there is an ideal and quintessential Thomas or William, yet, on the other hand, there may be much profounder differences between a white man and a Hottentot, and still more between *Homo sapiens* and *Homo Neanderthalensis*. While again the distinction between the class of pets and the class of useful animals is dependent upon very slight differences of habit and application, the differ-

ence of a cat and dog is so profound that the microscope can trace it in a drop of blood or a single hair. While some classifications are trivial, others seem to be fundamental and real. When this aspect of the question is considered, it becomes understandable how Nominalism had ultimately to abandon the idea that names were as insignificant as labels, and how, out of a revised and amended Nominalism, there grew up that systematic attempt to find the *true*—the most significant and fruitful—classification of things and substances which is called Scientific Research.

And it will be almost as evident that while the tendency of Realism, which is the natural tendency of every untutored mind, was towards dogma, harsh divisions, harsh judgments, and uncompromising attitudes, the tendency of earlier and later Nominalism was towards qualified statements, towards an examination of individual instances, and towards inquiry and experiment and scepticism.

So, while in the market-place and the ways of the common life men were questioning the morals and righteousness of the clergy, the good faith and propriety of their celibacy, and the justice of papal taxation; while in theological circles their minds were set upon the question of transubstantiation, the question of the divinity or not of the bread and wine in the Mass, in studies and lecture-rooms a wider-reaching criticism of the methods of ordinary Catholic teaching was in progress.

We cannot attempt here to gauge the significance in this process of such names as Peter Abelard (1079–1142), Albertus Magnus (1193–1280), and Thomas Aquinas (1225–1274). These men sought to reconstruct Catholicism on a sounder system of reasoning; and they turned towards Nominalism. Chief among their critics and successors were Duns Scotus (? –1308), an Oxford Franciscan and, to judge by his sedulous thought and deliberate subtleties, a Scotchman, and Occam, an Englishman (? –1347).

Both these latter, like Averroes, made a definite distinction between theological and philosophical truth; they placed theology on a pinnacle, but they placed it where it could no longer obstruct research: Duns Scotus declared that it was impossible to prove by reasoning the existence of God or of the Trinity or the credibility of the act of Creation; Occam was still more insistent upon this separation of theology from practical truth—a separation which manifestly released scientific inquiry from dogmatic control. A later generation, benefiting by the freedoms towards which these pioneers worked, and knowing not the sources of its

freedom, had the ingratitude to use the name of Scotus as a term for stupidity, and so we have our English word "Dunce." Says Professor Pringle Pattison[1]: "Occam, who is still a Scholastic, gives us the Scholastic justification of the spirit which had already taken hold upon Roger Bacon, and which was to enter upon its rights in the fifteenth and sixteenth centuries."

Standing apart by himself because of his distinctive genius is this Roger Bacon (about 1210 to about 1293), who was also English. He was a Franciscan of Oxford, and a very typical Englishman indeed, irritable, hasty, honest, and shrewd. He was two centuries ahead of his world. Says H. O. Taylor of him[2]:

"The career of Bacon was an intellectual tragedy, conforming to the old principles of tragic art: that the hero's character shall be large and noble, but not flawless, inasmuch as the fatal consummation must issue from character, and not happen through chance. He died an old man; as in his youth, so in his age, a devotee of tangible knowledge. His pursuit of a knowledge which was not altogether learning had been obstructed by the Order of which he was an unhappy and rebellious member; quite as fatally his achievement was deformed from within by the principles which he accepted from his time. But he was responsible for his acceptance of current opinions; and as his views roused the distrust of his brother Friars, his intractable temper drew their hostility on his head. Persuasiveness and tact were needed by one who would impress such novel views as his upon his fellows, or, in the thirteenth century, escape persecution for their divulgence. Bacon attacked dead and living worthies, tactlessly, fatuously, and unfairly. Of his life scarcely anything is known, save from his allusions to himself and others; and these are insufficient for the construction of even a slight consecutive narrative. Born; studied at Oxford; went to Paris, studied, experimented; is at Oxford again, and a Franciscan; studies, teaches, becomes suspect to his Order; is sent back to Paris, kept under surveillance, receives a letter from the Pope; writes, writes, writes —his three best-known works; is again in trouble, confined for many years, released, and dead, so very dead, body and fame alike, until partly unearthed after five centuries."

The bulk of these "three best-known works" is a hotly phrased and sometimes quite abusive but entirely just attack on the ignorance of the times, combined with a wealth of

[1] *Encyclopædia Britannica* Twelfth Edition, article: "Scholasticism."

[2] *The Medieval Mind*, by Henry Osborn Taylor.

suggestions for the increase of knowledge. In his passionate insistence upon the need of experiment and of collecting knowledge the spirit of Aristotle lives again in him. "Experiment, experiment," that is the burthen of Roger Bacon.

Yet of Aristotle himself Roger Bacon fell foul. He fell foul of him because men, instead of facing facts boldly, sat in rooms and pored over the bad Latin translations which were then all that was available of the master. "If I had my way," he wrote, in his intemperate fashion, "I should burn all the books of Aristotle, for the study of them can only lead to a loss of time, produce error, and increase ignorance," a sentiment that Aristotle would probably have echoed could he have returned to a world in which his works were not so much read as worshipped—and that, as Roger Bacon showed, in these most untrustworthy translations.

Throughout his books, a little disguised by the necessity of seeming to square it all with orthodoxy for fear of the prison and worse, Roger Bacon shouted to mankind, "Cease to be ruled by dogmas and authorities; *look at the world!*"

Four chief sources of ignorance he denounced; respect for authority, custom, the sense of the ignorant crowd, and the vain, proud unteachableness of our dispositions. Overcome but these, and a world of power would open to men. "Machines for navigating are possible without rowers, so that great ships suited to river or ocean, guided by one man, may be borne with greater speed than if they were full of men. Likewise, cars may be made so that without a draught animal they may be moved *cum impetu inæstimabili*, as we deem the scythed chariots to have been from which antiquity fought. And flying machines are possible, so that a man may sit in the middle turning some device by which artificial wings may beat the air in the manner of a flying bird."

Occam, Roger Bacon, these are the early precursors of a great movement in Europe away from "Realism" towards reality. For a time the older influences fought against the naturalism of the new Nominalists. In 1339 Occam's books were put under a ban and Nominalism solemnly condemned. As late as 1473 an attempt, belated and unsuccessful, was made to bind teachers of Paris by an oath to teach Realism. It was only in the sixteenth century, with the printing of books and the increase of intelligence, that the movement from absolutism towards experiment became massive, and that one investigator began to co-operate with another.

Throughout the thirteenth and fourteenth centuries experi-

menting with material things was on the increase, items of knowledge were being won by men, but there was no interrelated advance. The work was done in a detached, furtive, and inglorious manner. A tradition of isolated investigation came into Europe from the Arabs, and a considerable amount of private and secretive research was carried on by the alchemists, for whom modern writers are a little too apt with their contempt. These alchemists were in close touch with the glass and metal workers and with the herbalists and medicine-makers of the times; they pried into many secrets of nature, but they were obsessed by "practical" ideas; they sought not knowledge, but power; they wanted to find out how to manufacture gold from cheaper materials, how to make men immortal by the elixir of life, and such-like vulgar dreams. Incidentally in their researches they learnt much about poisons, dyes, metallurgy and the like; they discovered various refractory substances, and worked their way towards clear glass and so to lenses and optical instruments; but as scientific men tell us continually, and as "practical" men still refuse to learn, it is only when knowledge is sought for her own sake that she gives rich and unexpected gifts in any abundance to her servants.

The world of to-day is still much more disposed to spend money on technical research than on pure science. Half the men in our scientific laboratories still dream of patents and secret processes. We live to-day largely in the age of alchemists, for all our sneers at their memory. The "business man" of to-day still thinks of research as a sort of alchemy.

Closely associated with the alchemists were the astrologers, who were also a "practical" race. They studied the stars—to tell fortunes. They lacked that broader faith and understanding which induces men simply to study the stars.

Not until the fifteenth century did the ideas which Roger Bacon expressed begin to produce their first-fruits in new knowledge and a widening outlook. Then suddenly, as the sixteenth century dawned, and as the world recovered from the storm of social trouble that had followed the pestilences of the fourteenth century, Western Europe broke out into a galaxy of names that outshine the utmost scientific reputations of the best age of Greece. Nearly every nation contributed, the reader will note, for science knows no nationality.

One of the earliest and most splendid in this constellation is the Florentine, Leonardo da Vinci (1452–1519), a man with an almost miraculous vision for reality. He was a naturalist, an anatomist, an engineer, as well as a very great artist. He

was the first modern to realize the true nature of fossils, he made note-books of observations that still amaze us, he was convinced of the practicability of mechanical flight. Another great name is that of Copernicus, a Pole (1473–1543), who made the first clear analysis of the movements of the heavenly bodies and showed that the earth moves round the sun. Tycho Brahe (1546–1601), a Dane working at the university of Prague, rejected this latter belief, but his observations of celestial movements were of the utmost value to his successors, and especially to the German, Kepler (1571–1630). Galileo Galilei (1564–1642) was the founder of the science of dynamics. Before his time it was believed that a weight a hundred times greater than another would fall a hundred times as fast. Galileo denied this. Instead of arguing about it like a scholar and a gentleman, he put it to the coarse test of experiment by dropping two unequal weights from an upper gallery of the leaning tower of Pisa—to the horror of all erudite men.

Galileo made what was almost the first telescope, and he developed the astronomical views of Copernicus; but the church, struggling gallantly against the light, decided that to believe that the earth was smaller and inferior to the sun, made man and Christianity of no account; so Galileo was induced to recant this view and put the earth back in its place as the immovable centre of the universe. Seven cardinals condemned him to a period of imprisonment and he was ordered to recite the seven penitential psalms once a week for three years.

Newton (1642–1727) was born in the year of Galileo's death. By his discovery of the law of gravitation he completed the clear vision of the starry universe that we have to-day. But Newton carries us into the eighteenth century. He carries us too far for the present chapter.

Among the earlier names, that of Dr. Gilbert (1540–1603), of Colchester, is pre-eminent. Roger Bacon had preached experiment, Gilbert was one of the first to practise it. There can be little doubt that his work, which was chiefly upon magnetism, helped to form the ideas of Francis Bacon, Lord Verulam (1561–1626), Lord Chancellor to James I of England. This Francis Bacon has been called the "Father of Experimental Philosophy," but of his share in the development of scientific work far too much has been made.[1] He was, says Sir R. A. Gregory, "not the founder but the apostle" of the scientific method. His greatest service to science was a fantastic book, *The New Atlantis*. "In his *New Atlantis*, Francis Bacon planned

[1] See Gregory's *Discovery*, chap. vi.

in somewhat fanciful language a palace of invention, a great temple of science, where the pursuit of knowledge in all its branches was to be organized on principles of the highest efficiency."

From this Utopian dream arose the Royal Society of London, which received a Royal Charter from Charles II of England in 1662. The essential use and virtue of this society was and is *publication*. Its formation marks a definite step from isolated inquiry towards co-operative work, from the secret and solitary investigations of the alchemist to the frank report and open discussion which is the life of the modern scientific process. For the true scientific method is this: to make no unnecessary hypotheses, to trust no statements without verification, to test all things as rigorously as possible, to keep no secrets, to attempt no monopolies, to give out one's best modestly and plainly, serving no other end but knowledge.

The long-slumbering science of anatomy was revived by Harvey (1578–1657), who demonstrated the circulation of the blood. Presently the Dutchman, Leeuwenhoek (1632–1723), brought the first crude microscope to bear upon the hidden minutiæ of life.

These are but some of the brightest stars amidst that increasing multitude of men who have from the fifteenth century to our own time, with more and more collective energy and vigour, lit up our vision of the universe, and increased our power over the conditions of our lives.

§ 7

The New Growth of European Towns.

We have dealt thus fully with the recrudescence of scientific studies in the Middle Ages because of its ultimate importance in human affairs. In the long run, Roger Bacon is of more significance to mankind than any monarch of his time. But the contemporary world, for the most part, knew nothing of this smouldering activity in studies and lecture-rooms and alchemists' laboratories that was presently to alter all the conditions of life. The church did, indeed, take notice of what was afoot, but only because of the disregard of her conclusive decisions. She had decided that the earth was the very centre of God's creation, and that the Pope was the divinely appointed ruler of the earth. Men's ideas on these essential points, she insisted, must not be disturbed by any contrary teaching. So soon, however, as she had compelled Galileo to say that the world

did not move she was satisfied; she does not seem to have realized how ominous it was for her that, after all, the earth did move.

Very great social as well as intellectual developments were in progress in Western Europe throughout this period of the later Middle Ages. But the human mind apprehends events far more vividly than changes; and men for the most part, then as now, kept on in their own traditions in spite of the shifting scene about them.

In an Outline such as this it is impossible to crowd in the clustering events of history that do not clearly show the main process of human development, however bright and picturesque they may be. We have to record the steady growth of towns and cities, the reviving power of trade and money, the gradual re-establishment of law and custom, the extension of security, the supersession of private warfare that went on in Western Europe in the period between the first crusade and the sixteenth century.

Of much that looms large in our national histories we cannot tell anything. We have no space for the story of the repeated attempts of the English kings to conquer Scotland and set themselves up as kings of France, nor of how the Norman English established themselves insecurely in Ireland (twelfth century), and how Wales was linked to the English crown (1282). All through the Middle Ages the struggle of England with Scotland and France was in progress; there were times when it seemed that Scotland was finally subjugated and when the English king held far more land in France than its titular sovereign. In the English histories this struggle with France is too often represented as a single-handed and almost successful attempt to conquer France. In reality it was a joint enterprise undertaken in concert first with the Flemings and Bavarians and afterwards with the powerful French vassal state of Burgundy to conquer and divide the patrimony of Hugh Capet.

Of the English rout by the Scotch at Bannockburn (1314), and of William Wallace and Robert the Bruce the Scottish national heroes; of the battles of Crécy (1346) and Poitiers (1356) and Agincourt (1415) in France, which shine like stars in the English imagination, little battles in which sturdy bowmen through some sunny hours made a great havoc among French knights in armour; of the Black Prince and Henry V of England, and of how a peasant girl, Joan of Arc, the Maid of Orleans, drove the English out of her country again (1429–1430)—this history relates nothing. For every country has such cherished

national events. They are the ornamental tapestry of history, and no part of the building. Rajputana or Poland, Hungary, Russia, Spain, Persia, and China can all match or outdo the utmost romance of Western Europe, with equally adventurous knights and equally valiant princesses and equally stout fights against the odds.

Nor can we tell in any detail how Louis XI of France (1461–1483), the son of Joan of Arc's Charles VII, brought Burgundy to heel and laid the foundations of a centralized French monarchy. It signifies more that in the thirteenth and fourteenth centuries, gunpowder, that Mongol gift, came to Europe, so that the kings (Louis XI included) and the law, relying upon the support of the growing towns, were able to batter down the castles of the half-independent robber knights and barons of the earlier Middle Ages and consolidate a more centralized power.

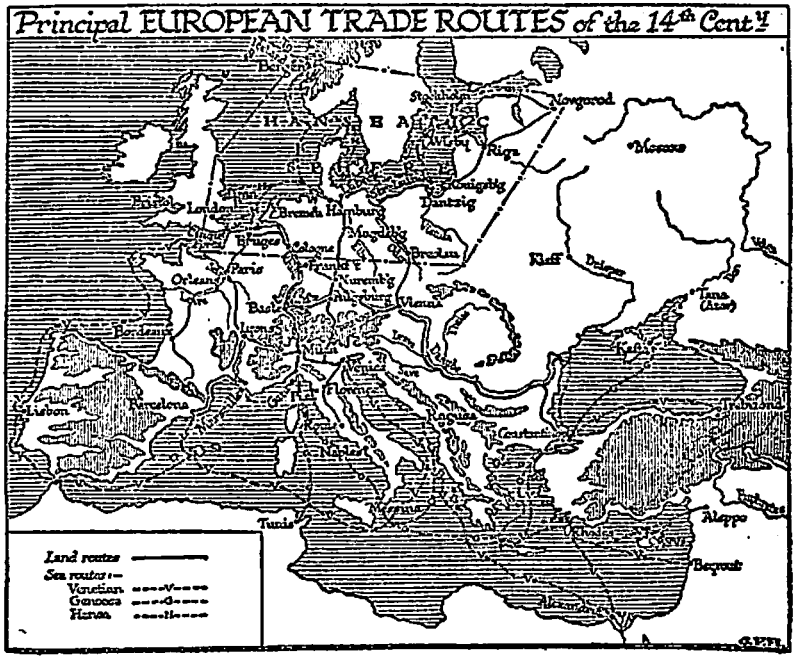
The fighting nobles and knights of the barbaric period disappear slowly from history during these centuries; the Crusades consumed them, such dynastic wars as the English Wars of the Roses killed them off, the arrows from the English long-bow pierced them and stuck out a yard behind, infantry so armed swept them from the stricken field; they became reconciled to trade and changed their nature. They disappeared in everything but a titular sense from the west and south of Europe before they disappeared from Germany. The knight in Germany remained a professional fighting man into the sixteenth century.

Between the eleventh and the fifteenth centuries in Western Europe, and particularly in France and England, there sprang up like flowers a multitude of very distinctive and beautiful buildings, cathedrals, abbeys, and the like, the Gothic architecture. We have already noted its chief characteristics. This lovely efflorescence marks the appearance of a body of craftsmen closely linked in its beginnings to the church. In Italy and Spain, too, the world was beginning to build freely and beautifully again. At first it was the wealth of the church that provided most of these buildings; then kings and merchants also began to build. Beside the church and the castle appear the mansion and the house.

From the twelfth century onward, with the increase of trade, there was a great revival of town life throughout Europe. Prominent among these towns were Venice, with its dependents Ragusa and Corfu, Genoa, Verona, Bologna, Pisa, Florence, Naples, Milan, Marseilles, Lisbon, Barcelona, Narbonne, Tours, Orleans, Bordeaux, Paris, Ghent, Bruges, Boulogne, London,

Oxford, Cambridge, Southampton, Dover, Antwerp, Hamburg, Bremen, Cologne, Mayence, Nuremberg, Munich, Leipzig, Magdeburg, Breslau, Stettin, Dantzig, Königsberg, Riga, Pskof, Novgorod, Wisby, and Bergen.

"A West German town, between 1400 and 1500,[1] embodied all the achievements of progress at that time, although from a modern standpoint much seems wanting. . . . The streets



were mostly narrow and irregularly built, the houses chiefly of wood, while almost every burgher kept his cattle in the house, and the herd of swine which was driven every morning by the town herdsman to the pasture-ground formed an inevitable part of city life." Charles Dickens in his *American Notes* mentions swine in Broadway, New York, in the middle nineteenth century. "In Frankfort-on-Main it was unlawful after 1481 to keep swine in the Altstadt, but in the Neustadt and in Sachsenhausen this custom remained as a matter of course. It was only in 1645, after a corresponding attempt in 1556 had failed, that the swine-pens in the inner town were pulled down

[1] From Dr. Tille in Helmolt's *History of the World.*

at Leipzig. The rich burghers, who occasionally took part in the great trading companies, were conspicuously wealthy land-owners, and had extensive courtyards with large barns inside the town walls. The most opulent of them owned those splendid patrician houses which we still admire even to-day.

"But even in the older towns most houses of the fifteenth century have disappeared; only here and there a building with open timber-work and over-hanging stories, as in Bacharach or Miltenburg, reminds us of the style of architecture then customary in the houses of burghers. The great bulk of the inferior population, who lived on mendicancy, or got a livelihood by the exercise of the inferior industries, inhabited squalid hovels outside the town; the town wall was often the only support for these wretched buildings. The internal fittings of the houses, even amongst the wealthy population, were very defective according to modern ideas; the Gothic style was as little suitable for the petty details of objects of luxury as it was splendidly adapted for the building of churches and town halls. The influence of the Renaissance added much to the comfort of the house.

"The fourteenth and fifteenth century saw the building of numerous Gothic town churches and town halls throughout Europe, which still in many cases serve their original purpose. The power and prosperity of the towns find their best expression in these and in the fortifications, with their strong towers and gateways. Every picture of a town of the sixteenth or later centuries shows conspicuously these latter erections for the protection and honour of the town.

"The town did many things which in our time are done by the State. Social problems were taken up by town administration or the corresponding municipal organization. The regulation of trade was the concern of the guilds in agreement with the council, the care of the poor belonged to the church, while the council looked after the protection of the town walls and the very necessary fire brigades. The council, mindful of its social duties, superintended the filling of the municipal granaries, in order to have supplies in years of scarcity. Such storehouses were erected in almost every town during the fifteenth century. Tariffs of prices for the sale of all wares, high enough to enable every artisan to make a good livelihood, and to give the purchaser a guarantee for the quality of the wares, were maintained. The town was also the chief capitalist; as a seller of annuities on lives and inheritances it was a banker and enjoyed unlimited credit. In return it obtained means for the construction of

fortifications or for such occasions as the acquisition of sovereign rights from the hand of an impecunious prince."

For the most part these European towns were independent or quasi-independent aristocratic republics. Most admitted a vague overlordship on the part of the church, or of the emperor or of a king. Others were parts of kingdoms, or even the capitals of dukes or kings. In such cases their internal freedom was maintained by a royal or imperial charter. In England the Royal City of Westminster on the Thames stood cheek by jowl with the walled city of London, into which the king came only with ceremony and permission.

The entirely free Venetian republic ruled an empire of dependent islands and trading ports, rather after the fashion of the Athenian republic. Genoa also stood alone.

The Germanic towns of the Baltic and North Sea from Riga to Middelburg in Holland, Dortmund, and Cologne were loosely allied in a confederation, the confederation of the Hansa towns, under the leadership of Hamburg, Bremen, and Lübeck, a confederation which was still more loosely attached to the empire. This confederation, which included over seventy towns in all, and which had depots in Novgorod, Bergen, London, and Bruges, did much to keep the northern seas clean of piracy, that curse of the Mediterranean and of the Eastern seas.

The Eastern Empire throughout its last phase, from the Ottoman conquest of its European hinterland in the fourteenth and early fifteenth century until its fall in 1453, was practically only the trading town of Constantinople, a town state like Genoa or Venice, except that it was encumbered by a corrupt imperial court.

The fullest and most splendid developments of this city life of the later Middle Ages occurred in Italy. After the end of the Hohenstaufen line in the thirteenth century, the hold of the Holy Roman Empire upon North and Central Italy weakened, although, as we shall tell, German emperors were still crowned as kings and emperors in Italy up to the time of Charles V (*circa* 1530). There arose a number of quasi-independent city states to the north of Rome, the papal capital. South Italy and Sicily, however, remained under foreign dominion. Genoa and her rival, Venice, were the great trading seaports of this time; their noble palaces, their lordly paintings still win our admiration. Milan, at the foot of the St. Gothard Pass, also revived to wealth and power. Brightest perhaps of all the stars in the Italian constellation of cities was Florence, a trading and financial centre which, under the almost monarchical rule of the Medici family in the

fifteenth century, enjoyed a second "Periclean age." Already, before the time of these cultivated Medici "bosses," Florence had produced much beautiful art. Giotto's tower (Giotto, 1266–1337) and the Duomo (by Brunellesco, 1377–1446) already existed. Towards the end of the fourteenth century Florence became the centre of the rediscovery, restoration, and imitation of antique art. But of the Renaissance of Art, in which Florence played so large a part, it will be more convenient to speak in a later section.

§ 8

The Literary Renaissance.

A great outbreak of creative literature is associated with this general reawakening of the Western European intelligence. We have already noted the appearance of literature in Italian under the initiatives of the Emperor Frederick II. Simultaneously the Troubadours in both Northern France and in Provence were setting people to the making of verse in the northern and southern dialects, love songs, narrative songs and the like. These things broke out, so to speak, beneath a general disposition to write and read Latin. They came from the popular mind and the relaxed mind and not from the learned. In Florence in 1265 was born Dante Alighieri, who, after vehement political activities, became an exile and wrote, among other works, an elaborate poem in rhymed Italian verse, the *Commedia*, a tapestry of allegory and sporadic incident and religious disquisition. It describes a visit to Hell, Purgatory and Paradise. Its relationship to the ancestral Latin literature is suggested by the fact that Dante's guide in the lower regions is Virgil. In its various English translations it makes extremely dull reading, but those who are best qualified to speak in the matter are scarce able to express their perception of the exquisite beauty, interest and wisdom of the original. Dante also wrote in Latin upon political questions and upon the claims of the Italian tongue to be considered a literary language. He was severely criticized for his use of Italian and accused of an incapacity for Latin verse.

A little later Petrarch (1304–1374) was also writing sonnets and odes in Italian which arouse the enthusiasm of all who have been sufficiently cultivated to respond to them. For example, John Addington Symonds wrote: "The *Rime in Vita e Morte di Madonna Laura* cannot become obsolete, for perfectly metrical form has here been married to language of the choicest

and purest." The poems leave us doubtful if Madonna Laura ever existed. Petrarch was one of the group of Italians who were strenuous to restore the glories of the Latin literature. In an Outline of History these glories are not perhaps so supreme as they seemed to be to a generation of Italians reawakening to the charms and excitement of literary beauty. Writing in Italian waned for a time before a revival of Latin authorship. Petrarch wrote an epic in Latin, *Africa*. There was a considerable output of pseudo-classical writing, epics and sham tragedies and sham comedies in Latin, no doubt very like the poems and rhetorical prose one receives in English from gifted young Indians. It was only later with Boiardo and Ariosto (1475–1533) that Italian poetry emerges again to distinction. Ariosto's *Orlando Furioso* was only the crowning specimen of a great multitude of romantic narrative poems that delighted the less erudite readers of the Renaissance. These narrative poems always paid the tribute of more or less allusion and imitation to the traditions of the artificial Virgilian epic, itself an imitative and scholarly exploit. Comedy and the narrative poem, shorter poems in various forms, constitute the bulk of this literature. Prose was not sufficiently artificial and genteel for critical approval.

The reawakening of literary life in the French-speaking community was also dominated by memories of the Latin literature. There was already a literature of merry songs in mediæval Latin in France, songs of the tavern and the road (the Goliardic poetry of the thirteenth century), and the spirit of this authentic writing lived in such true and native verse as that of Villon (1431–1463), but the revival of Latin studies flowed in from Italy and imposed artificiality upon all but the sturdiest minds. An elaborate style was established, with something of the dignity of monumental masonry, and splendid poems and classical plays were erected for the admiration rather than the pleasure of posterity. Yet the genius of French life was not altogether confined to these noble exercises; a fine and flexible prose appeared. Montaigne (1533–1592), the first of essayists, wrote pleasantly of life and unpleasantly about the learned, and Rabelais (1490?–1553), like a torrent of burning, shouting, laughing lava, burst through all the dignities and decencies of the pedants.

In Germany and in Holland the new intellectual impulses were more nearly simultaneous with the immense political and religious stresses of the Reformation, and they produced less purely artistic forms. Erasmus, says J. Addington Symonds,

is the great representative in Holland of the Renaissance as Luther was in Germany, but he wrote not in Dutch but Latin.

There was an outbreak of literary activity in England as early as the fourteenth century. Geoffrey Chaucer (1340?–1400) produced delightful narrative poetry that derived very obviously from Italian models, and there was much pre-existing romantic narrative verse. But the Civil Wars, the Wars of the Roses, pestilence, and religious conflicts damped down this first beginning, and it was only with the sixteenth century and after the reign of Henry VIII that English literature broke into vigorous life. There was first a rapid spread of classical learning and a fertilizing torrent of translations from Latin, Greek and Italian. There came a sudden harvest of fine English writing. English was played with, tested, elaborated. Spenser wrote his *Faerie Queen*, a tedious allegorical work of great decorative beauty. But it was in the drama, in the days of Queen Elizabeth, that the English genius found its best expression. It never succumbed to the classical tradition; the Elizabethan drama was a new and fuller and looser, more vigorous and altogether more natural, literary form. It found its extreme exponent in Shakespeare (1564–1616), a man happily with "little Latin and less Greek," whose richest, subtlest passages are drawn from homely and even vulgar life. He was a man of keen humour and great sweetness of mind, who turned every sentence he wrote into melody. Eight years before the death of Shakespeare, Milton (1608–1674) was born. Early classical studies gave both his prose and verse a proud and pompous gait from which they never completely recovered. He went to Italy and saw the glories of Renaissance painting. He translated the paintings of Raphael and Michael Angelo into superb English verse in his great epics of *Paradise Lost* and *Paradise Regained*. It is well for English literature that Shakespeare lived to counterbalance Milton and save so much of its essential spirit from the classical obsession.

Portugal, at the touch of the literary Renaissance, produced an epic, the *Lusiad* of Camoens (1524–1580); but Spain, like England, was so fortunate as to find a man of supreme genius, unembarrassed by an excess of learning, to express its spirit. Cervantes (1547–1616) seized upon the humours and absurdities of a conflict between the mediæval tradition of chivalry in possession of the imagination of a lean, poor, half-crazy gentleman, and the needs and impulses of the vulgar life. His Don Quixote and Sancho Panza, like Shakespeare's Sir John Falstaff, Chaucer's wife of Bath, and Rabelais' Gargantua break through

the dignity and heroics of formal literature to let in freedom and laughter. They break through as Roger Bacon and the scientific men broke through the bookish science of the scholars, and as the painters and sculptors we have next to tell about broke through the decorative restraints and religious decorum of mediæval art. The fundamental fact of the Renaissance was not classicism but release. The revival of Latin and Greek learning only contributed to the positive values of the Renaissance by their corrosive influence upon the Catholic, Gothic and Imperial traditions.

§ 9

The Artistic Renaissance.

It would be beyond our scale and compass to trace the multifarious revivals of domestic and decorative art in this great period of human recovery, or to tell how the northern Gothic was adapted to municipal and private buildings and modified, and to a large extent replaced by forms deriving from the Italian Romanesque, and the revival of classical traditions in Italy. Italy had never taken kindly to the Gothic that had invaded her from the north, or to the Saracenic forms that had come in from the south. The Latin writings in architecture of Vitruvius were unearthed in the fifteenth century, and had a very stimulating effect upon processes of change already in operation. The classical influences which were flowing strongly in literature spread into the already active world of artistic creation.

But, just as the literary revival preceded the revival of classical learning, so the artistic reawakening was in full progress before attention was drawn to classical representative art. The gradual reassertion of the desire for imitative representation rather than decoration has been going on in Europe ever since the days of Charlemagne. There was a vigorous development of painting, the painting of real things upon wood, in Germany in the twelfth and thirteenth centuries. In Italy, where the architectural forms gave more space than did the Gothic, mural painting also was increasing in importance. The first definite school of German painting was in Cologne (1360 onward). A little later came Hubert and Jan Van Eyck (*circa* 1380–1440) in Holland. Their work is bright and fresh and delightful; it is like the illustration of a missal taking the air in the larger spaces of the painted panel.

In Italy in the thirteenth century Cimabue was painting; he was the master of Giotto (1266–1337), who stands out as the early master figure of this first phase in the recovery of art. It was a phase that culminated and closed with Fra Angelico da Fiesole (1387–1455).

And now there began in Italy, and especially at Florence, a strictly scientific research into the artifices of realistic representation. It cannot be too strongly emphasized, because nothing is more steadfastly ignored in books about art, that the essence in the changes in art and sculpture that were happening in Europe in the Renaissance period was an abandonment of æsthetic for scientific considerations. In the place of design and patterning, formal, abstract and lovely, there was a research for reality that was at best bold and splendid and often harsh and brutal. The swing and sway of the crude human body that Saracenic art had suppressed and Byzantine frozen, came back upon wall and stone. Life returned to art and was presently sweating and gesticulating. The problems of perspective were studied and solved, and for the first time painters began with assurance to represent depth in the picture. Anatomy was acutely and minutely investigated. Art was for a time intoxicated with representation. There was a close, veracious rendering of details—flowers and jewels, folds of fabrics, and reflections in transparent objects. A phase of extreme decorative beauty was attained and passed.

We cannot trace here the sustained drive of these reawakened impulses through the various schools of the Italian and Low German cities, nor the mutual reactions of Flemish and Florentine and Umbrian and such-like groups of painters. We can but name among the fifteenth-century masters the Florentines, Filippo Lippi, Botticelli, Ghirlandajo, and the Umbrians Signorelli and Perugino and Mantegna. Mantegna (1431–1506) stands out because in his work more than that of any contemporary one traces the recovered leaven of the old classical art. He has at his best an inimitable austerity.

With the sixteenth century came Leonardo da Vinci (1452–1519), of whose scientific speculations we have already spoken. A kindred spirit in Nuremberg was Albrecht Dürer (1471–1528). Venetian art rose to its climax with Titian (1476?–1576), Tintoretto (1518–1594) and Paul Veronese (1582–1588). But it will mean little to the reader for us to catalogue names. The best reproductions would give only a few intimations of the quality of these masters; in print we can state only their general relationship to art and life as factors in a new attitude to the

body and tangible things. The student must go to their pictures for his realizations of their quality. We may point him to the picture by Titian known by the inappropriate name of *Sacred and Profane Love*, or to various of the sibyls, and to the *Creation of Adam* painted by Michael Angelo on the roof of the Sistine Chapel, as among the supremely beautiful flowers of this growth. Painting went to England with the German, Hans Holbein (1497–1543), for England had been too torn by civil war to shelter any school of painting. It was a mere visit. Even the Elizabethan time, so rich in literature, so fertile of music, produced no English painting or sculpture to compare with that of Italy and France. War and political trouble presently checked the art of Germany, but the Flemish impulse went on to Rubens (1577–1640), Rembrandt (1606–1669), and to a great number of delightful genre and landscape painters who reproduced in oil in the extreme west of Europe, and without any possible connection or derivation, work curiously similar in spirit and subject to some of the most interesting Chinese work. The parallelism may be due to some obscure parallelism of social conditions.

From the end of the sixteenth century onward the painters of Italy declined in stature. The novelty and zest of painting the brightly lit human body in every possible contraction, extension and foreshortening against backgrounds of more than natural vividness faded, the justifications of sculpture and classical mythology for such illuminated physical exercises were largely exhausted, the representation of the virtues, vices, arts, sciences, cities, nations, and so forth by freely revealed feminine figures agreeably disposed ceased to provoke original minds, and a less strenuous type of practitioner was attracted to the practice of the art, content to paint pictures that did at the best merely vie with pictures already painted. The European sculpture that had developed slowly and naturally in Germany, France and North Italy from the eleventh century onward, and which had produced such fine works as the angels of the Sainte Chapelle in Paris, the equestrian monument of Can Grande in Verona, and the Colleoni statue at Venice (by Verrocchio and Leopardi), was presently carried away by attempts to revive the peculiar qualities of the classical statuary that was now being disinterred and admired. Michael Angelo, drunk with this inspiration, produced works of a towering force and dignity and unparalleled anatomical vigour that stunned his successors into imitation and decline. As the seventeenth century progressed European painting and sculpture began to

have the quality of an athlete who has overtrained and is stale; of a rose that is overblown.

But architecture is sustained by material needs when less necessary arts decay, and through the sixteenth and seventeenth centuries a steady and various production of gracious and beautiful buildings went on all over Europe. We can but name Palladio (1518–1580), whose work abounds in his native town of Vicenza, and whose books and teaching spread his revivified classical style over nearly every European country. He was like a great fountain of architectural suggestions. We cannot trace here the intricate extensions and variations of Renaissance architecture that have continued in a natural and continuous evolution into our own times.

Painting in Spain was no such authentic growth of the soil as it was in Low Germany and Italy. The Spanish painters went to Italy to learn, and brought their art back thence. But in the opening half of the seventeenth century, at the shrunken but still opulent Spanish Court, Spanish painting flowered in the great and original personality of Velazquez (1599–1660). He had a novel directness of vision, a new power in his brush. He, in company with the Dutch Rembrandt, stands out from the rest of the Renaissance painters in spirit and quality, and looks towards the most vigorous work of the later nineteenth century and of our own time.

§ 10

America Comes into History.

In 1453, as we have related, Constantinople fell. Throughout the next century the Turkish pressure upon Europe was heavy and continuous. The boundary line between Mongol and Aryan, which had lain somewhere east of the Pamirs in the days of Pericles, had receded now to Hungary. Constantinople had long been a mere island of Christians in a Turk-ruled Balkan peninsula. Its fall did much to interrupt the trade with the East.

Of the two rival cities of the Mediterranean, Venice was generally on much better terms with the Turks than Genoa. Every intelligent Genoese sailor fretted at the trading monopoly of Venice, and tried to invent some way of getting through it or round it. And there were now new peoples taking to the sea trade, and disposed to look for new ways to the old markets because the ancient routes were closed to them.

The Portuguese, for example, were developing an Atlantic

coasting trade. The Atlantic was waking up again after a vast period of neglect that dated from the Roman murder of Carthage. It is rather a delicate matter to decide whether the Western European was pushing out into the Atlantic or whether he was being pushed out into it by the Turk, who lorded it in the Mediterranean until the battle of Lepanto (1571). The Venetian and Genoese ships were creeping round to Antwerp, and the Hansa town seamen were coming south and extending their range. And there were considerable developments of seamanship and shipbuilding in progress. The Mediterranean is a sea for galleys and coasting. But upon the Atlantic Ocean and the North Sea winds are more prevalent, seas run higher, the shore is often a danger rather than a refuge. The high seas called for the sailing ship, and in the fourteenth and fifteenth centuries it appears, keeping its course by the compass and the stars.

By the thirteenth century the Hansa merchants were already sailing regularly from Bergen across the grey cold seas to the Northmen in Iceland. In Iceland men knew of Greenland, and adventurous voyagers had long ago found a further land beyond, Vinland, where the climate was pleasant and where men could settle if they chose to cut themselves off from the rest of human kind. This Vinland was either Nova Scotia or, what is more probable, New England.

All over Europe in the fifteenth century merchants and sailors were speculating about new ways to the East. The Portuguese, unaware that Pharaoh Necho had solved the problem ages ago, were asking whether it was not possible to go round to India by the coast of Africa. Their ships followed (1445) in the course that Hanno took to Cape Verde. They put out to sea to the west and found the Canary Isles, Madeira, and the Azores. That was a fairly long stride across the Atlantic. In these maritime adventures in the eastern Atlantic and on the West African coast, says Sir Harry Johnston, the Portuguese were preceded in the thirteenth, fourteenth, and early fifteenth centuries by Normans, Catalonians, and Genoese. But in the fourteenth and fifteenth centuries their activities rose to pre-eminence, and it is they, at any rate, who fixed and established discoveries that hitherto had been mere vague and incidental visits. They were the pioneers of nautical astronomy. In 1486 a Portuguese, Bartolomeu Diaz, reported that he had rounded the south of Africa. So the way opened for the great enterprise of Vasco da Gama eleven years later. The Portuguese were already working their way to the east before the Spanish went west

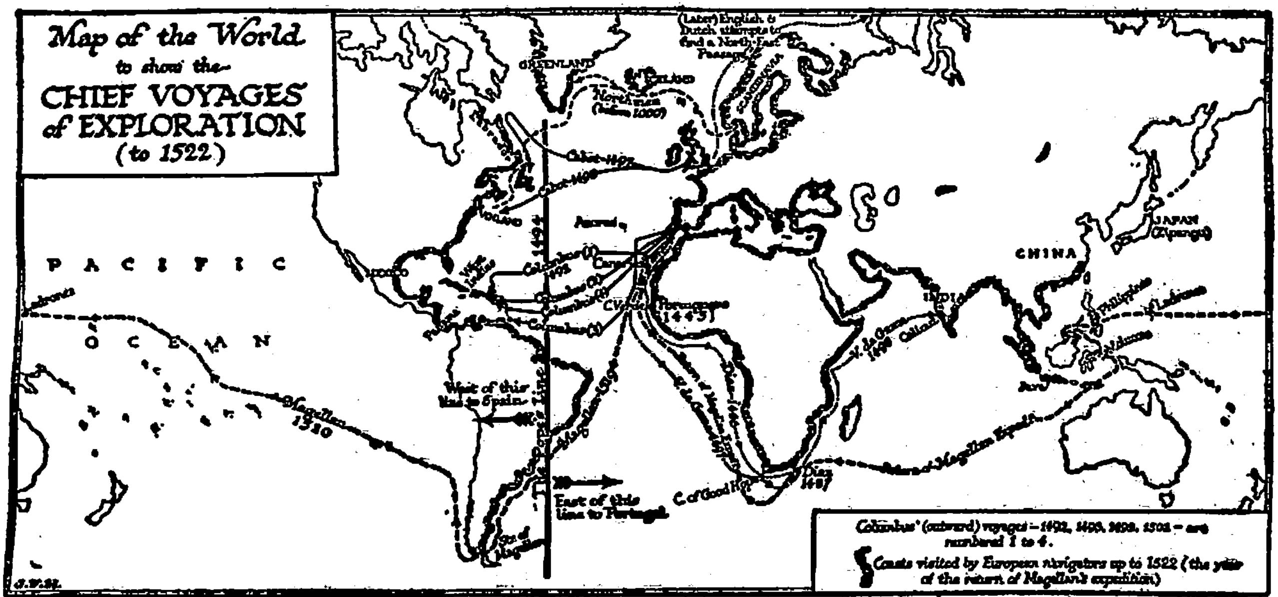
A certain Genoese, Christopher Columbus, began to think more and more of what is to us a very obvious and natural enterprise, but which strained the imagination of the fifteenth century to the utmost, a voyage due west across the Atlantic. At that time nobody knew of the existence of America as a separate continent. Columbus knew that the world was a sphere, but he under-estimated its size; the travels of Marco Polo had given him an exaggerated idea of the extent of Asia, and he supposed, therefore, that Japan, with its reputation for a great wealth of gold, lay across the Atlantic in about the position of Mexico. He had made various voyages in the Atlantic; he had been to Iceland and perhaps heard of Vinland, which must have greatly encouraged these ideas of his, and this project of sailing into the sunset became the ruling purpose of his life.

He was a penniless man, some accounts say he was a bankrupt, and his only way of securing a ship was to get someone to entrust him with a command. He went first to King John II of Portugal, who listened to him, made difficulties, and then arranged for an expedition to start without his knowledge, a purely Portuguese expedition. This highly diplomatic attempt to steal a march on an original man failed, as it deserved to fail; the crew became mutinous, the captain lost heart and returned (1483). Columbus then went to the Court of Spain.

At first he could get no ship and no powers. Spain was assailing Granada, the last foothold of the Moslems in Western Europe. Most of Spain had been recovered by the Christians between the eleventh and the thirteenth centuries; then had come a pause; and now all Christian Spain, united by the marriage of Ferdinand of Aragon and Isabella of Castile, was setting itself to the completion of the Christian conquest. Despairing of Spanish help, Columbus sent his brother Bartholomew to Henry VII of England, but the adventure did not attract that canny monarch. Finally, in 1492, Granada fell—some slight compensation for the Christian loss of Constantinople fifty years before; and then, helped by some merchants of the town of Palos, Columbus got his ships—three ships, of which only one, the *Santa Maria*, of 100 tons burthen, was decked; the two other were open boats of half that tonnage.

The little expedition—it numbered altogether eighty-eight men!—went south to the Canaries, and then stood out across the unknown seas, in beautiful weather and with a helpful wind.

The story of that momentous voyage of two months and


Map of the World
to show the
CHIEF VOYAGES
of EXPLORATION
(to 1522)
GREENLAND
Northmen
(before 1000)
(Later) English & Dutch attempts to find a North-East Passage
Cabot 1497
Cabot 1498
Azores
Canaries
C. Verde
Portuguese
1445
Columbus (1)
Columbus (2)
Columbus (3)
Columbus (4)
West Indies
1494
West of this line to Spain
East of this line to Portugal
Str. of Magellan
C. of Good Hope
Diaz 1486
Diaz 1487
V. da Gama 1498
Calicut
INDIA
CHINA
JAPAN
(Zipangu)
Philippines
Ladrones
P A C I F I C
O C E A N
Magellan
1520
Return of Magellan Expedn.
Columbus' (outward) voyages—1492, 1493, 1498, 1502—are numbered 1 to 4.
Coasts visited by European navigators up to 1522 (the year of the return of Magellan's expedition)