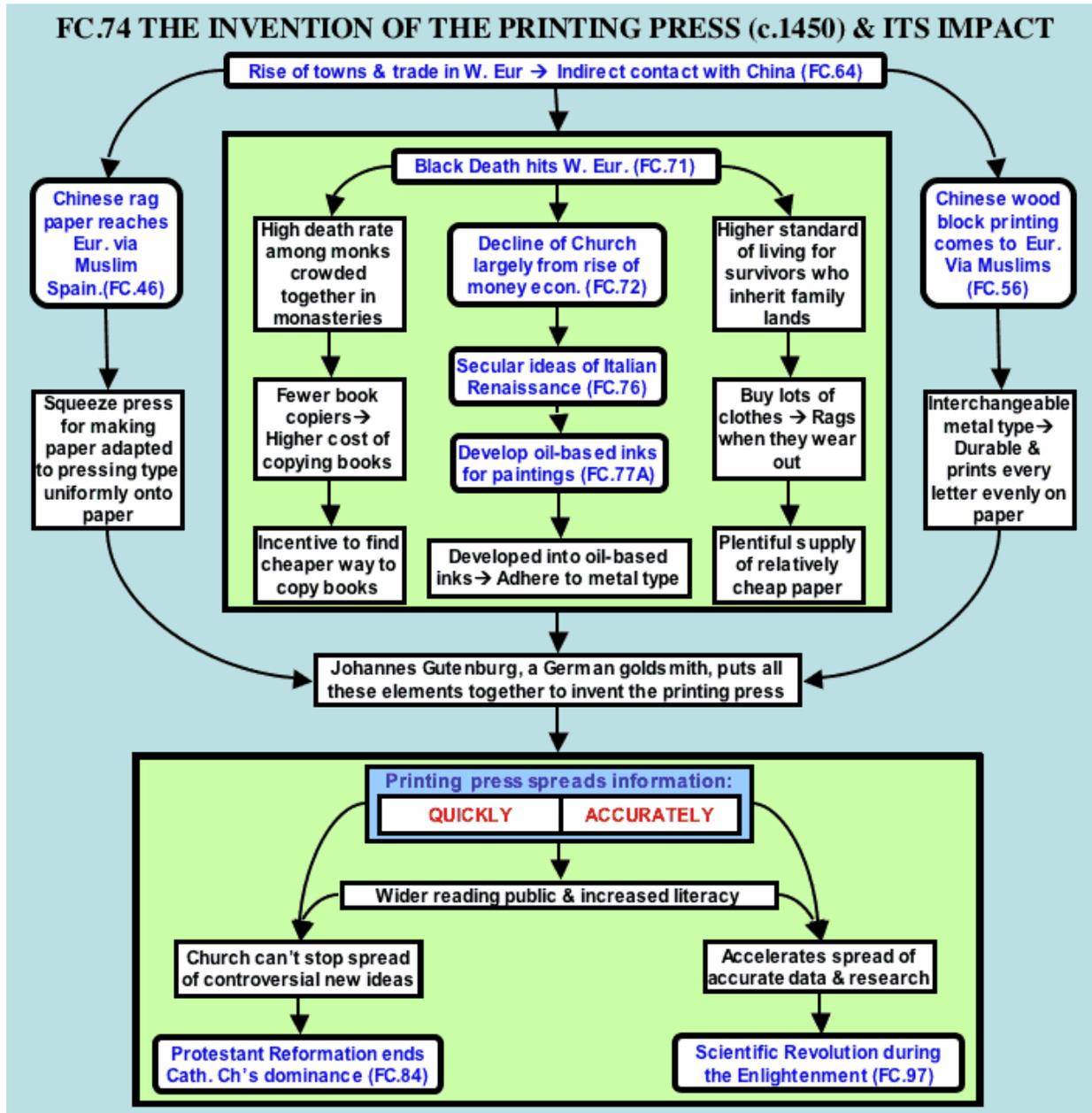


social preeminence. Gunpowder technology was also expensive. As a result, only kings and princes were able to afford armies with cannons and firearms, thus stripping nobles of even more of their power and prestige, leaving the way open for the rise of the modern nation state.

The Renaissance Unit 11: The Renaissance

FC74 The invention of the printing press and its effects



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Introduction

At the height of the Hussite crisis in the early 1400's, when the authorities ordered 200 manuscripts of heretical writings burned, people on both sides realized quite well the significance of that act. Two hundred handwritten manuscripts would be hard to replace. Not only would it be a time consuming job, but also trained scribes would be hard to find. After all, most of them worked for the Church, and it seemed unlikely that the Church would loan out its scribes to copy the works of heretics. Although the Hussites more than held their own against the Church, their movement remained confined mainly to the borders of their homeland of Bohemia. One main reason for this was that there was no mass media, such as the printing press to spread the word. A century later, all that had changed.

Like any other invention, the printing press came along and had an impact when the right conditions existed at the right time and place. In this case, that was Europe in the mid 1400's. Like many or most inventions, the printing press was not the result of just one man's ingenious insight into all the problems involved in creating the printing press. Rather, printing was a combination of several different inventions and innovations: block printing, rag paper, oil based ink, interchangeable metal type, and the squeeze press.

If one process started the chain reaction of events that led to the invention of the printing press, it was the rise of towns in Western Europe that sparked trade with the outside world all the way to China. That trade exposed Europeans to three things important for the invention of the printing press: rag paper, block printing, and, oddly enough, the Black Death.

For centuries the Chinese had been making rag paper, which was made from a pulp of water and discarded rags that was then pressed into sheets of paper. When the Arabs met the Chinese at the battle of the Talas River in 751 A.D., they carried off several prisoners skilled in making such paper. The technology spread gradually across the Muslim world, up through Spain and into Western Europe by the late 1200's. The squeeze press used in pressing the pulp into sheets of paper would also lend itself to pressing print evenly onto paper.

The Black Death, which itself spread to Western Europe thanks to expanded trade routes, also greatly catalyzed the invention of the printing press in three ways, two of which combined with the invention of rag paper to provide Europe with plentiful paper. First of all, the survivors of the Black Death inherited the property of those who did not survive, so that even peasants found themselves a good deal richer. Since the textile industry was the most developed industry in Western Europe at that time, it should come as no surprise that people spent their money largely on new clothes. However, clothes wear out, leaving rags. As a result, fourteenth century Europe had plenty of rags to make into rag paper, which was much cheaper than the parchment (sheepskin) and vellum (calfskin) used to make books until then. Even by 1300, paper was only one-sixth the cost of parchment, and its relative cost continued to fall. Considering it took 170 calfskins or 300 sheepskins to make one copy of the *Bible*, we can see what a bargain paper was.

But the Black Death had also killed off many of the monks who copied the books, since the crowded conditions in the monasteries had contributed to an unusually high mortality rate. One result of this was that the cost of copying books rose drastically while the cost of paper was dropping. Many people considered this unacceptable and looked for a better way to copy books. Thus the Black Death rag paper combined to create both lots of cheap paper plus an incentive for the invention of the printing press.

The Black Death also helped lead to the decline of the Church, the rise of a money economy, and subsequently the Italian Renaissance with its secular ideas and emphasis on painting. It was the Renaissance artists who, in their search for a more durable paint, came up with oil-based paints. Adapting these to an oil-based ink that would adhere to metal type was fairly simple.

Block printing, carved on porcelain, had existed for centuries before making its way to Europe. Some experiments with interchangeable copper type had been carried on in Korea. However, Chinese printing did not advance beyond that, possibly because the Chinese writing system used thousands of characters and was too unmanageable. For centuries after its introduction into Europe, block printing still found little use, since wooden printing blocks wore out quickly when compared to the time it took to carve them. As a result of the time and expense involved in making block prints, a few playing cards and pages of books were printed this way, but little else.

What people needed was a movable type made of metal. And here again, the revival of towns and trade played a major role, since it stimulated a mining boom, especially in Germany, along with better techniques for working metals, including soft metals such as gold and copper. It was a goldsmith from Mainz, Germany, Johannes

Gutenberg, who created a durable and interchangeable metal type that allowed him to print many different pages, using the same letters over and over again in different combinations. It was also Gutenberg who combined all these disparate elements of movable type, rag paper, the squeeze press, and oil based inks to invent the first printing press in 1451.

The first printed books were religious in nature, as were most medieval books. They also imitated (handwritten) manuscript form so that people would accept this new revolutionary way of copying books. The printing press soon changed the forms and uses of books quite radically. Books stopped imitating manuscript forms such as lined paper to help the copiers and abbreviations to save time in copying. They also covered an increasingly wider variety of non-religious topics (such as grammars, etiquette, and geology books) that appealed especially to the professional members of the middle class.

By 1482, there were about 100 printing presses in Western Europe: 50 in Italy, 30 in Germany, 9 in France, 8 each in Spain and Holland, and 4 in England. A Venetian printer, Aldus Manutius, realized that the real market was not for big heavy volumes of the Bible, but for smaller, cheaper, and easier to handle "pocket books". Manutius further revolutionized book copying by his focusing on these smaller editions that more people could afford. He printed translations of the Greek classics and thus helped spread knowledge in general, and the Renaissance in particular, across Europe. By 1500, there were some 40,000 different editions with over 6,000,000 copies in print.

The impact of the printing press

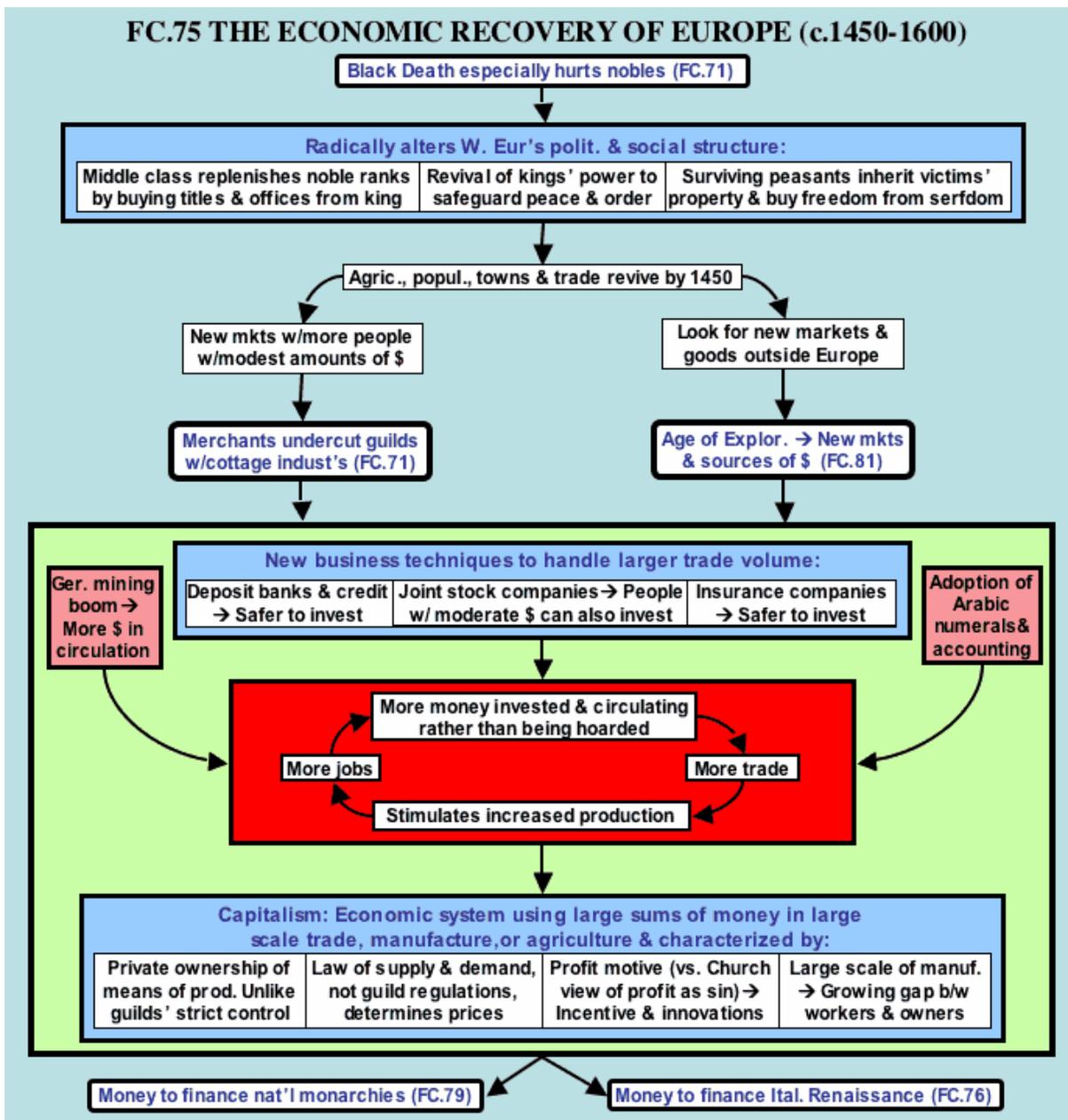
The printing press had dramatic effects on European civilization. Its immediate effect was that it spread information *quickly* and *accurately*. This helped create a wider literate reading public. However, its importance lay not just in how it spread information and opinions, but also in what sorts of information and opinions it was spreading. There were two main directions printing took, both of which were probably totally unforeseen by its creators.

First of all, more and more books of a secular nature were printed, with especially profound results in science. Scientists working on the same problem in different parts of Europe especially benefited, since they could print the results of their work and share it accurately with a large number of other scientists. They in turn could take that accurate, not miscopied, information, work with it and advance knowledge and understanding further. Of course, they could accurately share their information with many others and the process would continue. By the 1600's, this process would lead to the Scientific Revolution of the Enlightenment, which would radically alter how Europeans viewed the world and universe.

The printing press also created its share of trouble as far as some people were concerned. It took book copying out of the hands of the Church and made it much harder for the Church to control or censor what was being written. It was hard enough to control what Wycliffe and Hus wrote with just a few hundred copies of their works in circulation. Imagine the problems the Church had when literally thousands of such works could be produced at a fraction of the cost. Each new printing press was just another hole in the dyke to be plugged up, and the Church had only so many fingers with which to do the job. It is no accident that the breakup of Europe's religious unity during the Protestant Reformation corresponded with the spread of printing. The difference between Martin Luther's successful Reformation and the Hussites' much more limited success was that Luther was armed with the printing press and knew how to use it with devastating effect.

Some people go as far as to say that the printing press is the most important invention between the invention of writing itself and the computer. Although it is impossible to justify that statement to everyone's satisfaction, one can safely say that the printing press has been one of the most powerful inventions of the modern era. It has advanced and spread knowledge and molded public opinion in a way that nothing before the advent of television and radio in the twentieth century could rival. If it were not able to, then freedom of the press would not be such a jealously guarded liberty as it is today.

FC75The Economic recovery of Europe (c.1450-1600)



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The turmoil of the Later Middle Ages (c.1300-1450) continued and accelerated the changes that started with the rise of towns and kings in the High Middle Ages (c.1100-1300). Although these were certainly difficult times to live through, they also paved the way for the modern institutions, movements, and values that would emerge after 1450: capitalism with its new attitudes toward money and profit, the Renaissance with its new attitudes toward the secular world and Man's place in it, the nation state with its relatively centralized bureaucracy and army, and the age of exploration with the new perspective it gave on Europe's place in the world. New technological innovations such as the printing press, gunpowder, and better ships and navigation would also generate significant changes.

Social changes

The turmoil of the Later Middle Ages did not affect everyone equally. Nobles, in particular, saw a decline in their position as a class. The longbow, gunpowder, and massed formations of infantry pikemen effectively challenged

the armored knight's supremacy on the battlefield. Even his place in the castle grew ever more dangerous as new and more destructive cannons were constantly being developed. Economically, the Later Middle Ages had seen labor shortages that led to higher prices. Inflation cut increasingly into the noble's wealth since it was based on land with a more static value. By 1450, almost all the peasants in Western Europe had been able to buy freedom from their lords, paying them fixed rents instead of labor. Even those rents failed to help the nobles much since inflation reduced their value and nobles often had little skill or desire to spend within their means.

The nobles' decline meant other social classes could rise in power and status. Peasants benefited because they had bought their freedom and many even owned their land. The greater incentive provided by working for themselves rather than their lords led to greater agricultural production and the revival of Europe's population. The middle class benefited by making money from the nobles, either through loans with interest or selling them goods for a profit. However wealthy nobles may have been, it seemed that a lot of their money was ending up in the hands of middle class merchants. The middle class was also assuming a larger role in the governments of the emerging national monarchies in Western Europe. Kings also benefited since the nobles had been the main obstacles to building strong nation-states. The alliance of kings and middle class meant that the kings were the only ones with the power and wealth to afford the new gunpowder technology that was becoming a necessary part of any respectable army.

In spite of this, some powerful and influential nobles remained. Others were forced to seek employment in the king's army or at his court as *courtiers*, basically idle hangers on whose job was to make the king's court look impressive. Many others lost their noble status by having to support themselves through such ignoble pursuits as agriculture and commerce. Still, the nobles were considered the class to belong to. As a result, we see wealthy members of the middle class buying titles of nobility from the king (who always needed cash), giving up their businesses, and settling down on their landed estates just like other nobles. In this way, the noble class was constantly replenished by new blood, although the importance of the nobles kept on its path of gradual decline. The changes sweeping through European society were making it harder and harder to find a place for the nobles.

By 1500, we see the peasants in Western Europe free and often in possession of their own land. The middle class' status was getting steadily higher, both through their money and positions in the king's bureaucracy. And the kings were tightening their grip on their realms through their bureaucracies and armies.

Economic revival

, as usual, was based firmly on agriculture revival. That largely depended on the climate, which improved during this period, but other factors also helped. For one thing, the turmoil of the Later Middle Ages, which had weakened the Church and Nobles, was largely subsiding by 1450. This led to the emergence of strong monarchies in Western Europe that could safeguard the peace and promote trade and commerce. Secondly, the nobles, ruined by inflation and the collapsed urban grain market triggered by the Black Death, had sold most of their serfs their freedom by 1450. Finally, the peasants who had survived the Black Death and inherited the property of those who died had attained a higher standard of living. The fact that most peasants were now free and that many owned their land provided incentive to work harder that led to better agricultural production. One good indication that this was taking place was the fact that Europe's population rose from an estimated 50 million in 1450 to 70 million by 1500. This revival had three effects that would combine to create a dynamic new economic system: capitalism.

First of all, the dramatic population growth of the late 1400's meant that towns and trade could also rapidly recover and surpass their previous prosperity. In 1450, the wealthiest banking family in Europe was that of the Medici of Florence, whose fortune consisted of 90,000 florins. By the 1500's, another banking family, the Fuggers of Augsburg in Germany, had taken over first place with nearly one million florins to their credit, over ten times that of the Medici half a century before. What this suggests is that the amount of trade and money in circulation had increased a great deal.

The second effect was that there were new consumer markets, but with a very different distribution of wealth from before. In the High Middle Ages, nobles had provided merchants with much of their market since they controlled so much of Europe's wealth at that time. By 1450, this had changed. Most nobles had lost money and status and could not afford the fine woolens and other goods made by the guilds. Instead there were common laborers and peasants, each with a modest amount of money to spend. A lot of money was there. It was just spread out more widely.

This change in the consumer market from a few rich nobles to a large number of people each with modest amounts of cash led to a change in production techniques as well. Up to this point, guilds had controlled the production and selling of manufactured goods, while nobles could afford the high quality and prices that the guilds maintained. The new type of consumer emerging by 1500 could not afford them. In response to this, some wealthy businessmen went outside the town walls and the jurisdiction of the guilds to the various peasant cottages in the countryside. Here the peasants would produce lower quality woolens than the guilds produced. The businessmen would pay them lower prices for those woolens and turn around and undersell their guild competitors. In this way, older medieval cities and guilds, such as in Flanders, went into decline, while other centers of production took their places. This also led to the growing concentration of wealth in the hands of a few rich businessmen instead of being spread out among the guilds. Thus by 1500, the consumer market was more spread out than before, while the means of production and investment were concentrated in fewer hands.

The third effect of Europe's reviving economy was that its expanding internal markets prompted Spanish and Portuguese explorers to search for new trade routes to the sources of spices in the Far East. Besides opening up whole new continents for discovery and exploration, this also vastly expanded the volume of Europe's trade.

New business techniques

In order to handle this higher volume of trade, new techniques of handling money became prevalent about this time. The Italian city-states especially pioneered these new methods. The prosperity that these new business techniques brought Italy largely explains why Italy would lead the rest of Europe in the Renaissance. Very briefly, these techniques were:

1. *Joint stock companies.* These allowed people with small amounts of cash to take part in business enterprises such as merchant expeditions. Their importance was that, instead of hoarding their money, people put it into circulation in Europe's economy, allowing it to grow even more.
2. *Insurance companies.* These reduced the risk of losing all of one's investment in a business venture. The result was much like that of joint stock companies, in that it encouraged people to invest, rather than hoard, their money, which stimulated further growth in Europe's economy.
3. *Deposit banks and credit.* These gave bankers more money to invest in business ventures since they attracted investors with their promise of guaranteed interest from the deposits. Banking houses also opened branches and extended a system of credit across Western Europe. Credit allowed a businessman to use more money than he actually had to embark on some venture, paying his creditor back with interest when he made his profit. Europe's economy grew much more quickly this way than if it had been limited by the amount of cash on hand at any particular time. Banking and credit also made the transfer of funds across Europe much safer. For example, with a strictly cash economy, someone transferring funds from Florence to London ran the risk of being ambushed by brigands and losing his money. With credit, the same merchant could send an agent to London with a note saying he was worth so much money guaranteed by the bank back in Florence. The agent might get that money in the form of church taxes bound for Italy. He could use that cash in England, and then send a credit note back to Florence worth the amount he borrowed in Church taxes. If brigands ambushed an agent either way, all they got was a credit note that they could not spend. Meanwhile, the Florentine banker got hold of all the funds he needed in England, and the Church in Italy safely collected its taxes from England.

There were dangers to this system, especially debtors not repaying their creditors. Kings were especially bad risks in this respect. For example, in the 1340's, Edward III of England failed to repay the Bardi and Peruzzi firms of Florence. This caused their bankruptcies, which sent ripples throughout Western Europe's economy since so much of it was tied up with these two banking houses.

These new business techniques combined to create a feedback cycle that accelerated the growth of Europe's economy. More money was invested in new business ventures. This increased trade, which stimulated more production of goods. That, in turn, created more jobs for people, who had more money to spend, which was safer because of the new business techniques, and so on.

Overall, the system worked quite well, providing money for the expansion of Europe's economy and the growth of its monarchies. Two other important factors should be mentioned. One is the dramatic improvement in mining techniques in Europe at this time. Germany in particular saw a fivefold increase in mining production between 1400 and the early 1500's, which put much more silver into circulation. Secondly, the adoption of Arabic numerals improved accounting techniques so trade and business could run more efficiently. All this increased economic activity and prosperity transformed European values and attitudes toward money and helped create a new economic system called capitalism.

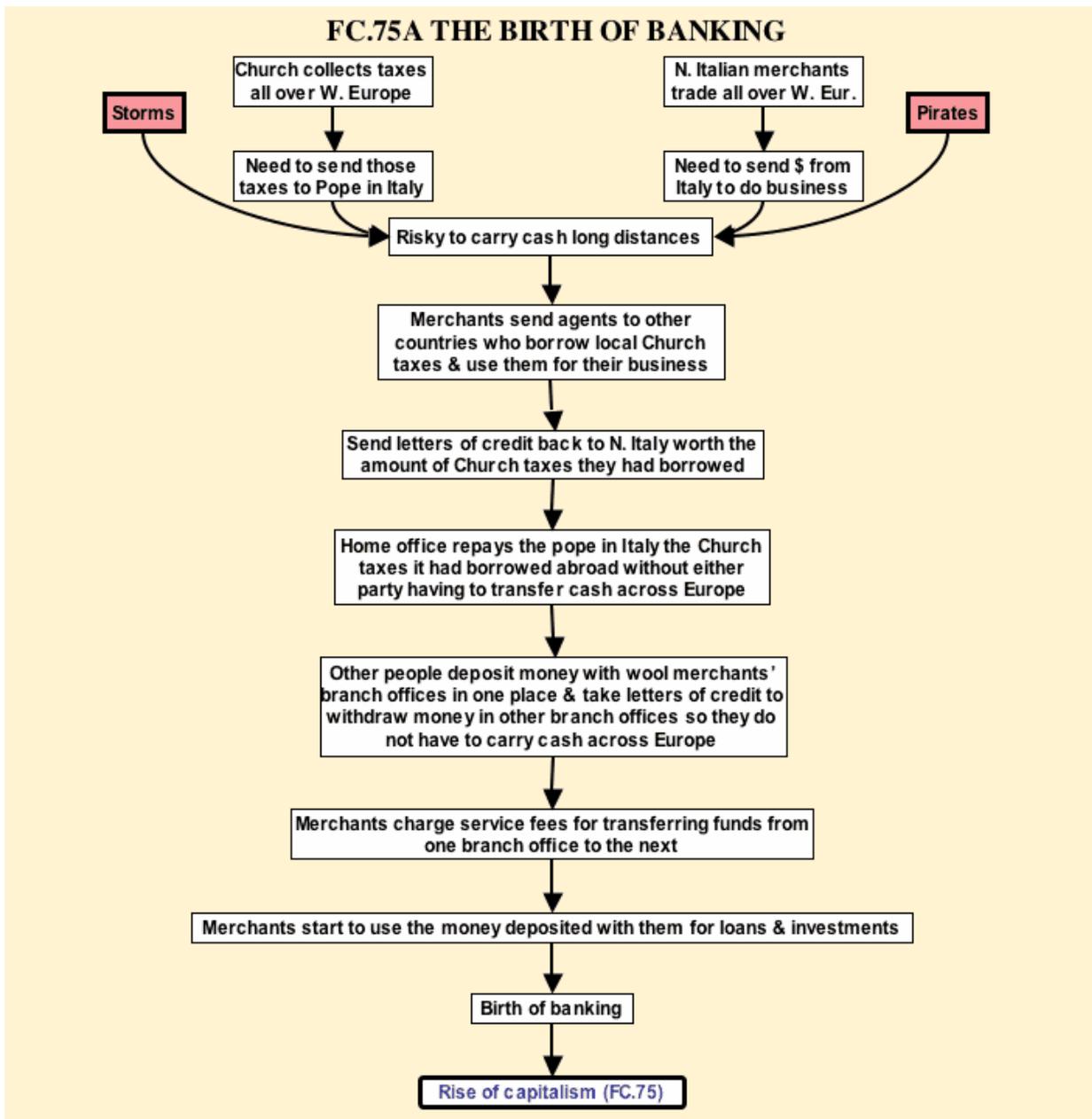
Capitalism

is an economic activity that involves using large sums of money or **capital** in large-scale commercial, manufacturing, or agricultural activities. It had some medieval roots, but also some non-medieval elements that did not develop until around 1500. We can isolate four main characteristics of capitalism:

1. *Private ownership of the means of production.* This was largely a break from the Middle Ages when guilds controlled the means of production. We have seen how wealthy businessmen started to break the guilds' monopoly by having peasants produce textiles in the countryside. This process continued and accelerated after 1500. Modern communism theoretically has the means of production owned by the workers, represented by the government, which in some ways seems closer to medieval guilds than its main rival, capitalism.
2. *The law of supply and demand determines prices.* Once again, this is a break from the guilds which kept prices artificially fixed no matter how plentiful or scarce its goods were. Communist governments also control prices in a similar way.
3. *There is a sharp distinction and often little contact between the workers and the capitalist who owns the means of production.* Such a distinction existed to a much smaller degree between guild masters and their laborers, and this became a serious problem in the later Middle Ages. Such a gap between capitalists and their workers would widen considerably and become especially bad in the early Industrial Revolution of the 1800's.
4. *The profit motive.* Although medieval guilds and merchants made profits, those profits were largely restricted by the Church's ban against charging more than a "fair price" for goods and services. The emergence of the profit motive by 1500 especially shows the changing attitudes and values in European civilization.

Capitalism helped lay the foundations for the rise of national monarchies in Europe by providing them with the capital to build up strong professional armies and bureaucracies. The states that best adapted to capitalism, in particular the Dutch Republic in the 1600's and England in the 1700's, would emerge as the economic and political powerhouses of Europe and eventually establish dominance of the world in later centuries. European prosperity in the later 1400's also made patronage of the arts possible and helped create one of the greatest cultural movements in history: the Renaissance.

FC75A The Birth of Banking



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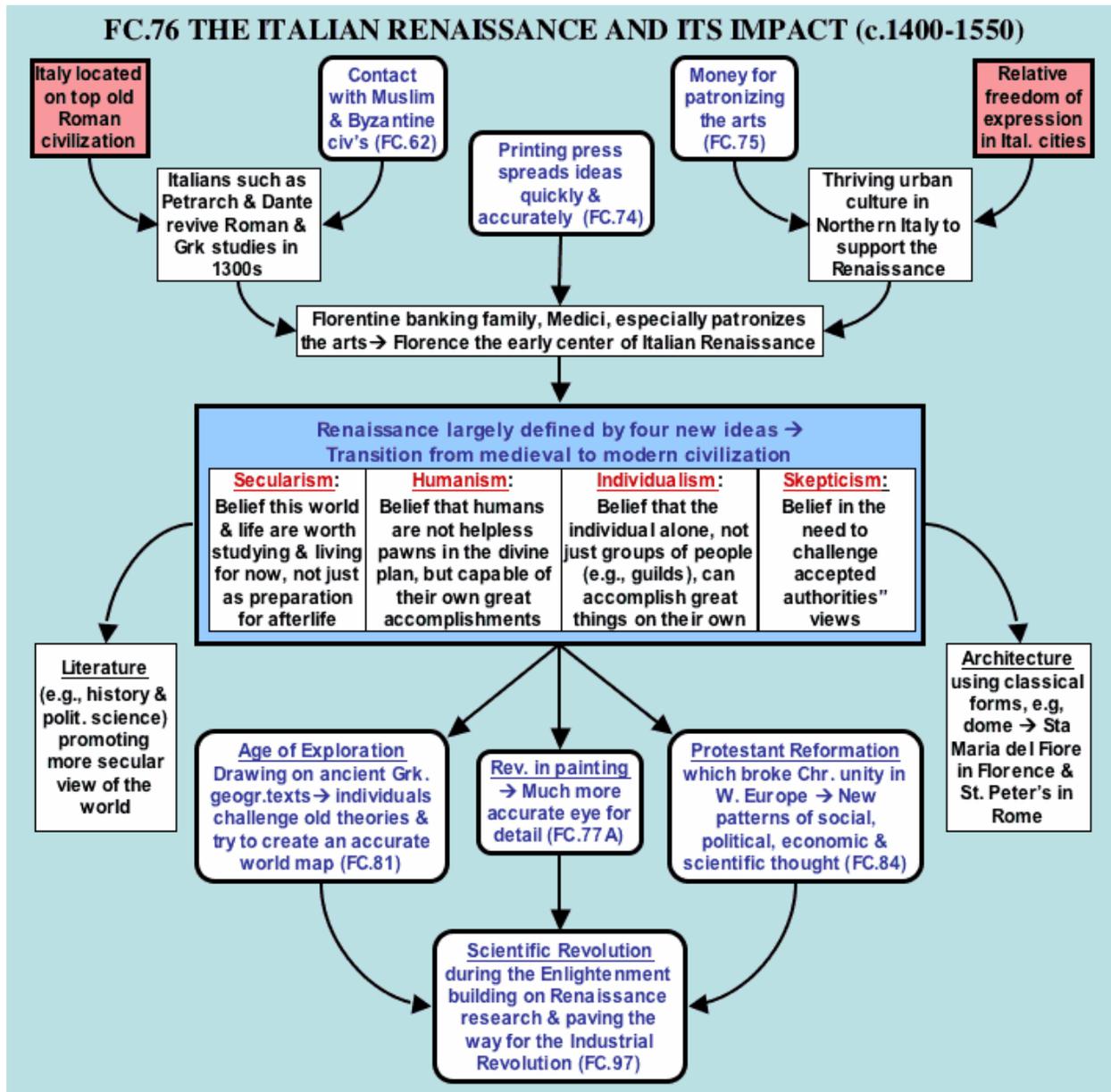
One of history's most important financial innovations was banking, which was closely bound up with credit. The main problem spurring on this development was the need to safely transport large amounts of cash over long distances in order to carry on trade across Europe. Such journeys were particularly beset by two dangers: natural disasters, especially storms, and attacks by pirates or brigands. Luckily, there were two parties with complementary needs that led to a solution. One was the Church, which needed to send its taxes to Italy from all over Europe. The other consisted of Italian merchants who wanted to take money from Italy to destinations across Europe in order to carry on trade.

At some point, a merchant started sending agents to other countries to trade. However, instead of carrying cash, they had letters of credit that they would present to local Church officials in return for cash that they could use there for trading. When they or church officials returned to Italy, they would bring letters of credit worth the amount borrowed from the Church and present them to the Italian merchant who would then give the church the money he

owed them. In that way, both parties could transfer large amounts of money across Europe without carrying any cash.

As this practice caught on, there were other people who wanted to transfer funds across Europe without the risks that came from traveling with cash. Therefore, they would deposit cash with a merchant who had branch offices all over Europe, take a letter of credit to their destination, and reclaim their cash from the merchant's branch office there. Naturally, the merchant would charge a fee for this service. He would also use the money deposited with him for his own business deals, hopefully making a profit on the depositor's cash before he reclaimed his money. Thus was born our modern institution of banking, an essential ingredient in the capitalist system.

FC76 The Italian Renaissance (c.1400-1550)



[FC76](#) in the [Hyperflow of History](#);

Covered in multimedia lecture [#2115](#).

"...everything that surrounds us is our own work, the work of man: all dwellings, all castles, all cities, all the edifices throughout the whole world, which are so numerous and of such quality that they resemble the works of angels

rather than men. Ours are the paintings, the sculptures; ours are the trades sciences and philosophical systems.”—
Gianozzo Manetti, 1452

Introduction: why Italy?

On rare occasion one comes across a period of such dynamic cultural change that it is seen as a major turning point in history. Ancient Greece, and especially Athens, in the fifth century B.C. was such a turning point in the birth of Western Civilization. The Italian Renaissance was another. Both were drawing upon a rich cultural heritage. For the Greeks, it was the ancient Near East and Egypt. For the Italian Renaissance, it was ancient Rome and Greece. Both ages broke the bonds of earlier cultural restraints and unleashed a flurry of innovations that have seldom, if ever, been equaled elsewhere. Both ages produced radically new forms and ideas in a wide range of areas: art, architecture, literature, history, and science. Both ages shined brilliantly and somewhat briefly before falling victim to violent ends, largely of their own making. Yet, despite their relative briefness, both ages passed on a cultural heritage that is an essential part of our own civilization. There were three important factors making Italy the birthplace of the Renaissance.

1. *Italy's geographic location.* Renaissance Italy was drawing upon the civilizations of ancient Greece and especially Rome, upon whose ruins it was literally sitting. During the Middle Ages, Italians had neglected and abused their Roman heritage, even stripping marble and stone from Roman buildings for their own constructions. However, by the late Middle Ages, they were becoming more aware of the Roman civilization surrounding them. Italy was also geographically well placed for contact with the Byzantines and Arabs who had preserved classical culture. Both of these factors combined to make Italy well suited to absorb the Greek and Roman heritage.
2. *The recent invention of the printing press spread new ideas quickly and accurately.* This was especially important now since many Renaissance ideas were not acceptable to the Church. However, with the printing press, these ideas were very hard to suppress.
3. *Renaissance Italy, like the ancient Greeks, thrived in the urban culture and vibrant economy of the city-state.* This helped in two ways. First, the smaller and more intimate environment of the city-state, combined with the freedom of expression found there, allowed a number of geniuses to flourish and feed off one another's creative energies. Unfortunately, the city-state could also be turbulent and violent, as seen in the riot scene that opens Shakespeare's *Romeo and Juliet*. Secondly, the Italian city-states, especially trading and banking centers such as Venice and Florence, provided the money to patronize the arts. Therefore, the wealth and freedom of expression thriving in the urban culture of Italy both helped give birth to the Renaissance.

Renaissance

literally means rebirth, in this case the rebirth of classical Greek and Roman culture. The traditional view of the Renaissance was that it suddenly emerged as a result of the fall of Constantinople in 1453, which drove Greek scholars to seek refuge in Italy and pass classical culture to Italy. Historians now take this as too simplistic an explanation. For one thing, knowledge of Greek and Roman culture had never completely died out in medieval Europe, being kept alive during the Dark Ages in the monasteries, and during the High Middle Ages in the growing universities. Secondly, a revived interest in classical culture can be traced back to the Italian authors, Dante and Petrarch, in the early 1300's. Thus the Italian Renaissance was more the product of a long evolution rather than a sudden outburst.

Still, the term "renaissance" has some validity, since its conscious focus was classical culture. The art and architecture drew heavily upon Greek and Roman forms. Historical and political writers used Greek and Roman examples to make their points. And renaissance science, in particular, relied almost slavishly upon Greek and Roman authorities, which was important, since it set up rival authorities to the Church and allowed Western Civilization to break free from the constraints of medieval thought and give birth to the Scientific Revolution during the Enlightenment.

New patterns of thought

Whether one sees the Renaissance as a period of originality or just drawing upon older cultures, it did generate four ideas that have been and still are central to Western Civilization: secularism, humanism, individualism, and skepticism.

1. *Secularism* comes from the word secular, meaning of this world. Medieval civilization had been largely concerned with religion and the next world. The new economic and political horizons and opportunities that were opening up for Western Europe in the High and Late Middle Ages got people more interested in this world. During the Renaissance people saw this life as worth living for its own sake, not just as preparation for the next world. The art in particular exhibited this secular spirit, showing detailed and accurate scenery, anatomy, and nature, whereas medieval artists generally ignored such things since their paintings were for the glory of God. This is not to say that Renaissance people had lost faith in God. Religion was still the most popular theme for paintings. But during the Renaissance people found other things worth living for besides the afterlife.
2. *Humanism* goes along with secularism in that it makes human beings, not God, the center of attention. The quotation at the top of this reading certainly emphasizes this point. So did Renaissance art, which portrayed the human body as a thing of beauty in its own right, not like some medieval "comic strip" character whose only reason to exist was for the glory of God. Along those lines, Renaissance philosophers saw humans as intelligent creatures capable of reason (and questioning authority) rather than being mindless pawns helplessly manipulated by God. Even the term for Renaissance philosophers, "humanists", shows how the focus of peoples' attention had shifted from Heaven and God to this world and human beings. It also described the group of scholars who drew upon the more secular Greek and Roman civilizations for inspiration.
3. *Individualism* takes humanism a step further by saying that individual humans were capable of great accomplishments. The more communal, group oriented society and mentality of the Middle Ages was giving way to a belief in the individual and his achievements. The importance of this was that it freed remarkable individuals and geniuses, such as Leonardo da Vinci to live up to their potential without being held back by a medieval society that discouraged innovation.

Besides the outstanding achievements of Leonardo, one sees individualism expressed in a wide variety of ways during the Renaissance. Artists started signing their paintings, thus showing individualistic pride in their work. Also, the more communal guild system was being replaced by the more individualistic system of capitalism, which encouraged private enterprise.

4. *Skepticism*, which promoted curiosity and the questioning of authority, was largely an outgrowth of the other three Renaissance ideas. The secular spirit of the age naturally put Renaissance humanists at odds with the Church and its purely religious values and explanations of the universe. Humanism and individualism, with their belief in the ability of human reason, raised challenges to the Church's authority and theories, which in turn led to such things as the Protestant Reformation, the Age of Exploration and the Scientific Revolution, all of which would radically alter how Western Europe views the world and universe. These four new ideas of secularism, humanism, individualism, and skepticism led to innovations in a variety of fields during the Renaissance, the most prominent being literature and learning, art, science, the Age of Exploration, and the Protestant Reformation.

Literature and learning

throughout the Middle Ages were centered on the Church. Consequently, most books were of a religious nature. There were Greek and Roman texts stashed away in the monasteries, but few people paid much attention to them. All that changed during the Renaissance. For one thing, increased wealth and the invention of the printing press created a broader public that could afford an education and printed books. Most of these newly educated people were from the noble and middle classes. Therefore, they wanted a more practical and secular education and books to prepare them for the real world of business and politics.

In response to this, new schools were set up to give the sons of nobles and wealthy merchants an education with a broader and more secular curriculum than the Church provided: philosophy, literature, mathematics, history, and politics. Naturally much of the basis for this new curriculum was Greek and Roman culture. Classical authors such as Demosthenes and Cicero were used to teach students how to think, write, and speak clearly. Greek and Roman history were used to teach object lessons in politics. This curriculum provided the skills and knowledge seen as essential for an educated man back then, and served as the basis for school curriculums well into the twentieth century. Only in recent decades has a more technical education largely replaced the curriculum established for us in the Renaissance.

Along the same lines, a more secular literature largely replaced the predominantly religious literature of the Middle Ages. History, as a study of the past (Greek and Roman past in particular) in order to learn lessons for the future, was emerging. So was another emerging new discipline deeply rooted in history: political science. The father of this discipline was Nicolo Machiavelli (1469-1527). His treatise on governing techniques, *The Prince*, urges the prince to carry on with whatever ruthless means were at his disposal. This serves as a stark contrast to St. Augustine's concept of the "just war."

Another book of a secular nature was Castiglione's *The Courtier*, which spelled out the ideal education and qualities of a nobleman attending a prince's court. Unlike the usually illiterate and rough mannered medieval noble, Castiglione's courtier should be versed in manners (such as not cleaning one's teeth in public with one's finger). This ideal of the well-rounded "Renaissance Man" harkens back to the Greek ideal of a well-rounded man and has continued to this day.

Art

is the one field most people associate with the Renaissance since it saw the most radical innovations and breaks with the Middle Ages. Medieval art was religious in tone and for the glory of God. As a result, artists neglected mundane details, thus making the art flat and lifeless. Faces and bodies were cartoon like, having no individual features or anything approaching anatomical detail. Other details such as background, perspective, proportion, and individuality were all virtually unknown.

Renaissance art contrasted sharply with medieval art in all these respects. More paintings were on secular themes, especially portraits. And even the religious paintings paid a great deal of attention to glorifying the human form and accomplishments. Starting with Giotto in the early 1300's, Renaissance artists increasingly perfected and used such things as background, perspective, proportion, and individuality. In fact, Leonardo's detail was so good that botanists today can identify the kinds of plants he put into his paintings.

Although painting was especially prominent during the Renaissance, other art forms also flourished. For example, architecture broke somewhat with the medieval Gothic style during the Renaissance. However, it was less innovative and relied more heavily on classical forms, in particular columns, arches, and domes as well as building on a massive scale. Possibly the supreme example of this is the dome of St. Peter's in Rome which was designed by Michelangelo and towers 435 feet from the floor. Music in the Renaissance saw developments that would later blossom into classical music. Instruments were improved and the whole family of violins was developed.

Counterpoint (the blending of two melodies) and polyphony (interweaving several melodic lines) also emerged during this period.

Science

saw little advancement, but it was also important for future developments. In particular, classical authorities were discovered who contradicted Aristotle, whose works were accepted by the Church almost as gospel. Finding conflicting authorities forced Renaissance humanists to ask questions that would lead to developing new theories, which in turn would lead to the birth of modern science in the 1600's and 1700's.

The Age of Exploration

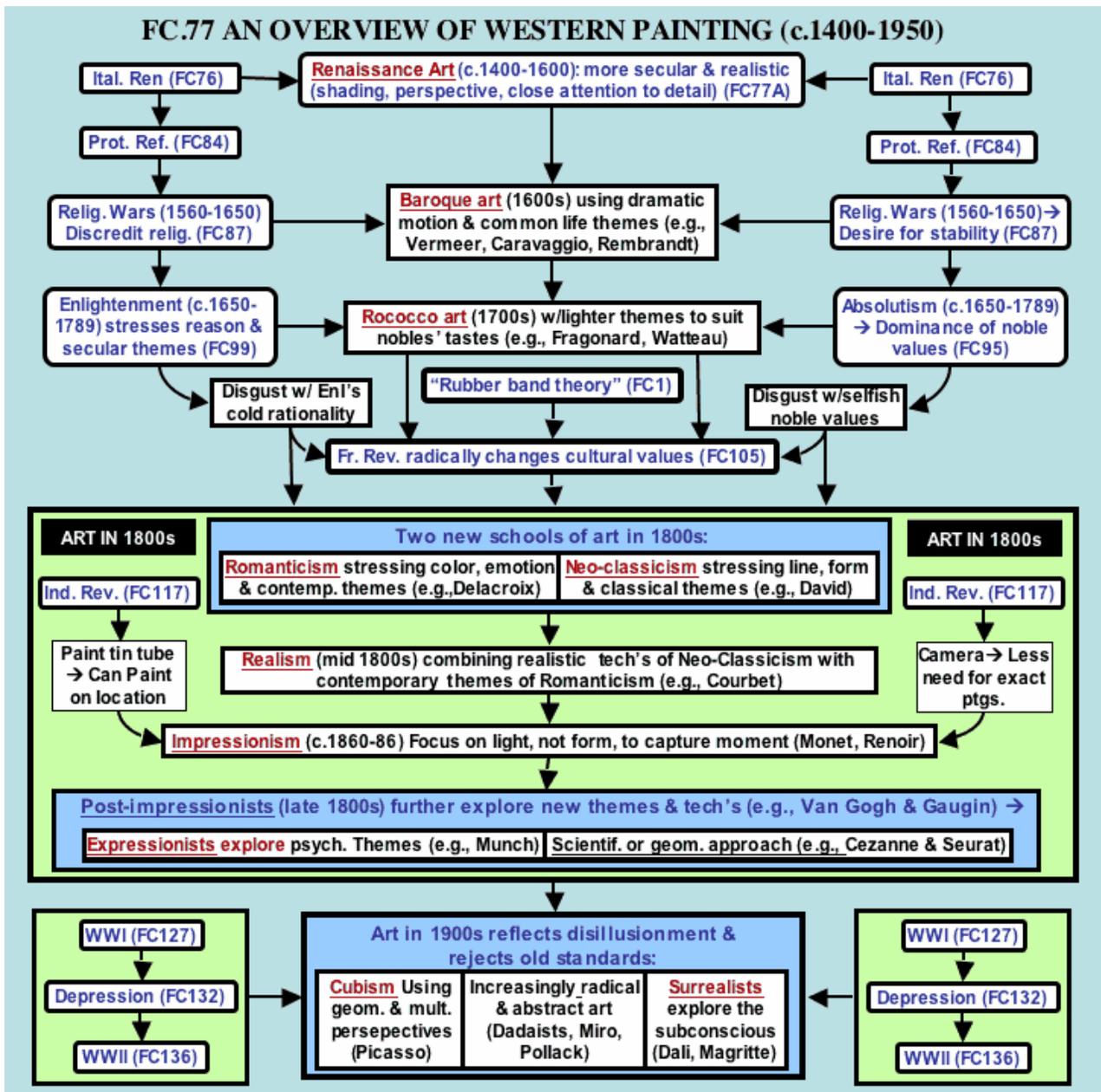
also showed Renaissance ideas at work. It was secular in its interest in the world. It certainly displayed skepticism by challenging accepted ideas about the world. And the fact that it pitted individual captains against the forces of nature shows it was both humanistic and individualistic.

The Protestant Reformation

was one other result of the Italian Renaissance. The spirit of skepticism challenged the authority of the Church, thus opening the way for much more serious challenge later posed by the Protestants. The Protestant Reformation, in turn, would pave the way for new patterns of thought in social, political, economic, and scientific matters.

The Italian Renaissance is generally seen as lasting until about 1500, when Italy's political disunity attracted a devastating round of wars and invasions that ended its most innovative cultural period. However, in the process, the invaders took the ideas of the Italian Renaissance back to Northern Europe and sparked what is known as the Northern Renaissance.

FC77An overview of Western Art (c.1400-1950)



[FC77](#) in the [Hyperflow of History](#);
Covered in multimedia lectures [#2108](#) and [#2035](#).

Introduction.

Doing a two page overview of Western painting may seem to be a bit of a ludicrous exercise, but it does serve a purpose: namely to show how art and other threads of historical development influence and reflect each other.

The Renaissance (c.1400-1600)

The Renaissance is a good place to start, because no historical era has been better reflected in its art. Starting sometime around 1400, a more secular approach was capturing the age's spirit and imagination. Renaissance paintings reflected this move toward a more secular realism in two major ways. One was subject matter, many

paintings portraying classical Greek and Roman history and legends or being portraits of individuals. The second way painting reflected the spirit of the age was through technique. The use of such things as perspective, proportion, shading, and closer attention details helped create paintings of striking realism compared to anything since the Roman Empire. It should be said that the single greatest patron of the arts was still the Church and religion was the most common theme, but even those paintings reflected the new techniques sweeping across Renaissance Europe.

The Baroque

By the 1600s, the Renaissance had helped produce the Protestant Reformation, which gave rise to an age of Religious Wars (c.1560-1648). This was a turbulent and violent age, and the art reflected it. Even the term Baroque, meaning twisted or distorted, suggested dramatic and even chaotic motion. However, there was also more portrayal of everyday life and common people in paintings by such artists as Caravaggio in Italy and a number of Dutch painters. The Dutch Republic became the most prolific center for art in the 1600s, since its wider distribution of wealth created a much broader market for art. Even moderately prosperous tradesmen could afford small paintings, thus supporting some 500 Dutch artists, so many that some were able to specialize in certain genres of art previously considered unworthy of being painted: landscapes, seascapes, still lifes, and interiors of homes.

The Rococo (1700s)

The age of religious wars helped lead to two things, one cultural and the other political. Culturally, the seemingly endless fighting had discredited religion and fostered a more secular outlook. The result was the age of Enlightenment that especially stressed reason, secular philosophies, and the newly emerging modern sciences. Politically, the turmoil of the last century created a desire for more stability, giving rise to the Age of Absolutism along with the prominence of the nobles and their values. Together, these produced a very ornamental style of art known as Rococo that typically had lighter, sensual, and more secular themes to suit the nobles' tastes.

However, by latter half of the 1700s, many people were reacting against the cold rationality of the Enlightenment and the frivolous values of the nobles. A new spirit crept into the art, stressing romance over base sensuality and sentimentality over cold reason. Typical of the latter were the paintings by Jean-Baptiste Greuze, showing dreamy looking young women holding fluffy lambs or weeping over their dead pet birds. In reaction to the corrupt values of the old regime there was also more stress given to civic virtue and patriotism, setting the stage for the French Revolution.

Romanticism, Neo-classicism, and Realism (early 1800s)

The two new ideas of the late Enlightenment, sentimentalism and emphasis on civic virtue and patriotism, were expressed in two new schools of art. One of them, Romanticism, which was also seen in the literature and music of the time, stressed our emotional side and idealized nature and everyday themes through the use of broad brushstrokes of color. Critics called the Romantics' work sloppy since the figures were often kind of blurry instead of precisely drawn (e.g., Turner's "Rain, Steam, and Speed"). The Romantics' more down to earth themes also reflected the more democratic spirit sweeping across Europe at the time.

By contrast, the other school of art, Neo-classicism, created precisely painted images from Greek and Roman myth and history to portray the selfless sacrifices of past heroes in order to inspire present day patriots. Jacques Louis David was especially prominent, doing paintings of such events as the Oath of the Horatii from Roman legend and Leonidas at Thermopylae Pass from Greek history. However, as an apologist for the French Revolution and then for Napoleon, he adapted his style to contemporary events such as the Tennis Court Oath and the death of Marat during the Revolution.

As the century progressed, the two styles each contributed to a third school of art: Realism. Painters such as Gustave Courbet combined the realistic techniques of Neo-classicism with the contemporary themes portrayed by

the Romantics. Thus Courbet did paintings of such mundane things as a peasant funeral and a dead trout, topics that critics considered beneath the dignity of portraying on canvas. However, this helped set up the next big movement in painting.

The second great art revolution: Impressionism and Post Impressionism (c.1863-1900)

In the nineteenth century, the industrial revolution produced two new developments that dramatically changed European painting. The first, tin tubes of pre-mixed paint, eliminated the need for artists to mix all their paints in their studios, thus freeing them to take their craft outside and paint on location. Previously, the closest artists had come to this was doing rough sketches on location and then doing paintings of those sketches in the studio. The second innovation was the camera, which mechanically produced images with photographic accuracy. This freed artists from slavishly having to recreate a scene exactly as it looked. Instead, they could approach their subjects in increasingly non-representational ways.

The Impressionists, such as Monet and Renoir, tried to free themselves from intellectualizing a subject as solid objects such as trees or tables, and then paint each of those objects separately. To this end, they tried to rapidly capture the individual impressions of light in a scene, which together would add up to a picture of that scene, but in a different way from a photograph. Now the emphasis was on the fleeting impressions of light and the emotional impressions they left with the viewer. This technique was especially effective in portraying such things as smoke, rippling water, flags blowing in the breeze, and the splash of colors seen in a bouquet of flowers. Not since the Renaissance had such a revolutionary new approach to art been taken, and the critics and public didn't like it or accept it for some two decades. But the Impressionists had opened the door to any number of new approaches to painting.

Thus the last decades of the nineteenth century saw a number of new schools of art, sometimes lumped together as the Post Impressionists. On the one hand there was the scientific or geometric approach, epitomized by Paul Cezanne's attempts to reduce a scene to a collection of basic geometric shapes. Georges Pierre Seurat created whole paintings of tiny colored dots mixed together that would add up to a picture. Paul Gauguin experimented with using solid fields of color rather than shading to create an effect. Another school of art originating in the late 1800s in Germany, Expressionism, focused on portraying emotional experience instead of physical reality. Probably the best known Expressionist painting is Edvard Munch's "The Scream" (1893).

The early twentieth century (c.1900-1945)

Building upon these dramatic artistic changes, painters in the early twentieth century explored progressively more radical approaches to art. Much of the art of this period should be seen in light of the catastrophic events of the period: World War I, the Great Depression, the rise of fascist dictatorships, and World War II ending with the nuclear attacks on Hiroshima and Nagasaki. These, along with the faster and more mechanized pace of modern life, led to a good deal of alienation and disillusionment with civilization. The giant of the age was Pablo Picasso, who went through a bewildering number of styles that especially reflected the century's rapid pace of change. One such style was Cubism, taking Cezanne's geometric approach one-step further and reducing a scene to a collage of cubes. Another approach was that of Surrealism, where artists such as Salvador Dali and Rene Magritte, influenced by the work of Sigmund Freud, painted images of the subconscious. Finally, the period also saw increasingly abstract and non-representational art, represented by Joan Miro and Fernand Leger.

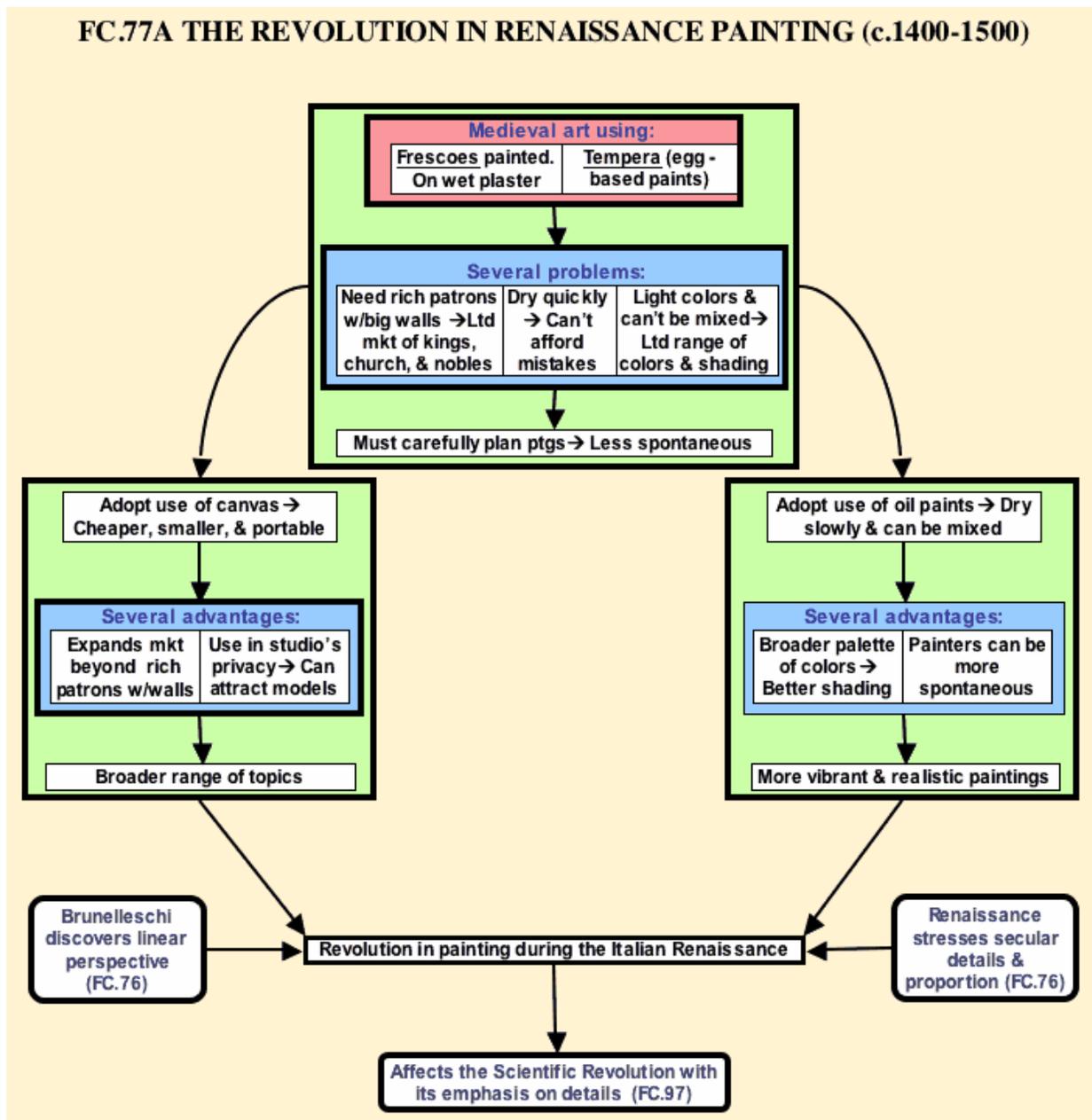
Post Modern art

After World War II, the art world fragmented into a dizzying array of schools and approaches that seemed increasingly out of touch with mainstream culture: Abstract Expressionism, Color field painting, Pop art, Op art,

Hard-edge painting, Minimal art, Lyrical Abstraction, FLUXUS, Post-minimalism, and Photorealism. Largely replacing painting in popularity have been new media, especially film, video, and television

In recent decades a new term has come into use, postmodern, describing art considered largely contradictory to modern art in its use of such things as collages, objects of consumer or popular culture (e.g., Andy Warhol's Campbell's Soup can), words as a central artistic element and various multimedia. . By the late 1970s some critics were even speaking about the "end of painting", although some artists since the 1980s have returned to representational art, known in its modern incarnation as Figurativism.

FC77A The Revolution in Renaissance painting



FC77A in the [Hyperflow of History](#);
Covered in multimedia lecture [#2111](#).

Introduction

Perhaps the most dramatic, or at least widely acclaimed, breakthrough in the Renaissance was in the realm of art, in particular painting. Not only did Renaissance art reflect growing concern with secular subjects, it involved new artistic tools and techniques that more accurately portrayed those subjects. Pre-eminent among those tools was the shift from tempera (egg based) paints painted on wood or as frescoes on walls to oil based paints applied to canvas.

Materials used

Frescoes were wall paintings applied to wet plaster that set into the wall when dry. While this did help preserve the painting, it had several drawbacks. First of all, frescoes dried quickly so an artist had to plan his work thoroughly in advance, since to change any mistakes involved redoing the whole painting. This made frescoes stiff and less spontaneous. Also, the rough surface of a plaster wall made it hard to render details, forcing the artist to use a pointed brush and even at times to stipple the surface dot by dot. To deal with these limitations, an artist would divide the wall into sections, one for each day's work. He would also do extensive preliminary drawings of the planned painting on the wall.

Tempera was the type of paint used in frescoes, consisting of egg mixed with pigment. This created a light, but somewhat limited range of colors. It dried quickly, which prevented the layering of paints and the subtle shading (known as *chiaroscuro*) of a painting.

Oil based paints were developed as early as the 1100s and were first widely used in the Low Countries in the early 1400s. Since it dried slowly, oil had three major advantages over tempera. First, it could be layered, which made possible the use of *chiaroscuro* & *sfumato* (a technique giving a painting a misty, foggy, or smoky effect). Second, artists could mix colors with oils, giving them a broader and richer palette to work with than ever before. Finally, as evidenced by X-rays of paintings, artists could, and did, change mistakes, thus letting them be more spontaneous in their work.

While oil paints were widely used in the North, they did not reach Italy until about 1475. Artists in Venice were the first Italians to use oil enthusiastically, their paintings being distinguished by the rich reds they often used. From Venice, the use of oil based paints spread rapidly across Italy.

Canvas replaced walls as a medium for painting had as dramatic an impact on art as oil replacing tempera. Not having to rely on walls, especially Church walls, for a painting surface, artists could paint smaller portraits and paintings with other themes, opening up wider markets for their talents. Canvas was also more portable, so artists could work in the privacy of their own studios where they could better attract models (especially for nude paintings). These two factors, plus growing middle class patronage, led to a commercial revolution in art and the end of the dominance of the Church, kings, and nobles who previously had the money and walls artists needed. Consequently, they could now pursue a much broader range of topics for paintings than ever before.

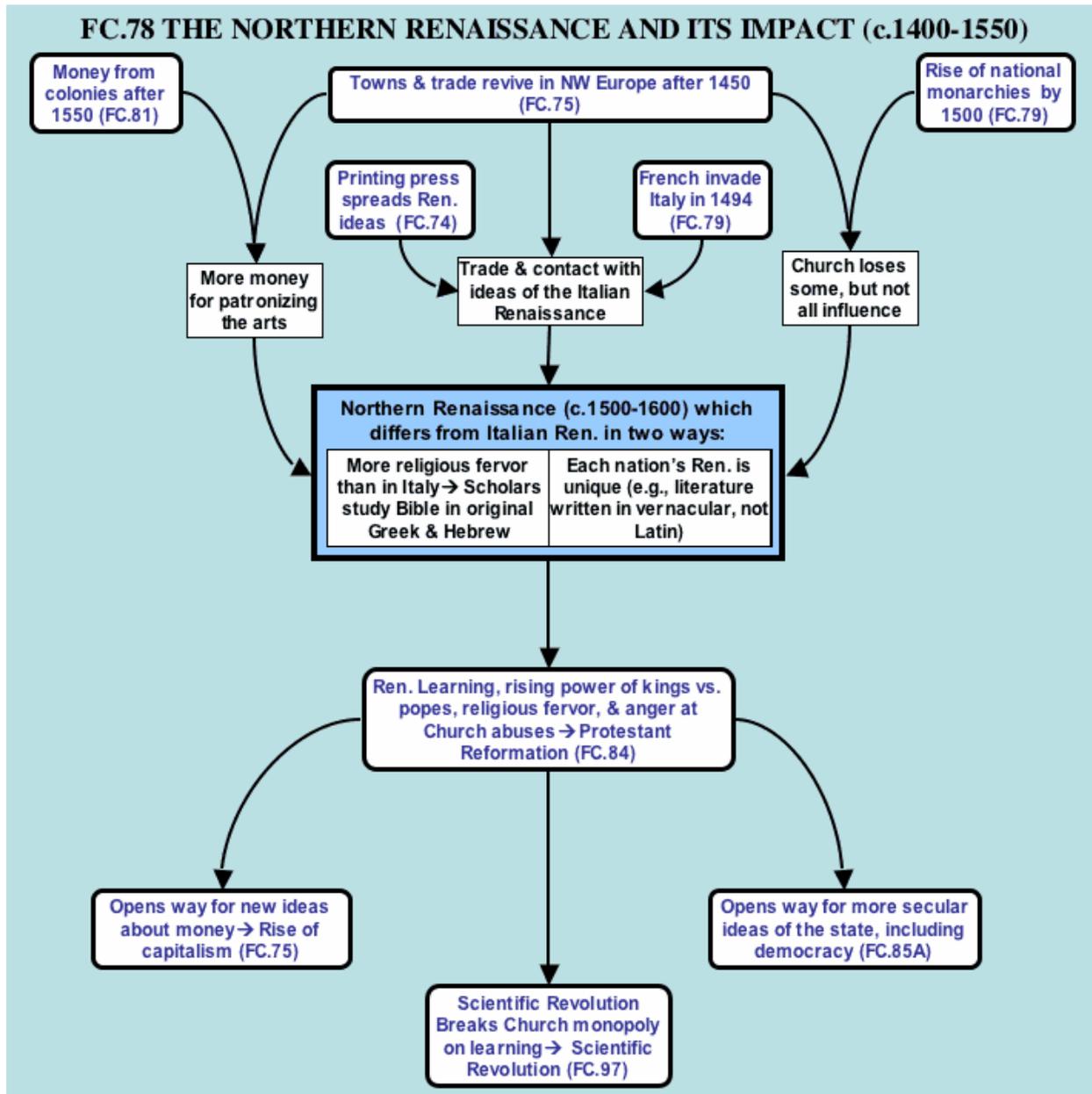
New techniques

New techniques in painting also helped transform Renaissance art. The most important of these was *linear perspective*, which allowed artists to attain three-dimensional effects on a two dimensional surface. Without it, paintings were crowded and limited in the number of people and details that could be represented. Greek and Roman paintings had achieved a high degree of perspective, but their techniques were lost during the Middle Ages. True linear perspective was first attained around 1420 in a remarkable experiment done by Filippo Brunelleschi, the same man who had designed the dome of Santa Maria del Fiore in Florence.

Brunelleschi painted Florence's Baptistery from the perspective of the facing cathedral doorway. He then drilled a hole through the vanishing point of the painting (which faced the Baptistery) and set a mirror in front of it. As someone in the cathedral doorway looked toward the Baptistery through the peephole, Brunelleschi could raise or lower the mirror so the viewer was alternately seeing the Baptistery or the reflection of the painting. Supposedly,

his painting and mastery of perspective were so good, viewers could not tell the difference between the real Baptistery and the reflected painting. This dramatic demonstration, plus more secular themes, proper proportion, and attention to details, triggered a virtual revolution, not just in art, but in a whole new way of viewing the world that has become a vital part of our civilization. In the 1600s, this new perspective on the world would help lead to the Scientific Revolution.

FC78 The Northern Renaissance (c.1500-1600)



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[FC78](#) in the [Hyperflow of History](#);
Covered in multimedia lecture [#2112](#).

Introduction

There are several reasons why the Renaissance came later to Northern Europe. First, it was further removed from the centers of trade and culture in the Mediterranean. As a result, towns, trade, and the more progressive ideas that tend to come with wealth developed more slowly in the north. Along these lines, the greater influence of feudalism and the Church kept the political, social, and intellectual institutions much more medieval and backward. This in turn provided more resistance to the humanistic ideas developing in Italy.

However, the revival of towns and trade in the North combined with other factors in three ways to bring the Renaissance to Northern Europe. First of all, the urban revival in the North along with the Portuguese and Spanish overseas colonies created the financial resources needed to patronize the arts. Secondly, growing trade in the North, combined with the French invasion of Italy in 1494 and the ability of the printing press to spread ideas quickly and accurately, led to growing contact with the ideas of the Italian Renaissance. Finally, the rise of towns together with the rising national monarchies in France, England, Spain, and Portugal led to the decline of the feudal nobility and medieval Church. This created less resistance to the new ideas from the Renaissance. All these factors came together to produce the Northern Renaissance (c.1500-1600).

The Northern Renaissance should not be seen as a mere copycat of the Italian Renaissance. There were two major differences between the two cultural movements in Italy and the North. First of all, the Church's influence, despite being shaken by recent corruption and scandals, still was strong enough to make the Northern Renaissance more religious in nature. Second, the rising power of the national monarchies made the Northern Renaissance more nationalistic in character.

Reconciling religion and the Renaissance

The more intense religious feelings prevailing in Northern Europe posed a difficult question: could a humanist education based on classical culture be reconciled with Christianity? The answer humanists came up with was yes. This was largely thanks to the greatest humanist of the age: Erasmus of Rotterdam (1466-1536). Called the "Prince of Humanists" and the "scholar of Europe", Erasmus dominated Northern Europe's culture in a way few, if any, other scholars have before or since his time. So great was his reputation that kings and princes from all over Europe competed for his services at their courts. Erasmus popularized classical civilization with his *Adages*, a collection of ancient proverbs with his own commentaries. His *Praise of Folly* satirized the follies and vices of the day, in particular those of the Church, while further popularizing humanism. Erasmus was still a pious Christian who pushed the idea that it was one's inner spirit, not outward shows of piety through empty rituals, that really mattered. However, he saw no contradictions between Christianity and ancient cultures. He underscored this attitude by referring to the ancient Greek philosopher, Socrates, as "Saint Socrates".

Other northern humanists picked up this banner. In England, Thomas More brilliantly defended studying classical Greek and Roman culture by saying their knowledge and the study of the natural world could serve as a ladder to the study of the supernatural. Besides, he pointed out, even if theology were the sole aim of one's education, how could one truly know the scriptures without knowing Greek and Hebrew, their original languages? It was in this spirit that the French humanist, Lefebvre d'Etaples, laid five different Hebrew versions of the Book of Psalms side by side in order to get a better translation than the one in the Latin Vulgate Bible. Even in Spain, the most staunchly Christian country in Europe, Cardinal Ximenes, who served as virtual prime minister for Ferdinand and Isabella, set up a university at Alcalá with a very humanist curriculum. Its purpose was to use humanism to provide better understanding of Christianity. The major accomplishment of Erasmus and the Northern humanists was that they successfully defended the study of the classics and a more secular education as a ladder to better understanding of Christianity. This in turn paved the way for using a secular education for more secular purposes and that would revolutionize Western Civilization.

Art also reflected the more religious nature of the Northern Renaissance. Secular and even mythological themes would appear, but with less frequency than in Italy. This intense religious passion is especially reflected in the work of the Spanish artist, El Greco. Technically, art in the North lagged behind Italy throughout the 1400's, especially in its use of perspective and proportion. The key turning point came when the German artist, Albrecht Durer, traveled to Italy in 1494 to study its art. Durer was heavily influenced by the Italians and the ancient writer, Vitruvius, in their efforts to find the mathematical proportions for portraying the perfect figure. Among other things, this shows a growing fusion of art and science that anticipated the scientific revolution that would sweep Europe two centuries

later. Other northern artists followed Durer, and from this time one sees a more realistic art in the North, which approached the standards of the Italian artists.

The emerging national cultures in the Northern Renaissance

The other major feature of the Northern Renaissance was the national character of the cultures that were evolving along with their respective nation-states in Europe. The literature of the age especially showed this. For one thing, it tended to be written in the vernacular and reflected its respective national cultures. In Spain the great literary genius was Cervantes, whose *Don Quixote* showed the changing values of the age by satirizing the medieval values of the nobility. Probably the greatest literary genius of the age was William Shakespeare, whose work reflects heavy influence from the Italian Renaissance. Many of his plays have Greek and Roman themes, sometimes copying the plot lines from classical plays (e.g.-- *Comedy of Errors*) or take place in Italy (e.g.-- *Romeo and Juliet*). However, many of Shakespeare's other plays take place in England and reflect the fact that the various nations in Northern Europe were defining their own unique cultures apart from Italian and classical influence.

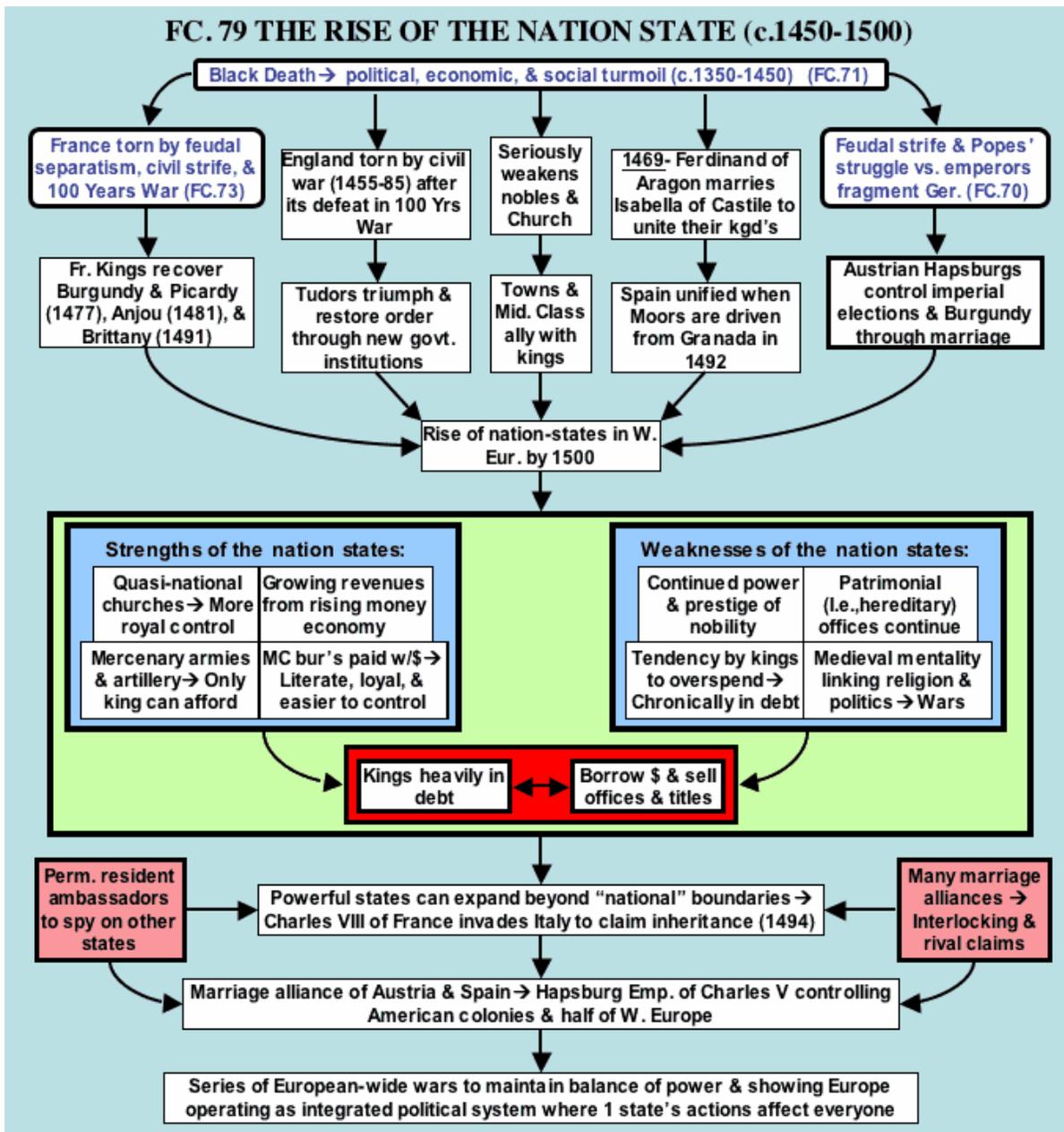
Results of the Northern Renaissance

Ironically, one could say the most important result of the Northern Renaissance was a religious revolution. This was the result of a several factors: anger at the church's corruption, the rising power of kings at the expense of the popes, and the fusion of Renaissance ideas from Italy with the still intense religious fervor and emerging national cultures of the North. The dynamic combination of these factors would lead to the Protestant Reformation that, in turn, would branch off in three lines of development.

First, the Protestant Reformation would open the way for new ideas about money and the middle class, and that would lead to the triumph of capitalism in Northern Europe. Secondly, the Protestant Reformation would play a vital role by shattering the Church's monopoly on religious truth, breaking its iron grip on scientific thinking, and paving the way for the Scientific Revolution of the late 1600's and 1700's.

Third, the growing power of kings in Northern Europe, combined with Renaissance learning and local anger at Church abuses, helped pave the way for more secular theories about the state. The Reformation, by challenging the power of the Church, would also help kings in their claims to greater sovereignty through the theory of Divine Right of Kings. Ironically, the Reformation would also provide the theoretical backing for the democratic revolutions that would eventually overthrow the very monarchies that tried to use it against the Church in the first place.

FC79The rise of the nation state during the Renaissance



[FC79](#) in the [Hyperflow of History](#).
Covered in multimedia lecture [#2944](#).

Just as the turmoil of the Later Middle Ages had cleared the way for sweeping economic, cultural, and technological changes in Western Europe, it likewise produced significant political changes that led to the emergence of a new type of state in Western Europe: the nation state. It did this along five lines of development, four of them corresponding to various nation-states in Europe and the other having to do with the overall decline of the Church and nobles which helped lead to the revival of towns and middle class allied to the kings.

The later 1400's saw kings in Western Europe picking up the pieces left by the turmoil of the last century in order to build stronger states. However, this process of unification, or in some cases reunification, involved more violence and warfare. In England, the aftermath of the Hundred Years War saw a period of civil strife known as the Wars of the Roses (1455-85) over control of the throne. In the end, Henry Tudor, who became Henry VII, triumphed and restored order with such new government institutions as the Star Chamber.

France, badly hurt by the Hundred Years War, gradually reunified as the Valois kings regained control of Picardy (1477), Anjou (1481), and Brittany (1491). The greatest challenge to the French kings came from the powerful and aggressive Charles the Bold of Burgundy. Charles controlled both Burgundy and the Low Countries (Flanders and the Netherlands) and threatened to become a major power in his own right until he met disaster at the hands of the Swiss pikemen at the Battle of Nancy (1477). With this potent threat removed and Burgundy also back under French control, a strong unified French state was emerging by 1500 after some 150 years of conflict.

A unified Spain also was born by 1500. The key event here was the marriage in 1469 of Isabella of Castile to Ferdinand of Aragon, which united most of Spain under their joint rule. (However, the two states continued to function largely as separate administrative entities for generations to come.) The final piece of the puzzle was put into place when the last of the Spanish Muslim states, Granada, was conquered in 1492. Among other things, this freed the new Spanish state to fund the voyage of a Genoese captain named Christopher Columbus who was looking for new routes to the spices of the East.

Even Germany, fragmented after centuries of feudal strife and the emperors' struggle with the Papacy, saw its fortunes seem to revive with the rise of the Hapsburg Dynasty that controlled the imperial throne at this time. This family, through a number of astute marriage alliances, would come to control Austria, the Low Countries, Hungary, and Spain along with its Italian possessions and American colonies. In fact, as impressive as this empire looked, it worked to Germany's disadvantage since it would trigger a number of wars to crush the Hapsburg "superpower"-- wars that would use Germany as a battleground and ruin it. Therefore, by 1500, nation states were evolving, having their own strengths and problems.

Strengths of the new nation-states consisted of four main pillars of support: money, which in turn enabled kings to pay for professional bureaucracies and mercenary armies, and control of the Church. This mixture of medieval and modern elements underscores the transition of Europe from the medieval to modern era.

Finances

The old medieval sources of revenue, such as feudal dues and income from royal lands and monopolies, were totally inadequate for the greater burdens, which the new types of government and army placed on Renaissance kings. Borrowing money against future tax revenues was a dead end that just got kings into deeper trouble, although that was commonly the practice. However, more regular taxes had to be collected. In France, the "extraordinary" taxes the townsmen had granted the crown to drive out the English in the Hundred Years War were collected annually and became a permanent tax, the *taille*. In Spain, the crown increased sales taxes to boost revenues. In England, the king was unable to get a high permanent tax granted to him by Parliament. He did increase his control over revenues for such things as customs on wool and cloth. Luckily, England was an island and in less need of a large expensive army and bureaucracy than states on the continent. Overall, Renaissance kings by 1500 were still faced with serious financial shortcomings. However, no one else in their realms possessed the resources to effectively challenge them. Along with their bureaucracies and armies, their finances presented a picture of the European state in transition from the medieval to the modern era.

Bureaucracies

consisted mainly of members of the middle class with the education and experience needed to run the government. Since kings were usually desperate for money, they resorted to selling government offices, a practice known as *venality of office*. This system had its good and bad points. The main good points were that it provided the king with some much needed cash and officials who showed more efficiency and loyalty to their king than the old feudal nobility had.

The main drawback was that such a system bred corruption, since money, not ability, was often the key to gaining office. Bureaucrats tended to assume their own consciousness as a class, maintaining a common silence to thwart any attempts to weed out corruption. They could often successfully resist or slow down reforms or other policies they did not like. But, for all the problems the new bureaucracy created, it was still more efficient than the old feudal system and gave kings a far greater degree of control over their states.

The new warfare

Renaissance armies told a similar story, being somewhat unruly but still better than their feudal predecessors. The ranks were now filled with mercenaries who fought until the king's money ran out. This gave the king much longer campaigning seasons than the forty days that feudal vassals typically owed. But it could still present some serious, and, at times, embarrassing problems. As soon as the king ran out of money, such armies would often desert or refuse to fight any longer. Also, since they were not usually natives of the state they were fighting for, they often had no qualms about plundering the people they were supposedly defending. Despite these drawbacks, Renaissance armies gave kings in Western Europe much tighter control over their states, largely because they were so expensive that no one but kings could afford to maintain them.

Part of that expense lay in the new type of warfare emerging by 1500. Although heavily armored knights were still prominent, their role was being reduced by two new ways of fighting, one medieval and one modern. One was massed formations of pikemen, reminiscent of the old Greek and Macedonian phalanxes, who formed the core of the Renaissance army. Until the early 1500's, the Swiss were reputedly Europe's best pikemen, and every prince wanted Swiss mercenaries in his army, no matter what the cost. In the 1500's, German pikemen, known as *landsknechte*, and Spanish pikemen would rival the Swiss in their reputations for ferocity on the battlefield.

The other new and expensive element emerging in the new warfare was gunpowder. Hanging on the flanks of each pike square were men wielding primitive muskets. Such guns were heavy, hard to load, and even harder to aim accurately. They also presented the danger of blowing up in their users' faces. Still, they could be very deadly when fired in massed volleys, having a range of up to 100 meters. Gradual but constant improvements, such as the matchlock that freed both hands for aiming, made them increasingly effective throughout the 1400's and 1500's. As a result, the number of musketeers, and their cost, gradually climbed throughout this period. The combination of guns' firepower with the solid pike formations proved to be the most potent military innovation of the Renaissance. It ruled Europe's battlefields until the later 1600's when better muskets and the bayonet phased out the pikeman for good.

Artillery was another important, but expensive, element in the Renaissance prince's army. Smaller and more mobile cannons were made for use in pitched battles as well as sieges. There was no standardization in the Renaissance artillery corps, each cannon being made by an independent contractor. The French, with Europe's best artillery, had 17 separate gauges of artillery requiring 17 different sizes of shot. The Hapsburg emperor, Charles V, had 50 different gauges. Obviously, this could create untold confusion in the heat of battle.

The advent of artillery made the tall thin walls of medieval castles obsolete, since they were so easily breached by cannons' firepower. However, this did not make fortifications obsolete. By the early 1500's, a new style of fortifications, the *trace Italienne*, was coming into use and slowing down, if not stopping artillery. These new fortifications were much thicker and more elaborate than their medieval predecessors, having multiple sets of walls, moats, and bastions set at different angles to one another to provide flanking fire from various directions against any enemy assaults. As with muskets and artillery, these new forts were so expensive that only kings could afford them or, more properly, afford to go into debt to bankers to buy them. And, by the same token, this increased the kings' power and put any rebellious nobles more at the kings' mercy.

This new type of warfare and army showed the beginnings of some aspects we associate with modern warfare. For one thing, it was expensive because of the size of its armies and the new technology. It was also very destructive to the inhabitants who were unlucky enough to be in the path of these plundering mercenaries and their hordes of camp followers. The seventeenth century general, Albrecht von Wallenstein, once said he could better support an army of 50,000 than one of 20,000 since it could more effectively plunder the countryside. This says a lot about supplying such armies and its effect on military strategy: fight in the enemy's territory and make him pay for the war. Finally, the new warfare was much bloodier than the medieval warfare that preceded it. We find nobles complaining because any low born peasant with a small amount of training and a gun could blow them out of the saddle. Even more significantly, the humanists condemned warfare for its bloodiness, no matter to what class. Throughout the modern era, that outcry has slowly gained force with the growing destructiveness of warfare.

The Church

was still the largest single landholder in Western Europe, making it mandatory for kings to control this vital source of revenue and propaganda. Luckily for the kings, the Church's power and prestige were seriously weakened by the popular discontent and corruption that climaxed with the Great Schism. In France, kings had gained the loyalty of the local clergy against the Italian higher clergy appointed by the popes and won their struggle to rule the French clergy in the Pragmatic Sanction of Bourges in 1438. This recognized the king's claim to the Gallican Liberties, transferring the direct loyalty of the French clergy from the pope to their king.

Elsewhere, the story was similar. In England, during the Avignon Papacy of the 1300's, kings had limited the right of foreign clergy to visit England and also restricted English clergy in their right to appeal to foreign (i.e., papal) courts. In Spain, the crown came to dominate the Church and, with it, the Inquisition. In all these countries, levying Church taxes was subject to the approval of the kings, who often made a deal to get a percentage of the taxes for themselves.

In addition to the structure of the emerging nation-state, peoples' attitudes toward that state were also in transition from a very personal feudal outlook to a broader concept of a nation. There was a growing awareness among various peoples that there were factors, such as language and culture, making them unique as nations. But the form of nationalism we are familiar with was still several centuries away. During this transitional period, the loyalties of people focused largely on the person of a king rather than on the nation's people as a whole.

Limits to the Renaissance state's power

We should keep in mind that, while the Renaissance state was a vast improvement over the feudal anarchy of the Middle Ages, it was still rudimentary and highly inefficient when compared to the modern state. There were three main limitations to state building at this time.

First of all, the decentralized chaos of the Dark Ages had given rise to a multitude of local institutions and customs, rights, and inherited titles and offices. France alone had some 300 local legal systems dating back to a time when there was essentially no central government, while there were 700 in the Netherlands. The force of tradition with centuries of history to back it up made it well nigh impossible for kings to do away with these offices, customs, and privileges. A good example of this were the *parlements*, local French courts which could modify the king's laws, delay enforcing them, or even refuse to enforce them if they thought those laws interfered with long established local customs and traditions. As a result, kings were forced either to work around the old offices by creating new parallel offices that would very gradually take over their functions, or incorporate the old offices into the new state apparatus. What this meant was that any regularization of government institutions and practices on a national scale was still centuries away.

A second problem was the continued existence and aspirations of the nobles. While we have seen them suffering from a prolonged decline since the High Middle Ages, they remained somewhat resilient as a class. One big reason for this was that they were still seen as *the* class to belong to, and many middle class merchants and bankers were eager to buy noble titles and lands so they could carry on like the nobles of old. A prime example of this was the Fuggers of Augsburg, Germany, the richest banking family in Europe, who bought noble titles and lands and passed into idle noble obscurity. Aiding this process were the kings who were always in need of cash and willing to sell noble titles and offices to anyone with the money. As a result, fresh blood kept infusing the nobility with new life. Unfortunately, these nobles, of whatever origin, could still be quite troublesome and lead revolts against their rulers, as happened in the Netherlands (1566), England (1569), and France (1582).

A third problem was the kings' inability or unwillingness to stay out of debt and pay their armies and bureaucrats. This encouraged corruption in the government and plundering and desertion by the mercenaries, which further reduced the kings' revenues and ability to pay their bills, leading to more loans at high rates of interest, and so on. Finally, although kings could control their national churches, they could not control the medieval mentality still linking politics and religion and causing disastrous wars over religious issues. This especially became a problem after 1560 in the repeated religious wars between Protestants and Catholics.

The "New Diplomacy"

Despite these problems, a new and more dynamic type of nation state was emerging by 1500. And once kings had affairs within their own borders reasonably under control, they started extending their involvement in diplomacy outside of their states. By 1500, we see Western Europe starting to function as an integrated political system, whereby one state's acts affected all the other states and triggered appropriate reactions. This new interdependence and sensitivity to other states' plans and actions sparked the beginnings of modern diplomacy. Two factors aided this process of outward expansion, and, once again, they were a mixture of medieval and modern forces.

Among the older methods still used to consolidate and improve a prince's position, the most notable was the marriage alliance. Rulers still thought of their states as their property. That property could be passed on to their sons, and it could be added to by marrying into another ruling family and assuming all or part of that family's property (i.e., state) as part of the deal. A number of such marriages took place in this period. Henry VII of England married Elizabeth of York, the heiress of his chief rival to the throne, a union that gave him undisputed claim to the crown. Charles VIII of France married Anne of Brittany and tied that region much more closely to the French king's interests.

Certainly the most spectacular example of dynastic empire building through marriage was the Hapsburg Empire, which controlled most of Western Europe in the first half of the 1500's. In 1469, Ferdinand of Aragon married Isabella of Castile, thus uniting Spain under one house, although the two governments functioned separately for some time. Meanwhile, the Hapsburg emperor, Maximilian, had wed Mary, duchess of Burgundy, and added Burgundy and the Low Countries (Flanders and Holland) to his family lands in Austria and the Holy Roman Empire. Finally, their son, Philip, married Ferdinand and Isabella's daughter, Joanna, to seal an alliance in reaction against the French invasion of Italy in 1494. The product of that union, Charles V (Charles I of Spain), inherited most of Western Europe: Germany, Austria, the Low Countries, most of Italy, and Spain with its American holdings. As the contemporary saying put it: "Others make war, but you, happy Austria, make marriages."

Marriage alliances alone were not enough to keep one diplomatically safe. For one thing, they created nearly as many problems as they solved. Since the network of marriage alliances was so extensive and interlocking there were almost always numerous claimants for vacant thrones whenever a ruler died childless. Such a situation often triggered wars, despite the original intention of the marriage alliance to stop such wars. Second, the Renaissance, with its increased political interdependence between states, created shifting alliances to maintain or improve their positions. This required a ruler to keep a much closer eye on what other states were doing so that they could not surprise him by switching alliances or suddenly declaring war. This led to permanent resident ambassadors, forerunners of our own modern diplomats.

Like so many other innovations, the idea of keeping permanent ambassadors at other rulers' courts originated in Italy. Previously, negotiations between states involved sending special ambassadors only for special occasions, such as a treaty of alliance or celebrating a dynastic marriage. By 1450, a delicate balance of power had evolved in Italy between its five main states: Milan, Venice, Florence, the Papal States, and Naples. The weakest of these states, Florence, felt nervous about its more powerful neighbors and wanted to maintain the balance of power to keep any one of them from threatening its own security. Therefore, it started maintaining permanent resident ambassadors at the other states' courts.

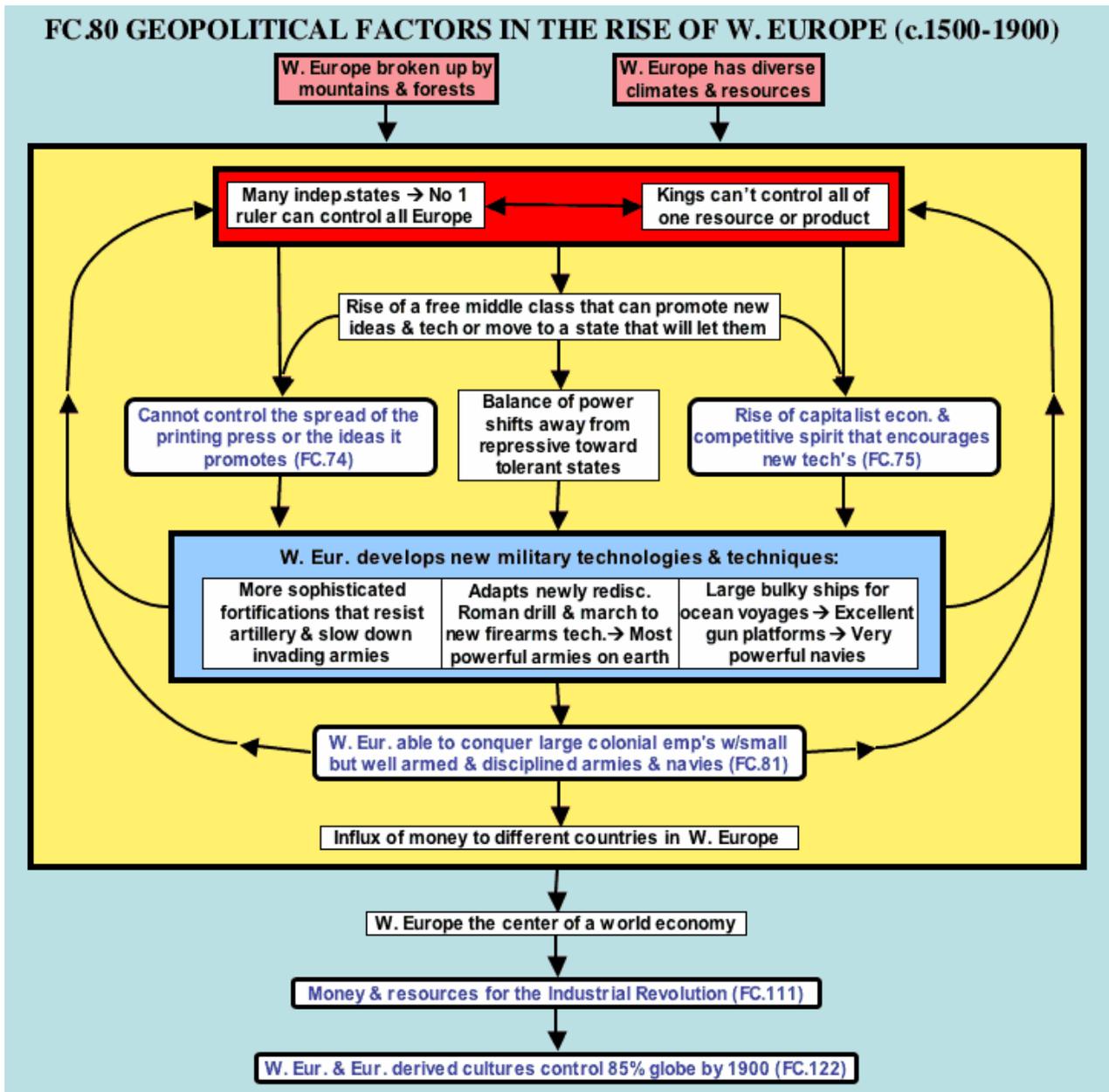
During the Renaissance, these officials were mainly of lower noble and middle class origin. They were expected to maintain themselves in the high style of their home court while being engaged in information gathering, which amounted to little more than spying. They had to send weekly letters home, often in code, repeating all pertinent facts, rumors, conversations, and character descriptions they could come up with. All this was done at their own expense, which many of them could not afford. We have letters from such men, pleading with their home governments not to force them to serve. Usually such pleas were to no avail.

There was no diplomatic immunity then, and the resident ambassadors suffered accordingly. Foreign courts saw them as spies and treated them as such, subjecting them to hostile treatment, insults, surveillance, imprisonment, and even torture. To add insult to injury, the home government often did not believe the letters these men sent home and kept spies at the court to watch their own diplomats. When important negotiations were to take place, the home government still appointed special ambassadors of high noble status to do the job.

In 1494, the French king Charles VIII invaded Italy. This prompted the intervention and fateful marriage alliance of Spain and the Holy Roman emperor, Maximilian, mentioned above. It also touched off a series of wars that devastated Italy and ended its leadership in European affairs. All these wars and shifting alliances caused the great rulers of Europe to start maintaining permanent ambassadors at each other's courts. Over the years, as resident ambassadors became a permanent fixture of diplomacy in Europe and the world, their status and treatment would improve. Florence's policy of maintaining a stable balance of power would also spread northward and become a cornerstone of European diplomacy in the centuries to come.

The Age of Exploration Unit 12: The Age of Exploration (c.1400-1900)

FC80 Geopolitical factors in the rise of Europe



[FC80](#) in the [Hyperflow of History](#).

Introduction

The four centuries following 1500 would see the meteoric rise of Western Europe from a cultural backwater to the first culture to dominate the planet. Given Western Europe's tiny size, the question arises: what singled it out as the civilization to rise to global dominance? A century ago, Europeans would attribute their dominance to the moral and religious superiority of European and Christian culture. However, life and history are not quite so simple. Rather, there was a unique combination of forces that converged at the right time and place to make European civilization the culture that would largely define the modern world, especially in terms of its technology and political ideologies.

On the surface, other civilizations seemed more likely to predominate, having larger populations, strongly centralized governments, wealth, and technologies comparable to, if not greater than, Western Europe's. For example, Ming China had a population two to three times that of Western Europe. Traditionally, Chinese technology had been among the most innovative in the world, heavily influencing Europe itself with such inventions

as gunpowder, the clock, paper, and the compass. China's government was strongly centralized and autocratic, being run by what was probably the best civil service in the world at that time.

The other major civilizations in the world, such as the Ottoman Turks, Mughal India, Tokugawa Japan, Muscovite Russia, and the Incan and Aztec Empires in the Western Hemisphere, told a similar story of being populous, wealthy (except for Russia), and highly centralized under strong autocratic rulers. In fact, it was Western Europe's lack of autocratic rulers, such as these other cultures had, which would be the key to its leaping ahead of the pack. For, while the absolute rulers outside of Europe tended to exploit and suppress their middle class and, in the process, stifle inventiveness and initiative, the spirit of free enterprise and inventiveness had much more free rein in Western Europe. That freedom created a powerful dynamic that allowed Europeans to forge ahead with new ideas, business techniques, and technologies that would shape the modern world. And if freedom was the key to Europe's success, geography was much of its underlying basis.

Europe's geography and its effects

There were two main geographic factors that would help lead to Western Europe's later dominance. First of all, Western Europe was broken up by mountains, forests, and bodies of water: the Alps and Pyrenees cutting Italy, Spain, and Portugal off from northern Europe; the English Channel cutting England off from the continent; and the Baltic Sea separating Scandinavia from the rest of Europe in the south. This broke Western Europe into a large number of independent states that no one ruler had the power and resources to conquer and hold. Second, Western Europe had a wide diversity of climates, resources, and waterways which promoted a large number of separate economies, but which were linked together for trade by the extensive coastlines and river systems covering the region. Therefore, just as no one power could control all of Europe politically, no one power could monopolize one vital aspect of its economy. Thus Europe was characterized by what we call *political and economic pluralism*, which also reinforced each other.

Political and economic pluralism also combined to promote the rise of a prosperous and innovative middle class that could create and spread new ideas, business techniques, and technology if the local rulers would allow it. If they did not allow it, there was always the option of moving to another state that did give them the freedom to pursue their interests. The results of such moves, such as when the French Protestant Huguenots left France *en masse* to avoid Louis XIV's religious persecution in 1685, were to deprive the economies of the persecuting nations of some of their wealthiest and most innovative people while boosting the economies of the countries that took these immigrants in. As a result, the balance of power would constantly shift away from powerful and repressive states and in favor of the more progressive and free thinking ones, thus reinforcing political pluralism in Western Europe.

The rise of a free middle class had two other important effects. First of all, in conjunction with Western Europe's political pluralism, it could spread new technology (e.g., the printing press) and ideas (e.g., the Reformation). Second, in conjunction with Western Europe's economic pluralism, the middle class was able to create a freer capitalist economy and promote a competitive spirit that encouraged new technologies and generated profits for those with the drive and imagination to invent and sell them.

These two factors combined to generate even more rapid technological development, especially in the realm of military inventions. There were three main areas of military technology developed. First of all there was the new gunpowder technology which, when combined with the Roman drill and march recently rediscovered and revived during the Renaissance, created the most powerful and efficient armies in the world by the late 1600's. The defensive response to gunpowder gave Europe the second military factor: stronger and more sophisticated fortresses to resist artillery. These fortresses tied invading armies down to prolonged and tedious sieges that stopped, or at least drastically slowed, the progress of invading armies. One side effect of this was that it fed back into and further reinforced Western Europe's political pluralism. The third military innovation (or more properly, application of peaceful technology to military purposes) was the development of large bulky ships to withstand long voyages over the rough waters of the Atlantic Ocean. Such ships also served as excellent gun platforms, thus making European navies the most deadly on the planet.

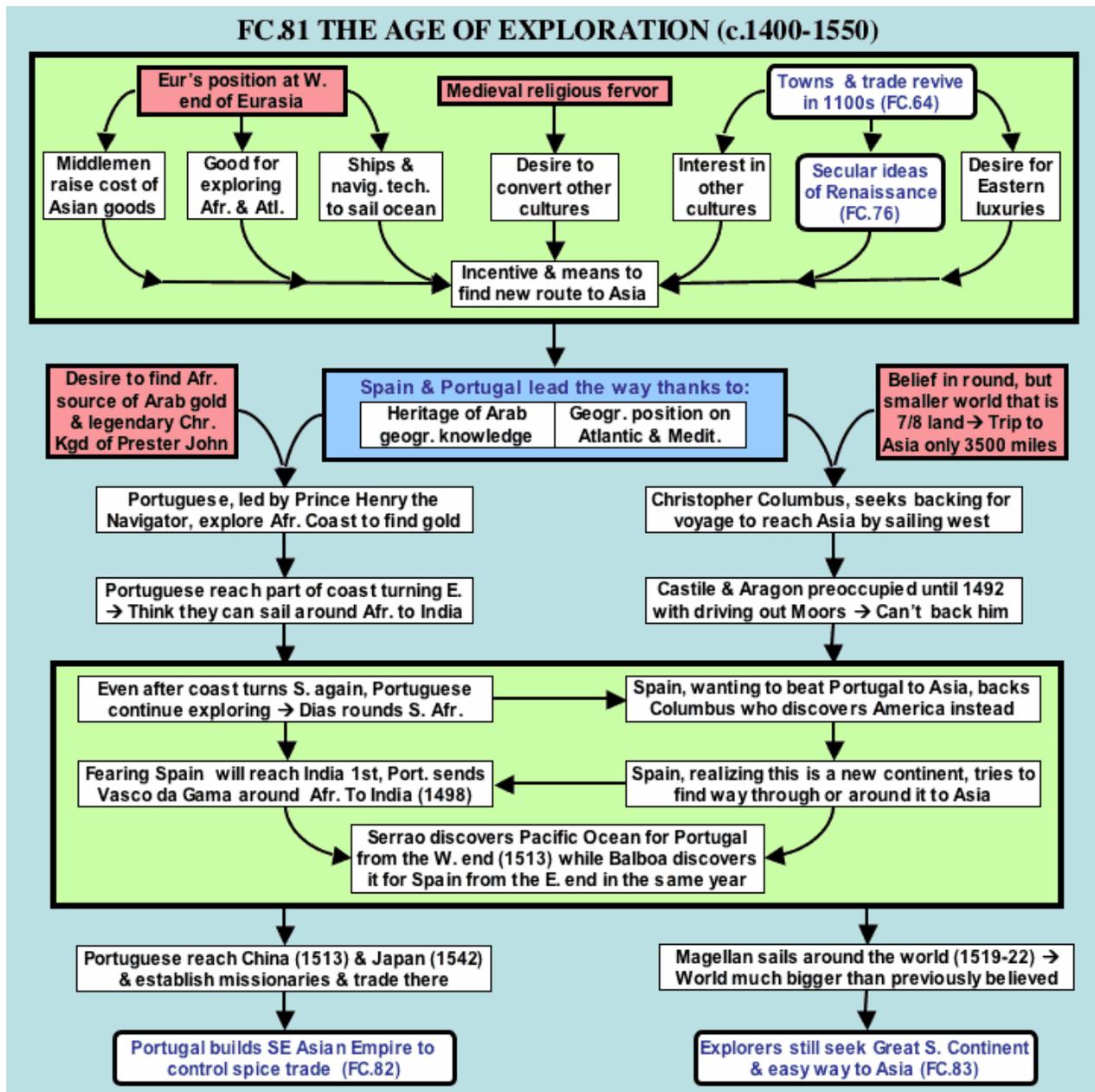
These three factors converged to help Western Europe establish large overseas colonial empires which were conquered by Europe's small but well armed and disciplined armies and navies and held under control by powerful European fortresses. As time and Western Europe's technology progressed, European armies would show an

amazing ability to defeat non-European armies many times their size with astounding regularity, each time increasing and strengthening their hold on their overseas colonies.

Europe's large colonial empires brought an influx of money and resources into Europe. This fed back into Europe's economic and political pluralism, especially after 1600 when smaller states such as England and the Dutch Republic were taking their share of overseas trade and colonies, thus starting the cycle all over again. These colonial empires also made Western Europe the center of a world economy, providing it with the money and resources needed for the Industrial Revolution in the late 1700's. It is no accident that the Industrial Revolution started in Great Britain, which also happened to be the foremost colonial power of its day.

Thanks to this cycle, Europe and European derived cultures (e.g., the United States, Canada, and Australia) were able to control 85% of the globe by 1900. Since then, Europe has lost its colonial empire, thanks primarily to two highly destructive world wars, but not before it could spread its ideas and technology across the globe where they have taken firm root.

FC81 Early voyages of Exploration (c.1400-1550)



[FC81](#) in the [Hyperflow of History](#).

Introduction

In 1400 A.D. Europeans probably knew less of the globe than they had during the Pax Romana. Outside of Europe and Mediterranean, little was known, with rumor and imagination filling the gaps. Pictures of bizarre looking people with umbrella feet, faces in their stomachs, and dogs' heads illustrated books about lands to the East. There was the legendary Christian king, Prester John with an army of a million men and a mirror that would show him any place in his realm whom Christians hoped to ally with against the Muslims.

Europeans also had many misconceptions about the planet outside their home waters. They had no real concept of the size or shape of Africa or Asia. Because of a passage in the Bible, they thought the world was seven-eighths land and that there was a great southern continent that connected to Africa, making any voyages around Africa to India impossible since the Indian Ocean was an inland. They had no idea at all of the existence of the Americas, Australia, or Antarctica. They also vastly underestimated the size of the earth by some 5-10,000 miles. However,

such a miscalculation gave explorers like Columbus and Magellan the confidence to undertake voyages to the Far East since they should be much shorter and easier than they turned out to be.

Factors favoring Europe

However, about this time, European explorers started to lead the way in global exploration, timidly hugging the coasts at first, but gradually getting bolder and striking out across the open seas. There were three main factors that led to Europeans opening up a whole new world at this time.

1. *The rise of towns and trade along with the Crusades* in the centuries preceding the age of exploration caused important changes in Europeans' mental outlook that would give them the incentive and confidence to launch voyages of exploration in three ways. First, they stimulated a desire for Far Eastern luxuries. Second, they exposed Europeans to new cultures, peoples and lands. Their interest in the outside world was further stimulated by the travels of Marco Polo in the late 1200's.

Finally, towns and the money they generated helped lead to the Renaissance that changed Europeans' view of themselves and the world. There was an increasing emphasis on *secular* topics, including geography. *Skepticism* encouraged people to challenge older geographic notions. *Humanism* and *individualism*, gave captains the confidence in their own individual abilities to dare to cross the oceans with the tiny ships and primitive navigational instruments at their disposal.

1. *Medieval religious fervor* also played its part. While captains such as Columbus, da Gama, and Magellan had to rely on their own skills as leaders and navigators, they also had an implicit faith in God's will and guidance in their missions. In addition, they felt it was their duty to convert to Christianity any new peoples they met. Once again we see Renaissance Europe caught in the transition between the older medieval values and the new secular ones. Together they created a dynamic attitude that sent Europeans out on a quest to claim the planet as their own.
2. *Europe's geographic position* also drove it to find new routes to Asia in three ways. First of all, Europe's geographic position at the extreme western end of the trade routes with the East allowed numerous middlemen each to take his cut and raise the cost of the precious silks and spices before passing them on to still another middleman. Those trade routes were long, dangerous, and quite fragile. It would take just one strong hostile power to establish itself along these routes in order to disrupt the flow of trade or raise the prices exorbitantly. For Europeans, that power was the Ottoman Empire. The fall of the Byzantine Empire and the earlier fall of the crusader states had given the Muslims a larger share of the trade headed for Europe. Thus Europe's disadvantageous geographic position provided an incentive to find another way to the Far East.

However, Europe was also in a good position for discovering new routes to Asia. It was certainly in as good a position as the Muslim emirates on the coast of North Africa for exploring the Atlantic coast of Africa. And when Spain gained control of both sides of the straits of Gibraltar, it was in a commanding position to restrict any traffic passing in and out of the Western Mediterranean. Europe was also well placed for exploration across the Atlantic Ocean.

Finally, ships and navigation technology had seen some dramatic leaps forward. The most striking of these was the compass, which had originated in China around 200 B.C. This allowed sailors to sail with much greater certainty that they were sailing in the right direction. Instruments such as the quadrant, crosstaff, and astrolabe allowed them to calculate latitude by measuring the elevation of the sun and North Star, although the rocking of ships at sea often made measurements taken with these instruments highly inaccurate. Columbus, one of the best navigators of his day, took readings in the Caribbean that corresponded to those of Wilmington, North Carolina, 1100 miles to the north! As a result of such imperfect measurements, sailing directions might be so vague as to read: "Sail south until your butter melts. Then turn west." Compounding this was the lack of a way to measure longitude (distance from east to west) until the 1700's with the invention of the chronometer.

Maps also left a lot to be desired. A medieval map of the world, showing Jerusalem in the center and Paradise to the Far East, gives an insight into the medieval worldview, but little useful geographic information. By 1400, there were fairly decent coastal maps of Europe and the Mediterranean, known as *portolan charts*. However, these were

of no use beyond Europe, and larger scale global projections would not come along until the 1500's. As a result, explorers relied heavily on sailors' lore: reading the color of the water and skies or the type of vegetation and sea birds typical of an area. However, since each state jealously guarded geographic information so it could keep a monopoly on the luxury trade, even this information had limited circulation.

Advances in ship design involved a choice between northern Atlantic and southern Mediterranean styles. For hulls, shipwrights had a choice between the Mediterranean *carvel built* design, where the planks were cut with saws and fit end to end, or northern *clinker built* designs, where the planks were cut with an axe or adze and overlapped. Clinker-built hulls were sturdy and watertight, but limited in size to the length of one plank, about 100 feet. As a result, the southern carvel built hulls were favored, although they were built in the bulkier and sturdier style of the northern ships to withstand the rough Atlantic seas. One other advance was the stern rudder, which sat behind the ship, not to the side. Unlike the older side steering oars which had a tendency to come out of the water as the ship rocked, making it hard to steer the ship, the stern rudder stayed in the water.

There were two basic sail designs: the southern triangular, or *lateen*, (i.e., Latin) sail and the northern square sail. The lateen sail allowed closer tacking into an adverse wind, but needed a larger crew to handle it. By contrast, the northern square sail was better for tailwinds and used a smaller crew. The limited cargo space and the long voyages involved required as few mouths as possible to feed, and this favored the square design for the main sail, but usually with a smaller lateen sail astern (in the rear) to fine tune a ship's direction.

The resulting ship, the *carrack*, was fusion of northern and southern styles. It was carvel built for greater size but with a bulkier northern hull design to withstand rough seas. Its main sail was a northern square sail, but it also used smaller lateen sails for tacking into the wind.

Living conditions aboard such ships, especially on long voyages, was appalling. Ships constantly leaked and were crawling with rats, lice, and other creatures. They were also filthy, with little or no sanitation facilities. Without refrigeration, food and water spoiled quickly and horribly. Disease was rampant, especially scurvy, caused by a vitamin C deficiency. A *good* voyage between Portugal and India would claim the lives of twenty per cent of the crewmen from scurvy alone. It should come as no surprise then that ships' crews were often drawn from the dregs of society and required a strong and often brutal, hand to keep them in line.

Portugal and Spain led the way in early exploration for two main reasons. First, they were the earliest European recipients of Arab math, astronomy, and geographic knowledge based on the works of the second century A.D. geographer, Ptolemy. Second, their position on the southwest corner of Europe was excellent for exploring southward around Africa and westward toward South America.

Portugal and the East (c.1400-1498)

Portugal started serious exploration in the early 1400's, hoping to find both the legendary Prester John as an ally against the Muslims and the source of gold that the Arabs were getting from overland routes through the Sahara. At first, they did not plan to sail around Africa, believing it connected with a great southern continent. The guiding spirit for these voyages was Prince Henry the Navigator whose headquarters at Sagres on the north coast of Africa attracted some of the best geographers, cartographers and pilots of the day. Henry never went on any of his expeditions, but he was their heart and soul.

The exploration of Africa offered several physical and psychological obstacles. For one thing, there were various superstitions, such as boiling seas as one approached the equator, monsters, and Cape Bojador, which many thought was the Gates of Hell. Also, since the North Star, the sailors' main navigational guide, would disappear south of the Equator, sailors were reluctant to cross that line.

Therefore, early expeditions would explore a few miles of coast and then scurry back to Sagres. This slowed progress, especially around Cape Bojador, where some fifteen voyages turned back before one expedition in 1434 finally braved its passage without being swallowed up. In the 1440's, the Portuguese found some, but not enough, gold and started engaging in the slave trade, which would disrupt African cultures for centuries. In 1445, they reached the part of the African coast that turns eastward for a while. This raised hopes they could circumnavigate Africa to reach India, a hope that remained even when they found the coast turning south again.

In 1460, Prince Henry died, and the expeditions slowed down for the next 20 years. However, French and English interest in a route around Africa spurred renewed activity on Portugal's part. By now, Portuguese captains were taking larger and bolder strides down the coast. One captain, Diego Cao, explored some 1500 miles of coastline. With each such stride, Portuguese confidence grew that Africa could be circumnavigated. Portugal even sent a spy, Pero de Covilha, on the overland route through Arab lands to the Indies in order to scout the best places for trade when Portuguese ships finally arrived.

The big breakthrough came in 1487, when Bartholomew Dias was blown by a storm around the southern tip of Africa (which he called the Cape of Storms, but the Portuguese king renamed the Cape of Good Hope). When Dias relocated the coast, it was to his west, meaning he had rounded the tip of Africa. However, his men, frightened by rumors of monsters in the waters ahead, forced him to turn back. Soon after this, the Spanish, afraid the Portuguese would claim the riches of the East for themselves, backed Columbus' voyage that discovered and claimed the Americas for Spain. This in turn spurred Portuguese efforts to find a route to Asia before Spain did. However, Portugal's king died, and the transition to a new king meant it was ten years before the Portuguese could send Vasco da Gama with four ships to sail to India. Swinging west to pick up westerly winds, da Gama rounded the Cape of Good Hope in three months, losing one ship in the process. Heading up the coast, the Portuguese encountered Arab surprise and hostility against European ships in their waters. Da Gama found an Indian pilot who led the Portuguese flotilla across the Indian Ocean to India in 1498.

The hostility of the Arab traders who dominated trade with India and the unwillingness of the Indians to trade for European goods which they saw as inferior made getting spices quite difficult. However, through some shrewd trading, da Gama managed to get one shipload of spices and then headed home in August 1498. It took over a year, until September 1499, to get back to Portugal, but he had proven that Africa could be circumnavigated and India could be reached by sea. Despite its heavy cost (two of four ships and 126 out of 170 men) Da Gama's voyage opened up new vistas of trade and knowledge to Europeans.

Subsequent Portuguese voyages to the East reached the fabled Spice Islands (Moluccas) in 1513. In that same year, the Portuguese explorer, Serrao, reached the Pacific at its western end while the Spanish explorer, Balboa, was discovering it from its eastern end. Also in 1513, the Portuguese reached China, the first Europeans to do so in 150 years. They won exclusive trade with China, which had little interest in European goods. However, China was interested in Spanish American silver, which made the long treacherous voyage across the Pacific to the Spanish Philippines. There, the Portuguese would trade Chinese silks for the silver, and then use it for more trade with China, while the Spanish would take their silks on the even longer voyage back to Europe by way of America. In 1542, the Portuguese even reached Japan and established relations there. As a result of these voyages and new opportunities, Portugal would build an empire in Asia to control the spice trade.

Spain and the exploration of the West (1492-c.1550)

Spain led the other great outward thrust of exploration westward across the Atlantic Ocean. Like, Portugal, the Spanish were also partially driven in their explorations by certain misconceptions. While they did realize the earth is round, they also vastly underestimated its size and thought it was seven-eighths land, making Asia much bigger and extending much further west. Therefore, they vastly underestimated the distance of a westward voyage to Asia.

This was especially true of a Genoese captain, Christopher Columbus, an experienced sailor who had seen most of the limits of European exploration up to that point in time, having sailed the waters from Iceland to the African coast. Drawing upon the idea of a smaller planet mostly made up of land, Columbus had the idea that the shortest route to the Spice Islands was by sailing west, being only some 3500 miles. In fact, the real distance is closer to 12,000 miles, although South America is only about 3500 miles west of Spain, explaining why Columbus thought he had hit Asia. The problem was that most people believed such an open sea voyage was still too long for the ships of the day.

Getting support for this scheme was not easy. The Portuguese were already committed to finding a route to India around Africa, and Spain was preoccupied with driving the Moors from their last stronghold of Granada in southern Spain. However, when the Portuguese rounded the Cape of Good Hope and stood on the verge of reaching India,

Spain had added incentive to find another route to Asia. Therefore, when Granada finally fell in 1492, Spain was able to commit itself to Columbus' plan.

Columbus set sail August 3, 1492 with two caravels, the *Nina* and *Pinta*, and a carrack, the *Santa Maria*. They experienced perfect sailing weather and winds. In fact, the weather was too good for Columbus' sailors who worried that the perfect winds blowing out would be against them going home while the clear weather brought no rain to replenish water supplies. Columbus even lied to his men about how far they were from home (although the figure he gave them was fairly accurate since his own calculations overestimated how far they had gone). By October 10, nerves were on edge, and Columbus promised to turn back if land were not sighted in two or three days. Fortunately, on October 12, scouts spotted the island of San Salvador, which Columbus mistook for Japan.

After failing to find the Japanese court, Columbus concluded he had overshot Japan. Further exploration brought in a little gold and a few captives. But when the *Santa Maria* ran aground, Columbus decided to return home. A lucky miscalculation of his coordinates caused him to sail north where he picked up the prevailing westerlies. The homeward voyage was a rough one, but Columbus reached Portugal in March 1493, where he taunted the Portuguese with the claim that he had found a new route to the Spice Islands. This created more incentive for the Portuguese to circumnavigate Africa, which they did in 1498. It also caused a dispute over who controlled what outside of Europe, which led to the pope drawing the Line of Demarcation in 1494.

Ferdinand and Isabella, although disappointed by the immediate returns of the voyage, were excited by the prospects of controlling the Asian trade. They gave Columbus the title "Admiral of the Ocean Sea, Viceroy and Governor of the Islands that he hath discovered in the Indies." Over the next decade, they sent him on three more voyages to find the Spice Islands. Each successive voyage put even more of the Caribbean and surrounding coastline on the map, but the Spice Islands were never found. Columbus never admitted that his discovery was a new continent. He died in 1504, still convinced that he had reached Asia.

However, by 1500, many people were convinced that this was a new continent, although its size and position in relation to and distance from Asia were by no means clear. The Portuguese discovery of a route to India around Africa in 1498 provided more incentive for Spanish exploration. In 1513, the Spanish explorer, Balboa discovered the Pacific Ocean, having no idea of its immensity or that the Portuguese explorer, Serrao, was discovering it from the Asian side. Given the prevailing view of a small planet, many people thought that the Pacific Sea, as they called it, must be fairly small and that Asia must be close to America. Some even thought South America was a peninsula attached to the southern end of Asia. Either way, finding a southwest passage around the southern tip of South America would put one in the Pacific Sea and a short distance from Asia. If this were so, it would give Spain a crucial edge over Portugal, whose route around Africa to India was especially long and hard.

In 1519, Charles V of Spain gave five ships and the job of finding a southwest passage around South America to Ferdinand Magellan, a former Portuguese explorer who had been to the Spice Islands while serving Portugal. Magellan's circumnavigation of the globe was one of the great epic, and unplanned, events in history. After sailing down the South American coast, he faced a mutiny, which he ruthlessly suppressed, and then entered a bewildering tangle of islands at the southern tip of the continent known even today as the Straits of Magellan. Finding his way through these islands took him 38 days, while the same journey today takes only two.

Once they emerged from the Straits of Magellan into the Pacific "Sea", Magellan and his men figured they were a short distance from Asia, and set out across the open water and into one of the worst ordeals ever endured in nautical history. One of those on the journey, Pigafetta, left an account of the Pacific crossing:

“On Wednesday the twenty-eighth of November, one thousand five hundred and twenty, we issued forth from the said strait and entered the Pacific Sea, where we remained three months and twenty days without taking on board provisions or any other refreshments, and we ate only old biscuit turned to powder, all full of worms and stinking of the urine which the rats had made on it, having eaten the good. And we drank water impure and yellow. We ate also ox hides, which were very hard because of the sun, rain, and wind. And we left them...days in the sea, then laid them for a short time on embers, and so we ate them. And of the rats, which were sold for half an ecu apiece, some of us could not get enough.

“Besides the aforesaid troubles, this malady (scurvy) was the worst, namely that the gums of most part of our men swelled above and below so that they could not eat. And in this way they died, inasmuch as twenty-nine of us died...But besides those who died, twenty-five or thirty fell sick of divers maladies, whether of the arms or of the legs and other parts of the body (also effects of scurvy), so that there remained very few healthy men. Yet by the grace of our Lord I had no illness.

“During these three months and twenty days, we sailed in a gulf where we made a good 4000 leagues across the Pacific Sea, which was rightly so named. For during this time we had no storm, and we saw no land except two small uninhabited islands, where we found only birds and trees. Wherefore we called them the Isles of Misfortune. And if our Lord and the Virgin Mother had not aided us by giving good weather to refresh ourselves with provisions and other things we would have died in this very great sea. And I believe that nevermore will any man undertake to make such a voyage.”

By this point, the survivors were so weakened that it took up to eight men to do the job normally done by one. Finally, they reached the Philippines, which they claimed for Spain, calculating it was on the Spanish side of the Line of Demarcation. Unfortunately, Magellan became involved in a tribal dispute and was killed in battle. Taking into account his previous service to Portugal in the East, Magellan and the Malay slave who accompanied him were the first two people to circumnavigate the earth.

By now, the fleet had lost three of its five ships: one having mutinied and returned to Spain, one being lost in a storm off the coast of South America, and the other being so damaged and the crews so decimated that it was abandoned. The other two ships, the *Trinidad* and *Victoria*, finally reached the Spice Islands in November 1521 and loaded up with cloves. Now they faced the unpleasant choice of returning across the Pacific or continuing westward and risking capture in Portuguese waters. The crew of the *Trinidad* tried going back across the Pacific, but gave up and were captured by the Portuguese. Del Cano, the captain of the *Victoria*, took his ship far south to avoid Portuguese patrols in the Indian Ocean and around Africa, but also away from any chances to replenish its food and water. Therefore, the Spanish suffered horribly from the cold and hunger in the voyage around Africa.

When the *Victoria* finally made it home in 1522 after a three year journey, only 18 of the original 280 crewmen were with it, and they were so worn and aged from the voyage that their own families could hardly recognize them. Although the original theory about a short South-west Passage to Asia was wrong, they had proven that the earth could be circumnavigated and that it was much bigger than previously supposed. It would be half a century before anyone else would repeat this feat. And even then, it was an act of desperation by the English captain Sir Francis Drake fleeing the Spanish fleet.

Interior and coastal explorations (1519-c.1550)

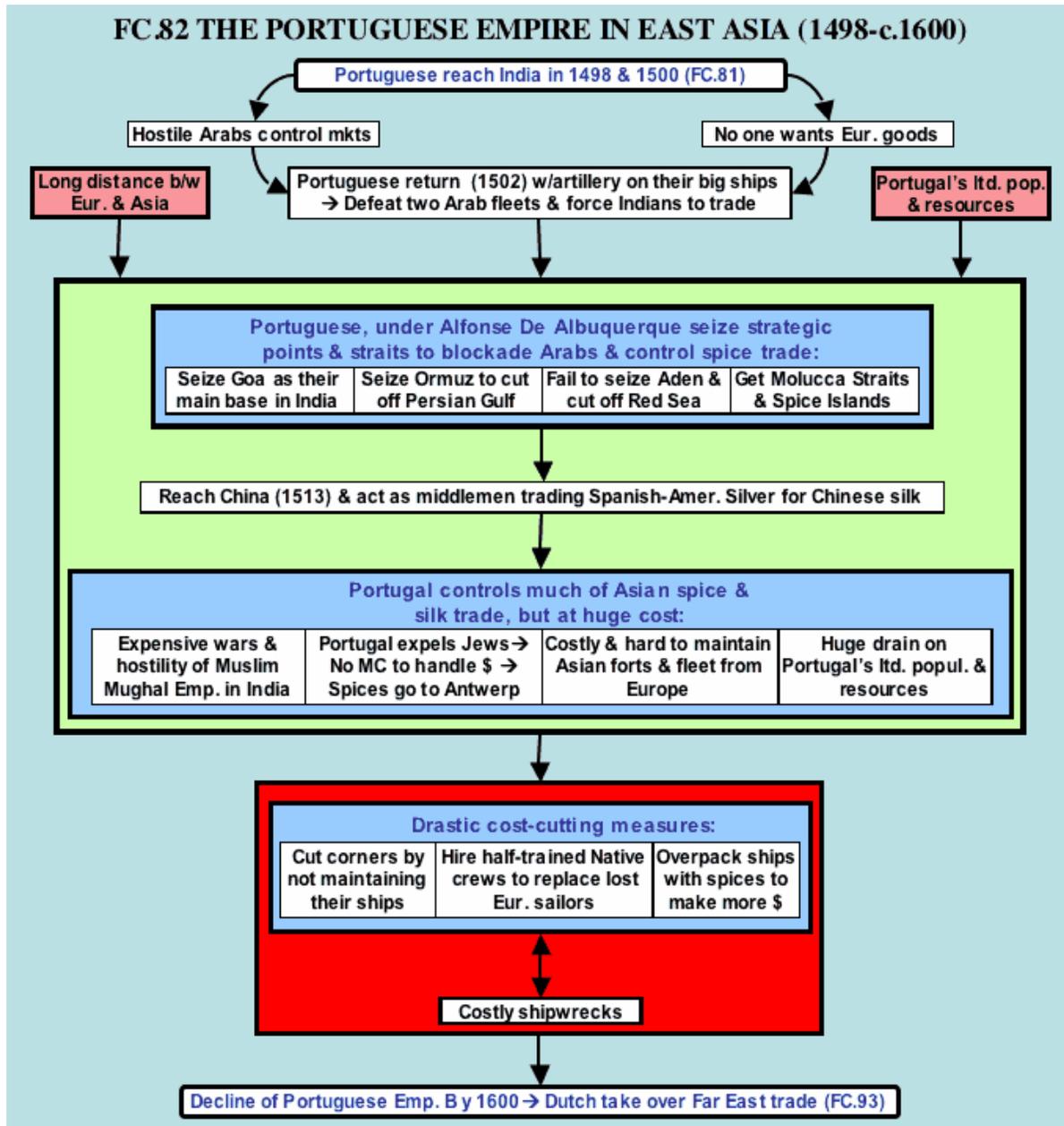
Meanwhile, the Spanish were busy exploring the Americas in search of new conquests, riches, and even the Fountain of Youth. There were two particularly spectacular conquests. The first was by Hernando Cortez, who led a small army of several hundred men against the Aztec Empire in Mexico. Despite their small number, the Spanish could exploit several advantages: their superior weapons and discipline, the myth of Quetzecoatl which foretold the return of a fair haired and bearded god in 1519 (the year Cortez did appear), and an outbreak of smallpox which native Americans had no prior contact with or resistance to. Because of this and other Eurasian diseases, native American populations would be devastated over the following centuries to possibly less than ten per cent their numbers in 1500.

The Spanish conquistador, Pizarro, leading an army of less than 150 men, carried out an even more amazing conquest of the Inca Empire in Peru in the 1530's. Taking advantage of a dispute over the throne, Pizarro captured the Inca Emperor, whose authority was so great that his capture virtually paralyzed the Incas into inaction. As a result, a highly developed empire ruling millions of people fell to a handful of Spaniards.

The conquests of Mexico and Peru more than compensated Spain for its failure to establish a trade route to the Spice Islands. The wealth of South America's gold and silver mines would provide Spain with the means to make it the great power of Europe in the 1500's. Unfortunately, Spain would squander these riches in a series of fruitless religious wars that would wreck its power by 1650.

Other Spanish expeditions were exploring South America's coasts and rivers, in particular the Amazon, Orinoco, and Rio de la Plata, along with ventures into what is now the south-west United States (to find the Seven Cities of Gold), the Mississippi River, and Florida (to find the Fountain of Youth). While these found little gold, they did provide a reasonable outline of South America and parts of North America by 1550. However, no one had yet found an easy route to Asia. Therefore, the following centuries would see further explorations which, while failing to find an easier passageway, would in the process piece together most of the global map.

FC82 The Portuguese Empire in the East (c.1500-1600)



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Even before da Gama had set out for India, a Genoese explorer sailing under the Spanish flag, Christopher Columbus, had returned from what he believed was a direct route to Asia. This provoked a dispute between Spain and Portugal over who could claim what territories outside of Europe. In 1494, the pope arbitrated the dispute and drew a Line of Demarcation down the middle of the Atlantic. Everything outside of Christian Europe and west of

the line belonged to Spain; everything east of it was Portugal's to claim. The line extended all around the globe, but since the size of the earth was not known, just where that line came out was anybody's guess. Despite these uncertainties, the Pope's Line of Demarcation determined the direction of both Spanish and Portuguese explorations. For the Portuguese, this meant they must control the trade routes to the East.

In 1500, only a year after da Gama's return, Pero Alvares Cabral followed da Gama's route to India with a fleet of ten Portuguese ships. Using da Gama's tactic of swinging westward to pick up westerly winds to take him around the Cape of Good Hope, he accidentally hit Brazil which juts eastward into the Atlantic. Since that part of Brazil lay east of the Line of Demarcation, Cabral claimed it for Portugal. He continued to India, but found the same problems da Gama had encountered: Arab hostility and an unwillingness to trade for European goods.

Therefore, the Portuguese decided to change their approach. The third expedition to India, led by da Gama in 1502, took 14 well-armed ships that would take the spice trade by force. The bulky European ships, built to stand the rough Atlantic seas, also provided excellent gun platforms for artillery, and that was the decisive factor in the battle that followed as the Portuguese beat the Arab fleet opposing them. A second decisive victory by the Portuguese fleet in 1509 established the Portuguese reputation for naval invincibility in Eastern waters and started Portugal on the road to establishing a maritime empire in the East.

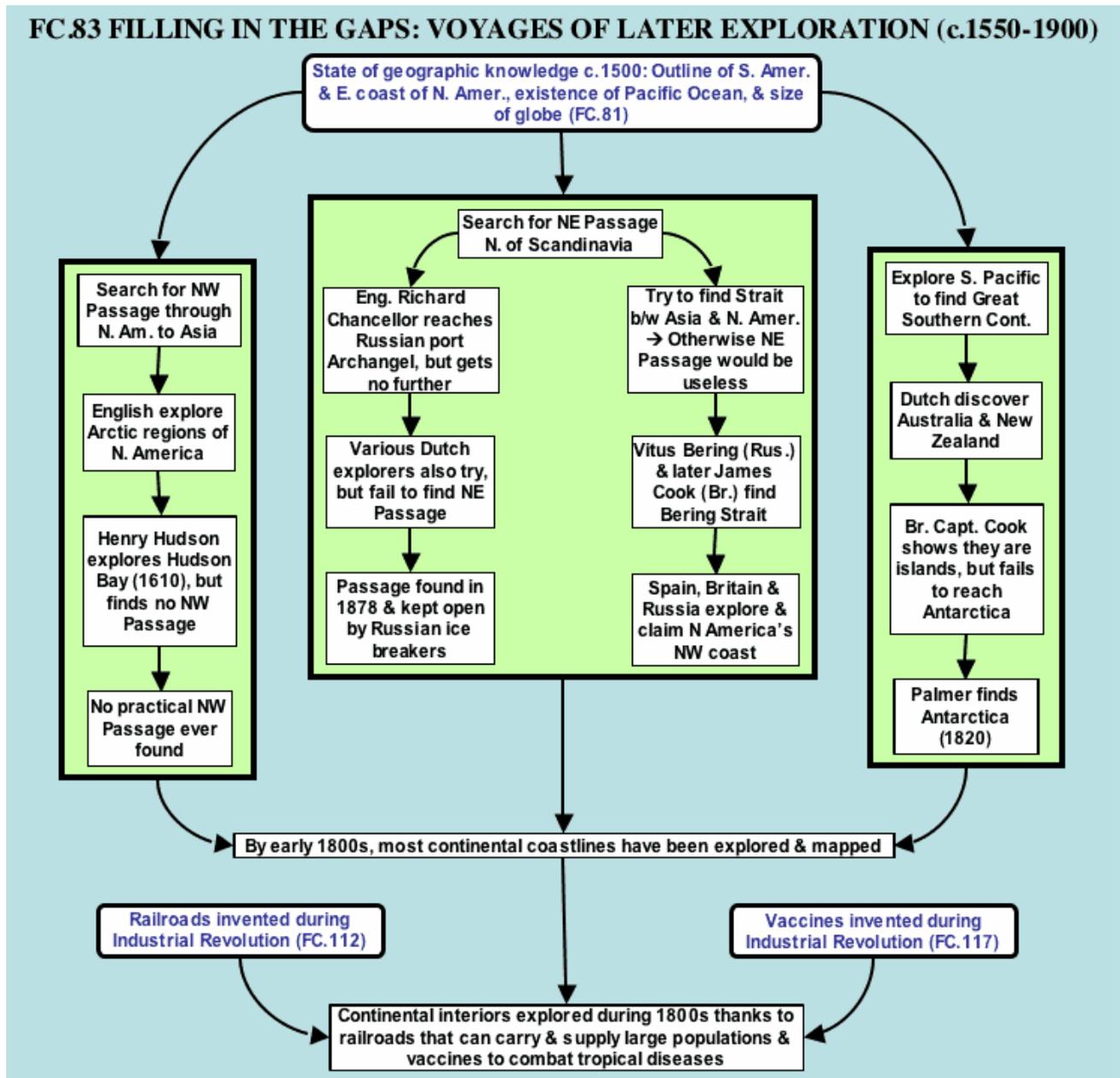
The architect of the Portuguese Empire in the East was a capable and daring leader, Alphonse de Albuquerque. He realized that such a tiny state as Portugal could not conquer a land empire in Asia and run it all the way from Europe. Therefore, he concentrated on seizing key strategically placed ports that could control the flow of the spice trade. First he captured the strongly fortified island of Goa off the coast of India. From there he could strike out in several directions. Although he failed to cut off Muslim trade coming out of the Red Sea, he did cut off much of the Arab trade by seizing Ormuz at the tip of the Persian Gulf through some masterful bluffing and sailing with only six ships.

The Portuguese maintained their dominance of the East through a combination of astute and ruthless policies. Albuquerque was especially talented in establishing the proper ratio of escort ships to cargo ships. The Portuguese also blackmailed other merchants into paying for certificates of free passage in the Far East. For a few years they managed to have nearly all spices headed for Europe traveling on Portuguese ships.

However, there were serious limits to Portugal's power in the East, which led to the eventual decline of its Empire in Asia. For one thing, the Portuguese, in a fit of religious fervor, had expelled their Jewish bankers and merchants from Portugal, thus eliminating most of Portugal's business community. As a result, the Flemish port of Antwerp handled most of Portugal's spice trade and took much of its profit. Second, Portugal's empire put a tremendous strain on its very limited manpower. Along these same lines, it was very expensive to maintain forts, garrisons, and fleets, especially over such long distances. Finally, the hostility of local rulers, in particular the Mughal Dynasty ruling India, put extra strains on Portugal's ability to hold its empire.

All these factors cut deeply into Portugal's profits and prompted several cost cutting moves. The Portuguese cut corners by not maintaining their ships in the best condition. They would replace lost European crewmen with half-trained natives unfamiliar with European ships and rigging. Finally, because of the limited number of ships and the desire for as large a profit as possible, they would over pack their ships with spices. All these measures led to costly shipwrecks, which cut further into Portuguese profits and caused even more of these cost cutting measures. By 1600, the Portuguese Empire in Asia was in serious decline and increasingly losing ground, first to the Dutch and later to the English.

FC83 The later voyages of exploration (c.1550-1900)



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The progress of the past 150 years still left many questions to answer and myths to dispel concerning the world map. Subsequent explorations concerned four main issues and followed four lines of development:

1. Finding a practical northwest passage around North America to Asia;
2. Finding a practical northeast passage around Scandinavia to Asia;
3. Determining if North America and Asia were connected or separate, which would determine if any north-west or north-east passages, if they existed, could get through to Asia; and
4. Looking for a great southern continent to counterbalance the weight of the Northern Hemisphere.

The English largely led the search for a northwest passage. In 1576, Martin Frobisher, while exploring arctic regions, found an inlet, making him believe he had found the way to Asia and that the Eskimos were Mongols. Further explorations followed. Hopes especially soared in the early 1600's when Henry Hudson found a deep inlet,

known ever since as Hudson's Bay. Because of this bay's size and the fact that no one had any idea of North America's size, people believed they had found the way to Asia. However, the North-west Passage was never found, unless one counts voyages by modern nuclear submarines under the Arctic Ocean's icecap.

At the same time, Europeans were trying to find a northeast passage north of Scandinavia to Asia. The English explorer, Richard Chancellor, reached the Russian port of Archangel, but got no further. He did claim to have "discovered" Russia and established relations between it and England. However, it would not be until the early 1700's that the czar Peter I would make Russia an integral part of European affairs. Subsequent attempts by Dutch explorers met with similar failures in finding the North-east Passage. Finally, in 1878, the Swedish explorer, A.E. Nordenskjöld, found the Northeast Passage along the rim of the Arctic Ocean and then down the Bering Straits to Asia. Even today, Russian icebreakers ply the route to keep it open for trade and shipping.

The usefulness of the North-east Passage depended on whether North America and Asia are connected. If they were, any northwest or northeast passages would be cut off from entering the Pacific. The answer to this hinged on determining the size of North America, which most people then vastly underestimated. Therefore, a number of expeditions explored the northwest coast of North America to find a passage between it and Asia. The key expedition was led by a Russian, Vitus Bering, who found the passage (the Bering Strait) in 1725. He also claimed Alaska, which Russia held until its sale to the United States in 1867.

For whatever reasons, many people did not believe Bering had found this passage; so more expeditions were launched to this region. Spain and England both explored North America's northwest coast in order to claim lands for the growing fur trade as well as search for the strait of water separating Asia from the New World. Conflicting claims between the two countries were resolved in 1790, with Britain getting everything from Oregon to Alaska. In the meantime, England's most famous explorer, Captain James Cook, confirmed Bering's discovery. By 1800, the coastal map of North America was pretty much in place.

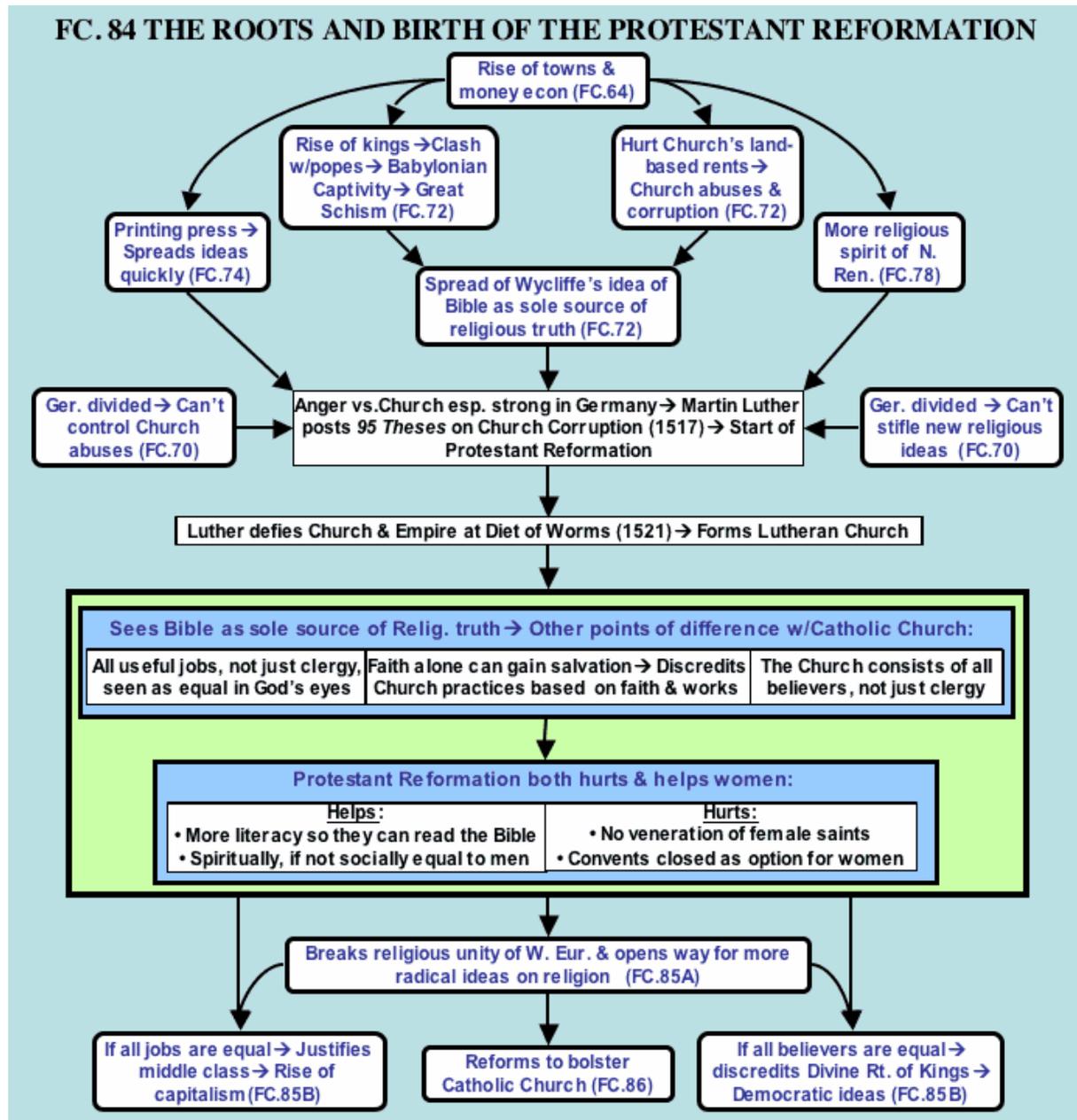
Expeditions in the South Pacific centered on finding the great southern continent. At first, the Dutch led the way in the 1600's in discovering Australia (literally "Southland"), New Zealand (named after a province of the Netherlands), and Tasmania (named after the Dutch captain, Abel Tasman). Since the Dutch had not circumnavigated Australia, many believed it was the great southern continent. In 1768, the English Captain Cook disproved this by circumnavigating it and New Zealand. On his next voyage, he sailed further south to find out if there was a great southern continent, but rough icy waters forced him to turn back. (On his third voyage, which confirmed the existence of the Bering Strait, Cook met his death in Hawaii when trying to recover hostages taken by the natives.) It was not until 1820 that the explorer, Nathaniel Palmer, finally discovered the long sought great southern continent, which we call Antarctica.

Conclusion

By 1800, most continental coastlines had been mapped. The following century was mainly one of exploring and settling continental interiors. Two things helped this process, both of them products of the ongoing Industrial Revolution. First of all, the railroad made possible the movement and supplying of large numbers of settlers in continental interiors. This was especially decisive in the development of the interior of North America. Second, germ theory and the development of vaccines for various tropical diseases meant that Europeans could now explore and conquer tropical regions. This particularly affected Africa, known until then to Europeans as the "Dark Continent" since its interior had been so impenetrable.

Reformation & religious wars Unit 13: The Age of Reformation and religious wars (1517-1648)

FC84 The roots and birth of the Protestant Reformation



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The roots of the Reformation lie far back in the High Middle Ages with the rise of towns and a money economy. This led to four lines of development that all converged in the Reformation. First of all, a money economy led to the rise of kings who clashed with the popes over control of Church taxes. One of these clashes, that between pope Boniface VIII and Philip IV of France, triggered the Babylonian Captivity and the Great Schism. Second, the replacement of a land based with a money economy led to growing numbers of abuses by the Church in its desperation for cash. Both of these factors seriously damaged the Church's reputation and helped lead to the Lollard and Hussite heresies which would heavily influence Luther's Protestant Reformation.

Another effect of the rise of towns was a more plentiful supply of money with which humanists could patronize Renaissance culture. When the Renaissance reached Northern Europe, the idea of studying the Bible in the original Greek and Hebrew fused with the North's greater emphasis on religion, thus paving the way for a Biblical scholar such as Martin Luther to challenge the Church.

Finally, towns and trade spread new ideas and technology. Several of these bits of technology, some from as far away as China, helped lead to the invention of the printing press which helped the Reformation in two ways. First of all, it made books cheaper, which let Luther have his own copy of the Bible and the chance to find what he saw as flaws in the Church's thinking. Second, the printing press would spread Luther's ideas much more quickly and further a field than the Lollards and Hussites ever could have without the printing press.

All of these factors, growing dissatisfaction with corruption and scandal in the Church, the religious emphasis of the Northern Renaissance, and the printing press, combined to create a growing interest in Biblical scholarship. Nowhere was this interest more volatile or dangerous than in Germany. The main reason for this was the fragmentation of Germany into over 300 states, which helped the Reformation in two ways.

For one thing, there was no one power to stop the large number of Church abuses afflicting Germany, thus breeding a great deal of anger in Germany against the Church. For another thing, the lack of central control also made it very difficult to stop the spread of any new ideas. This was especially true in Germany, with over 30 printing presses, few, if any, being under tight centralized control, and each of which was capable of quickly churning out literally thousands of copies of Protestant books and pamphlets. If Germany could be seen as a tinder box just waiting for a spark to set it aflame, Martin Luther was that spark.

Luther, like all great men who shape history, was also a product of his own age. He had a strict religious upbringing, especially from his father who frequently beat his son for the slightest mistakes. School was little better. Young Martin was supposedly beaten fifteen times in one day for misdeclining a noun. All this created a tremendous sense of guilt and sinfulness in him and influenced his view of God as a harsh and terrifying being. Therefore, Luther's reaction to the above mentioned thunderstorm in 1506 should come as no surprise. He carried out his vow and joined a monastic order.

As a monk, Luther carried his religious sense of guilt to self-destructive extremes, describing how he almost tortured himself to death through praying, reading, and vigils. Indeed, one morning, his fellow monks came into his cell to find him lying senseless on the ground. Given this situation, something had to give: either Luther's body or his concept of Christianity. His body survived.

Out of concern for Martin, his fellow monks, thanks to the printing press, gave him a copy of the Bible where Luther found two passages that would change his life and history: "*For by grace are you saved through faith; and that not of yourselves: it is the gift of God; not of works, lest any man should boast.*" (Ephesians 2:8-9) "*Therefore, we conclude that a man is justified by faith without the deeds of the law.*" (Romans 3:28) As Luther put it, "*Thereupon I felt as if I had been born again and had entered paradise through wide open gates. Immediately the whole of Scripture took on a new meaning for me. I raced through the Scriptures, so far as my memory went, and found analogies in other expressions.*" From this Luther concluded that faith is a "free gift of God" and that no amount of praying, good deeds or self-abuse could affect one's salvation. Only faith could do that.

The storm breaks

In the following years, Luther's ideas quietly matured as he pursued a career as a professor, back then a Church position. Then, in 1517, trouble erupted. Pope Leo X, desperate for money to complete the magnificent St. Peter's cathedral in Rome, authorized the sale of indulgences. These were documents issued by the Church that supposedly relieved their owners of time in purgatory, a place where Catholics believe they must purge themselves of their sins before going to heaven. Originally, indulgences had been granted to crusaders for their efforts for the faith. In time they were sold to any of the faithful who wanted them. The idea was that the money paid was the result of one's hard work and was sanctified by being donated to the Church. However, it was easily subject to abuse as a convenient way to raise money.

Indulgence sales were especially profitable in Germany where there was no strong central government to stop the Church from taking money out of the country. This greatly angered many Germans and made them more ready to listen to criticism of the Church when it came. The Church's agent for selling indulgences in Brandenburg in Northern Germany, John Tetzel, used some highly questionable methods. He reportedly told local peasants that these indulgences would relieve them of the guilt for sins they wished to commit in the future and that, after buying them, the surrounding hills would turn to silver. He even had a little jingle, much like a commercial: "*As soon as coin in coffer rings a soul from Purgatory springs.*"

Luther was then a professor in nearby Wittenburg, Saxony, not far from the home of the Hussite heresy in Bohemia. When some local people showed him the indulgences they had bought, he denied they were valid. Tetzel denounced Luther for this, and Luther took up the challenge. On October 31, 1517, Luther nailed a placard to the church door in Wittenburg. On it were the Ninety-five Theses, or statements criticizing various Church practices, some of which are given here.

26. "They preach mad, who say that the soul flies out of purgatory as soon as the money thrown into the chest rattles.

27. "It is certain that, when the money rattles in the chest, avarice and gain may be increased, but the suffrage of the Church depends on the will of God alone...

32. "Those who believe that, through letters of pardon, they are made sure of their own salvation, will be eternally damned along with their teachers.

43. "Christians should be taught that he who gives to a poor man, or lends to a needy man, does better than if he bought pardons...

56. "The treasures of the Church, whence the Pope grants indulgences, are neither sufficiently named nor known among the people of Christ.

65 & 66. "Hence the treasures of the Gospel are nets, wherewith they now fish for the men of riches...The treasures of indulgences are nets, wherewith they now fish for the riches of men..."

86. "Again; why does not the Pope, whose riches are at this day more ample than those of the wealthiest of the wealthy, build the one Basilica of St. Peter when his own money, rather than with that of poor believers...?"

Luther's purpose was not to break away from the Church, but merely to stimulate debate, a time honored academic tradition. The result, however, was a full-scale religious reformation that would destroy Europe's religious unity forever.

Soon copies of Luther's Ninety-five Theses were printed and spread all over Germany where they found a receptive audience. Indulgence sales plummeted and the authorities in Rome were soon concerned about this obscure professor from Wittenburg. Papal legates were sent to talk sense into Luther. At first, he was open to reconciliation with the Church, but, more and more, he found himself defying the Church. Luther's own rhetoric against the Church was becoming much more radical:

"If Rome thus believes and teaches with the knowledge of popes and cardinals (which I hope is not the case), then in these writings I freely declare that the true Antichrist is sitting in the temple of God and is reigning in Rome—that empurpled Babylon—and that the Roman Church is the Synagogue of Satan... If we strike thieves with the gallows, robbers with the sword, heretics with fire, why do we not much more attack in arms these masters of perdition, these cardinals, these popes, and all this sink of the Roman Sodom which has without end corrupted the Church of God, and wash our hands in their blood?"

"...Oh that God from heaven would soon destroy thy throne and sink it in the abyss of Hell!...Oh Christ my Lord, look down, let the day of thy judgment break, and destroy the devil's nest at Rome."

Luther also realized how to exploit the issue of the Italian church draining money from Germany:

“Some have estimated that every year more than 300,000 gulden find their way from Germany to Italy... We here come to the heart of the matter... How comes it that we Germans must put up with such robbery and such extortion of our property at the hands of the pope?... If we justly hand thieves and behead robbers, why should we let Roman avarice go free? For he is the greatest thief and robber that has come or can come into the world, and all in the holy name of Christ and St. Peter. Who can longer endure it or keep silence?”

The papal envoy, Aleander, described the anti-Catholic climate in Germany:

“...All German is up in arms against Rome. All the world is clamoring for a council that shall meet on German soil. Papal bulls of excommunication are laughed at. Numbers of people have ceased to receive the sacrament of penance... Martin (Luther) is pictured with a halo above his head. The people kiss these pictures. Such a quantity has been sold that I am unable to obtain one... I cannot go out in the streets but the Germans put their hands to their swords and gnash their teeth at me...”

What had started as a simple debate over Church practices was quickly becoming an open challenge to papal authority. The Hapsburg emperor, Charles V, needing Church support to rule his empire, feared this religious turmoil would spill over into political turmoil. Therefore, although religiously tolerant by the day's standards, Charles felt he had to deal with this upstart monk. A council of German princes, the Diet of Worms, was called in 1521. At this council, the German princes, opposed to the growth of imperial power at their expense, applauded Luther and his efforts. As a result, Charles had to summon Luther to the diet so he could defend himself.

Luther's friends, remembering Jan Hus' fate, feared treachery and urged him not to go. But Luther was determined to go “*though there were as many devils in Wurms as there are tiles on the roofs.*” His trip to Worms was like a triumphal parade, as crowds of people came out to see him. Then came the climactic meeting between the emperor and the obscure monk. Luther walked into an assembly packed to the rafters with people sensing history in the making. A papal envoy stood next to a table loaded with Luther's writings. Asked if he would take back what he had said and written, Luther replied:

“Unless I am convinced by the evidence of Scripture or by plain reason—for I do not accept the authority of the Pope, or the councils alone, since it is established that they have often erred and contradicted themselves—I am bound by the scriptures I have cited and my conscience is captive to the Word of God. I cannot and will not recant anything, for it is neither safe nor right to go against conscience. God help me. Amen.”

Having defied Church and empire, Luther was hurried out of town where he was “ambushed” by his protector, Frederick of Saxony, and hidden in Wartburg castle to keep him out of harm's way. However, although Luther dropped out of sight for a year, the Reformation did not go away.

Luther's religion

Because of his criticism of papal authority and Church practices, Luther had been excommunicated from the Church. This along with the dramatic meeting at Worms led him to make a final break with the Catholic Church and form Lutheranism, the first of the Protestant faiths. This was not a new religion. It had basically the same beliefs about God as the Catholic faith. However, there were four main beliefs in the Lutheran faith that differed substantially from Catholicism.

1. *Faith alone can gain salvation.* No amount of good works can make any difference because man is so lowly compared to God. In the Catholic faith, penance and good works are important to salvation.
2. *Religious truth and authority lie only in the word of God revealed in the Bible, not in any visible institutions of the Church.* This largely reflects what Wycliffe had said about the many institutions and rituals the Church valued. As a result, Lutheranism tended to be simpler in practice than Catholicism.

3. *The church is the community of all believers, and there is no real difference between priest and layman in the eyes of God.* The Catholic Church gave greater status to the clergy who devoted their lives to God.
4. *The essence of Christian living lies in serving God in one's own calling.* In other words, all useful occupations, not just the priesthood, are valuable in God's eyes. This especially appealed to the rising middle class whose concern for money was seen as somewhat unethical by the Medieval Church.

The spread of Lutheranism

When the Church burned 300 copies of Hus' and Wycliffe's writings in the early 1400's, this dealt a heavy blow to the Hussite movement. However, from the start of the Reformation, printed copies of Luther's writings were spread far and wide in such numbers that the movement could not be contained. By 1524, there were 990 different books in print in Germany. Eighty percent of those were by Luther and his followers, with some 100,000 copies of his German translation of the Bible in circulation by his death. Comparing that number to the 300 copies of Hussite writings underscores the decisive role of the printing press in the Protestant Reformation.

When discussing whom in society went Lutheran or stayed Catholic and why, various economic and political factors were important, but the single most important factor in one's decision was religious conviction. This was still an age of faith, and we today must be careful not to downplay that factor. However, other factors did influence various groups in the faith they adopted.

Many German princes saw adopting Lutheranism as an opportunity to increase their own power by confiscating Church lands and wealth. Many middle class businessmen, as stated above, felt the Lutheran faith justified their activities as more worthwhile in the eyes of God. The lower classes at times adopted one faith as a form of protest against the ruling classes. As a result, nobles tended to be suspicious of the spread of a Protestant faith as a form of social and political rebellion. Many Germans also saw Lutheranism as a reaction against the Italian controlled Church that drained so much money from Germany. However, many German people remained Catholic despite any material advantages Lutheranism might bestow. For both Catholics and Protestants, faith was still the primary consideration in the religion they adopted.

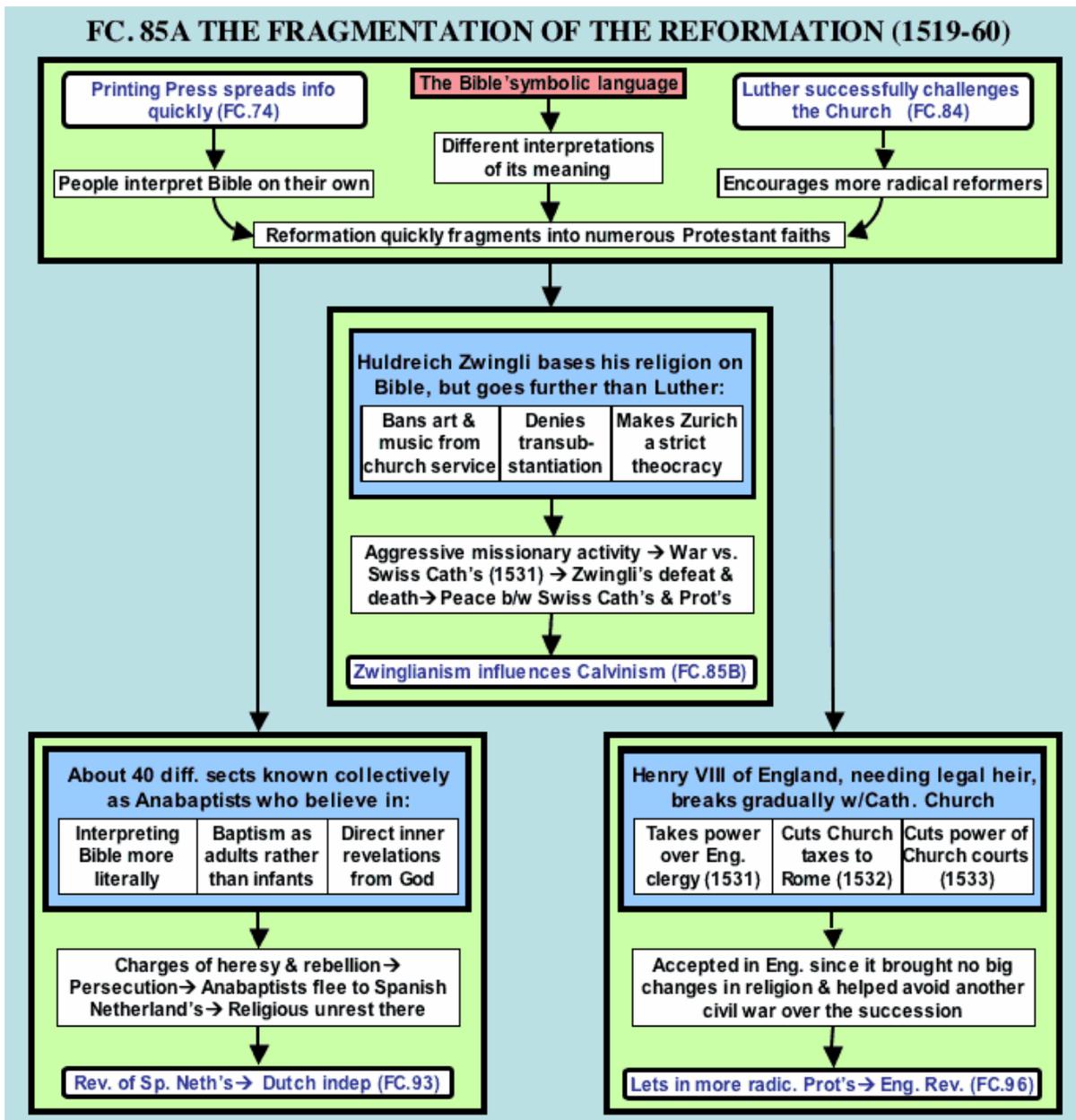
Lutheranism did not win over all of Germany, let alone all of Europe. Within Germany, Lutherans were strongest in the north, while the south largely remained Catholic. However, Germany's central location helped Protestants spread their doctrine from Northern Germany to Scandinavia, England, and the Netherlands.

Luther's achievement

Although Luther had not originally intended to break with Rome, once it was done he tried to keep religious movement from straying from its true path of righteousness. Therefore he came out of hiding to denounce new more radical preachers. He also made the controversial stand of supporting the German princes against a major peasant revolt in Germany in 1525, since he saw the German princes' support as vital to the Reformation's survival. This opened Luther to attacks by more radical Protestants who saw him as too conservative, labeling him the "Wittenburg Pope". However, as the Protestant movement grew and spread, it became increasingly harder for Luther to control.

Martin Luther died February 18, 1546 at the age of 63. By this time events had gotten largely out of his control and were taking violent and radical turns that Luther never would have liked. Ironically, Luther, who had started his career with such a tortured soul and unleashed such disruptive forces on Europe, died quite at peace with God and himself. Like so many great men, he was both a part of his times and ahead of those times, thus serving as a bridge to the future. He went to the grave with many old Medieval Christian beliefs. However, his ideas shattered Christian unity in Western Europe, opening the way for new visions and ideas in such areas as capitalism, democracy, and science that shape our civilization today.

FC85A The Reformation fragments I: Zwinglianism & Anabaptism



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Introduction

While the Catholic Church kept Western Europe religiously united for 1000 years, Protestant unity broke up almost immediately. There were three major reasons for this. First, Luther's successful challenge to the Catholic Church set an example for other reformers to follow. Second, the printing press and translations of the Bible from Latin to the vernacular let more people read and interpret scripture on their own. Previously, the Church's monopoly on Bibles, all written in Latin, severely limited individual interpretations. Finally, the Bible itself is often vague, which also

encouraged widely differing interpretations. Consequently, a number of different *sects* (religious groups) sprang up on the heels of Luther's Reformation.

Huldreich Zwingli and the Swiss Reformation

The first break in Protestant unity came from the Swiss reformer, Huldreich Zwingli. Although only a year younger than Luther, Zwingli seemed to come from a different world. While Luther's outlook and background were very medieval, Zwingli received a liberal humanist education and did not have the great sense of guilt and fear of the terrors of hell his German counterpart had. Zwingli's humanist education influenced him to call for a religion based entirely on the Bible. In 1518 he became a common preacher in Zurich, Switzerland and echoed Luther by speaking out against Bernhardin Samson, a local seller of indulgences. He also denounced other church abuses and thus launched the Swiss Reformation.

Zwingli's religion was both similar to and different from Luther's. Like Luther, he stressed a more personal relationship between man and God, claimed faith alone could save one's soul, and denied the validity of many Catholic beliefs and customs such as purgatory, monasteries, and a celibate (unmarried) clergy. However, Zwingli's goal from the first was to break completely from the Catholic Church. His plan for doing this was to establish a theocracy (church run state) in Zurich.

By 1525, he had accomplished this, having banished the Catholic mass and introduced services in the vernacular. He vastly simplified the service to sermon and scripture readings. Despite his love of music, Zwingli banned it from the service and even smashed the church organ. He either destroyed or whitewashed religious images, which he saw as idolatrous, served communion in a wooden bowl rather than a silver chalice, and closed down monasteries or turned them into hospitals and schools. Although not persecuted, Catholics had to pay fines for attending mass and eating fish on Fridays (a Catholic practice then to symbolize personal sacrifice by not eating meat) and were excluded from public office. Zwingli also closely supervised the morals of his congregation. All these measures anticipated the later reforms of John Calvin.

By 1528, Zwingli's reforms had spread across northern Switzerland with the South remaining Catholic. Because of fear of being caught between Catholics in southern Switzerland and Germany to the north Zwingli followed a more aggressive foreign policy and attempts to unite with the Lutherans in common cause against the Catholics. The proposed alliance never occurred because the two camps could not agree on one piece of theology: whether the bread and wine of communion were actually *transubstantiated* (transformed) into the body and blood of Christ. The Catholic Church had claimed for centuries that transubstantiation did take place, and Luther agreed with them in a modified form. Zwingli said it was only symbolic of Christ's body and blood. A personal meeting between Luther and Zwingli in 1529 accomplished nothing except hard feelings, and the proposed alliance between the Zwinglians and Lutherans fell through.

Aggressive Zwinglian missionaries in the Catholic districts of Switzerland led to war in 1531, and an army of 8000 Catholics destroyed Zwingli and his force of 1500 men. An uneasy co-existence between Protestants and Catholics followed, and Protestantism survived in Switzerland. Zwinglianism, however, did not survive, being replaced by Calvinism in the Swiss Reformed Church. Still, Zwingli was important for establishing Protestantism in Switzerland and serving as an example for the more successful Calvinists who followed.

Grassroots Protestantism: the Anabaptists

After breaking the Catholic Church's centuries long monopoly on religion, the issue arose of how far beyond the old set of rules the new beliefs could go. Luther, Zwingli, and Calvin, despite significant religious differences, drew up new sets of rules fairly close to the Catholic Church's. Among other things, they all believed in obedience to civil authority. However, some men preferred to go much further in rewriting the rules. As a result, some 40 different religious sects sprang up in Western Europe. Although their beliefs varied somewhat from one another, they have been lumped together under the name of Anabaptists from their common practice of baptizing members as adults when they could make the free choice to be Christians. In addition to the Bible as a source of religious truth, they also believed in inner revelation coming directly from God.

The Anabaptist movement was more involved with social discontent than the other Protestant sects were. The 1500's saw economic difficulties resulting from rising population and inflation. Peasants, town craftsmen, and miners were especially hard hit, and it was they who especially joined the Anabaptist ranks in hope for a better world to come. Most Anabaptists denied the right of civil governments to rule their lives. They refused to hold office, bear arms, or swear oaths, which naturally made the authorities suspicious of them.

Actually, most of the Anabaptists were just trying to live good, peaceful; Christian lives in imitation of Christ himself. They did not openly resist the authorities, but they still aroused suspicion because of their different ways. Some groups held property in common. Others went to extremes in interpreting the Bible literally, preaching from rooftops and even babbling like children as the Bible supposedly told them to. They tended to separate themselves from the rest of society, which they saw as sinful. Despite their peacefulness, the Anabaptists were heavily persecuted. This forced them to migrate, which spread their beliefs from Switzerland down the Rhine to the Netherlands. It was here that the movement turned more violent as it combined frustration from economic hard times with an older tradition of socially revolutionary ideas that were popular among the peasants. The climax of this process took place in the German city of Munster in the early 1530's.

It was in Munster that radical Anabaptists seized power and combined religious fanaticism with a reign of terror that tarnished the reputation of other Anabaptists for years. All books except the Bible were burned. Communal property and polygamy were enforced. Their leader, John Bockleson, ruled with a lavish court while ensuring his followers that they too would eat from gold plates and silver tables in the near future. So alarming was this spectacle that Lutherans and Catholics combined forces to snuff it out. The determined and disciplined resistance of the Anabaptists led to a drawn out siege (1534-35). The city was finally betrayed and the Anabaptist leaders exterminated. An intense persecution of the Anabaptists followed, killing thousands and driving many more from place to place. Some of them, such as the Mennonites and Amish, found a home in North America and have had a profound influence on our attitude of separating church and state. Others made their way to the Spanish Netherlands where they helped stir up a major revolt against Catholic Spain.

The English Reformation

As discussed above, the strong medieval monarchies of France, England, and Spain assumed more and more control over the Church within their own lands. As a result, these kings had few grievances against the Church and were generally hostile to the Reformation, since it threatened their own control of religious policies. They were also strong enough to repress the spread of Protestantism among the lower classes. However, the Reformation found a home in one of these monarchies, England, thanks to some very peculiar circumstances.

Henry VIII of England had been given the title of "Defender of the Faith" by Pope Clement VII for a work he had written attacking the Lutherans, mainly on political grounds. However, just as at one point he defended the Church for largely political reasons, at a later date, Henry broke with the Church, also for political reasons.

Henry had a problem: he needed a son to succeed him to the throne. Without such a son, England might plunge back into civil war like the Wars of the Roses that Henry's father had ended in 1485. Henry's wife, Catherine of Aragon, had borne him a daughter, Mary, but no sons. Since Catherine was getting older, Henry wanted his marriage annulled so he could find a new wife to bear him a son. Unfortunately, Catherine was the aunt of the Hapsburg emperor, Charles V. Naturally he wanted Catherine to remain as Queen of England in order to influence its policies and possibly get control of the throne herself. Since Charles also controlled the pope, the annulment was refused. Meanwhile, Henry had fallen in love with a young woman of the court, Anne Boleyn, giving him more reason to dispose of Catherine.

Only twenty years earlier, Henry would have had to accept this verdict or resort to violent means to solve his problem. Ironically, the Lutherans that Henry despised provided him with an answer to his problem: break with Rome. However, he had to move quickly, because Anne was with child and Henry wanted the baby, hopefully a boy, to be born after the break with Rome in order to be legitimate.

In 1533, Henry started to break England's ties with the Catholic Church. He was clever in how he accomplished this, doing it in stages, first by cutting off money to Rome, then curtailing the power of the Church courts and assuming more authority over the English clergy. Also, he did this through Parliament so it would seem to be the will of the

English people rather than the mere whim of the king. In 1534, he severed the last ties with Rome, and the Church of England replaced the Catholic Church. All this took place in time for the birth of the baby, which turned out to be a girl, Elizabeth.

The average churchgoer in England would have noticed little difference in the dogma and service as a result of this break, since the Church of England was basically the Catholic Church without a pope. Therefore, most people accepted it since there were no drastic changes, they resented Church abuses, and feared a civil war if Henry died without a male heir.

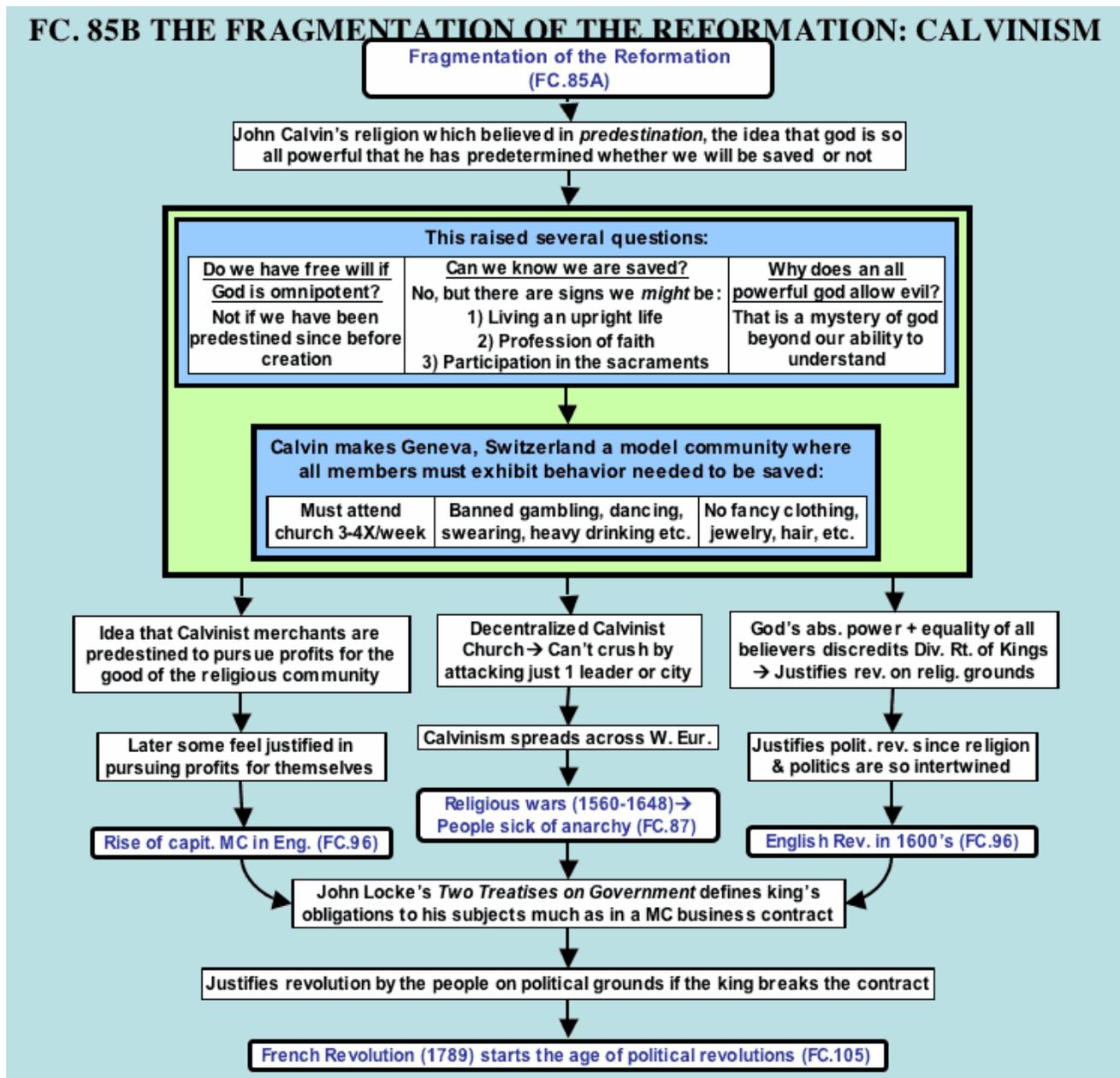
After Henry's death, his nine-year-old son, Edward VI, the son of Jane Seymour, one of Henry's later wives, took the throne. During his brief reign, the nobles ruling in his name followed Protestant policies. However, when Edward died in 1553, his older half sister, Mary, came to the throne. She was an ardent Catholic like her mother, Catherine. She even married Philip II of Spain to enforce her Catholic policies. The main effects of Mary's persecutions were to alienate the English People, make them more firmly Protestant, and earn her the title of Bloody Mary.

When Mary died childless in 1558, her half sister, Elizabeth I, succeeded her. This remarkable woman, one of England's ablest and most popular monarchs steered an interesting course between Protestantism and Catholicism. The English, or Anglican, Church under Elizabeth grafted moderate Protestant theology on top of Catholic organization and ritual. This compromise satisfied most people, but the more radical English Calvinists wanted more sweeping reforms, such as doing away with bishops and archbishops altogether. These people were known as Puritans, since they wanted to purify the Anglican Church of all Catholic elements. Their numbers and power would continue to grow throughout Elizabeth's reign, although she was able to control them.

In addition to England's navy saving European Protestantism from extinction at the hands of the Spanish Armada in 1588, the English Reformation was important for opening the way for the more radical Puritans Calvinists to filter in. Eventually, they would become influential enough to overthrow the pro-Catholic king, Charles I, and establish a parliamentary democracy. This in turn would inspire the spread of democratic ideals to America, Europe, and the rest of the world.

FC85BThe Reformation Fragments II: Calvinism

FC. 85B THE FRAGMENTATION OF THE REFORMATION: CALVINISM



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Introduction

As important as the Zwinglian, Anabaptist, and English reformers may have been, it was Calvinism that would have the most profound and revolutionary impact on Western Civilization. Although the Calvinists' primary concerns were religious, their reforms would radically alter the political and economic institutions of Europe, helping lay the foundations for the eventual triumph of capitalism and democracy.

Luther's break with the Church was especially difficult since he had grown up without any religious alternatives to Catholicism or examples to follow in his reforms. The next generation of reformers, led by John Calvin, grew up in a world that offered alternatives to Catholicism, thus making it easier to break with the Church and carry religious reforms much further than Luther ever had.

Calvin himself grew up in France as the first shock waves of the Reformation rocked Europe. Although not officially allowed in France, Protestant ideas still filtered across the border and won converts. Unlike Luther, whose tormented soul provides fascinating reading, Calvin was a much calmer individual. He seems to have been plagued by none of Luther's self doubts and his personal character was described as nearly flawless. After receiving a good education in theology, law, and also humanist studies, which prompted him to read the *Bible* more carefully, he seems to have arrived at some sort of conversion in 1533.

Calvin's religion

The cornerstone of Calvin's theology was God's all encompassing power and knowledge. There was nothing God did not know or have control of: past, present, or future. As a result, God knew and controlled from the beginning of time whose souls would be saved or condemned for eternity. This doctrine, known as *predestination*, had scriptural support and was a logical outgrowth of what Luther had said about faith and salvation being a free gift of God. Predestination raised several disturbing questions. First of all, if God were all-powerful, could we have any free will in choosing between God and Satan? Quite bluntly, Calvin said no. Second, if God were good, how could he let evil exist in the world? Calvin answered that these were mysteries of God that we cannot know the answers to and probably have no business asking.

Finally, can we know we are saved and how? According to Calvin, there is no way for us to know for sure. However, if we meet the requirements of living an upright life, profession of faith, and participation in the sacraments, we could become pleasing to God and be saved despite our sinful nature, if predestined to do so. Such a puritan lifestyle might not ensure salvation, but it could be a sign that one *might* be one of the few elected by God to go to heaven. However, Calvin said our primary concern should not be going to Heaven, but rather carrying out God's plan for us in this life. As fatalistic as Calvinism with its denial of the existence of free will may sound, its adherents felt empowered by this idea that they were the special instruments for carrying out God's plan. This gave them an unshakable faith in the utter rightness of their cause and made Calvinism the most dynamic movement of its day.

Calvin's *Institutes of the Christian Religion*, published in 1559, became one of the most popular and influential books of its day. However, Calvin went beyond words in trying to make a point about his religion. To ensure that as many people as possible had a chance to be saved, he established a model Church and community in Geneva, Switzerland to enforce the proper lifestyle needed for salvation. Naturally, Calvin's reforms met resistance and it took him nearly twenty years to get control of Geneva and reform it.

Although the city government still functioned, the Consistory, a church council of twelve elders, wielded the real power over people's lives in Geneva. All citizens were members of the church and had to attend services three or four times a week. This was because there was no telling who was predestined to be saved, and so all must be given a chance. Such acts as fighting, swearing, drunkenness, gambling, card playing, and dancing were outlawed. Even loud noises and laughing in church were fined. Theaters and taverns were closed and replaced by inns allowing moderate drinking accompanied by sermons and church propaganda. Members of the Consistory would make annual inspections of homes to ensure they were morally run. People were even expected to report their neighbors for any behavior that was less than saintly.

The Consistory also ruled the more trivial aspects of peoples' lives. Jewelry and lace were frowned upon, the color of clothing was regulated by law, and women were fined for arranging their hair to immodest heights. Children were to be named after Old Testament figures, and one man was jailed for four days for naming his son Claude instead of Abraham. Punishments were equally harsh, with fifty-eight executions between 1542 and 1564, mostly for heresy (especially Catholicism) and witchcraft. Fourteen witches were burned in one year and one boy was beheaded for striking his parents. Not surprisingly Geneva was called "City of the Saints".

Geneva served as a model to other reformers in Europe, helping make Calvinism the most popular form of Protestantism in the Netherlands, Scotland, and England. This was in spite of its lack of support from rulers who feared both Calvinism's emphasis on God's absolute power, which might undercut the doctrine of Divine Right of Kings, and its lack of being associated with any particular nation. In Germany and Scandinavia, Lutheranism was quickly identified with strong nationalist sentiments that rulers could exploit for their own political purposes.

However, Calvinism had no particular national ties, thus depriving it of the strong state support that Lutheranism enjoyed.

However, this lack of state support forced Calvinists to form independent local congregations without any real central organization, making it virtually impossible to uproot and destroy their movement by concentrating on a few leaders. These congregations were somewhat democratic, thus inspiring greater loyalty in all their members, even when facing intense persecution for their beliefs.

Long range effects of Calvinism

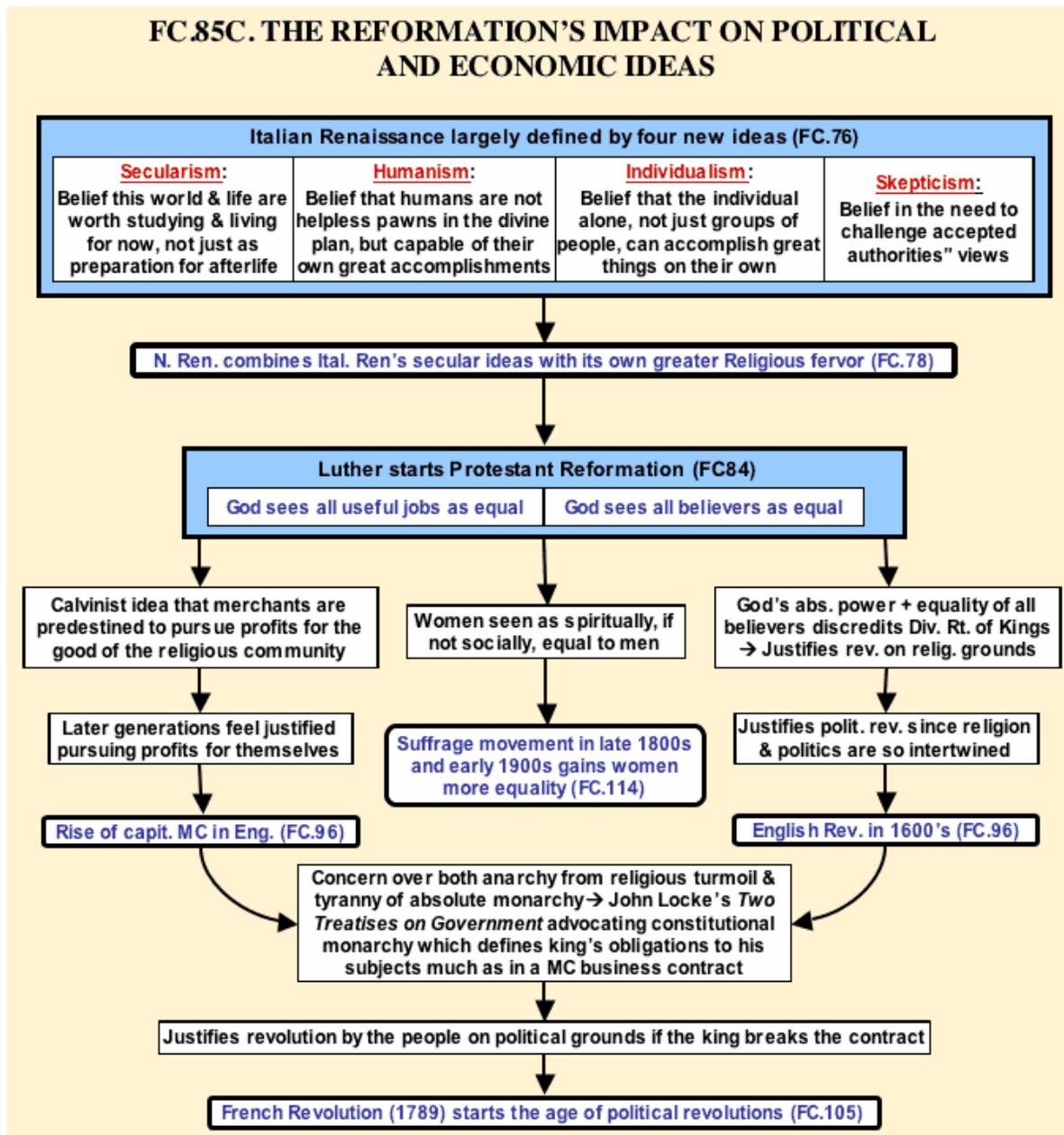
Two of Calvin's ideas would have far reaching effects going far beyond religion. First, the idea of predestination meant not only that Calvinist merchants were *allowed* to do business and make money, they were *predestined* to do so and should do so fervently as God's will. Of course, as devout Calvinists, they were to make money for the good of the church and community, and at first that was what they did. However, later generations, lacking the intense fervor of the first generation of reformers (a normal pattern with any revolutionary movement), came to feel justified in pursuing profits for their own personal good. The result of this was the triumph of capitalism, especially in England and the Dutch Republic where Calvinists predominated, as the dominant economic system in Western Europe. This in turn would make Western Europe the economic center of the world and home of the Industrial Revolution.

The second Calvinist far-reaching effect of Calvinism was the concept of God's absolute power that, along with the idea that God sees all useful occupations as equal, discredited the doctrine of Divine Right of Kings. Calvin himself preached obedience to authority unless religious conviction forced civil disobedience. But it should never involve open resistance, since God alone would punish any evil rulers. However, some Calvinists, such as John Knox, the fiery leader of the Scottish Calvinists, preached people could overthrow a corrupt prince to defend their religious beliefs and God's law. The revolt of the Spanish Netherlands (1566-1648) and the English Civil War (1642-45) were two prime examples of such Calvinist religious revolts.

Later, these two ideas, capitalism and religious revolution, combined into an even more powerful idea discussed in John Locke's *Two Treatises on Government* (1694). Much as middle class contracts define obligations in a business deal, Locke saw government as an implied contract especially defining obligations for the king who acted as caretaker of the state for the good of the people, protecting their lives, liberties, and property. If the king failed in these duties, the contract was null and void and the people had the right to overthrow him. This combination of middle class contracts and the belief in religious revolution would become the cornerstone of democracy. And within that idea lay the seeds for the democratic revolutions that would sweep through France, Europe, and eventually the entire globe in the 1800s and 1900s.

FC85C The Reformation's impact on political ideas

FC.85C. THE REFORMATION'S IMPACT ON POLITICAL AND ECONOMIC IDEAS



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Few things in history take more devious twists and turns from their origins than ideas, and few ideas have taken more devious twists and turns than how those of the Protestant Reformation helped lead to such things as the triumph of capitalism, democracy, and women's rights. In fact, to fully understand this progression of ideas, we need to go back to the Italian Renaissance and the four major ideas that came from it:

Secularism: the belief this world and life are worth studying and living for now, not just as a preparation for the afterlife;

Humanism: the belief that humans are not helpless pawns in the divine plan, but capable of their own great accomplishments;

Individualism: the belief that individuals alone, not just groups of people, can accomplish great things on their own; and

Skepticism: the belief we should challenge accepted authorities views, rather than blindly accept them.

When these ideas made their way out of Italy and combined with the more religious attitudes of the Northern Renaissance, they helped lead to the Protestant Reformation. Two of Luther's ideas would have dramatic and

unforeseen effects: the beliefs that God sees all useful jobs as equal and all believers as equal.

While Luther also believed in pre-destination, it was Calvin who especially emphasized it. That combined with the idea that all useful jobs are equal led to the conclusion that if one is a merchant, it is because he was predestined to be a merchant. Therefore, it was God's will that he work hard to earn profits for the good of the church and community. However, as religious fervor cooled over succeeding generations, Calvinist merchants started keeping more and more of their profits for themselves. Eventually, some merchants would lose all their religious fervor, leaving only a fervor for profits, which we still refer to as the Protestant work ethic, and the triumph of capitalism in Northwestern Europe.

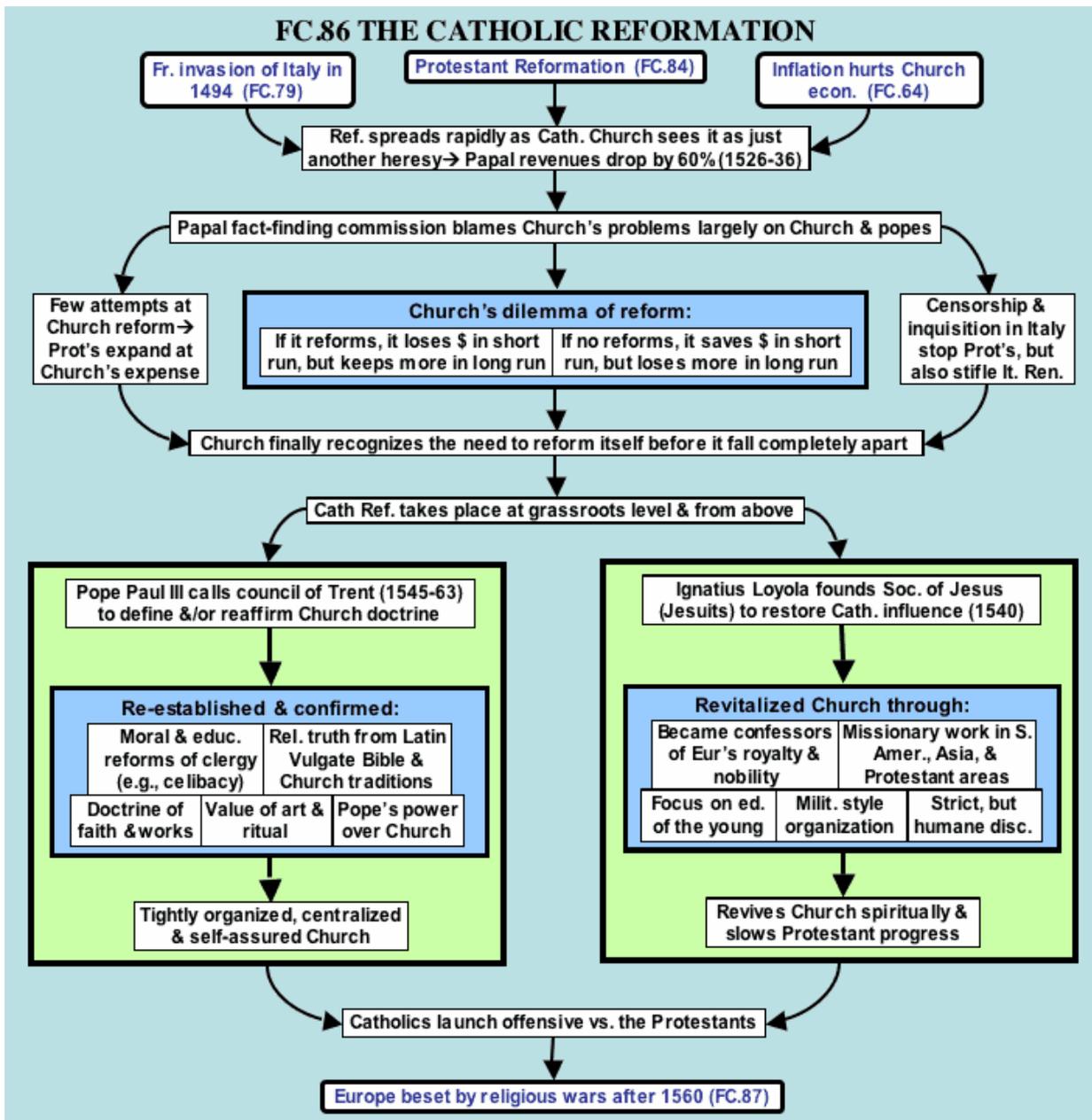
The idea that God sees all believers as spiritually equal also had surprising repercussions through the succeeding centuries. For one thing, the idea of spiritual equality was seen as applying to women as well as men, but not in the political or social sense.... at first. A major, though little noted, turning point came in the 1600s with a Protestant sect known as the Quakers. They figured that, if women were spiritually equal, they should have the right to preach. However, the church was the center of their social life as well, and women assumed a more prominent place in Quaker society overall. Fast forward two centuries to 1848 and the Seneca Falls Conference, which was the start of the women's suffrage movement in America. Of the five women at that conference, three were Quakers who would take the lead in gaining women the vote.

The spiritual equality of all believers also had profound political effects in another way. The reasoning was that, if all believers and the jobs they do are equal, which would discredit the quasi-religious status of rulers and the doctrine known as the Divine Right of Kings. Calvin said that if people were religiously repressed and kept from worshiping God in the proper manner, they had the right to resist, but only non-violently through civil disobedience. It didn't take long for a Calvinist leader in Scotland, John Knox, to extend this to justifying revolution on religious grounds. The problem was that religion and politics were so intertwined that a religious revolution had major political implications as well. This mixture of religious and political issues played out in nearly a century of religious wars that raged across the Netherlands, France, Germany, and England.

The English Revolution (1603-88) also saw economics mixed in with religious and political issues. In 1694, the rise of a capitalist middle class and triumph of democratic principles (in a very limited form) led a remarkable book by John Locke, *Two Treatises on Government*, which summarized what that revolution had been about. Locke saw government, in typically capitalist fashion, as an implied contract between the ruler and subjects where each had mutual rights and obligations, as opposed to everything existing for the benefit of the ruler. The people owed their ruler obedience, but he was obligated to protect three things: their lives, liberties, and property. If the ruler failed to live up to these terms, the contract was null and void, justifying revolution on purely political grounds. Thus, less than two centuries after the start of Luther's reformation, his purely religious ideas about the equality of believers and their jobs had transformed into ideas justifying political revolution on purely secular grounds.

In 1776 the American Declaration of Independence would merely restate Locke's ideas, substituting "pursuit of happiness" for property. The "Declaration of Rights of Man and Citizen" in 1789 during the French Revolution wouldn't even diverge that far and would inspire revolutions across Europe and the globe over the next two hundred years.

FC86The Catholic Reformation



[FC86](#) in the [Hyperflow of History](#);
Covered in multimedia lecture [#2086](#).

One must remember that the Protestant reformation had only limited success. The two most powerful monarchies in Europe, Spain and France, remained Catholic, as did Austria, Italy, Portugal, Hungary, Poland and parts of Germany. Still, Protestant success had been rapid and posed a serious threat to the Catholic Church. As a result, the Church went through its own Catholic Reformation, also known as the Counter Reformation, in which it reformed itself, defined its theology, reestablished the pope's authority in the now reduced Church, and prepared for a counter-offensive against the Protestants.

Early reactions by the Church to Protestantism

The Church had often been challenged with criticism in the past, but each time had patched things up with internal reforms. Therefore, at first it saw Protestantism as just another protest that a few reforms could mend and failed to recognize the deep philosophical and religious issues involved. Since many Church abuses were the result of the

financial problems deeply rooted in the later Middle Ages, maybe it was too much to expect reforms of abuses at this time. However, those problems only got worse in the 1500s. Inflation, loss of lands and revenue to the Protestants, and invasions of Papal lands left Pope Paul III with only 40% of the revenues his predecessor had just ten years earlier. As difficult as it would be, the threat of further losses to the Protestants made reforms all the more necessary. In 1536, Pope Paul III established a fact-finding commission to find out why there was so much protest and what could be done about it. The resulting report, *Advice on the Reform of the Church*, blamed the Church for many of its problems and called for reforms that would convince the Protestants to rejoin the Church. Two things resulted from this report. First, the Church failed to accept responsibility for its problems, making what few reforms that result only half-hearted. Consequently, Protestantism kept expanding.

The second result was that the Church, rather than trying to reform itself, decided to attack its enemies. In 1542, the pope brought the Inquisition into Italy, giving the Inquisitor general authority over all Italians. This effectively uprooted any elements of Protestantism in Italy and restored the pope's authority over the whole peninsula. To a large extent, the Inquisition helped put an end to the Italian Renaissance, since it suppressed Italy's vigorous intellectual life for the sake of conformity to the Church. Remarkable individuals, such as Galileo, might still come along, but they would face the Inquisition's repression for any new ideas they might propose. The Church was also waking up to the dangers that a free press presented to the established order. In 1543, the Inquisition published the first Index of Prohibited Books, the first full-scale effort to limit or destroy the free expression of ideas through the press. It would not be the last. Among its victims was the report *Advice on the Reform of the Church*, since it was seen as giving solace to the Protestants and their ideas.

However, by the mid-1540s, it was becoming increasingly apparent that the Catholic Church would have to institute serious reforms if it were to halt the rising tide of Protestantism. These reforms came from two directions: the Papacy at the top and the grassroots (popular) level below.

Reform from the top: the Council of Trent (1543-63)

One problem facing the Church was the wide variety of interpretations people had of the Bible and other Church writings. This was not a new problem, but it became an urgent one when faced with competing Protestant interpretations. Consequently, Pope Paul III called a general Church council that met at Trent, Italy to define decisively what the official doctrines of the Church were. People remembered the threat to the pope's power that councils had posed during the Great Schism a century earlier. Naturally, the pope was nervous about this and tried to restrict the council to working on Church doctrine instead of reforms that might threaten his position.

The Council of Trent met in three sessions from 1543 to 1563. Popular hopes focused on the desire to restore Christian unity, since Protestant representatives were supposed to attend (but never did). Even if it did not achieve such unity the Council did revitalize the Catholic Church and restore the pope's power within the Church. It strictly defined religious doctrine. It emphasized the role of both faith *and* good works in achieving salvation. It declared the Latin Vulgate Bible the only acceptable form of scripture, thus excluding any vernacular translations. It also reaffirmed the validity of all seven Catholic sacraments and the writings of such Church Fathers as St. Augustine as sources of religious truth. It kept the elaborate ritual and decoration of the Church, since they were inspirational for the mass of illiterate Catholics with little or no understanding of Church dogma. It also enacted various reforms, ensuring clergy were better educated and their morals better supervised. The pope was even able to restore his authority over local church and clergy at the kings' expense.

Although the Council of Trent did not peacefully restore Christian unity, it did reestablish the authority of the popes within the Catholic Church, giving it the power to launch an offensive against the Protestants to reclaim formerly Catholic lands. Also restoring the Church's spirit was a new religious order: the Society of Jesus, commonly known as the Jesuits.

Reform from below: Ignatius Loyola and the Jesuits

The Jesuits' founder, Ignatius Loyola, (1491-1556) was quite similar to Luther in how he achieved inner religious peace, although the two men arrived at some very different conclusions about their respective faiths. Loyola was born a Spanish noble and, like Luther, had no initial plans for a religious career, being a soldier by profession. Also,

like Luther, a somewhat dramatic event turned his life to religion. Instead of lightning, it was a leg broken by a cannonball while defending a fort that forced him into a long period of convalescence and ultimate conversion. Instead of the tales of war and chivalry that Loyola liked, the only reading material available was religious in nature. Eventually, this literature had its effect. Loyola experienced an intense conversion and decided to devote his life to Christ.

Like Luther, Loyola almost killed himself trying to purge his guilt. He finally obtained some inner peace by deciding the Devil was responsible for any self-doubts and despair one had for sins he had already confessed to the Church and done penance for. Loyola developed a four-week long set of spiritual exercises help others achieve similar inner peace. These exercises first had people contemplate their sins and their eternal consequences in Hell for two weeks, then contemplate Christ's life, sacrifice on the Cross, and resurrection for a week, and finally contemplate the final ascension into Heaven.

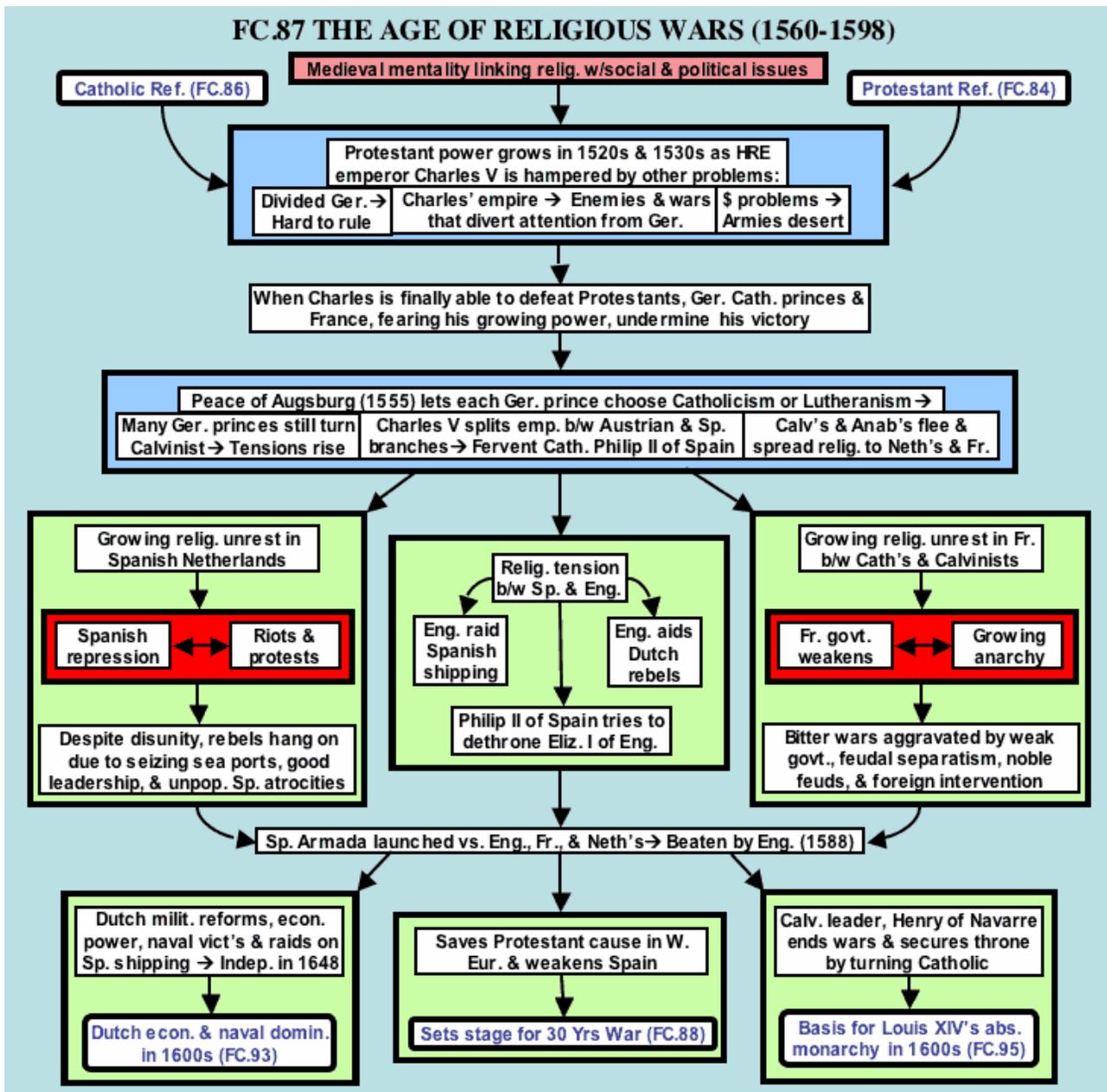
After a pilgrimage to Palestine, Ignatius decided to get an education in order to preach more effectively. In school he gathered a loyal core of followers, the most famous being Francis Xavier. In 1536, they went to Rome determined to win souls, not by the Inquisition or the sword, but by educating people, especially the young who are most impressionable.

In 1540, they founded the Society of Jesus, also known as the Jesuits. The order was organized along military lines with four ranks or classes. Members were expected to show absolute obedience to their superiors, the pope and God. Instead of ascetic activities such as endless praying and whipping themselves, the Jesuits performed Loyola's Spiritual Exercises and menial labor. Discipline was rigorous, but flexible, helping the Jesuits produce some remarkable leaders. The Jesuits also carefully selected their target audience from two main groups in society: nobles and children. As the confessors for royalty and nobles, they exercised considerable influence on religious policies within catholic states. They also ran numerous schools, believing that if they could influence children at an early age, they would remain loyal Catholics for the rest of their lives.

The order grew rapidly and became the virtual "shock troops" of the Catholic Church. They had missionary activities to South America (still mostly Catholic) and Asia. Within Europe, they spearheaded the Catholic reformation by strengthening the Church's power in areas it still held while restoring allegiance in such areas such as Bohemia and parts of Germany.

With their Church on much firmer ground than before, many Catholics felt ready to go on the offensive against Protestantism. What resulted was a series of religious wars that would engulf Western and Central Europe for the next century.

FC87The Age of religious wars (c.1560-98)



[FC87](#) in the [Hyperflow of History](#);

Covered in multimedia lectures [#2078](#), [#2080](#), [#2082](#) and [#2077](#).

“Kill them all; God will know his own.”— *Catholic general, ordering a massacre of a town containing both Protestants and Catholics*

By the mid 1500's, three main factors were converging to push Western Europe into a century of brutal religious wars. Two of these were the Protestant and Catholic Reformations that were firmly opposed to each other. Added to this was a prevailing medieval mentality linking religion with political issues, making it impossible for either side to tolerate the other side's presence or rule. The first round started in Germany.

Germany (1521-55)

The emperor Charles V's dramatic confrontation with Luther at Worms in 1521 had resulted in outlawing the Lutheran heresy. However, this was easier said than done for several reasons. First, Charles had little control over the Holy Roman Empire (Germany), a patchwork of over 300 principalities, Church states, and free cities, all

jealously guarding their liberties against any attempts by the emperor to increase his authority over them. Charles could not even get effective support from the Catholic states to help suppress the Lutherans, since his success might give him more power over Catholic princes as well.

Second, the size of Charles' empire made him many enemies, in particular France and the Ottoman Turks, who posed a constant threat from west and east. As a result, Charles felt forced to let the Protestants alone and turn to more pressing matters on his borders. Finally, Charles was plagued with money problems. Several times in his career he found himself short of funds while on the verge of a major victory. In an age of mercenary armies prone to run out on their employers as soon as funds for paying them ran out, this was fatal and forced him to let his enemies, especially France, off the hook. All these factors kept Charles from effectively dealing with the Lutherans for over twenty years.

Therefore, it was 1546 before Charles could attack a defensive alliance of Lutheran princes known as the Schmalkaldic League. Charles won a decisive military victory. But the complex forces discussed above kept him from imposing either firm imperial control or his Catholic faith on Germany. Both Lutheranism and the privileges of the German princes were too deeply entrenched for that. Consequently, Charles agreed to the Peace of Augsburg in 1555, a compromise giving each German prince the right to choose his realm's religion, as long as it was either Catholic or Lutheran. Calvinists, Anabaptists, and other non-Lutheran Protestants were outlawed.

Instead of settling Germany's religious problems, the Peace of Augsburg actually made them worse in three ways. For one thing, Calvinism kept spreading across Germany, even among German princes, thus raising religious tensions even more. Also, Charles V, worn out by over 30 years of trying to maintain his empire and religious unity, gave up his throne. The family lands in Austria and the Imperial title went to his brother Ferdinand, while Charles' son, the staunchly Catholic Philip II, inherited Spain, the Netherlands, most of Italy, and Spain's American colonies. Philip's passionate hatred of the Protestants would also aggravate the growing religious conflict brewing. Finally, the Peace of Augsburg led to thousands of refugees, especially Calvinists and Anabaptists, fleeing Germany and spreading their religious beliefs to the Spanish Netherlands (modern Belgium and Holland), France, and eventually England.

As a result, religious conflict spread to these three countries after 1560. In the Spanish Netherlands the influx of Protestants created growing religious unrest that led to a pattern of Spanish repression, riots and protests in response, more repression, and so on. Despite its disunity, the ensuing revolt would hang on due to its control of seaports in the North, good leadership, and anger against Spanish atrocities. In France, rising tensions between Calvinists and Catholics triggered its own vicious cycle of weakening the government, which allowed more anarchy, further weakening the government, etc. Coming from this was a series of bitter civil wars aggravated by the weak government, feudal separatism, nobles' rivalries, and foreign intervention, especially by Spain. Finally, tensions between Protestant England and Catholic Spain led the English to raid Spanish shipping and support the revolt in the Spanish Netherlands while Philip II conspired to dethrone Elizabeth I.

The critical turning event in all three of these conflicts was the defeat of Philip II's Spanish Armada (1588) that was aimed against the Dutch and French Calvinists as well as England. While this did not destroy Spain as a power, it did save Protestantism in Western Europe, thus setting the stage for the Thirty Years War. It also helped the Dutch win their freedom (1648) and become the premier naval and trading power in the 1600's. Finally, it allowed the Calvinist leader, Henry of Navarre, to take the throne of France after placating his Catholic subjects by converting to Catholicism while ensuring religious freedom to the French Calvinists. This ended the French Wars of Religion so Henry IV could lay the foundations for the absolute monarchy of Louis XIV.

Revolt of the Spanish Netherlands (1566-1648)

The Spanish Netherlands was a collection of seventeen semi-independent provinces lumped together under Spanish rule. With the possible exception of Italy, they were the wealthiest trading and manufacturing area in Europe in the 1500's. Their main port, Antwerp, handled a full 50% of Europe's trade with the outside world. Charles V had been born there and was somewhat popular with the inhabitants. That was not the case with Philip II. It was said that Charles neglected the Spanish Netherlands, but his son, Philip, abused them. This was largely true, although Charles also heavily taxed the Netherlands for his wars and tried to impose his religious policies on them. The

major difference was that Philip did it with a heavier hand and with little or no concern for the feelings of his subjects there.

Philip was Spanish born and never left his homeland after his coronation in 1556. His view of the world was very Spanish and very Catholic. He taxed the Netherlands to pay for Spanish wars and he claimed he would rather die a hundred deaths than rule over heretics. As it was, Anabaptist and Calvinist "heretics" were making their way into the Netherlands, especially after the Peace of Augsburg outlawed them in Germany. Philip, determined to get them out, brought in the Inquisition and increased the number of bishops the Netherlands had to support from four to sixteen. This repression started a cycle that led to protests and riots, more Spanish repression and so on until rebellion broke out. This rebellion would drag on until 1648, become part of the wider European struggle known as the Thirty Years War, and itself become known as the Eighty Years War.

In 1566, the Duke of Alva with an army of 10,000 Spanish troops established the so-called "Council of Blood" which burned Calvinist churches, executed their leaders, and raised taxes to levels ruinous for trade, and nearly extinguished the revolt. However, despite the disunity of the revolt itself, it managed to survive for several reasons. First, Calvinist raiders, known as "Sea Beggars", managed to gain control of some ports in the North. When word of these Calvinist havens spread, more Calvinists flocked in. As a result of this migration, Holland in the north became and remains primarily Protestant today. The second reason was the rebels' leader, William, Prince of Orange, called "the Silent" for his ability to mask his intentions. Although a mediocre general, William was a brave and patriotic leader whose selfless determination gave the revolt what little cohesion it had. His accomplishment, much like that of George Washington in the American Revolution, would be as much to keep the rebels together as keeping the enemy at bay.

Finally, Spanish attempts to crush the revolt of the Sea Beggars often alienated more people and made them go over to the rebels' side. This was especially the case in 1576 when Spanish troops in the loyal provinces to the south rioted and went on a rampage of looting and slaughter in Antwerp after going unpaid for 22 months. (However, they were pious enough to fall to their knees and pray to the Virgin Mary to bless this atrocity.)

Fighting in the war itself was desperate and destructive. The siege of Maastricht in 1579 involved vicious battles in the miles of underground mines and countermines dug around the city. When Spanish troops finally poured in through a breach in the wall, a slaughter ensued which killed all but 400 people out of a population of 30,000. At times the rebels had to stop Spanish invasions by opening up their dikes and literally flooding the enemy (and their own crops) out. At the siege of Leyden, this was done also to provide water on which the Dutch rebels could float relief ships full of grain right up to the walls of the city. The city held out, but only half of its inhabitants survived the rigors of the siege, having subsisted on boiled leaves and roots, wheat chaff, dog meat, and dried fish skins. Interestingly enough, it was not until 1581 that the Dutch rebels formally deposed Philip II as their king and declared the Dutch Republic in the Oath of Abjuration, a document that would strongly influence the American Declaration of Independence and later democratic movements.

Philip's efforts to establish Catholic rule in England and France got the Netherlands involved in the wider scope of European religious wars. Troops from England helped the rebels, as did the defeat of the Spanish Armada in 1588, which was aimed against the Dutch and French Calvinists as well as England. After Dutch advances in the 1590's and early 1600's, the two sides signed a twelve years truce in 1609. However, the Dutch continued to blockade the Scheldt River and cut off Antwerp's trade. Gradually, this trade shifted to the Dutch city of Amsterdam, thus making it the new commercial capital of Europe. Hostilities resumed in 1621 as part of the wider conflict known as the Thirty Years War. Gradually, growing Dutch economic power and Spanish exhaustion from constant warfare turned the tables in favor of the Dutch. In 1628, the Dutch captured the entire Spanish treasure fleet. In 1639, they crushed another Spanish Armada at the Battle of the Downs and ended Spanish naval power once and for all.

After eighty years of struggle, Spain finally recognized Dutch independence in 1648 in the Treaty of Munster. At this point, the Dutch were at the height of their commercial and naval power, although England would challenge them for that position in the later 1600's. The southern provinces would remain under Spanish, then Austrian, and finally Dutch rule until they won their freedom in 1831 and established the modern nation of Catholic Belgium in the south.

The French Wars of Religion (1562-98)

France was another country that saw the devastating effects of religious wars in the last half of the 1500's. In this case, the antagonists were the Catholic majority of France and a strong minority of French Calvinists known as *Huguenots*. Although only comprising about 10% of France's population, the Huguenots had several factors that helped them maintain their struggle for over thirty years. Their number included many nobles who provided excellent leadership. They were concentrated largely in fortified cities in the south. Finally, they were enthusiastic and well organized into local congregations.

For thirty years Catholic and Huguenot armies marched across France destroying its fields and homes. All this bred a cycle of chaos and destruction where growing anarchy would steadily weaken the French government's power, thus allowing even more anarchy and so on. There were actually seven French religious wars with intermittent periods of peace, which made these wars & this period of French history confused, chaotic, and bloody.

Once the wars started, they tended to drag on and were aggravated by several factors that made them especially destructive. First of all, besides the religious struggles, fighting between noble factions and revolts by old feudal provinces exposed and added to the weaknesses of the French state. Second, foreign intervention, especially by Spain, but also by other states such as England, compounded the turmoil and destruction. Finally, France was ruled by weak monarchs who let these forces tear the country apart.

The fighting was confused and often involved the massacres of women and children. From 1562-1571 there were eighteen massacres of Protestants, five massacres of Catholics, and over thirty assassinations. The most famous such event was the Saint Bartholomew's Day Massacre (8/24/1572), when the Paris Catholics suddenly burst upon local and visiting Calvinists and killed some 3000 of them. A letter from a Spanish ambassador shows the degree of fanaticism and viciousness that infected peoples' minds and values then: "As I write they are killing them all, they are stripping them naked...sparing not even the children. Blessed be God."

Philip II added to the disorder by actively supporting the Catholics. The turning point came with the defeat of the Spanish Armada in 1588, which led to a series of assassinations. First, the king, Henry III, assassinated the Catholic leader, Henry of Guise. Then, a fanatical monk assassinated the king for what he saw as his betrayal of the Catholic cause. The man in line to succeed Henry was still another Henry, duke of Navarre, who also happened to be the Huguenot leader. The prospect of a Calvinist king did not set too well with the predominantly Catholic population of France and led to even more fighting. Despite brilliant victories against heavy odds, Henry still faced the desperate resistance of the Parisians, whose priests told them it was better for them to eat their own children than let them live under a Calvinist king. When confronted also with Spanish intervention to put a Catholic back on the throne, Henry somewhat cynically converted to Catholicism to give his Catholic opponents no more reason to attack him.

Despite Henry's obvious political motives and the fact that he guaranteed Huguenot religious freedom by the Edict of Nantes (1598), Frenchmen were ready to accept him as king, since they were tired of constant warfare and wished only for peace. In order to ensure this, Frenchmen were willing to submit to the stronger rule of a king. This attitude helped set the stage for the rise of France as the dominant power in Europe in the later 1600's and the rule of one of its most glorious and absolute monarchs, Louis XIV, the Sun King.

Elizabethan England and the Spanish Armada

Certainly one of the most fascinating and capable monarchs of the age was Elizabeth I of England (1558-1603). We have already seen how she skillfully defused religious tensions in England by grafting Catholic ritual and organization onto mild Protestant theology, thus keeping most people reasonably content. Good Queen Bess, as she was known, was quite popular with her people, since she kept taxes low and knew how to get what she wanted from Parliament without being too demanding about it. She also kept the people's good will by acting as one of their own, patiently sitting through any pageants or speeches given in her honor. Elizabeth and her subjects understood and loved each other quite well. Her tolerant reign was a virtual golden age for England, nurturing among other things, the genius of William Shakespeare, possibly the greatest literary figure in its history.

Being a woman, Elizabeth had to be crafty to keep her throne, avoiding at all costs a marriage that would put a husband in her place as the real power in England. As a result, she never married, although she cleverly held out the prospect of marriage to neutralize potential enemies and keep them on their best behavior.

The great test of Elizabeth's reign was the war against Spain culminating in the Spanish Armada in 1588. The causes of the war revolved mainly around religious differences between Spain and England that caused various acts of aggression by each side against the other. Philip II still hoped fervently to re-establish Catholicism in England. Throughout the 1570's he plotted toward this end, trying to put Mary Queen of Scots, a Catholic, in Elizabeth's place. Elizabeth countered these intrigues by finally executing Mary after a long imprisonment. She also sent troops to help the Dutch rebels, while encouraging freebooting English captains, such as Sir Francis Drake, to raid Spanish shipping. Finally, Philip decided to crush the Protestants in England, Holland, and France by sending a huge armada (navy) and army northward in 1588.

Philip's plan was to send the Armada to pick up the Spanish Army of Flanders which was then fighting the Dutch, transport it to England to crush the English, and then transport it back to crush the Dutch rebels and French Huguenots. Thus the Armada presented a serious threat, not just to England, but also to the very existence of Protestantism in Europe.

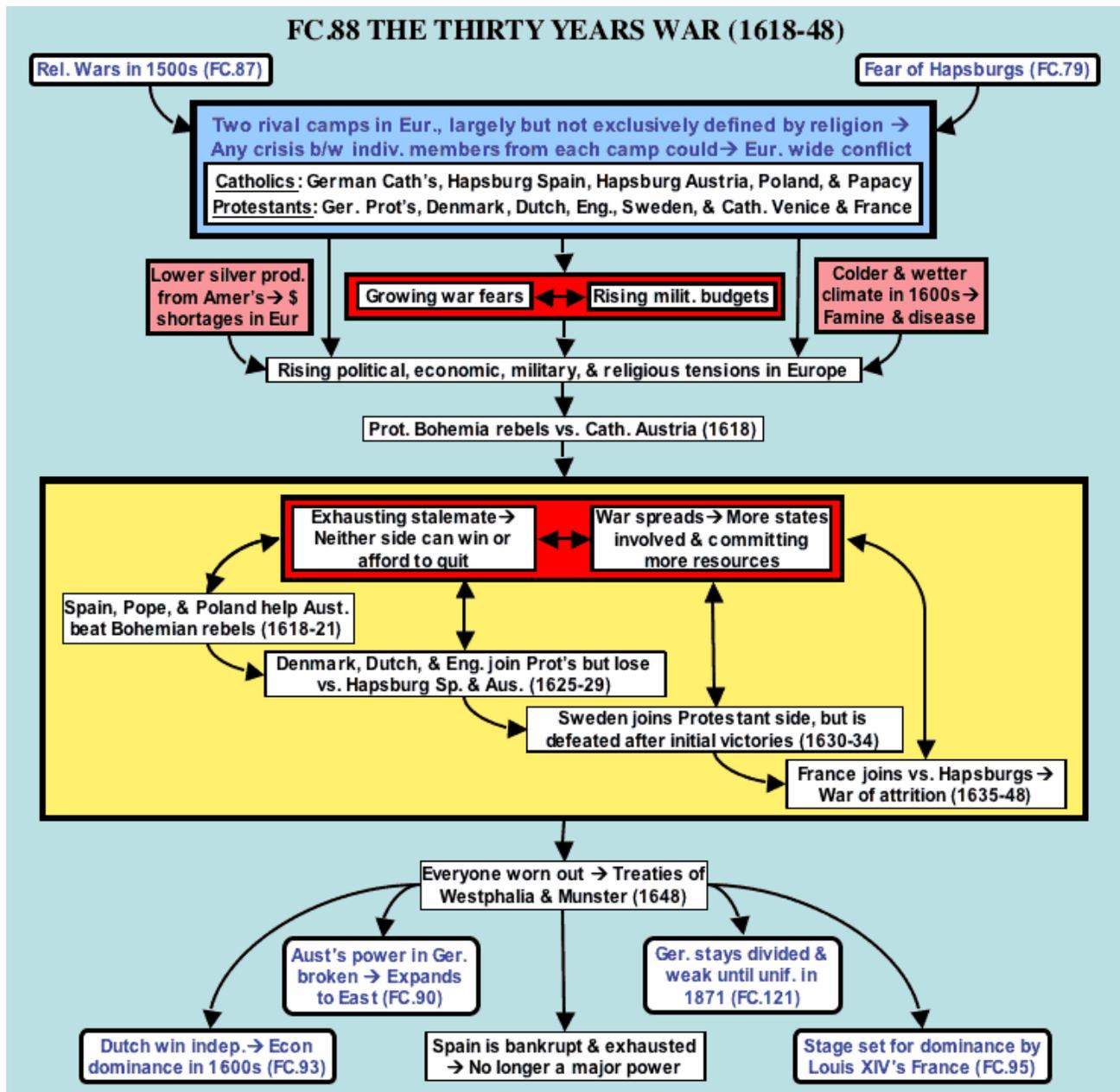
On the surface, the struggle looked like an uneven one, heavily stacked in Spain's favor. However, the English had developed radical new tactics and ship designs that would revolutionize naval warfare. They built sleeker ships powered totally by sails. Instead of boarding and grappling, they relied on cannons fired from the broadside to destroy the enemy fleet. Recent research shows that the English enjoyed a decisive edge in firepower thanks to their use of shorter four wheeled carriages that made it easier to reload and fire the cannons. This contrasted with the Spanish who still used longer gun carriages adapted for land use. These had long trailers, which made it very difficult, if not impossible, to pull them inside the cramped quarters of the ship's gun deck for reloading during the heat of battle. These innovations successfully frustrated the Armada's attempts to come to grips with the English. However, the English, in turn, were unable to stop the Spanish advance up the coast for its rendezvous with the Army of Flanders.

When the Spanish pulled into the French harbor of Calais to rest, get supplies, and try to establish contact with the Army of Flanders (which through poor communications had no idea of its approach), the English struck. Launching eight fireships into the midst of the Spanish fleet, they forced the Spanish ships out into the open and out of formation where the English could use their superior firepower and speed to destroy the Spanish ship by ship. An ensuing storm added to the damage and forced the Spanish to give up on their rendezvous with the Army of Flanders and return home by sailing all the way around the British Isles. When the Armada finally came limping back home, a full half of it had been destroyed.

The defeat of the Spanish Armada did not destroy Spain as a great power. However, it did signal the beginning of the end of Spanish dominance of Europe. In the first half of the 1600's this process would accelerate as Spain wrecked itself by trying to maintain its power in an exhaustive and devastating series of conflicts, most notably the Thirty Years War (1618-48). As a result, a new balance of power would emerge in Europe. France would replace Spain as the main superpower, while the Dutch Republic and then England, despite their small size, would become the most dynamic naval and economic powers in Europe.

Europe's mentality would also change in the 1600's. Exhausted and disgusted by the seemingly endless religious wars and disputes, many people would take a more secular (worldly) view of things, seeing religion more as a source of trouble than comfort. By the late 1600's, these views would flower in the great scientific and cultural movement known as the Enlightenment.

FC88An overview of the Thirty Years War (1618-48)



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Introduction

The last half of the 1500's saw Europe embroiled in a number of religious conflicts. For the most part, these wars were either between two countries (e.g., England vs. Spain, the Dutch vs. Spain) or internal affairs with some outside interference (e.g., France and Germany). However, as the seventeenth century dawned, religious and political tensions grew to encompass all of Europe in an interlocking network of states extending from Russia to England and from Sweden to Spain. These tensions exploded into what can be seen as the first European wide conflict in history: the Thirty Years War (1618-48).

Causes and outbreak of war

The roots of the Thirty Years War extended back to two main developments in the 1500's: the religious wars emanating from the Protestant and Catholic Reformations, and fear of Hapsburg Spain and Austria, who between them controlled nearly half of Western Europe. Religious tensions (complicated by political rivalries) led to conflicts between Lutheran Sweden and Catholic Poland, German Protestants and Catholics, and the Protestant Dutch and English against Catholic Spain. Fear of the Hapsburgs also contributed to the English and Dutch conflicts with Spain. In addition, France, once it had recovered from its own religious wars, increasingly took the lead against the Spanish and Austrian Hapsburgs who ringed its borders to the north, south, and east. Venice also had problems with Austria over pirates in the Adriatic.

All these tangled religious and political tensions of the early 1600's polarized Europe into two camps defined largely, but not exclusively, by religion. The Protestant camp consisted of German Protestants, Denmark, the Dutch Republic, England, Sweden, Catholic Venice, and Catholic France. The Catholic camp had German Catholics, Spain, Austria, the Spanish Netherlands, Naples, Milan, the Papacy, and Poland.

Two such hostile camps staring menacingly at one another led to the common fear and expectation of a general war embroiling all of Europe. As a result, kings and princes built up armies and fortifications in preparation for the coming war, which merely reinforced the other side's fears of war, triggering more military spending and so on. Travelers of the time noted how states all over Europe seemed to be armed to the teeth and ready for a fight. This was especially true in Germany where the Protestant princes formed a defensive league known as the Protestant Union in 1609 while the Catholic princes quickly answered with the Catholic League.

Added to this were two other factors making Europe's economy less vibrant than it had been in the 1500's. For one thing, the flow of silver from the Americas had passed its peak. For another, the climate turned colder, reducing crop yields and straining Europe's ability to feed its population (which had doubled since 1450). This, in turn, led to lower resistance to disease (including Bubonic Plague which made a comeback in the 1600's). The combination of soaring military budgets, declining silver production, and the effects of a colder climate led to rising tensions in Europe, both between different states and between social classes within individual societies.

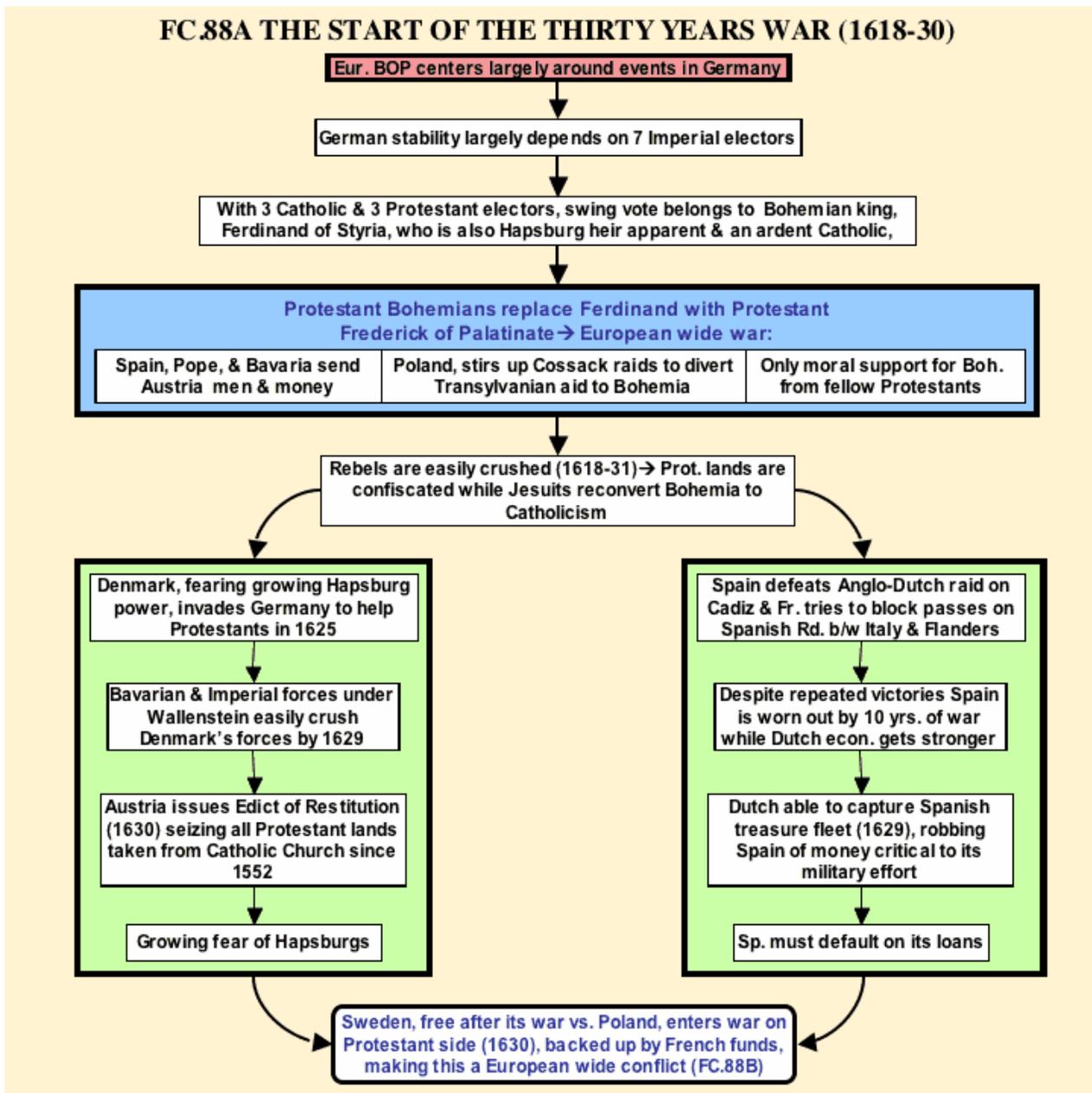
These problems combined with the fact that Europe was split between two hostile political/religious camps meant that any conflict or crisis between individual members of each camp could drag in all the other members of their respective camps and trigger a European wide war. In this respect, the situation largely resembled the one that would drag Europe into World War I in 1914.

In 1618, Protestants in Bohemia, then part of the Holy Roman Empire, rebelled against the Austrian Hapsburgs. Unfortunately, Germany's fragmented political situation generated a vicious cycle that would turn a local struggle into a European wide conflict using Germany as its battleground. As the crisis grew, more states would get involved and commit increasing amounts of resources. As more allies joined each side, the war grew into an exhausting stalemate that neither side could either win or afford to quit since it had already spent so much on it and felt it had to recover its expenses from its enemies. Concern over a Protestant or Hapsburg Catholic victory and belief that the balance could be tipped to their advantage would draw in more powers, eat up more resources, perpetuate the stalemate, and so on.

Thus Spain, Poland, the German Catholics, and the Pope came to Austria's aid to crush the Bohemian rebels. This caused Denmark, England and the Dutch Republic to join the conflict against the Hapsburgs and were defeated. Then Sweden attacked Austria, supposedly in defense of the German Protestants, but was eventually defeated. Finally, Catholic France threw itself into the fray, helping the Protestants against the Hapsburgs. Each new power that would get involved merely fed more fuel into the veritable firestorm of continuing stalemate until there was hardly anything left to burn.

More and more, this has become the pattern of modern warfare, as its expense makes it too expensive to fight, but also too costly to back out once a country has committed itself to it. And as the cost and destructiveness of war goes up, the spoils of war to make it pay for itself dwindle correspondingly. This dilemma has increasingly plagued modern warfare to the present day as the technology of war has gotten progressively more destructive and expensive, both to build and use.

FC88A The early stages of the Thirty Years War (1618-31)



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Opening phases of the war (1618-35)

Many people figured war would start in 1621 when a truce between the Dutch Republic and Spain was due to expire. In fact, it started in Bohemia (the modern Czech Republic) and Germany over the succession to the crown of the Holy Roman Empire that the Hapsburgs had held for generations. However, there was no guarantee the electors would choose another Hapsburg when the old emperor Matthias died. Since six of the seven imperial

electoral votes might easily be split between three Catholic and three Protestant electors, the Bohemian king's electoral vote could be the decisive one.

Here was where the trouble began, because Ferdinand of Styria, the king of Bohemia and heir apparent to Matthias, was an ardent Catholic, whereas Bohemia had been a hotbed of religious turmoil ever since the Hussite revolt in the early 1400's. When Ferdinand tried to end the Protestant Bohemians' religious freedom, they retaliated by defenestrating (throwing out a window) two imperial ministers in the famous Defenestration of Prague (1618) and deposing Ferdinand as their king. Although the ministers miraculously survived the sixty-foot fall, the peace did not survive with them as the turmoil quickly spread across Germany.

Unfortunately for the Bohemians, when they rebelled against Austria, they elected a mediocre king, Frederick of the Palatinate, who only brought moral support from other Protestant powers. Cossack raids stirred up by Poland diverted the one bit of substantial help they might have gotten, troops from Transylvania. Meanwhile, Spain, Bavaria (as head of the German Catholic League), and the Pope were helping Austria with men and money. Consequently, the Bohemian War (1618-22) was not much of a struggle as Ferdinand (who had since become emperor) easily swept away Bohemian opposition. Ferdinand and his followers confiscated large tracts of land, exiled Protestants, and reclaimed Bohemia for the Catholic Church.

However, growing fear of a resurgent Hapsburg dominance stirred up activity across Europe in two main theaters of war, one aimed against Spain and the other against Austria. First of all, hostilities between Spain and the Dutch Republic resumed as expected in 1621 when their truce ran out. England also declared war on Spain in 1625 and joined the Dutch in a raid on Cadiz that ended in an embarrassing defeat for the Dutch and English. After this, England became more involved in its own religious and political squabbles that culminated in civil war in the 1640's. This kept them from playing any major role in the wider conflict unfolding on the continent.

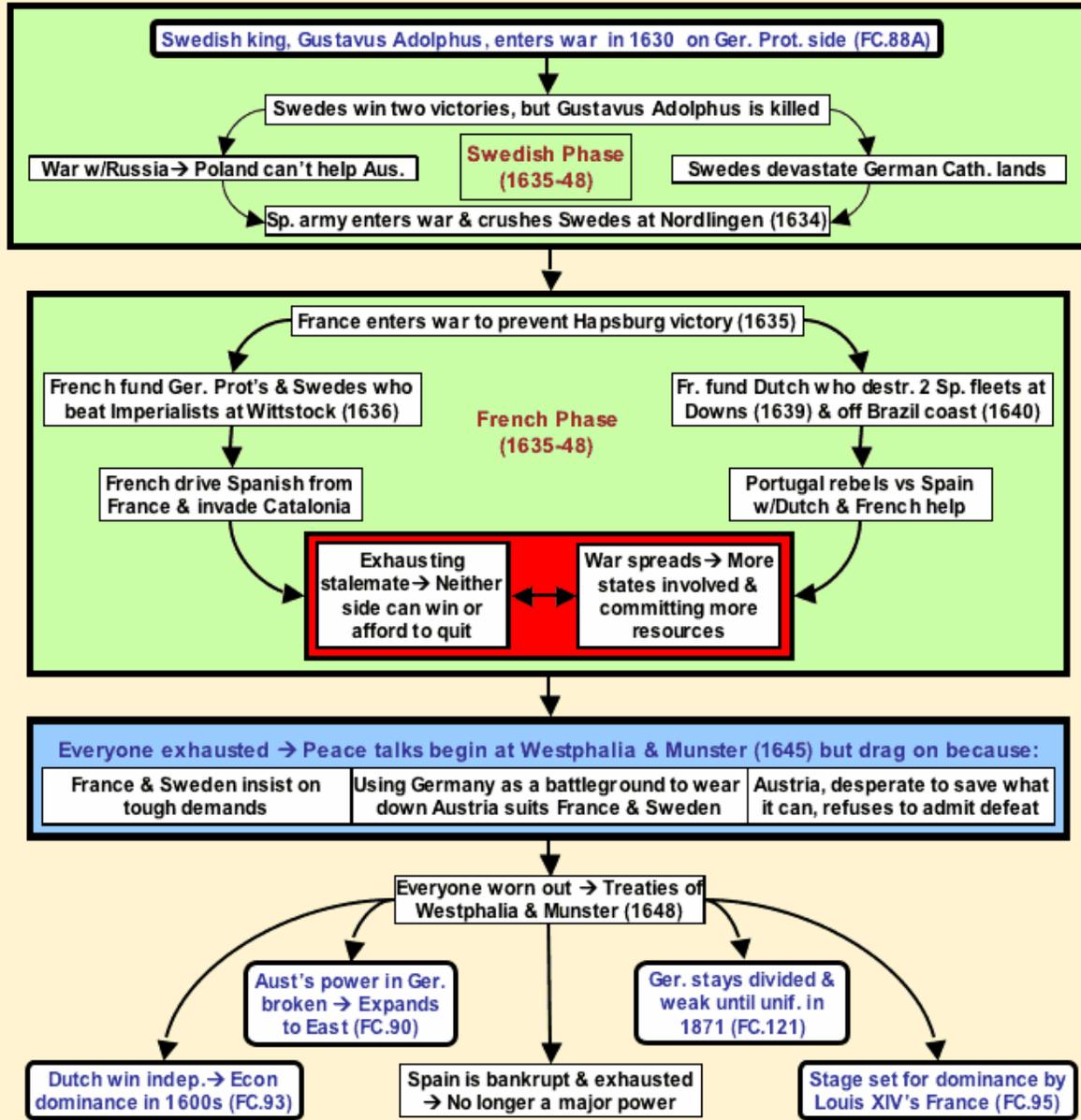
Meanwhile, France was also active, fighting Spain over strategic towns and passes in Italy. If the French could control this area, they could block the flow of Spanish troops to the Netherlands along the so-called Spanish Road. However, France's effort was somewhat ineffective at this point, largely because of turmoil at court. Cardinal Richelieu, who wanted to commit France wholeheartedly to fight the Hapsburgs, had to fight for his own political life against the Queen mother, Marie de Medici. Richelieu and his policy would eventually triumph, throwing the full weight of France against the Hapsburgs with momentous results for European history. But for now, France's effort was of little account, and Spain held on in Italy.

Despite these victories, ten years of warfare were taking their toll on Spain's wealth, manpower, and ability to protect its treasure fleet, which the Dutch captured for the first time in 1629. This and Spain's already seriously damaged finances forced it to declare bankruptcy, leaving outstanding loans unpaid.

Meanwhile, the Austrian Hapsburgs' overwhelming victory in Bohemia had led Denmark to invade Germany in 1625 supposedly in defense of Protestant liberties. The Hapsburg general, Albrecht von Wallenstein, and the Catholic League's general, Tilly, made short work of the Danes, thus winning what is known as the Danish phase of the war (1625-29). The emperor Ferdinand felt so strong after his victory that he issued the Edict of Restitution in 1630. This declared that all land taken from the Catholic Church since 1555 must be returned to the Church. The Edict of Restitution drove thousands of Protestants from their homes and aggravated an already turbulent situation. It also alarmed and angered German princes, Catholic and Protestant alike, who felt the emperor was overstepping his constitutional powers.

FC88B The later stages of the 30 Years War (1631-48)

FC.88B THE THIRTY YEARS WAR: THE WAR OF ATTRITION (1630-48)



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The Swedish Phase

At this point Sweden, prodded by fear of Austria's growing power, Spain's apparent weakness, and France's willingness to back it with money, threw in its lot against the Hapsburgs and invaded Germany. This transformed what was already a European wide affair into a prolonged and bloody war of attrition where neither side was able to win a quick decisive victory or willing to concede defeat. To the German people caught in the middle, the war seemed to have assumed a life of its own that would carry on until there was nothing left in Germany to sustain it.

Sweden was a relative newcomer to European diplomacy. However, thanks to a line of brilliant and ambitious kings, the "Swedish meteor" would shine brightly over the Baltic before burning out in the 1700's. Two other Baltic states, Poland and Russia, were also assuming a greater role in European affairs. As a result, events in Eastern

Europe and the Baltic had a growing impact on events in Western Europe. At this point, it was peace between Sweden and Poland that freed Sweden to invade Germany.

Sweden's king, Gustavus Adolphus, was a brilliant and daring general with a highly trained and disciplined army at his back. He used Swedish draftees rather than unreliable mercenaries and put them in smaller units that could more effectively use their numbers and firepower. He further increased this firepower by experimenting with mobile field artillery that could wreak havoc on the massed formations of the day. These reforms proved their worth at the battle of Breitenfeld (1631) where Swedish discipline and firepower overcame the desertion of their Saxon allies to crush an imperial army under Tilly. The next year Swedish tactics won a bloody but costly victory at Lutzen. In the smoke and confusion of battle, Gustavus was killed, taking a good part of the heart out of the Swedish effort.

Nevertheless, the Swedes pressed on, devastating Catholic lands on the way. Austria enticed its ally and Sweden's enemy, Poland, into the war, but a war further east against Russia neutralized the Poles. This prompted Spain to send an army north to retrieve the situation in Germany and the Netherlands. In 1634, the Spanish army crushed the Swedes at Nordlingen. The Swedes launched some fifteen heroic, but basically suicidal charges against the Spanish positions, all with disastrous results.

The war of attrition (1635-48)

Once again, the Protestant cause seemed on the verge of collapse. The war had raged now for some sixteen years. Hundreds of German towns and villages were devastated, and whole regions were virtually depopulated. The war's destruction and upheaval brought famine, and with that came disease. Germany was ready for peace. Unfortunately, the other powers in Europe were not. Instead, the war was about to enter a much more destructive phase of attrition where each side, instead of expecting a quick and decisive victory, fought to wear down the other side no matter what the cost might be to themselves.

In 1635, France wholeheartedly entered the war, ending any hopes for a quick peace. Its strategy was still largely to fund two of Spain's enemies, the Dutch and Swedes, and let them do as much of the fighting as possible. At first its own armies were somewhat ineffective against Spain's veteran troops. However, the Swedes, bolstered by French funds, beat the imperialists at Wittstock (1636) and forced an invading Spanish army to withdraw from France. This in turn allowed the French to invade Spain to support a revolt in Catalonia.

Meanwhile, the Dutch had dealt a crippling blow to the Spanish war effort by destroying a Spanish armada of 77 ships at the Battle of the Downs (1639). The next year, the Dutch crushed another Spanish and Portuguese fleet off the coast of Brazil. These two naval battles had the double effect of permanently wrecking Spanish naval power in the Atlantic and triggering a Portuguese revolt.

Even for the victors, this war was exhausting and ruinous, and by 1640 most powers were ready for peace. However, several things prevented peace at this time. First of all, the tangled alliances kept any one power on one side from negotiating its own separate peace. Second, rulers had a limited resource base with which to pay for the war, and that was shrinking steadily as the war's destruction ate up those resources. This helped generate the vicious cycle of stalemate discussed above.

However, with each year, the tide of war was shifting more and more against the Hapsburgs. In Germany, the Swedes beat an Imperialist army at the Second Battle of Breitenfeld (1642), which caused most of Austria's German allies to desert it. In 1643, the French crushed a Spanish army at Rocroi, opening the way to invade the Spanish Netherlands and establish France as the premier power in Europe for decades.

With Spain on the verge of bankruptcy and collapse, Sweden's manpower depleted, and even France facing tax revolts, everyone agreed to start negotiations at Westphalia in 1645. Even then, heavy French and Swedish demands for land and money, Austrian reluctance to give up, and the fact that neutral Germany was the battleground caused the negotiations to drag out as the war dragged on.

End of the war and its results

In 1648, the Dutch finally made a separate peace with Spain, gaining recognition of their independence after an 80-year struggle (1567-1648). This and the growing threat of revolt in its own lands prompted France at last to come to terms that same year. The resulting treaty became known as the Peace of Westphalia.

The Peace of Westphalia symbolized and confirmed the great changes taking place in Europe's balance of power over the first half of the 1600's. Spain, bankrupt and exhausted, was now reduced to the level of a second-class power. Austria's influence was virtually destroyed in the Holy Roman Empire. However, it would find new life by expanding eastward against an even more corrupt and decaying power, the Ottoman Turks. Germany, whose population and property had suffered damages only surpassed by that of World War II, remained hopelessly broken into some 300 states. Yet out of the ashes of this destruction Brandenburg-Prussia would gradually emerge to unify Germany in 1871.

There were winners. Sweden emerged as the dominant power in the Baltic for another half century. However, by the early 1700's, its aggressive policies would wear it out and knock it out of the mainstream of European politics. The Dutch came out of the war in the best shape of any country in Europe. Dutch trade and economy actually flourished during the war, making enormous profits from raiding Spanish shipping, taking over Spain's colonial trade, and selling munitions to the various combatants, including Spain.

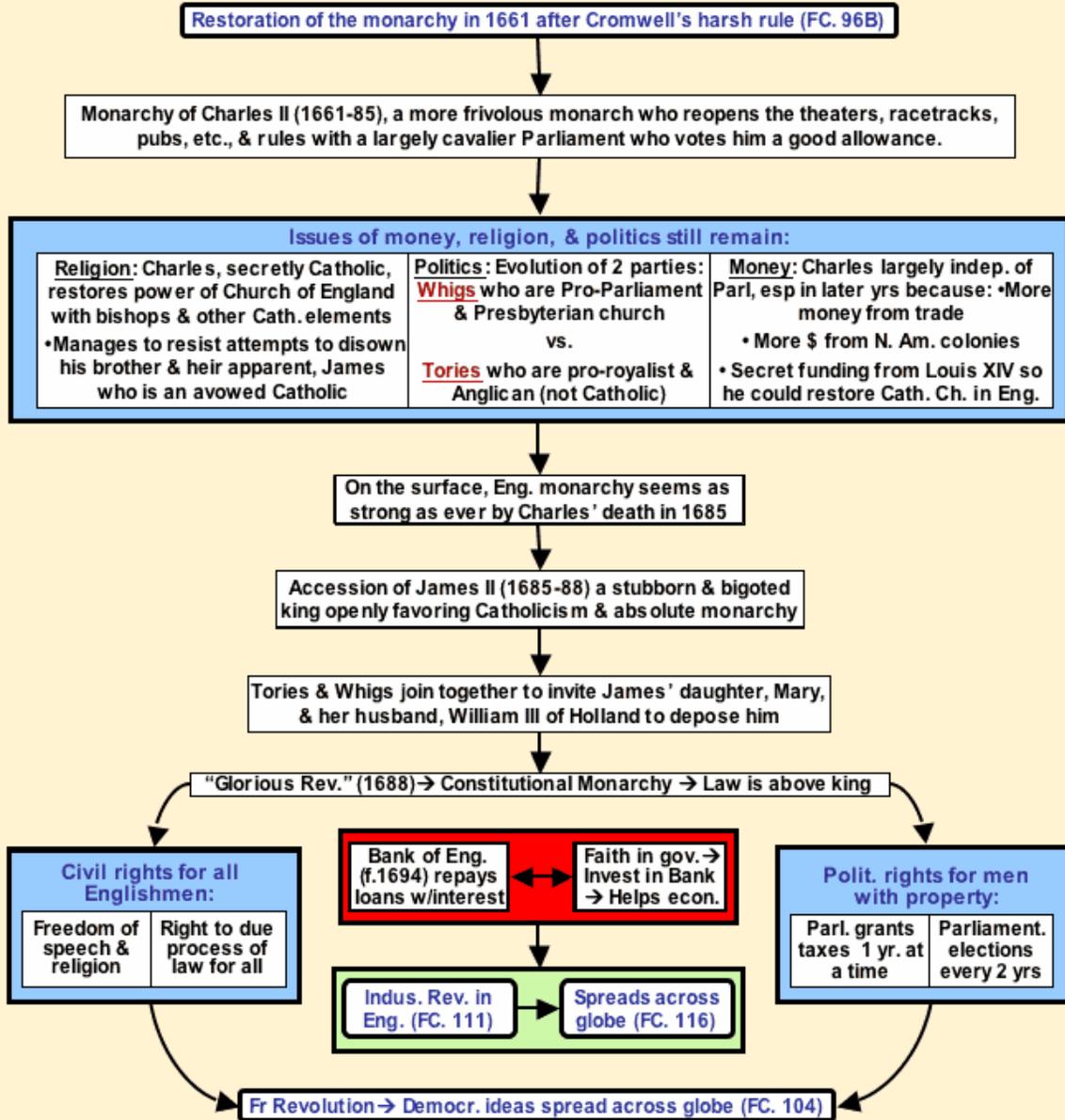
Politically, France was the big winner, severely weakening the ring of Hapsburg powers surrounding it as well as gaining territories along the Rhine. All this also had its cost. For one thing, France's war with Spain dragged on until 1659. Secondly, the terrible tax burden of the war triggered a revolt known as the Fronde (1648-53) that nearly toppled the monarchy of the young Louis XIV. As it was, Louis' monarchy emerged triumphant (unlike its counterpart in England also facing revolution), and France emerged as the dominant power in Europe. The age of Spain was giving way to the age of France.

Absolute Monarchies in Europe

Unit 14: The rise of absolute monarchies in Eastern and Western Europe (c.1600-1700)

FC96C The English Revolution From the Restoration Monarchy to the Glorious Revolution (1660-1688)

FC 96C FROM RESTORATION MONARCHY TO GLORIOUS REVOLUTION



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"Here lies our lord and sovereign king whose promise none relies on.

He never said a foolish thing nor ever did a wise one." --court jest concerning Charles II

"That is very true, for my words are my own, and my actions are those of my ministers." --Charles' reply

Charles II and the Restoration Monarchy (1660-85)

The above quoted poem says a great deal about the reign of Charles II. The English people were ready to throw off Cromwell's strict Puritan rule and enjoy life again. Theaters, taverns, and racetracks opened up again. Flamboyant fashions and hairstyles became the rage. And Britain once again became "Merry Old England". Charles, the "Merry Monarch" seemed to be just what the English people needed. However, despite all this, there still remained an undercurrent of tensions in the areas of politics, money, and religion

In politics, things seemed much calmer than they had been for decades-- at least at first. King and a largely cavalier Parliament seemed reconciled. Charles was voted a sizable income. The army was paid off, and most of the crown's enemies from the civil war were granted pardons. However, many of the old tensions between king and Parliament still existed. For one thing, the Restoration not only restored the king. It also restored Parliament, which Cromwell had suppressed. In fact, it was the restored Parliament that formally summoned Charles back to England, not the king who summoned Parliament. Parliament itself was divided into two parties: the *Tories* who favored a strong king and a Church of England largely resembling the Catholic Church, and the *Whigs* who favored a strong Parliament and more Protestant Church and ritual.

As far as money was concerned, England's wealth was rapidly growing. Cromwell's aggressive foreign policy had intensified England's commercial and naval rivalry with the Dutch, largely due to the Navigation Act, which excluded foreign, and particularly Dutch, ships from carrying English goods. This led to three short but bitterly fought naval wars with the Dutch (one under Cromwell and two under Charles II). Although the Dutch held their own, the expense and stress of their wars against England and France allowed the English to replace them as the premier naval and commercial power in Europe by 1700. Between 1670 and 1700, England's foreign trade grew by 50 per cent, and the king's customs revenues tripled. Despite this new prosperity, Charles' allowance from Parliament still could not satisfy his extravagant personal tastes and style of living. Instead of letting this lead to a clash with Parliament, as had led to Civil War in 1642, Charles neatly sidestepped Parliament by signing the Secret Treaty of Dover with Louis XIV. This gave Charles a handsome pension in return for the promise to turn England Catholic when the time was ripe.

Concerning religion Charles II was sly enough to keep to himself his beliefs in the Divine Right of Kings and the Catholic faith. Although he did not openly profess his Catholic faith until he was on his deathbed, he did restore lands confiscated since the civil war to the Church, crown, and nobles. He also restored the power of the Church of England, re-establishing the church courts and persecuting anyone, especially Puritans, not conforming to the Church's doctrines.

Much more unsettling was the fact that Charles had many children, but none of them were legitimate. That left James, Charles' brother and an avowed Catholic, next in line for the throne. This alarmed the Puritans, who put pressure on Charles to disinherit his brother. Puritan pressure intensified with Titus Oates' "Popish plot," a preposterous rumor that the Jesuits were plotting to kill Charles and massacre all the Protestants in England. This led to two years of anti-Catholic persecutions and hysteria, which put Charles in an awkward position, since he did not want to be exposed as a "papist" himself. Rumors of his funds from France made his position that much more delicate. In the end, the slippery Charles managed to avoid disinheriting his brother. He even ruled without Parliament the last few years of his reign, getting by on his subsidies from Louis XIV. By Charles' death in 1685, it seemed the king was as strong as ever.

James II and the Glorious Revolution (1685-88)

As strong as the new king, James II, may have appeared, there was no way he could undo the changes of the last 80 years. Charles II was a capable monarch quite adept at handling the Whigs. Unfortunately, James had nearly all the qualities to ensure getting himself dethroned, being bigoted, stubborn, and quite inept. His worst mistake was his open preference for Catholicism. He suspended laws keeping Catholics out of public office and even recruited Irish Catholics for his army. When his own bishops tried to advise him to reconsider his openly favoring Catholicism, he jailed seven of them in the Tower of London.

Even the Tories came to fear the king's religious views more than they did the Whigs' political views. Finally, they joined with the Whigs in inviting James' Protestant daughter, Mary, and her husband, William the Prince of Orange, to come from Holland and dethrone James. What followed has been known ever since as the Glorious Revolution, partly for being virtually bloodless (except for James' nosebleed), but mainly for what it accomplished. William and Mary's Dutch army landed unopposed and marched to London. James' army deserted him, and he fled to France.

Royalty and Parliament then came to an agreement whereby William could use England's resources to help stop Louis XIV's drive to dominate Europe. In return, William and Mary guaranteed Parliament's rightful place in the government and signed the Bill of Rights, precursor to our own Bill of Rights. This assured Englishmen such liberties as free speech, free elections, no imprisonment without due process of law, and no levying of taxes without

Parliament's consent. In addition, the king agreed to call for new elections every three years. The king could still formulate policy and name his officials. However, the balance of power had definitely shifted in favor of Parliament, especially since it controlled the purse strings. Money was only granted one year at a time, which meant that the king would have to call Parliament each year just to have the cash needed for his policies. This new government where even the king was subject to the law and certain legal procedures in ruling is called *constitutional monarchy*,

In the years to come, Parliament gradually gained more power at the expense of the kings. This process gained momentum when the German prince, George of Hanover, became king in 1714. His main interests remained on the continent, and he was generally content to let his allies, the Whigs, run the government for him.

Results of the English Revolution

The struggle between kings and Parliament throughout the 1600's ended in a clear-cut victory for Parliament. While a more democratic government emerged as a result of the English Revolution, keep in mind that rather high property qualifications still kept the vast majority of Englishmen from voting.

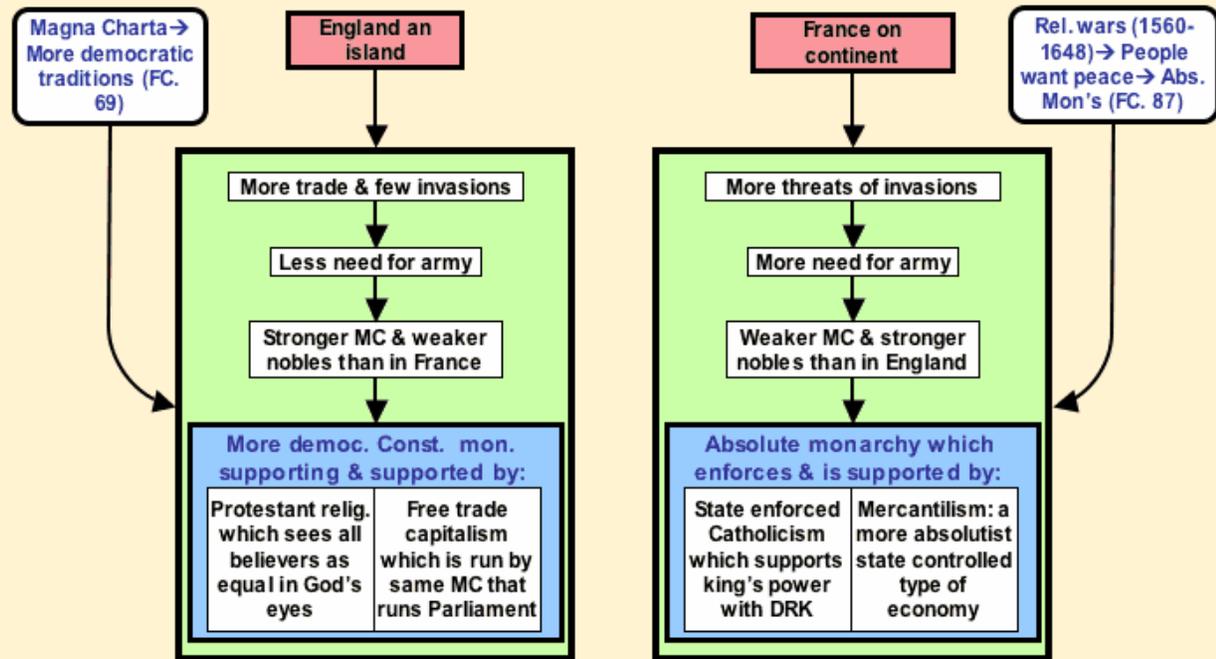
However, the English Revolution would benefit all England in two areas: civil rights and the economy. For one thing all Englishmen did gain certain civil rights, such as free speech and the right to a fair trial by a jury of peers. Also, all Christians except Catholics and Unitarians, who eventually, would also be tolerated. The English Revolution also opened the way for more democratic reforms over the next two centuries, until England would become a truly democratic society. The power and success of these principles would spread to the American and French Revolutions, and from France to the rest of Europe and the world.

Economically, the English revolution saw the triumph of capitalism in England. One important aspect of this was Parliament's founding of the Bank of England (1694) through which the government did much of its business. The important thing here was that the government guaranteed repayment with interest on any loans it took out. This contrasted sharply with the old medieval method whereby kings took out personal loans, often did not bother to pay them back, and let the liability for the loans go to the grave with them. Now that government was identified more with Parliament, liability for the loans did not die with the king. Therefore, people were more willing to loan the government money, since they knew they would get it back with interest.

Since the government was largely run by hard-nosed middle class businessmen rather than extravagant nobles with no sense of the value of money, it would use these loans wisely by investing them in business and new industries. That, in turn would improve the economy, which not only could pay more taxes, but also invest further in the Bank of England, which could invest even more money in economic development, and so on. Therefore, England, along with the Dutch Republic, was one of the first modern states to operate at a profit rather than in chronic debt. And, as a result, England would be the birthplace of the Industrial Revolution in the 1700's, a factor that would make Europe the dominant culture on the globe by 1900.

FC96DA Comparison of English & French Histories in the 1600S

FC.96D THE COMPARATIVE GEOGRAPHIES & HISTORIES OF ENGLAND AND FRANCE IN THE 1600s



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While just a few miles of the English Channel separate France and England, their respective histories, while similar in some ways have diverged somewhat in others. Once again, one of the main factors in the equation has been geography, the fact that England is an island and relatively safe from invasion, while France is on the continent and in closer contact with its neighbors, sometimes in hostile ways.

Another factor affecting England has been a longer democratic, or more properly quasi-democratic, tradition compared to that of France, going back at least to the Magna Charta in 1215, although that was drawing upon an earlier charter signed by Henry I around 1100, which itself drew upon older traditions of Saxon liberties. Together, England's protected position, but still very close to the continent, and its quasi-democratic roots blessed it with few invasions and more trade. Therefore it had less need for a strong army, giving it a stronger and richer middle class and a less powerful and distinct nobility than in France. For example, lower nobles and the upper middle class sat together in the House of Commons as a group known collectively as the gentry. While titles of nobility could not be bought in England, neither could they be lost, as in France, for the stigma of working to support oneself like the a commoner.

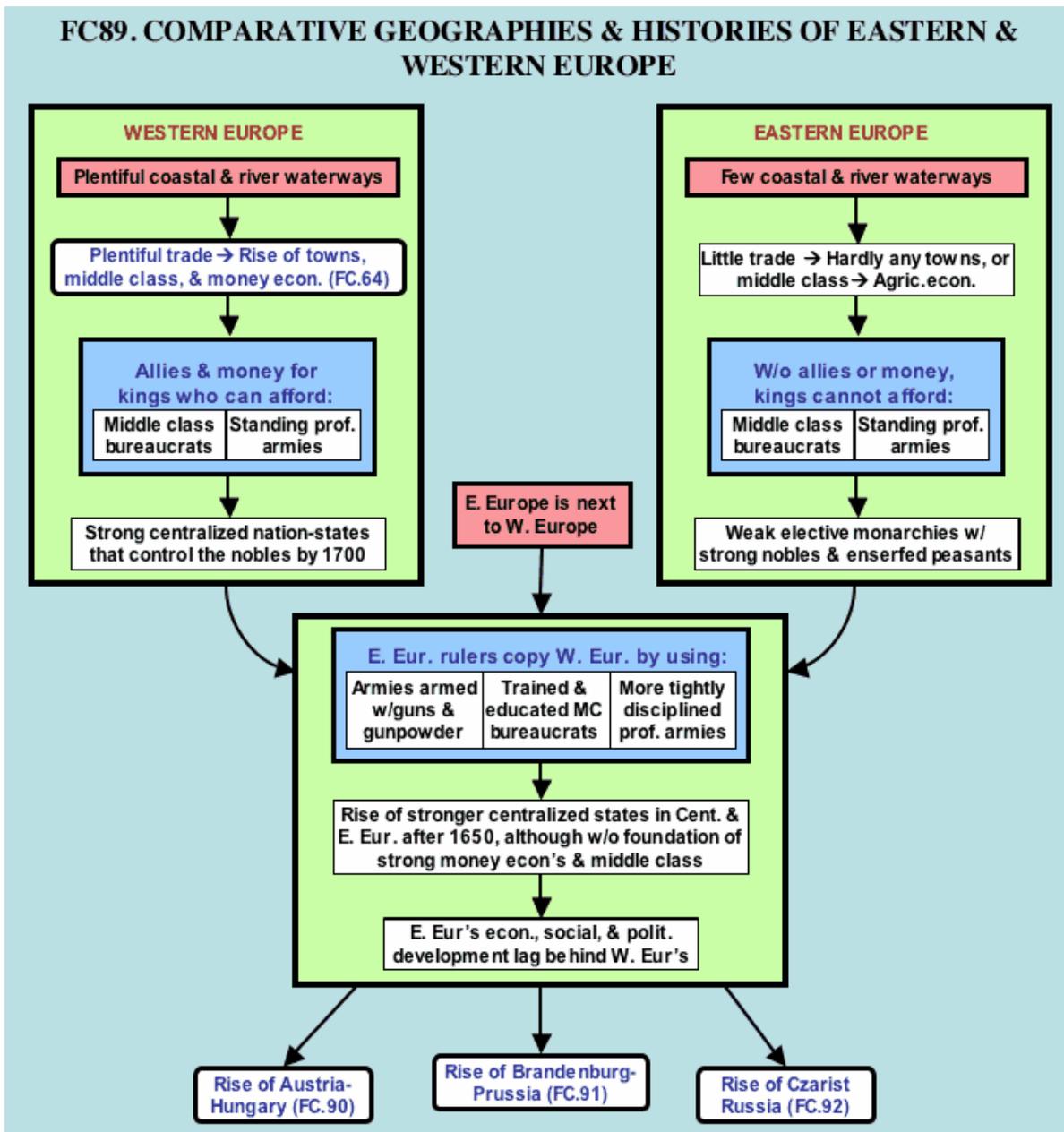
By 1700, England had worked out a constitutional monarchy that was more democratic, giving all freemen certain civil rights, although withholding the vote from all but about 5% of the men. Two major pillars supported this new order. One was Protestantism, which sees all believers as (at least spiritually) equal in God's eyes. In the early 1600s when one could not separate religion and politics, spiritual equality led the way to political and social equality. The other pillar was free trade capitalism, versus the quasi-socialistic system of medieval guilds, royal monopolies, and mercantilism. Running this was the same Protestant middle class gentry that ran Parliament and claimed that God values all jobs equally. In the 1700s the combined dynamics of middle class capitalism and democracy would vault England into global leadership in terms of finance, naval and colonial power, and eventually industrialization.

France's geography and history took it down a somewhat different path, at least until the 1800s. Its position on the continent presented more threats of invasion, as well as opportunities for conquest. Either way, it had a greater need for an army, which is expensive and disruptive to trade when it is actually used in wars. Therefore, the middle class had less clout and status in France than its counterpart in England, as witnessed by the more prominent role played by Parliament in English history than that played by its French counterpart, the Estates General. Also, there was no blending of the upper middle class and lower nobles corresponding to the gentry in England.

As a result, France experienced an absolute monarchy that was supported by its religious and economic systems. One was state enforced Catholicism with the doctrine of Divine Right of Kings, which supported the principle of absolute monarchy. The economic counterpart to absolute monarchy was mercantilism, which did recognize the importance of nourishing a strong national economy, but did it in an overbearing absolutist manner that stifled initiative and may have done as much harm as good.

However, instead of continuing on diverging paths, France would follow with its own democratic revolution and the triumph of free trade capitalism for two major reasons. One was political and economic competition from Britain that France had to adapt to in order to survive. The other was a common cultural and historical heritage going back to ancient Rome, which made France and England much more alike than either of them might want to admit.

FC89The Comparative Geographies and Histories of Eastern and Western Europe



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Between East and West

Throughout the modern era, there have been striking contrasts between the histories, economies, and politics of Eastern and Western Europe. After World War II, those differences became especially obvious with the Soviet led Warsaw Pact forces poised on one side of the Elbe River and the Western NATO alliance on the other. As so often in history, the underlying basis for these differences has been geography.

First of all, Europe's latitude lies quite far north. For example, Rome, Italy is about as far north as Chicago, Illinois. However, it has a much warmer climate, especially in the winter. This is because Western Europe gets the moderating effects of a warm current known as the South Atlantic Drift and warm sea breezes coming across the Mediterranean from North Africa. Eastern Europe is too far inland to benefit much from either of these effects, and thus has more extremes in climate, especially in the winter.

However, the critical difference between Eastern and Western Europe has to do with waterways. Western Europe has an abundance of navigable rivers, coastlines, and harbors along the Atlantic Ocean and the Mediterranean, North, and Baltic Seas. In the High Middle Ages, these fostered the revival of trade and the rise of towns, a money economy, and a middle class opposed to the feudal structure dominated by the nobles and Church.

Kings also opposed the nobles and the Church, so the middle class townsmen provided them with valuable allies and money. With this money, kings could buy two things. First of all, they could raise mercenary armies armed with guns to limit the power of the nobles. Secondly, they could form professional bureaucracies staffed largely by their middle class allies who were both more efficient since they were literate and more loyal since they were the king's natural allies and dependant on him for their positions. As a result, kings in Western Europe were able to build strong centralized nation-states by the 1600's.

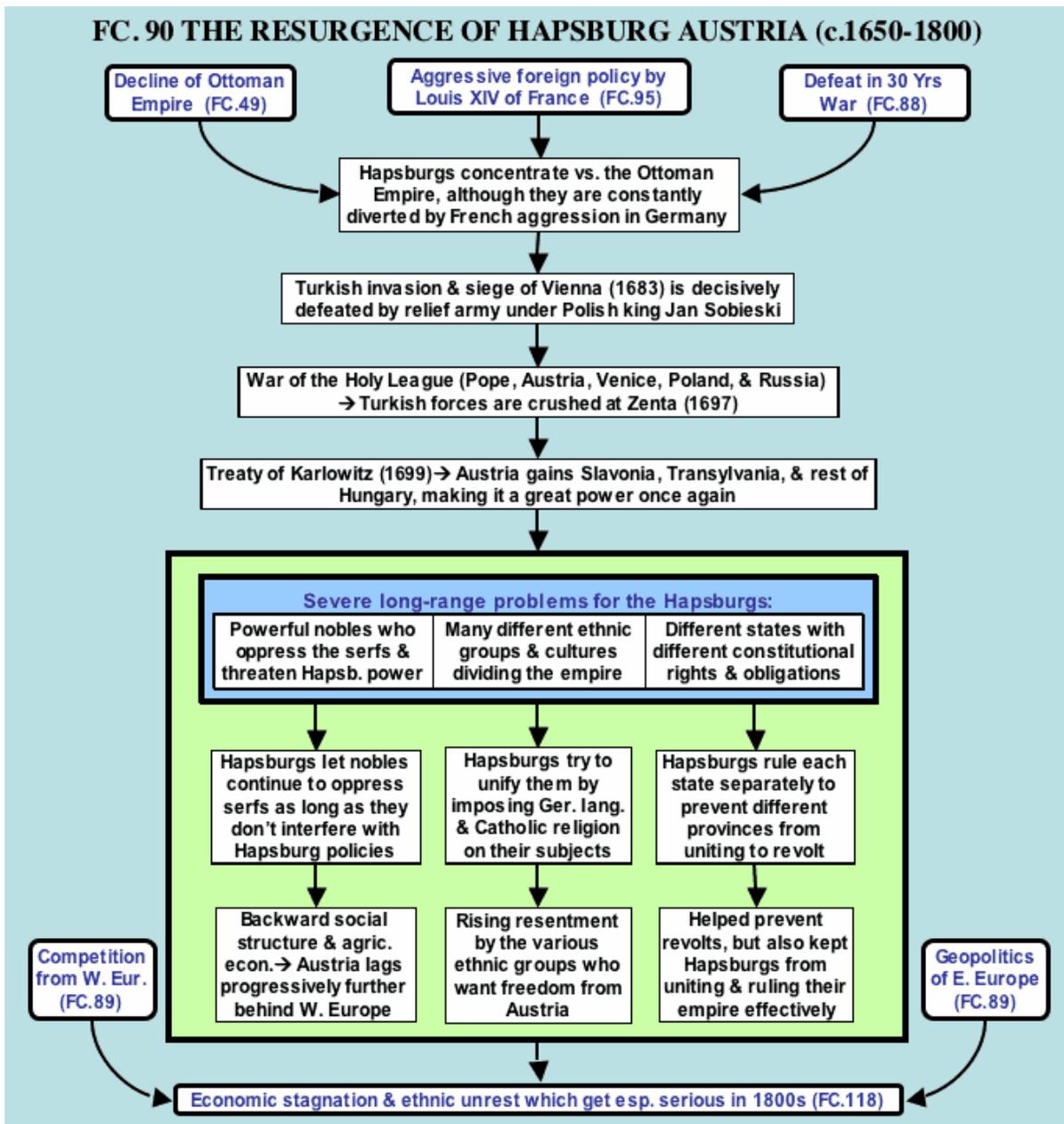
Eastern Europe, in stark contrast to Western Europe, provided practically a mirror image of its historical development before 1600. Being further inland compared to Western Europe hurt Eastern Europe's trade, since the sea and river waterways vital to trade did not exist there in such abundance as they did in Western Europe.

Factors limiting trade also limited the growth of a strong middle class in Eastern Europe. This meant that kings had little in the way of money or allies to help them against the nobles. That in turn meant that peasants had few towns where they could escape the oppression of the nobles. Therefore, strong nobilities plus weak, and oftentimes elective, monarchies were the rule in Eastern Europe before 1600. At the same time, the nobles ruled over peasants whose status actually was sliding deeper into serfdom rather than emerging from it.

However, there was one geographic factor that favored Eastern Europe's rulers after 1600. That was the fact that Eastern Europe is next to Western Europe. As a result, some influence from the West was able to filter in to the East. In particular, Eastern European rulers would emulate their Western counterparts by adopting firearms, mercenary armies, and professional bureaucracies. As a result, they were able to build strongly centralized states in the 1600's and 1700's. This was especially true in three states: Austria-Hungary (the Hapsburg Empire), Brandenburg-Prussia in Germany, and Russia.

However, the lower incidence of towns and a strong middle class has continued to hamper the development of Eastern European states in the modern era, since rulers there have had to build their states with less of the strong foundation of a money based economy, basing their states on less developed agricultural economies. While the strong middle class in Western Europe would provide the impetus for further developments in the West, notably the emergence of democracy and the Industrial Revolution, these two things have had a harder time taking root in Eastern Europe, making its overall political and economic development more difficult.

FC90Hapsburg Austria Resurgent (c.1650-1700)



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“We came, we saw, God conquered.”— *Jan Sobieski, announcing the relief of the siege of Vienna from the Ottoman Turks in 1683*

When the Thirty Years War and Peace of Westphalia stifled Austrian ambitions in Germany, the Hapsburgs expanded eastward against the Ottoman Empire. Ever since the death of Suleiman the Magnificent in 1565, the Ottoman Empire had been in serious decline, with a corrupt government, rebellious army, obsolete military technology, and decaying economy. Such a faltering empire was a tempting target for its neighbors. However, the Hapsburgs were never able to concentrate solely on the Turks. This was because France under Louis XIV posed a constant threat of invasion to the various German states, which forced the Hapsburgs to divide their attention between east and west.

The Hapsburg ruler at this time was Leopold I (1657-1705), a mediocre ruler, but lucky enough to have capable generals to lead his armies. Leopold's main goal was control of Hungary, which had been divided between Turkish and Austrian rule for over a century. When Leopold supported rebels in Transylvania against the Turks, war and an

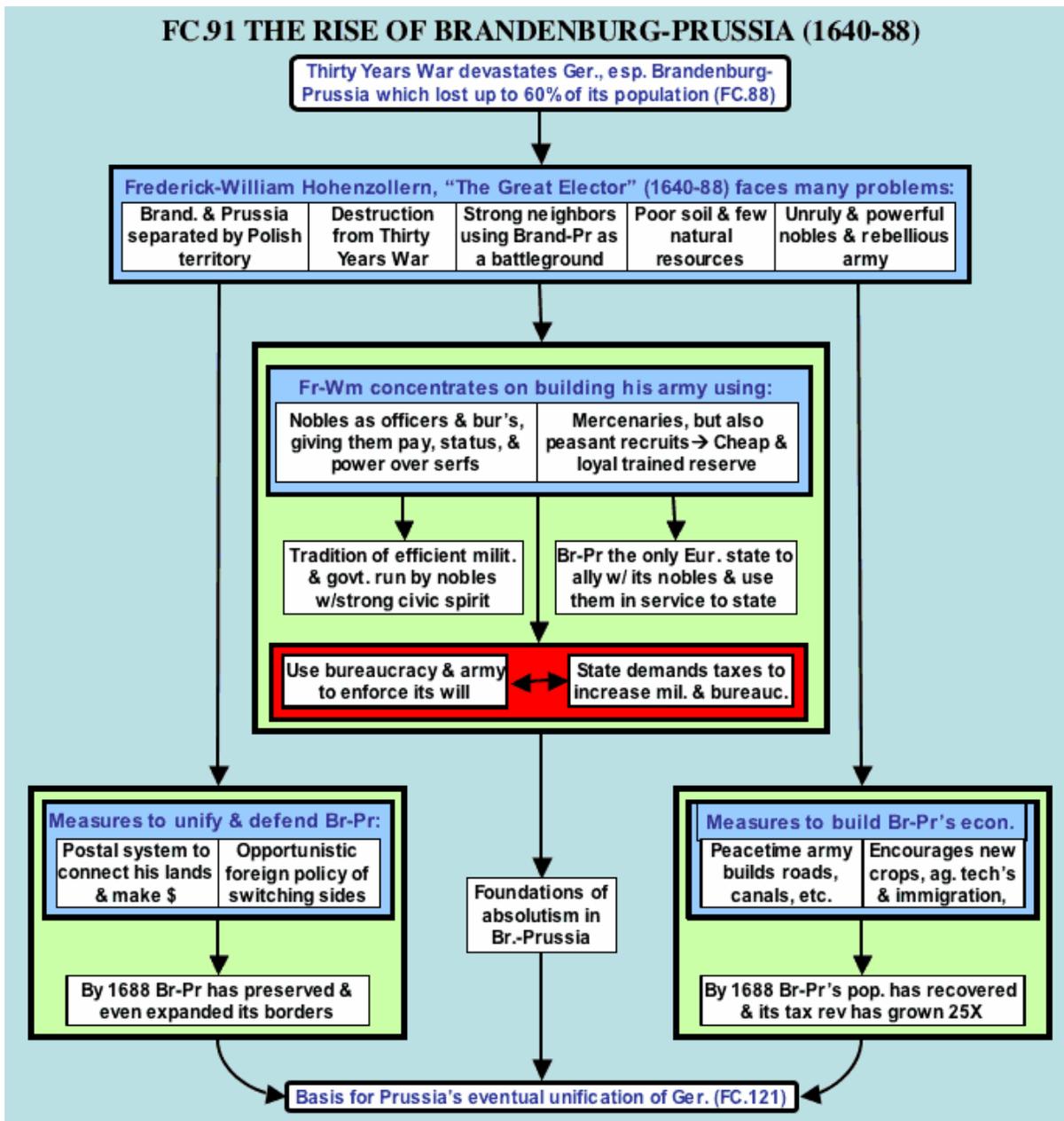
Ottoman invasion resulted. At this time, the Turks were ruled by an able family of viziers, the Koprulus, who started reforming the state in order to make the Ottomans a power to contend with once again. As a result, when the Turkish army started to advance westward, the alarm went up all over Europe, with even Louis XIV sending 4000 troops to help the Hapsburgs (and make himself look like a good Christian). In 1664, a much smaller, but better equipped and trained allied army caught and destroyed a Turkish army while it was crossing the Raba River. This was the first major victory of a Christian army over the Ottomans. However, it encouraged Leopold's allies to feel secure enough to take their troops home, leaving him to face the Turks alone. Instead of continuing the fight, he signed a humiliating peace that damaged his reputation considerably. As a result, the Hungarian nobles under his rule rebelled and called in the Turks to help them.

This triggered the Turks' last major invasion of Europe, climaxing at the siege of Vienna in 1683. A huge Turkish army of possibly 150,000 men, but with no large siege artillery, was faced by only the stout walls of Vienna and a garrison of 11,000 men. The siege lasted two months as the Turks gradually used the old medieval technique of undermining the walls. Just as the hour of their victory approached, a relief army from various European states arrived and crushed the Turkish army. From 1683 to 1700, Hapsburg forces and their allies advanced steadily against the Turks, only being interrupted by having to meet French aggression in the West. In 1697, the allied forces demolished another Turkish army at Zenta and watched as the once proud Janissaries murdered their own officers in the rout. The resulting treaty of Karlowitz (1699) gave Austria all of Hungary, Transylvania, and Slavonia. Karlowitz re-established Austria, now also known as Austria-Hungary, as a major European power. From 1700 until the end of World War I in 1918, the Hapsburg Empire would dominate southeastern Europe, while the Ottoman Empire staggered on as the "Sick Man of Europe."

Although the Hapsburg Empire had regained its status as a military and diplomatic power, it still had serious internal problems, namely a powerful nobility ruling over enserfed peasants, a hodge-podge of peoples with nothing in common except that they all called Leopold their emperor, and a variety of states that each had their own rights, privileges and governmental institutions. The Hapsburgs dealt with these problems in three ways. First of all, they neutralized the nobles politically by making a deal that let them continue to oppress the peasants as long as they did not interfere in the government. This left the nobles fairly happy while giving the Hapsburgs a free hand to run the state, largely with soldiers and bureaucrats recruited from other parts of Europe. Unfortunately, this also left the empire socially and economically backward. Second, they tried to unite their empire religiously and culturally by imposing the Catholic faith and promoting the German language throughout their empire. Trying to submerge native cultures, such as that of Bohemia, under Catholicism and German culture mostly caused resentment against Hapsburg rule. Finally, they ruled each principality (Austria, Hungary, Bohemia, etc.) separately with its own customs and institutions. This kept nobles of different provinces from being able to combine in revolts against the Hapsburgs, but it also left the empire fragmented into a number of separate provinces. A large standing army and bureaucracy also held the empire together.

For the next two centuries the Hapsburg Empire would be a major power in Europe. However, it had a number of serious problems that it never adequately solved, being socially and economically backward and fragmented into a large number of provinces and increasingly restless ethnic groups. Together, these problems gradually ate away like a cancer at the Hapsburg Empire, rotting it out from within until there was hardly anything left to hold it together by the twentieth century.

FC91Brandenburg-Prussia & the Roots of Modern Germany (1640-88)



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As badly as the Thirty Years War had treated Hapsburg Austria, it was much worse for the German states comprising the Holy Roman Empire. Some estimates of population loss in the war go as high as 35-40%, with material damage at an equally frightening level. However, human beings are a resilient species in the face of such adversity, and recovery was soon underway. Travelers in Germany a few years after the war noted a marked absence of men of military age, but an unusually high number of children. By 1700, Germany's population was back to its pre-war level of 20,000,000. Similar resilience was shown by the tiny state of Brandenburg-Prussia in northern Germany. In 1648, no one looking at this poor little state devastated by war would have believed it was destined one day to unite all of Germany and become a major world power.

Brandenburg had lived under the rule of the Hohenzollern dynasty since 1411 when Frederick of Hohenzollern had purchased the territory and one of the seven electoral votes of the empire along with it. In 1618, the elector, as the ruler of Brandenburg was known, also got control of Prussia some 100 miles to the east, holding it as a vassal of the king of Poland. Brandenburg especially suffered during the Thirty Years War, since it was caught between the Catholic imperialists to the south and Swedes to the north, not to mention its own rapacious mercenaries. This was

the situation when Frederick William, known as the Great Elector, took power in 1640.

Frederick William found an imposing array of problems that fell into three basic categories: geographic, military/diplomatic, and economic. Frederick William's main geographic problem was that the territories of Brandenburg and Prussia were separated by 100 miles of Polish territory, making it very difficult to control and administer. Economically, Brandenburg was a poor country with few resources and a sandy soil that earned it the nickname "the sandbox of Germany". There were several factors aggravating the military and diplomatic situation. Worst of all was the devastation suffered at the hands of the Imperialists, Swedes, and Brandenburg's own troops. An estimated 60% of population was lost from the war, falling from 1.5 million to 0.6 million. Not only that, but Swedish troops were still on Brandenburg's soil in 1640, with other powerful threatening neighbors, such as Poland to the east and France to the west. To meet these threats, Frederick William's army consisted mainly of unruly mercenaries as likely to plunder his lands as defend them. And he also faced a powerful class of nobles known as junkers who were a constant obstruction to the government.

Frederick William figured that, above all else, he needed to tackle his military and diplomatic problems by building a good army to protect himself and his realm. The first step was to use what few reliable troops he had in order to destroy his old army of worthless mercenaries. One by one, he eliminated his old regiments until he had only an army of 2500 men, but it was a loyal core upon which to build. Through diligence and hard work, Frederick William built an excellent army of some 8000 men by 1648. This was enough to give him a voice in the treaty talks at Westphalia. His main goal was to get Pomerania which, although legally Brandenburg's, was occupied by Swedish troops. He had to settle for half of Pomerania, but that was more than he could have expected eight years earlier, and it did give him a coastline on the Baltic Sea.

Inspired by his success, Frederick William kept building up his army and bureaucracy. For an officer corps and civil officials, he turned to the junkers. Like his contemporary, Leopold I of Austria, he let the nobles maintain their dominance over the serfs. But unlike Leopold, who did this to keep the nobles out of the government, Frederick William expected service to the state in return for those privileges. The junkers were expected to serve in the army as officers or as a highly efficient civil service that could provide better support for the army in the way of tax collection and supplies. They received fancy uniforms and excellent training, and soon had developed a high morale and pride in themselves as the officer class of Brandenburg-Prussia. That tradition of a proud Prussian officer class as the backbone of the state would continue all the way down to the twentieth century. As a result of this policy, Brandenburg-Prussia was the only state in Europe where the government successfully allied with the nobles and used them effectively in government service.

For recruits, Frederick William and his successors started to rely increasingly on peasant draftees rather than on undependable and expensive foreign mercenaries. Such soldiers were much cheaper than mercenaries and much less prone to looting, although not as efficient. During peacetime, they could be kept in training for a few months each year while letting them farm and be productive the rest of the time. By the end of his reign, Frederick William was able to field an army of 45,000 men, with a smaller, but still sizable standing peacetime army.

In addition to defense, the army also helped Frederick William increase his power internally, since he could use it to demand taxes and enforce his policies. With those taxes, he could increase his army, which further increased his authority, and so on. As a result, Frederick William laid the firm foundations for absolutism in Brandenburg-Prussia.

As far as Brandenburg-Prussia's divided geography was concerned, Frederick William developed a postal system, which better tied together his scattered realm and also generated more revenue for the government. Even so, Brandenburg-Prussia was still a small fish in a big pond, and a turbulent pond at that. The later 1600's were hardly more peaceful than the early 1600's, with an aggressive Sweden to the north and Louis XIV's France to the west keeping Europe's armies constantly on the march. Thus, Brandenburg-Prussia's geography and revived army both forced and allowed Frederick William to pursue a foreign policy that was, in a word, opportunistic.

Throughout his reign he skillfully switched sides whenever convenient and sold his army's services to the highest bidder or most useful allies. For example, in the fighting between Louis XIV and the Dutch Republic, he switched sides three times. And in the Northern War between Poland and Sweden (1655-60), Frederick William at first was neutral, then on Sweden's side, and finally on Poland's side in return for recognition of his title to Prussia being

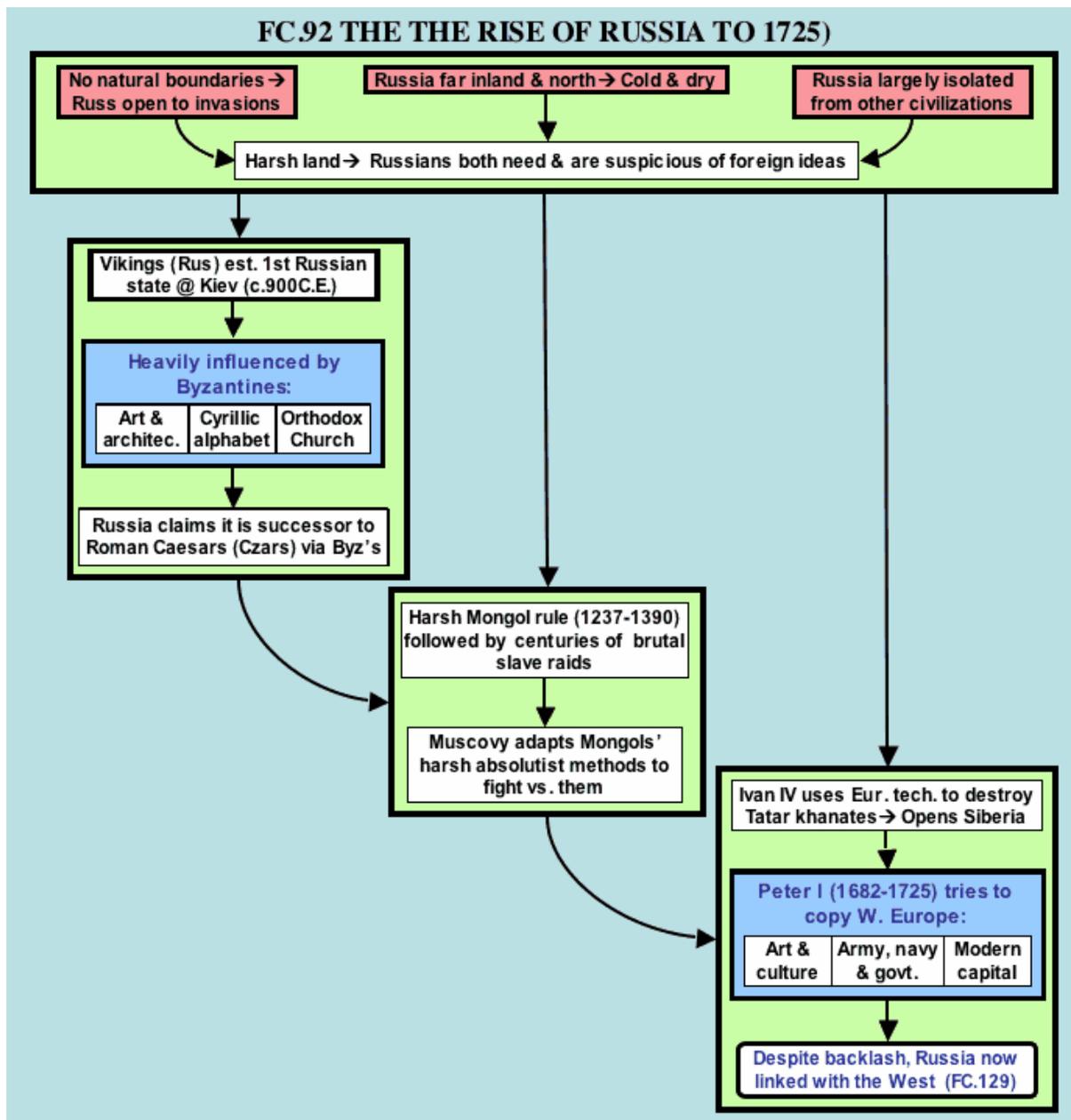
totally independent of his overlord, Poland. This independent title gave Frederick William special status among German princes, who were still in theory under the power of the Holy Roman Emperor. In fairness to Frederick-William, it should be said that switching sides so often was typical of European diplomacy at this time. Although Frederick William's policies gained him some land and the independent title to Prussia, his major accomplishment was holding his original realm together in the midst of such powerful neighbors while rebuilding its prosperity.

At the same time, Frederick William was every bit as talented a ruler in building his realm economically as he was in military and diplomatic affairs. There were several things he did to restore Brandenburg-Prussia's prosperity. For one thing, he took an active interest in the development and use of new agricultural strains and techniques that would allow crops to thrive in Brandenburg's sandy soils. Considering the fact that the vast majority of the populace then was still concerned with agriculture, this was especially significant. Also, Frederick William encouraged immigration to repopulate his realm. Louis XIV's revocation of the Edict of Nantes in 1685 (which took religious freedom from the French Huguenots) certainly helped Frederick William here, since some 20,000 Huguenots found their way to new homes in Brandenburg-Prussia. This was largely with the help of the Great Elector, who supplied the Huguenots with traveling money, guides, land, tax exemption for six years, and various other privileges. Thus, France's loss was Brandenburg-Prussia's gain, since the Huguenots were some of the hardest working and most highly skilled people in Europe. Finally, the government controlled monopolies on the production and sale of such commodities as salt and silk. The efficient management of these monopolies raised important funds for the government.

Frederick William's military reforms and concern for the economy caused him to use the army during peacetime to develop public works projects. For example, the army built a canal connecting Berlin, the capital, to the Oder River, thus increasing trade and tax revenues. Much of that extra revenue surely went back into the army. But at least it was partially able to pay for itself in peacetime. This also kept the army from causing trouble during times of peace and idleness.

By Frederick-William's death in 1688, Brandenburg-Prussia was in better shape than before the Thirty Years War. Its population was back up to pre-war levels, while its tax revenues had increased from 59,000 thalers in the 1640's to 1,533,000 thalers in 1689, over twenty-five times its original revenue. Its army provided more security than ever before while also giving Brandenburg-Prussia an unprecedented amount of international prestige and respect. However, this was only the beginning. Frederick William's reforms set the stage for two centuries of steady growth and expansion that would culminate in the unification of Germany and its rise to the status of a world power in the nineteenth and twentieth centuries.

FC92The Geography and Patterns of Russian History



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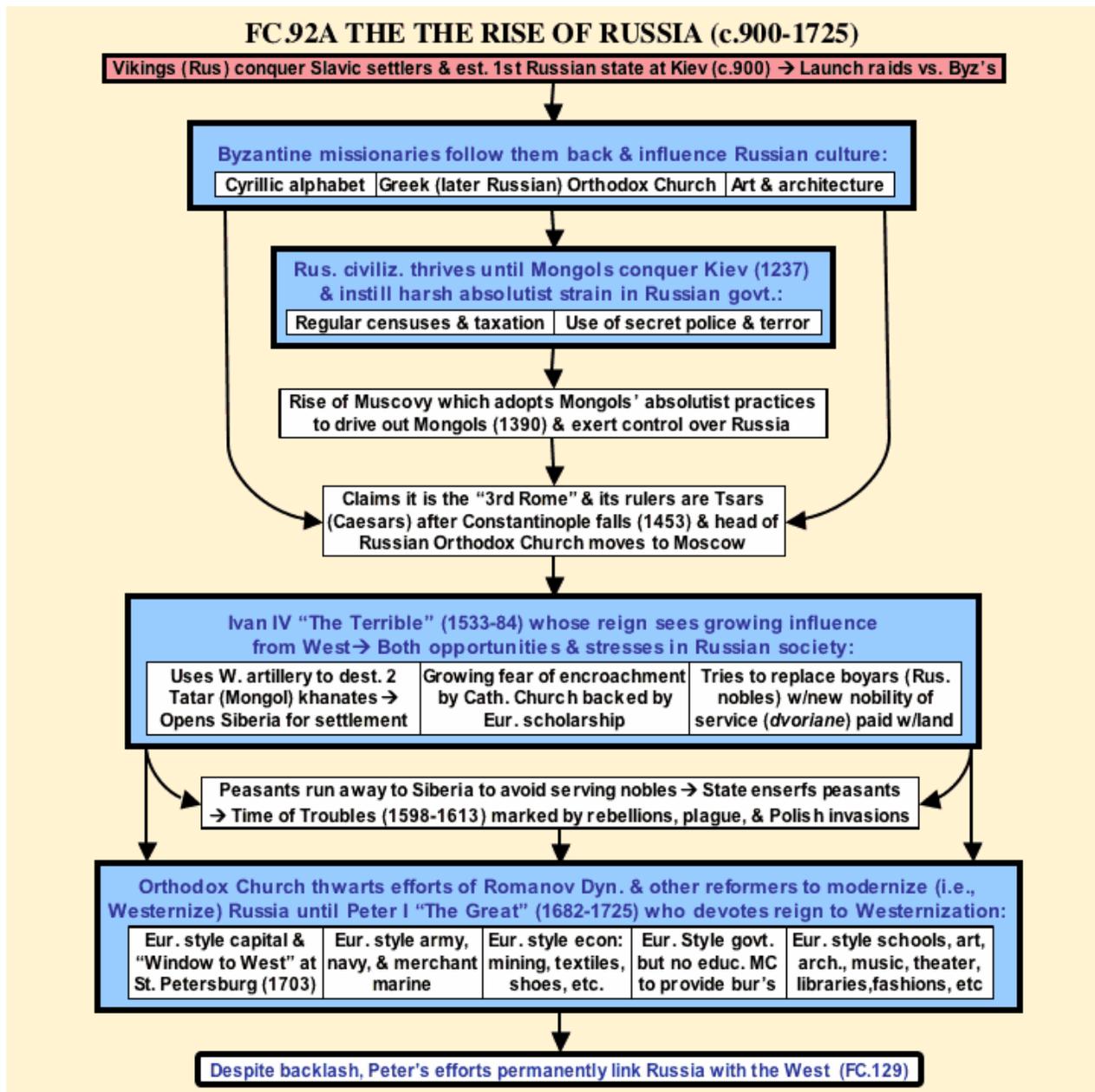
The last and easternmost state to assume a place in European culture and diplomacy was Russia. Three aspects of Russia's geography have had a major impact on its history. First of all, its location on a high northern latitude and far inland gave it a cold and dry climate. That, combined with large areas of poor or mediocre soils, made it a cold dry steppe in which it is difficult to survive, let alone prosper. Famine has affected Russia on an average of one year out of three throughout its history.

Second, Russia lies on the vast Eurasian Steppe with no formidable natural barriers, which has invited a number of invasions with tragic results. In its early history, the main threat would come from the nomadic tribes to the east, making Russia a battleground between nomads and farmers. Only more recently have Russia's neighbors to the west been a serious threat, as seen by the loss of an estimated 27,000,000 people in World War II. Ironically, Russia's harsh climate has saved it from invasion more than once. Napoleon and Hitler both found out the power of "General Winter" when they made the mistake of trying to conquer this vast northern giant.

Finally, Russia's inland location to the north and east of Europe has left it largely isolated from the mainstream of developments in Europe. Altogether, Russia's geographic features have made it a harsh land facing constant invasions. As a result, Russians have historically been torn between needing and wanting foreign ideas with which they could better compete and survive on the one hand and a suspicion of foreigners bred by the continual threat of invasions they have faced on the other.

This love-hate relationship with foreign ideas has created recurring stress throughout Russian history all the way to the present. In its early history, one can see four major stages of development where it has taken place. The first of these was when the first Russian state, centered on Kiev, was confronted with Byzantine influence from the south. The Cyrillic alphabet, Russian Orthodox Christianity, and Russian art and architecture all bear the distinctive marks of Byzantium. The next major influence came from the Mongols who conquered Russia in the 1200's and introduced the harsh absolutist strain that became a hallmark of later Russian government. The last two phases, the reigns of Ivan IV and Peter I, witnessed growing influence from Western Europe. Ivan IV's reign saw the first attempts to gain access to the West for its technology, the use of Western artillery in the conquest of two Mongol khanates, and the attempts to replace the traditional Russian nobility with a new nobility of service. While his efforts had only limited success, they helped set the stage for the more widespread and concerted efforts of Peter I to westernize Russia. Despite the conservative backlash that followed Peter's reign, Russia from that time on was an integral part of Europe and European civilization.

FC92A The Early History of Russia to 1725



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Early history

The earliest written references to inhabitants in Russia were the Scythians, nomadic horsemen who inhabited the southern steppes in the time of the classical Greeks. Russia's grassy plains provided ideal grazing for these nomads' sheep and horses. Some time after 500 A.D., various Slavic tribes, ancestors of most of today's Russians, moved in and settled down in Russia. Then, around 900 A.D., Vikings, known as the Rus, came in and united the Slavs under a state centered around Kiev.

The Rus used Kiev and other Russian cities as bases from which to raid their more civilized neighbors to the south, in particular the Byzantines. The first such raids were successful in forcing tribute from the emperors in Constantinople in order to make the Rus go home. Later raids were met by the dreaded Greek fire, which set the Rus' navy and the very sea itself ablaze. In the wake of Greek fire came Byzantine missionaries, who converted the

Rus and their Slavic subjects to Greek Orthodox Christianity. Byzantine civilization has had a profound impact on Russian culture. Many Russians today still cling to the Orthodox faith in spite of over seventy years of Communist disapproval. The Cyrillic alphabet and the onion domes that grace the tops of the Kremlin also bear solid testimony of Byzantine influence on Russia to this day.

Russian civilization and the Kievan state flourished until 1223, when the most devastating wave of nomadic invaders in history arrived: the Mongols. In 1223 C.E. at the Kalka River, the Russian princes were overwhelmed by a small Mongol army whose numbers were exaggerated by panic and confusion to some 150,000 men. Europe itself was only spared Asia's fate by luck rather than the prowess of its armies. Upon Chinghis Khan's death his far-flung hordes returned to the Mongol homeland to elect a new khan. However, the Mongols returned to Russia in 1237 to finish its conquest. They even struck into Poland and Hungary, giving Europe a taste of things to come. Amazingly, fate intervened again when Chinghis Khan's successor died. Thus Europe was spared a second time, and the incredible energy that had sent the Mongols to the corners of the known world started to fizzle out. However, Russia remained the western frontier of Mongol power.

Mongol rule was exercised indirectly through whichever Russian princes were most willing and able to carry out the will of their masters. This meant doing things in the rough and brutal Mongol way, so that after two centuries of Mongol rule, much of the Mongol character and way of running a state rubbed off on their Russian vassals. The Mongols' expectation of blind obedience to authority and the use of such things as a secret police to enforce their will and inspire terror, a postal relay rider system for better communications, and regular censuses and taxation became a major part of the Russian state that would later evolve.

Muscovy

The most successful of the Russian vassals to adapt Mongol ruling methods were the princes of Muscovy (Moscow) who earned the sole right to collect taxes and dispense justice for the Mongols, while increasingly resembling their Mongol masters in their ruling and military techniques. Eventually, the Muscovite princes turned against their Mongol masters and ended their rule in 1390. It was around Moscow that the modern state of Russia would form.

Mongol rule was gone, but the Mongol terror was not. Nearly every year, the horsemen of various neighboring khanates would ride in to spread a wide swathe of death and destruction, taking thousands of Russian prisoners to the slave markets back home. These raids would depopulate whole regions of Russia, even Moscow itself being sacked by the Mongols five different times between 1390 and 1571. While destabilizing Russian society, these raids also forced the Muscovite princes to tighten their grip on society in order to provide better defense. Muscovite absolutism grew even stronger when the metropolitan, or patriarch, of the Russian Orthodox Church moved to Moscow, giving it claim to the title of "the third Rome" after Constantinople and Rome itself. Likewise, Muscovite rulers laid similar claim to the title of Czars (Caesars).

The first truly memorable Czar was Ivan IV, known as "the Terrible" (1533-84). Ivan's reign saw four momentous developments, all of which can be seen as growing efforts to bring in influence from Western Europe. The first, the destruction of the neighboring khanates of Kazan and Astrakhan to the south and east, was made possible by the use of European artillery. Although the Mongols of the Crimea still remained to carry out their depredations, destroying these other two khanates did relieve the Russian people of some suffering from nomadic raids. It also opened the way for the rapid expansion of the Russians eastward across Siberia to the Pacific in much the same way the United States would spread rapidly westward to the same ocean in the 1800's.

Second was Ivan's long but unsuccessful war against Poland and Sweden to conquer Livonia and gain closer access to Western Europe. Compounding this failure was the third development, the Orthodox Church's growing fear of the Roman Catholic Church. Causing this was increased missionary activity by the Jesuits in the Ukraine and eastern Baltic. Using Western scholarship in debates with the less educated Orthodox clergy, they were able to convert growing numbers of people in these regions. Naturally, the Orthodox clergy saw this as an especially serious threat to their religion and became the most ardent opponents of contact with the West.

Finally there was Ivan's fight against the boyars, the powerful Russian nobles. Blaming them for the death of his beloved wife, he launched a concerted campaign against them by setting up the Oprichnina, or state within a state, where Muscovy was split between the traditional state and his own Oprichnina. Ivan then launched an eight-year

reign of terror (1564-72) against anyone he suspected of disloyalty. He also tried to replace the boyars with a new nobility of service that would be more subservient to the crown. Since Russia's economy was still quite backward, the czar had to pay this service nobility with land worked by peasants. Consequently, many peasants fled to the freer lands in Siberia, now opened for settlement by Ivan's wars. The government reacted with a series of laws that tied the free peasants to the soil and made them serfs.

The "Time of Troubles"

Ivan's reforms and purges made his reign a turbulent and costly one. Also, Ivan's accidental slaying of his most able son in a fit of passion left the throne to the feeble-minded Feodor, who liked to spend most of his time praying and ringing church bells. The reins of government thus fell to the boyar, Boris Gudonov, who succeeded Feodor as Czar in 1598. At this point, everything in Russia seemed to go wrong at once. The Boyars resisted his attempts to increase royal power. The Orthodox Church thwarted Boris' early attempts to bring Western European knowledge and culture to Russia. And, worst of all, in 1601 a horrible drought and famine killed millions of peasants who revolted out of desperation and the belief that the famine was the Czar's fault. The rebels got help from the Poles, who supported a supposed son of Ivan IV as Czar. Boris successfully defended his realm until, right on the verge of victory, he suddenly died, capping off a remarkably unlucky reign. The Poles had little better luck in holding the throne, their candidate being assassinated and replaced by another boyar. More peasant revolts and another Polish invasion, which took Moscow, tore Russia further apart. Finally, the Church managed to rally the people, drive out the Poles, and set up a stable government. A national assembly called the Zemsky Sobor set up a new dynasty, the Romanovs. However, the boyars were as independent and troublesome as ever while increasing their hold on the serfs below. The Church blocked any progressive reforms that it saw as irreligious even making it illegal to play chess or gaze at the new moon. This was the condition of Russia when probably its greatest Czar, Peter the Great, took the throne in 1682.

Peter I (1682-1725)

is one of the most interesting characters in Russian history. An enormous man (6'8" tall) with incredible physical strength, he had a strong drive and will to match his physical stature. From an early age, Peter was fascinated with anything from Western Europe, especially technology. He was an amateur clockmaker and dentist (to the dismay of anyone in court with a toothache), and especially loved ships. His early exposure to western ways made him realize how backward Russia was compared to the rest of Europe. Therefore, he was determined that Russia should modernize, which meant it must westernize.

The first step was the Great Embassy, a grand tour of Europe where Peter traveled in disguise so he could experience its culture and technology more freely. The huge Czar's identity was the worst kept secret in Europe, but he did learn about such things as Prussian artillery and Dutch and English shipbuilding first-hand instead of from a distance. In their wake, Peter and his wild entourage left a trail of ransacked houses and enough material to keep Europe gabbing for years about these "wild northern barbarians." But Peter had also gained a much firmer understanding of European technology, further fueling his determination to bring it to Russia, whether Russia wanted it or not. The subsequent transformation of Russia is known as the "Petrine Revolution".

Peter first had to secure better communications with the West. At this time, Poland and Sweden effectively blocked such contact in order to keep Russia backwards and at their mercy. Peter's determination to end Russia's isolation and gain a "window to the West" as he called it, led to The Great Northern War with Sweden (1700-1721). This was a desperate life and death struggle for both Sweden in its attempt to stay a great power, and for Russia in its effort to become one. Despite the brilliance of Sweden's brilliant warrior king, Charles XII, Russia's superior resources and manpower, along with its winter, wore out the Swedes. The "Swedish meteor" which had burned so brightly in the 1600s was quickly fading away. In its place, the Russian giant started to cast its huge shadow westward and make Europe take note that a new power had arrived.

Peter's new capital and "window to the West" was St. Petersburg. Its location was less than ideal, being on marshy land, twenty-five miles from the sea up the Neva River, and in a high northerly latitude that gave up to nineteen hours of sunlight a day in the summer and as little as five hours a day in the winter. Stone for the city had to be

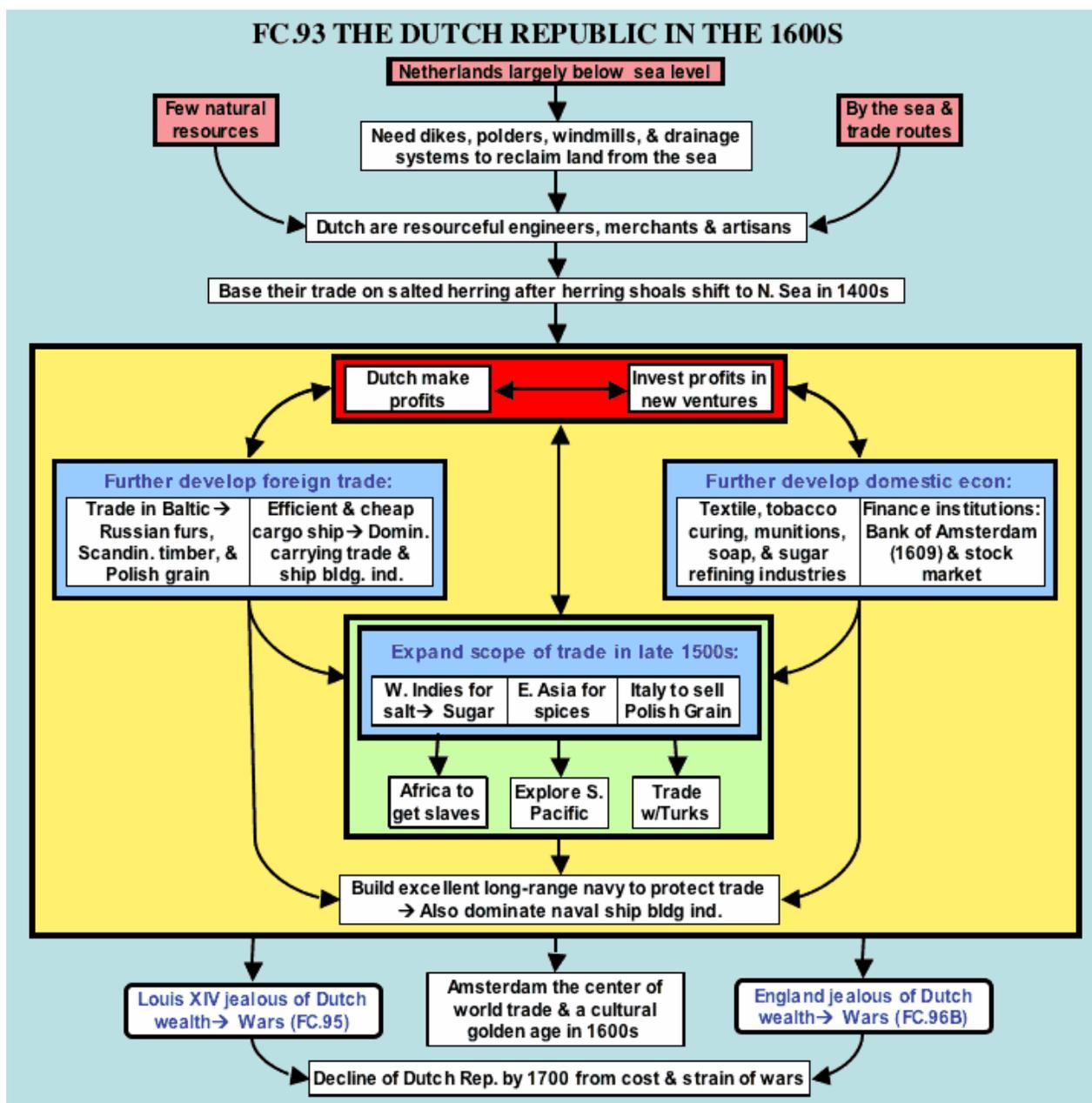
brought in on the backs of laborers, since there were no wheelbarrows. As a result, thousands of laborers died while building this new capital which legend said was built on the bones of the Russian people.

Meanwhile, Peter's other reforms left hardly anything untouched. He more tightly centralized the government and built up a more modern army, navy, and merchant marine along European lines. He dealt with his main obstacle to reform, the Orthodox Church, by not electing a new patriarch when the old one died. Without effective leadership, the Church could do little to fight Peter's reforms. After twenty-one years of this, Peter appointed a council, or Holy Synod, which made the Church little more than a department of state.

Peter tried to westernize the economy by first creating mines to develop the resources needed for industry. By 1725, Russia had gone from being an iron importer to an iron exporter. He brought in western cobblers to teach Russians how to make western style shoes. Anyone refusing was threatened with life on the galleys. As a result of Peter's strict measures, Russian industries grew, and with them an "industrial serfdom" tied to their jobs in much the same way the peasants were tied to the soil. Peter also worked to build up commerce and a middle class like that he saw in Western Europe. He raised the status of merchants to encourage more men to take up trade and started an extensive canal building program that connected rivers and made water transport possible between the Baltic and Black Seas. Peter tried to westernize people's lifestyles as well. He updated the alphabet and changed the calendar to get more in line with that of the West. He established newspapers, libraries, and western style schools, imported music, theater, and art from the West, and imposed European fashions upon the Russian people. Even beards were taxed, because they were not in style in Europe.

By Peter's death, Russia's economy and culture were starting to look much more western. However, many of these reforms were superficial, touching only the nobles or a limited part of the economy. For one thing, such widespread and comprehensive reforms would naturally cause a good deal of resistance and turmoil in such a traditional society as Russia. Therefore, after Peter died, there was a serious reaction against his reforms in an effort to go back to the old ways. However, Peter, by the force of his character, had so thoroughly exposed Russia to the West that there was no turning back. From this point on, like it or not, Russia was a part of Europe.

FC93The Rise of the Dutch Republic in the 1600's



[FC93](#) in the [Hyperflow of History](#);

Covered in multimedia lectures [#2023](#) and [#2024](#).

Introduction

Although it took the Dutch until 1648 to force formal recognition of their independence from Spain, for all intents and purposes, the Dutch Republic was free by the twelve-year truce signed with Spain in 1609. The question arises: how did the Dutch hold off and defeat the biggest military power in Europe? While geographic distance from Spain, foreign aid from France and England, and the occasional desperate measure of opening their dikes to flood out invading armies all certainly played a role, the single most important factor was money. For example, of the 132 military companies in the Dutch army in 1600, only 17 were actually made up of Dutch soldiers. The rest were English (43), French (32), Scottish (20), Walloon (11), and German (9) companies fighting for the Dutch because they had the money to pay them. The war took a tremendous financial effort to win, costing the Dutch 960,000 florins in 1579, 5.5 million florins in 1599, and 18.8 million florins in 1640. Despite this expense, the Dutch were in stronger financial shape than ever by the end of the war and were well on their way to becoming the dominant

commercial and economic power in Europe. This economic dominance was the product of a chain reaction of events and processes that, as so often was the case, was rooted in geography.

Geography of the Netherlands

Three geographic factors influenced the rise of the Dutch Republic. First, as the name Netherlands (literally "lowlands") implies, much of the Dutch Republic is below sea level. The Dutch have waged a constant battle in order to claim, reclaim, and preserve their lands from the sea through the construction of dikes, polders (drained lakes and bogs), drainage systems, and windmills (for pumping out water). Roughly 25% of present day Holland is land reclaimed from the sea and still partially protected by hundreds of windmills. The second factor is the Netherlands' position at the mouths of several major rivers and on the routes between the North Sea and Atlantic Ocean. The third factor is the Netherlands' relative scarcity of natural resources. All three of these factors forced the Dutch to be resourceful engineers, merchants, sailors, and artisans. With these geographic factors as a foundation, the Dutch launched themselves on a career that was a classic case of the old saying: it takes money to make money. The whole process started with fish.

In the 1400's, the herring shoals, a mainstay of the Hanseatic League, migrated from the Baltic to North Sea. The Hanseatic League's loss was the Dutch Republic's gain, since, in the absence of refrigeration, salted herring was then an important source of protein in Europe, especially the Netherlands whose population was 40% urban and had to import about 25% of its food. The other half of this trade was salt for preserving the herring. The best sources of salt were off the coasts of France (the Bay of Biscay) and Portugal. These two activities complemented each other well, since the herring season lasted from June to December, so the Dutch could collect salt from December to June.

The Dutch ran large scale operations compared to those of other countries. Unlike the simple open English fishing boats, the Dutch sailed virtual floating factories, called buses, with barrels of salt for curing the herring on board. Although the claims by other competing countries that the Dutch had 3000 ships working the herring shoals were vastly exaggerated (500 being closer to the mark), the Dutch still produced such a volume of salted herring that they could undersell their competition and drive them out of business.

The Dutch pattern of growth

Dutch control of the herring trade touched off a cycle where the Dutch would get profits, invest those profits in new ventures, which generated more profits and so on. This initially led into two general areas of development, foreign trade and the domestic economy, each of which fed back into the cycle of profits and so on. Both of these also led to expansion of trade across the globe to the Mediterranean, West Indies, Africa, East Indies, and the South Pacific, which also fed back into the cycle of profits.

In terms of foreign trade, the Dutch first expanded their operations into the Baltic Sea where they traded for Norwegian timber, Polish grain, and Russian furs for both home consumption and selling abroad. The Baltic trade became so important that the Dutch referred to it as the "Mother Trade."

All this trade required durable, efficient, and cheaply built ships that could operate in the rough waters of the North and Baltic Seas as well as the shallow coastal waterways that were typical of the Netherlands. What the Dutch came up with was the *fluyt*, a marvel of Dutch efficiency and engineering. The fluyt was both sturdy enough to withstand rough seas and shallow draught for inland waterways. Unlike other countries' merchant ships, which doubled as warships, the fluyt carried few, if any, guns, leaving extra space for cargo. It was cheaper to build, costing little more than half as much as other ships, thanks to the use of mechanical cranes, wind-driven saws, and overall superior shipbuilding techniques.

The fluyt also had simpler rigging that used winches and tackles, thus requiring a crew of only 10 men compared to 20-30 on other European ships. This resulted in two things. First of all, the Dutch could carry and sell goods for half the price their competition had to charge, giving them control of Europe's carrying trade. Second, they were able to dominate Europe's shipbuilding industry.

Meanwhile, the Dutch were developing their domestic economy in two ways. First they invested in a wide variety of industries, some traditional and some new: textiles, munitions, soap boiling, sugar refining, tobacco curing, glass, and diamond cutting. The need for efficient handling of all the money from this and other enterprises spurred the Dutch to develop another aspect of their economy: financial institutions. For one thing, they established the Bank of Amsterdam in 1609, the first public bank in North-West Europe, being modeled after the Bank of Venice (f.1587). The vast sums of cash this bank attracted in deposits allowed it to lower interest rates, which in turn brought in more investments, and so on. Even in wartime, the Bank of Amsterdam was able to lower its interest rates from 12% to 4%. The Dutch also created a stock market. At first this was just a commodities market. Only later did it evolve into a futures commodities market where, by the time a shipload of such goods as wool or tobacco landed, someone had already bought it in the hope of reselling it for a profit.

The success of the Baltic Mother Trade and their domestic economy led the Dutch to expand their foreign trade on a global scale. They did this in three basic directions. First was the Mediterranean, where recurring famines hit in the 1590's, signaling the start of a "Little Ice Age" that would afflict Europe for the next century. This opened new markets for Polish grain, which the Dutch traded in return for, among other things, marble. (It was this Italian marble which Louis XIV would buy from the Dutch for his palace at Versailles.) The Dutch even expanded this Mediterranean trade to include doing business with the Ottoman Turks.

Second, when Portugal (then under Spain's rule) closed access to its supplies of salt, the Dutch crossed the Atlantic to find salt in Venezuela. While there, they found the plantations in the West Indies needed slaves, which got them involved in the African slave trade. They also discovered an even more lucrative condiment in the Caribbean than salt: sugar. Soon, the Dutch were founding their own colonies (e.g., Dutch Guiana) and sugar plantations and gaining control of the sugar trade. Soon, sugar was rivaling even the spices of the Far East in value. However, this is not to say the Dutch ignored the Far Eastern trade.

However, breaking into the lucrative Asian Spice market, the third new direction of Dutch expansion, was not so easy. For one thing, they had to find the East Indies. Amazingly, the Portuguese had kept the South East Passage around Africa a secret for a full century since da Gama's epic voyage. The Dutch looked in vain for a northeast passage around Russia. They also sought a southwest passage, which Oliver van der Noort found (1599-1601), making him the third captain to circumnavigate the globe after Ferdinand Magellan and Sir Francis Drake. But that route was no more practical for the Dutch than it had been for the Spanish and English.

Finally, Jan van Linschuten, a Dutch captain who had served Portugal, showed the way around Africa in 1597. Although the first voyage was not a financial success, the second was, bringing back 600,000 pounds of pepper and 250,000 pounds of cloves worth 1.6 million florins, double the initial investment. Investors rushed to get in on the action, forming the Dutch East Indies Company in 1602. This privately owned company operated virtually as an independent state, seizing control of the spice trade from Portugal's weakening grip. From there, always in search of new markets, the Dutch explored the South Pacific, discovering Australia, New Zealand, and Tasmania, the last two names bearing evidence of their presence.

Such a far-flung trading empire, combined with the struggle with Spain, required a navy to protect its merchant ships. Therefore, the Dutch developed such a navy, excelling in this as well as their other endeavors. At this point, warships generally followed the principle of the bigger the better. As a result, the man-of-war, as it was called, was a huge and bulky gun platform that did not suit the Dutch needs. For one thing, they needed more of a shallow draught vessel that could sail in their home waters. They also needed a long-range ship that could protect their far-flung commercial interests. The result was the *frigate*, a sleeker shallow draught vessel with only about 40 guns, but capable of long-range voyages. Dutch frigates, along with their excellent sailors and captains, made the Dutch the supreme naval power of the early 1600's and also helped them dominate the warship-building industry, building navies for both sides in a Danish-Swedish war and even for their French rivals. And, of course, this brought in more money and pushed the Dutch to expand their domestic industries and finance operations in three ways.

A cultural golden age

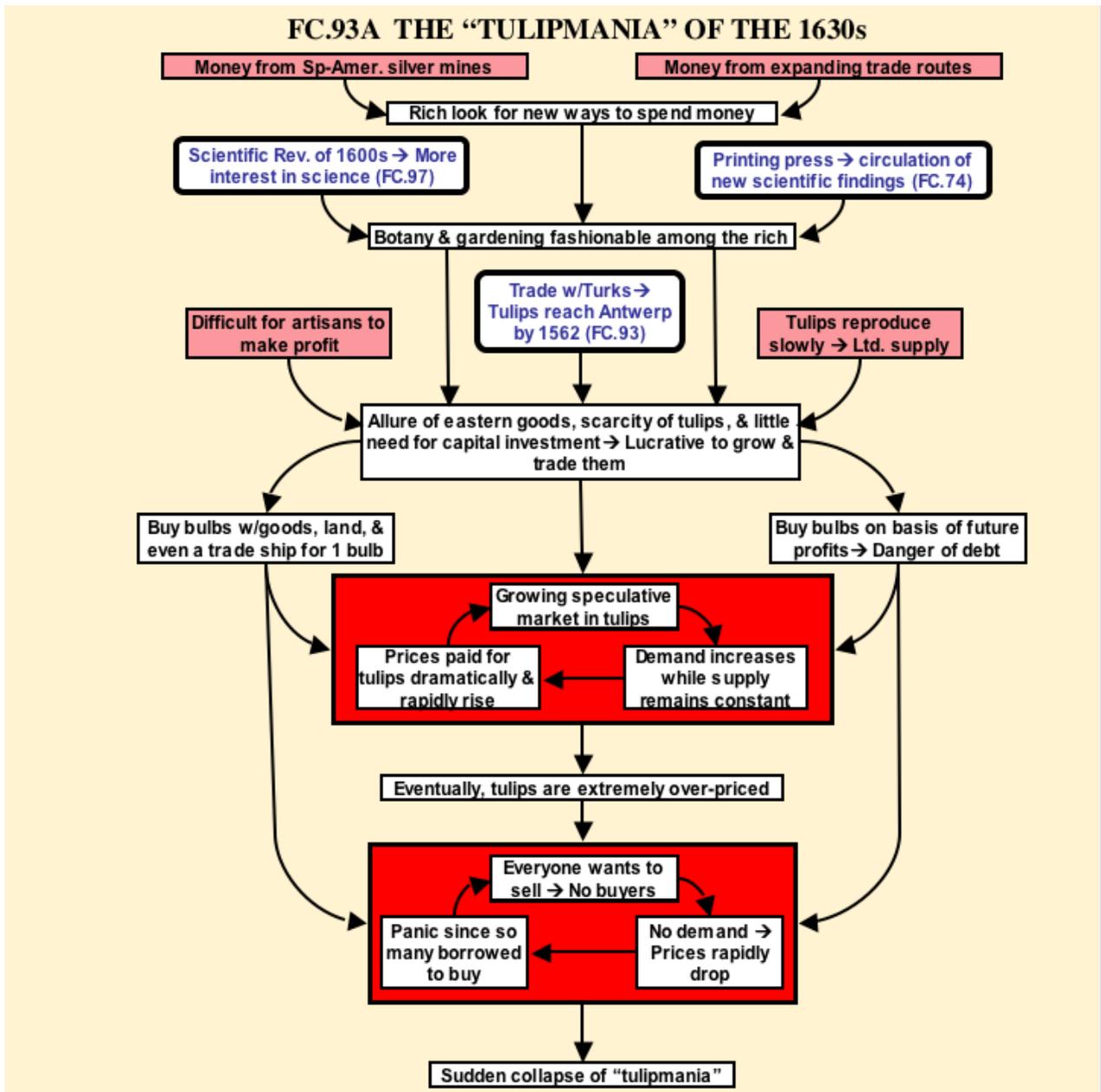
By the early 1600's, Amsterdam was the center of world trade, which allowed the Dutch to engage in one more type of activity: patronage of the arts. The seventeenth century saw the Dutch Republic become the center of a cultural flowering much as Italy had been during its Renaissance. Along with money to patronize the arts and sciences, the

Dutch Republic had both a free and tolerant atmosphere and enterprising spirit willing to challenge old notions and creatively expand the frontiers of the arts and sciences. The Dutch Republic acted as a virtual magnet for Jewish émigrés from Spain and Portugal and Calvinist dissidents from England, some of who would eventually move on to Plymouth Rock, Massachusetts. The Jewish philosopher from Spain, Spinoza, and the French mathematician, Descartes, were two of the shining lights that the Dutch attracted. Notable among Dutch artists were Rembrandt, Vermeer, Hals, Van Dyck, Steen, Ruysdael, and Hobbema, whose portraits, domestic scenes, landscapes, and mastery of light and shadow brought their age to life on the canvass as no artists before them had done.

Conclusion

The Golden Age of the Dutch Republic was to be short lived, once again largely because of geography. It was the Dutch Republic's great misfortune to border the great land power of the day, France. In the 1670's, the French king, Louis XIV, due to a combination of jealousy of Dutch prosperity and hatred of Protestants, launched a series of wars that would embroil most of Europe and put the Dutch constantly on the front line of battle. At the same time, just across the channel, the growing economic and naval power, England, was challenging the Dutch on the high seas and in the market place. Three brief but sharply fought naval wars plus the strain of fighting off Louis exhausted the Dutch and allowed England to become the premier economic, naval, and colonial power in the world by the 1700's. However, England owed the techniques and innovations for much of what it would accomplish in business and naval development to the Dutch from the previous century.

FC93A The "Tulipmania" of the 1630s



There are few things more resilient than greed, as seen by the succession of “boom and bust” speculative market in the modern era over such things as websites, real estate, and even buying insurance policies at cut rate to cash in later at full value. The grand daddy of all these speculative markets took place in Holland in the 1630s and focused on, of all things, tulips.

The tulip seems to have originated in the harsh wind-blown environment of the Himalayas. It was originally a short, stubby flower, but was admired for its beauty and as a symbol of the tenacity of life. Tulips spread westward and became especially popular among the Arabs who cultivated gardens of them. Their popularity spread to the Turks, and the Ottoman sultan Suleiman the Magnificent even had a tattoo of a tulip to serve as a protective talisman.

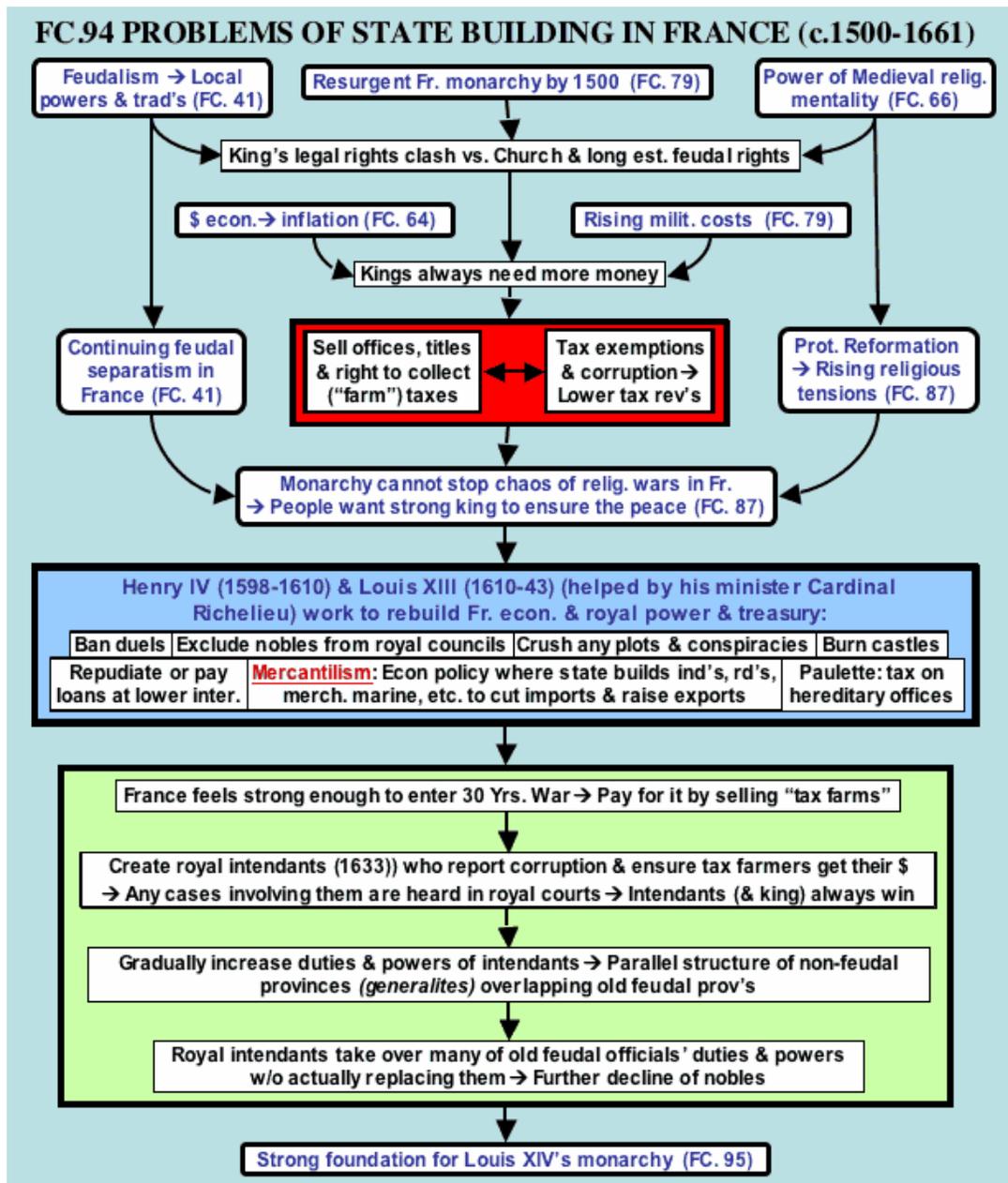
The tulip first arrived in Antwerp in 1562 by way of trade with the Turks. By this time, the influx of money from the Americas and expanding trade routes were pushing rich Europeans to look for new ways to spend and invest their money. One area was botany and gardening, thanks to the scientific revolution and the circulation of scientific knowledge by the printing press. This and two other factors made the tulip seem like the perfect thing in which to invest. One was that it was difficult for many Dutch artisans to make a profit, so they were also looking for another source of income requiring little capital investment. The other factor was that tulips reproduce slowly, thus creating a limited supply that could be sold for a high profit. All these things made tulips lucrative to grow and sell.

At first, the tulip trade grew reasonably, as demand for this new sensation grew and the supply remained constant, thus driving prices up. This would draw more people into the speculative market, further increasing demand, driving prices up more, and so on. However, what started as a reasonable trade in tulips soon turned into a frenzy of buying and selling, with each new buyer expecting to be able to sell at a higher price. People were paying outrageous prices, such as plots of land and, a whole trade ship, and, in one case, an entire mansion, for a single bulb. They were also borrowing heavily and going into debt to buy tulip bulbs, counting on future profits from other people caught up in the same frenzy.

Unfortunately, there was a major problem with tulip bulbs, because the most beautiful designs in tulips tend to be recessive traits, and there was no guarantee that a tulip bulb's offspring would have the same traits as its parent. Eventually, people, realizing this and seeing that tulips were extremely over-priced, wanted to sell their bulbs. Unfortunately, there were no buyers, so prices dropped rapidly. This led to panic selling, since so many people were in debt for tulip bulbs they hoped to sell, causing prices to drop more, leading to more panic selling, and so on. By the end of 1637, the tulip bubble had burst and "tulipmania had collapsed as suddenly as it had bloomed.

Even though the speculative bubble popped, tulips still retained much of their value. Louis XIV would buy 2,000,000 tulips a year from the Dutch for his palace at Versailles. They continue to be a major export for Holland (the Dutch Republic).

FC94Laying the Foundations for Absolutism in France and Europe



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The roots of the problems of state building in the 1600's, go back to the turmoil of the Dark Ages which helped give rise to two medieval institutions: feudalism and the medieval Church. Feudalism formalized the fragmentation of France into some 300 different legal systems. Over the centuries, custom and tradition firmly established a multitude of local rights and privileges across France. Various nobles and local officials claimed these rights, privileges, and the offices that went with them as their patrimonial birthrights. Meanwhile, the chaos of the age helped make the medieval Church a major factor in state and society. However, the revival of towns and trade in the High Middle Ages helped lead to the rise of kings. They had always been recognized in theory as the rulers of France, but it had been centuries since anyone had taken them seriously.

By the 1200's kings were making serious claims to rule in fact as well as name, strengthening those claims with the doctrine of Divine Right of Kings. However, they were continually clashing with the Church and the locally entrenched rights and privileges that had evolved during the Dark Ages. French courts, known as *Parlements*, were particularly troublesome in modifying, slowing down, or even stopping the king's decrees from being carried out.

The king could appear before the Parlements and plead his case, but that was seen as being beneath his royal dignity and was rarely done.

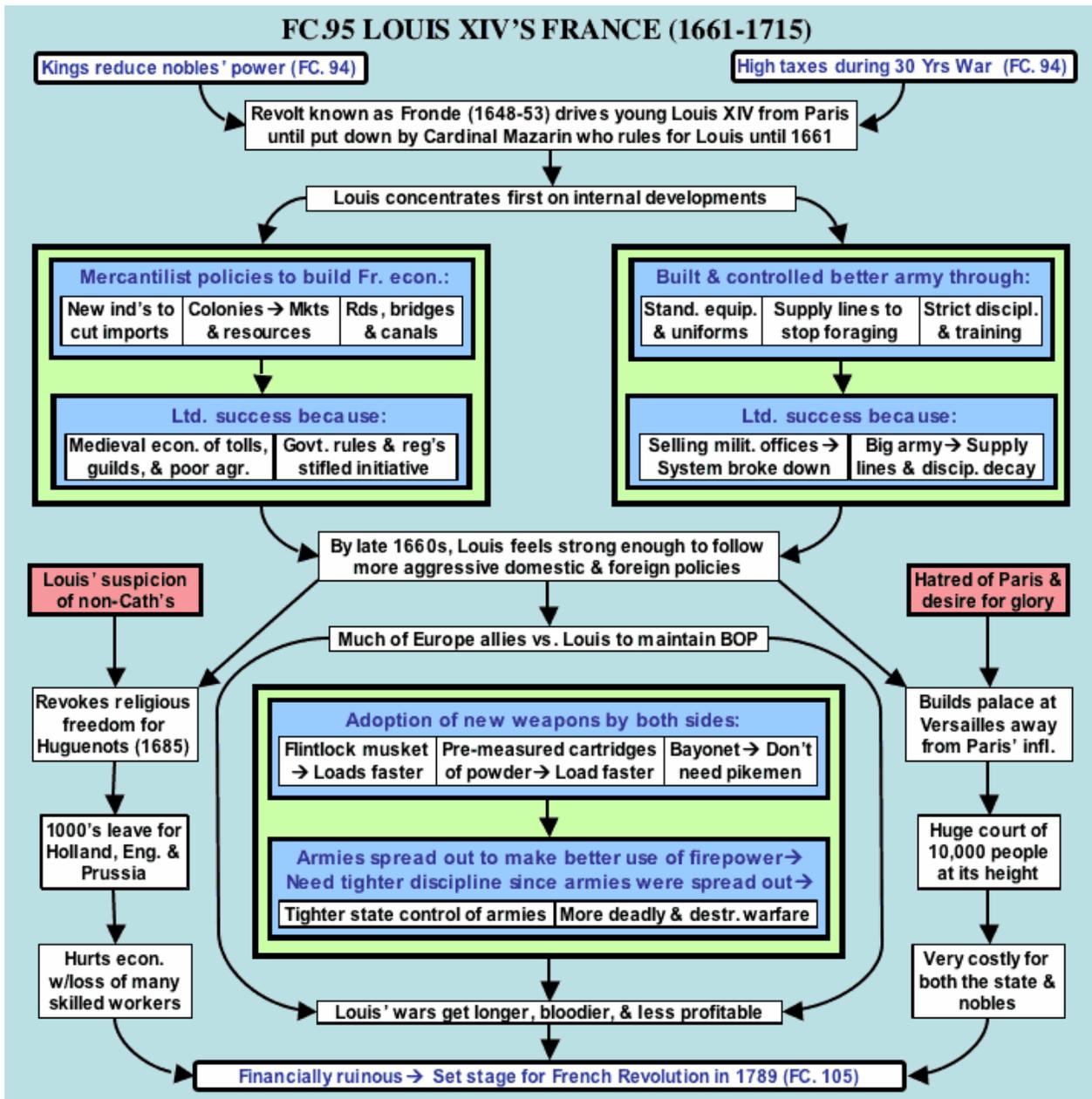
This made it especially difficult for kings to get new taxes, which the inflation and high military costs of the 1500's made even more necessary. Kings had to resort to such fund raising techniques as taking out loans and selling offices and noble titles to ambitious members of the middle class. Unfortunately, these created even bigger problems. Kings repaid loans through tax farming where creditors would collect the taxes of certain provinces. Naturally, these creditors would take everything they could get from the provinces, which bred widespread corruption and discontent in the absence of a professional bureaucracy to check these abuses. Selling offices and noble titles also bred corruption and made their owners tax exempt. All this merely reduced the king's tax base even more, forcing him to sell more offices and tax farms, and so on until he was so far in debt he would declare bankruptcy or imprison his creditors on charges of corruption in order to erase his debts.

By the mid 1500's, these financial problems, combined with growing religious turmoil and continuing feudal separatism, helped trigger the French Wars of Religion which devastated France on and off for nearly forty years (1562-98). One outcome of these wars was the willingness of people to recognize the king's power in order to ensure the peace. The new king, Henry IV (1598-1610), and his minister, Sully, used this new attitude favoring absolutism and various economic measures to restore the power of the monarchy. First of all, they repudiated all foreign debts, while repaying French creditors at a much lower rate of interest. Second, they established the *Paulette*, a tax on hereditary offices that would partially make up for lost revenues when commoners bought into the tax-exempt ranks of the nobility. Third, they built and repaired roads and bridges to encourage internal trade. Finally, in the spirit of the economic theory of the day, *mercantilism*, which encouraged domestic industries to increase the flow of gold and silver into a country, they promoted such luxury industries as silk and tapestries to compete with foreign industries. By the end of Henry's reign, the royal government was probably as financially solid as it had ever been.

Henry's successor, Louis XIII (1610-43), and his minister, Cardinal Richelieu, continued building royal power. They particularly focused on breaking the power of the nobles by destroying their castles, quickly crushing any of their conspiracies, and infringing on their privileges (such as dueling). They also excluded them from royal councils, relying more on middle class officials who had just recently bought noble titles and were thus more reliable. By 1635, they felt France was strong enough to throw its weight into the Thirty Years War to stop Spain. Unfortunately, the war's expense largely wrecked the progress of the last 35 years and forced Richelieu to resort increasingly on tax farming, but this time with one important innovation.

In order to protect the financiers who bought the tax farms, Richelieu created new officials known as *Intendants*, whose job was to report corruption and make sure the financiers got their money. Naturally, both the financiers and intendants were quite unpopular, and got involved in numerous disputes. However, since the intendants were new officials with no tradition of being tried in local or Church courts, all their cases went to the royal courts, which favored them and the king's interests. Eventually, Richelieu expanded the intendants' authority, making them supreme in all provincial affairs and rearranging the provinces into 32 non-feudal districts known as *generalites*. This neatly sidestepped the firmly entrenched interests of local authorities and laid the foundations for more thorough royal control of the provinces and France under Louis XIV.

FC95The Age of Louis XIV, the "Sun King" (1643-1715)



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"I am the state."— *Voltaire, incorrectly quoting Louis XIV*

Introduction

From 1643 to 1815 France dominated much of Europe's political history and culture. Foreigners came to France, preferring it to the charms of their own homeland. Even today, many still consider it *the* place to visit in Europe and the world. In the 1600's and 1700's there was a good reason for this dominance: population. France had 23,000,000 people in a strongly unified state compared to 5,000,000 in Spain and England, and 2,000,000 in the Dutch Republic and the largest of the German states. This reservoir of humanity first reached for and nearly attained the dominance of Europe under Louis XIV, the "Sun King".

Louis' early life and reign (1643-61)

Louis was born in 1638 and succeeded his father, Louis XIII, as king in 1643 at the age of five. Luckily, another able minister and Richelieu's successor, Cardinal Mazarin, continued to run the government. In 1648, encroachment by the government on the nobles' power, poor harvests, high taxes, and unemployed mercenaries plundering the countryside after the Thirty Years War led to a serious revolt known as the Fronde, named after the slingshot used by French boys. Louis and the court barely escaped from Paris with their lives. Although Mazarin and his allies crushed the rebels after five hard years of fighting (1648-53), Louis never forgot the fear and humiliation of having to run from the Parisian mob and fight for his life and throne against the nobles. This bitter experience would heavily influence Louis' policies when he ruled on his own.

From 1643 to 1661, Cardinal Mazarin ruled ably in the young king's interests, although he provided Louis with a rather odd upbringing for a king. Despite an immense fortune, Mazarin was something of a miser who gave the young king inadequate food, clothing, and attention. (Once the young Louis was left unattended and fell into a fountain where he almost drowned.) Louis also got little in the way of a formal education and, even as an adult, was barely literate. But Mazarin did give Louis a sense of what it meant to be a king. As a result, he turned out to be a hard working ruler, but often lacked much common sense and the willingness to entrust enough freedom of action to his subordinates. From his mother, a full-blooded Spanish princess, Louis learned great religious piety and love of ritual, another trait that would influence his reign. In 1661, Mazarin died. Louis' officials, assuming he would be a "do nothing" king like his father, asked to whom they should now answer. Louis' reply was "To me." The age of Louis XIV was about to begin in earnest.

Louis' internal policies

Louis XIV may not have said, "I am the state", but he ruled as if he had said it. Louis was the supreme example of the absolute monarch, and other rulers in Europe could do no better than follow his example. Although Louis wished to be remembered as a great conqueror, his first decade of active rule was largely taken up with building France's internal strength. There are two main areas of Louis' rule we will look at here: finances and the army.

Louis' finance minister, Jean Baptiste Colbert, was an astute businessman of modest lineage, being the son of a draper. Colbert's goal was to build France's industries and reduce foreign imports. This seventeenth century policy where a country tried to export more goods and import more gold and silver was known as *mercantilism*. While its purpose was to generate revenue for the king, it also showed the growing power of the emerging nation state. Colbert declared his intention to reform the whole financial structure of the French state, and he did succeed in reducing the royal debt by cutting down on the number of tax farms he sold and freeing royal lands from mortgage. Colbert especially concentrated on developing France's economy in three ways.

First of all, Colbert concentrated on developing French internal trade in order to reduce foreign imports. He developed better inland trade routes by building canals and improving ports and river ways, which would connect different parts of the country to each other and open up new markets. Secondly, Colbert worked to develop French industries. Most industries he developed can be seen as being aimed against imports from other countries: mirrors from Venice, lace from England, and iron and firearms from Sweden. He also built a merchant marine to stop foreign powers, especially the Dutch, from carrying French goods and making profits at France's expense. In 1661, France had a merchant marine of 18 ships. By 1681, it was up to 276 ships. Finally, Colbert encouraged the development of overseas colonies much like those of other European powers. During this time, France established and tightened control over colonies in Canada, French Guiana, and Madagascar.

For all his efforts and financial wizardry, Colbert's successes were limited, largely because he was trying to drag a basically medieval economy into the modern world. Guilds were still powerful and held back progress in new production and financing techniques. Local authorities still jealously guarded their rights to charge tolls on trade. Getting across France involved paying up to 100 such local tolls, which of course stifled trade. The tax burden was extremely unfair, with nobles and the Church virtually exempt from taxation even though they controlled much of the land. Colbert's own techniques of having the government control so many aspects of the economy were heavy

handed and tended to stifle initiative. His efforts at trying to centrally control France's overseas colonies were especially disastrous.

However, Colbert did make real progress in developing the French economy. A merchant marine and navy were built. Industries were developed. And for a few years Colbert even managed to run the government at a profit. Unfortunately, Louis' desire for glory and conquests led to a long series of wars that embroiled Europe in a new round of bloodshed and wrecked France's economy. Not even Colbert could do anything to stop that.

The army was another primary object of reform. By the mid 1600's, the old system of recruiting armies and fighting wars was clearly outmoded. Mercenaries were disloyal, untrustworthy, and terribly destructive to friend and foe alike. By contrast, the Swedish army of Gustavus Adolphus and the English army of Oliver Cromwell each had loyal native recruits that proved reliable and effective, while Brandenburg-Prussia was transforming its troublesome nobles into a loyal professional officer corps. These lessons were not lost on Louis and his minister of war, Louvois, who built what amounted to one of the first modern national armies. Three aspects of the army they concentrated on were its training and discipline, its equipment, and its supplies.

First of all, soldiers in Louis' new army, whether mercenaries or peasant draftees, found military life was much stricter and more regularized in several ways. For one thing, instead of mercenary captains who recruited, paid, and commanded them, soldiers now answered to the state and its officers. Along these lines, there was also a regular chain of command from the *Intendant de l'armee* (roughly equivalent to our modern secretary of defense) down through field marshals, generals, colonels, and captains. Officers also got regular training and were much more strictly under the rule of the central government than ever before.

Naturally, the nobles claimed the officers' positions as their birthright. However, the government kept tighter control of its army, largely through new positions filled by men of more humble birth. These *lieutenant colonels* performed many vital duties *in lieu* of the noble officers without actually replacing them. In this way, a more modern army helped Louis bring the old troublesome medieval nobility more tightly under his control.

A second reform was that uniforms and equipment were more standardized, which made the army easier to supply, more efficient, and promoted more of a group identity and higher morale. Finally, the army maintained regular supply lines. This reduced the need for foraging, which increased discipline and control over the army and protected the civilian populace from being plundered.

There were two major factors that limited the effectiveness of Louis' military reforms. For one thing, Louis' standing army was large and expensive, having some 400,000 men at its height. It is estimated that a pre-industrial society such as seventeenth century France could only afford to support 1% of its population in the military. Louis' army at its height was nearly twice that, which was a terrible strain on French society. This became especially apparent in Louis' later wars when supply lines broke down, which led to foraging and a breakdown in discipline. Second, the expense of Louis' wars forced him to sell military offices, which brought in less capable and dedicated officers. Overall, Louis' military reforms were much like Colbert's economic reforms. They made progress, but met severe obstacles that prevented them from being completely successful.

Despite these limits to Louis' economic and military reforms, France was the most powerful state in Europe by the late 1660's. Louis realized this quite well, in fact probably too well, because he embarked on an ambitious series of policies that nearly ruined France by the end of his reign. There were three areas where Louis chose to show his power: religion, his palace at Versailles, and foreign expansion.

Religion

was one aspect of Louis' reign that illustrated the absolute nature of his monarchy quite well. Louis himself was quite a pious Catholic, learning that trait from his mother. However, in the spirit of the day, he saw religion as a department of state subordinate to the will of the king. By the same token, not adhering to the Catholic faith was seen as treason.

As a result, Louis gradually restricted the rights of the French Huguenots and finally, in 1685, revoked the Edict of Nantes, which had given them religious freedom since the end of the French Wars of Religion in 1598. This drove

200,000 Huguenots out of France, depriving it of some of its most skilled labor. Thus Louis let his political and religious biases ruin a large sector of France's economy.

Versailles

Louis' religious faith was largely a superficial one attached to the elaborate ritual of the Catholic mass. This love of ritual also showed itself in how Louis ran his court at his magnificent palace of Versailles, several miles outside of Paris. Much of the reason for building Versailles goes back to the Fronde that had driven Louis from Paris as a young boy. Ever since then, Louis had distrusted the volatile Paris mob and was determined to move the court away from the influence of that city. Versailles was also the showpiece of Louis' reign, glorifying him as the Sun King with its magnificent halls and gardens.

The palace facade was a quarter of a mile across. The famous Hall of Mirrors alone was 250 feet long. Water pumped from the Seine River to hills 500 feet above Versailles fed its fountains. The Orangery had over 1200 orange trees that were moved inside for the winter. All this was built and maintained at tremendous expense. But it was worth it to Louis, regardless of the burden it put on the French people.

As splendid as it may seem, life at Versailles was not always such a picnic. The site itself was on low marshy ground that made it unhealthy to live in. Except for a few magnificent rooms and bedrooms, most people had small cramped rooms with little or no ventilation. Nevertheless, a noble was considered socially and politically dead if he did not live at Versailles. He lived there at his own expense and was expected to keep up a sumptuous life style in order to be a proper ornament for Louis' court. The seemingly endless round of masquerades, plays, operas, and parties eventually grew old to even the most ardent partygoers. For many, life became a bitter series of petty intrigues over such things as who could stand closest to Louis when he held court or got dressed in the morning. Some even saw this as a plot to ruin the nobles by making them go bankrupt while they were trapped in the gilded cage of Versailles. And indeed, Versailles did bankrupt many nobles along with the French government, helping lead to the French Revolution some 75 years after Louis died.

Louis' diplomacy and wars

Just as Louis's palace at Versailles dominated European culture during the late 1600's and early 1700's, his diplomacy and wars dominated Europeans political history. As Louis himself put it: "The character of a conqueror is regarded as the noblest and highest of titles." Interestingly enough, he never led his troops in battle except for overseeing a few sieges from a safe distance.

Louis' main goals were to expand France to its "natural borders": the Rhine, the Alps, and the Pyrenees. This, of course, would make him enemies among the Dutch, Germans, Austrians, Spanish, and English. Therefore, Louis' diplomacy had to clear the way to make sure he did not fight everyone at once. For this purpose he skillfully used money to neutralize potential enemies (such as Charles II of England in the Secret Treaty of Dover) and extracted favorable terms from stalemate or losing situations. But Louis could also make some fateful blunders to hurt his cause. His obsessive hatred of the Dutch dominated his policy too much, as did his own self-confidence and arrogance in trying to publicly humiliate his enemies. However, this just alarmed Louis' enemies more, especially the Dutch, Austrians, and English, who allied against Louis to preserve the balance of power.

Several new inventions transformed the warfare of this period. First of all there was the bayonet, invented in Bayonne, France around 1670. This blade, when attached to the end of a musket, transformed it into a short pike, thus eliminating the need for separate pikemen to protect the musketeers in hand-to-hand combat. Second, there was the flintlock musket, which provided more reliable firing and faster loading than the old matchlock muskets. Finally, there was the introduction of paper cartridges with pre-measured amounts of gunpowder that also sped up the process of loading in combat. With all infantrymen carrying flintlock muskets, premeasured charges of powder, and bayonets for hand-to-hand combat, generals could create much less dense formations and greatly stretch their battle lines.

These new linear tactics vastly increased European armies' firepower and warfare's destructiveness. They also made armies harder to control since they were stretched out over such a great distance. As a result, discipline was

tightened even more, which further increased the power of the state over its armies. It also made it harder to attract recruits, leading to a growing reliance on peasant draftees.

The general trend in Louis' wars was for them to become increasingly longer, bloodier, and less successful. His first major conflict, the War of Devolution, lasted only two years (1667-1668). Louis' goal was to conquer the Spanish Netherlands (modern Belgium), which would give him control of the mouth of the Rhine and much of Germany's trade.

At this point, Colbert's financial measures provided Louis a strong economic base with which to wage war. Louis' military reforms had also given him the best fighting machine in Europe. The system of supply lines worked so well that the French officers were even supplied with silverware for their tables. As a result, Louis gained several strategic towns and fortresses in the Spanish Netherlands. However, Europe's suspicion and fear of French aggression had been aroused, and each succeeding war would be progressively harder for Louis to win.

The Dutch War (1672-78) brought in the Dutch Republic, Spain, Brandenburg-Prussia, Denmark, and Austria against Louis. French progress was much slower, and fighting much costlier, as the Dutch in particular fought desperately to defend their homeland, even opening the dikes to flood out the French. Although Louis gained nothing against the Dutch, he did win lands along the Rhine at the expense of various German states, but at considerable cost. France lost its two best field marshals, and the French people endured ever-higher taxes, some peasants even being reduced to making bread from acorns and roots.

Louis' next adventure, the War of the League of Augsburg, also known as the Nine Years War (1688-97), embroiled Europe in an even more prolonged and fruitless conflict. French expansion was directed across the Rhine into Germany while Austria was preoccupied with its Turkish war. Austria put the Turks on hold and allied with the Dutch, English, and several German states to stop French aggression. Fighting raged through most of the 1690's. Peasants were drafted in greater numbers, taxes were raised to intolerable heights, and a major famine in 1694 merely added to the misery. Finally, peace was made in 1697 with little changed, except for everyone being severely weakened by the senseless struggle. By 1700, France's population had declined from an estimated 23,000,000 in 1670 to 19,000,000.

Unfortunately, a new and bloodier war soon arose. This time the prize was Spain and its extensive empire, left without a ruler by the death of Charles II. Louis' grandson had an excellent claim through Louis' wife, a Spanish princess. Predictably, the rest of Europe would not tolerate a French Empire that surpassing even that of Charles V in the 1500's. The resulting conflict, the War of the Spanish Succession, would bring twelve more dreary years of warfare and destruction to Europe (1701-13).

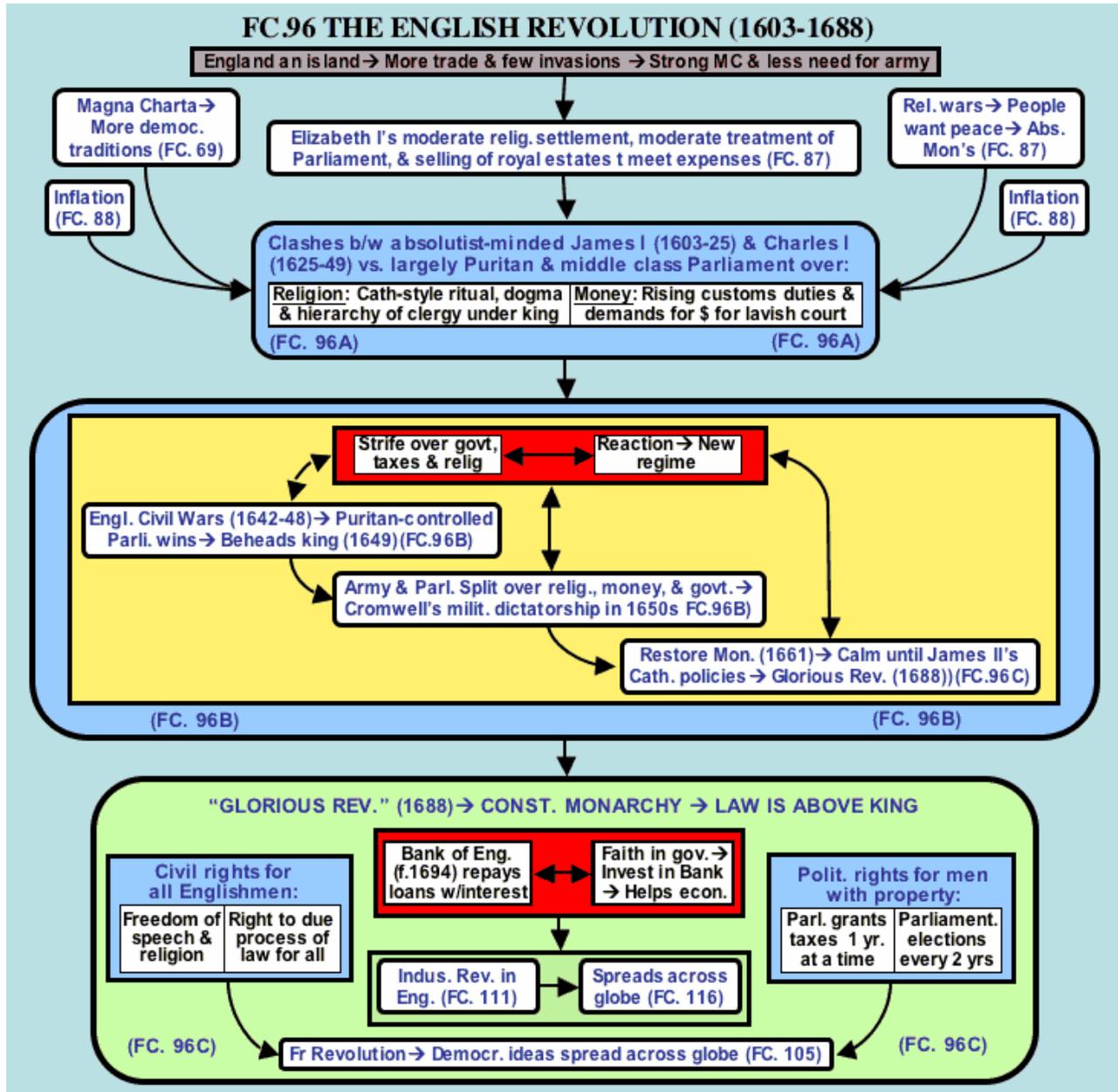
For the first time, Louis' generals suffered decisive defeats, mostly at the hands of the brilliant British general, John Churchill, the Duke of Marlborough. French armies were thrown on the defensive, and French peasants were drafted in growing numbers to defend their homeland. Resistance stiffened and the war ground down to a bloody stalemate. Exhaustion on both sides finally led to the Treaty of Utrecht in 1713. Louis' grandson took the throne of Spain and its American empire, but the French and Spanish thrones could not be united under one ruler. Austria got the Spanish Netherlands to contain French aggression to the north. Just as the Treaty of Westphalia in 1648 had contained Hapsburg aggression, the Treaty of Utrecht contained French expansion. Two years later Louis XIV was dead, with little to show for his vaunted ambitions as a conqueror except an exhausted economy and dissatisfied populace.

Results of Louis' reign

The age of Louis XIV was important to European history for several reasons. First of all, it saw the triumph of absolutism in France and continental Europe. Versailles was a glittering symbol and example for other European rulers to follow. Any number of German and East European monarchs modeled their states and courts after Louis XIV, sometimes to the point of financial ruin. Second, Louis' wars showed the system of Balance of Power politics working better than ever. French aggression was contained and the status quo was maintained. All this had its price, since the larger sizes of the armies and the final replacement of the pike with the musket took European warfare to a new level of destruction. Finally, Louis' reign definitely established France as the dominant power in Europe. However, the cost was immense and left his successors a huge debt. Ironically, the problems caused by

Louis XIV's reign would help lead to the French Revolution in 1789 and the spread of democratic principles across Europe and eventually the world.

FC96 The English Revolution: (1603-88)



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“The state of monarchy is the supremest thing on earth; for kings are not only God's lieutenants on earth, but even by God himself they are called gods.” — *James I of England*”

“A king is a thing men have made for their own sakes, for quietness' sake. Just as in a family one man is appointed to buy the meat...” — *John Selden*

Introduction: a century of change

As the Greek philosopher, Heraclitus, said, nothing is so constant as change. While history has always seen changes taking place, few times and places saw more dramatic changes in such a wide variety of areas ranging from fashions and diet to the Scientific Revolution as England saw in the 1600's. But nowhere were there more sweeping changes than in the realm of government. In 1600, the absolute monarch believing in the concept of Divine Right of Kings was becoming the most fashionable form of rule. By 1700, a new more democratic government with checks and balances between the executive (king) and legislative (Parliament) branches had emerged in England, setting the stage for modern democracies.

Background to the Revolution

There were three main factors that came to the surface in the reign of Elizabeth I (1558-1603) to set the stage for the English Revolution. For one thing, going back to the Magna Charta (1215) which itself drew upon even more ancient Anglo-Saxon traditions, England had a long tradition that no one, not even the king, is above the law. Secondly, Elizabeth reigned in a period of intense religious strife, both within England itself as well as triggering an expensive war with Spain. Finally, the 1500's and 1600's were a period of rampant inflation, which made monarchs everywhere increasingly desperate for money.

The convergence of these factors during Elizabeth's reign generated problems in two critical areas: money and religion. As far as money went, the Queen knew how to get money from Parliament while outwardly showing respect to that body's rights and privileges. However, such treatment gave Parliament a growing sense of its own power and importance, which it was unlikely to give up peacefully. Elizabeth also partly paid for her rising expenses from the struggle with Spain by selling up to one-fourth of the royal estates. This left her successors with even less of an independent financial base, which in turn made them more dependent on Parliament for funds, thus leading to fights over money.

In religion, Elizabeth skillfully maintained peace in England while much of Europe was embroiled in religious wars. She did this by grafting moderate Protestant theology onto Catholic style ritual and organization. She also blunted the ferocity of the religiously radical Puritans (Calvinists) by incorporating many of them into the hierarchy of the Church of England. However, this put many Puritans into positions of authority where they could demand more sweeping reforms beyond the Queen's lukewarm Protestantism. In addition, many of these Puritans were also members of the gentry (lower nobles) and middle classes who controlled the House of Commons in Parliament and voted on taxes. Thus the issues of religion and money became even more tangled.

Religious wars, which threatened everyone's peace and security, and inflation, which made maintaining armies too expensive for rebellious nobles, also combined to help with the rise of absolutism in Europe. This rising tide of absolutism would influence the Stuart kings of England to try to establish absolutism in their own realm in spite of popular opinion. A less skillful and diplomatic ruler than Elizabeth would have trouble dealing with these new forces rising up in England. Such an undiplomatic ruler succeeded Elizabeth in the person of James I (1603-1625).

While Elizabeth had so skillfully kept the issues of money and religion in check, James' absolutist beliefs and abrasive personality brought them to the surface. As far as religion went, James fought the largely Puritan Parliament to keep the Church of England's Catholic style ritual, decorations, and hierarchy of clergy, over which he as king had control. In money matters, king and Parliament clashed over James' growing requests for money to support his lavish lifestyle. He also angered the middle class by raising customs duties, one of his main sources of revenue, to keep pace with inflation. While James and Parliament never completely broke with one another over these issues, their constant squabbling did set the stage for the revolution that was to follow.

Pattern of events (1625-88)

While the individual events of the English Revolution could be somewhat involved and complicated, they did fit into a basic pattern. Parliament and the ruler of England would clash over the issues of religion and taxes as the government became less decisive and/or reasonable. This would trigger a reaction by Parliament that would bring in a new ruler, and then the process would start all over again. This cycle would repeat itself three times over the next sixty years, with each successive stage feeding back into the aforementioned cycle as well as into the next stage.

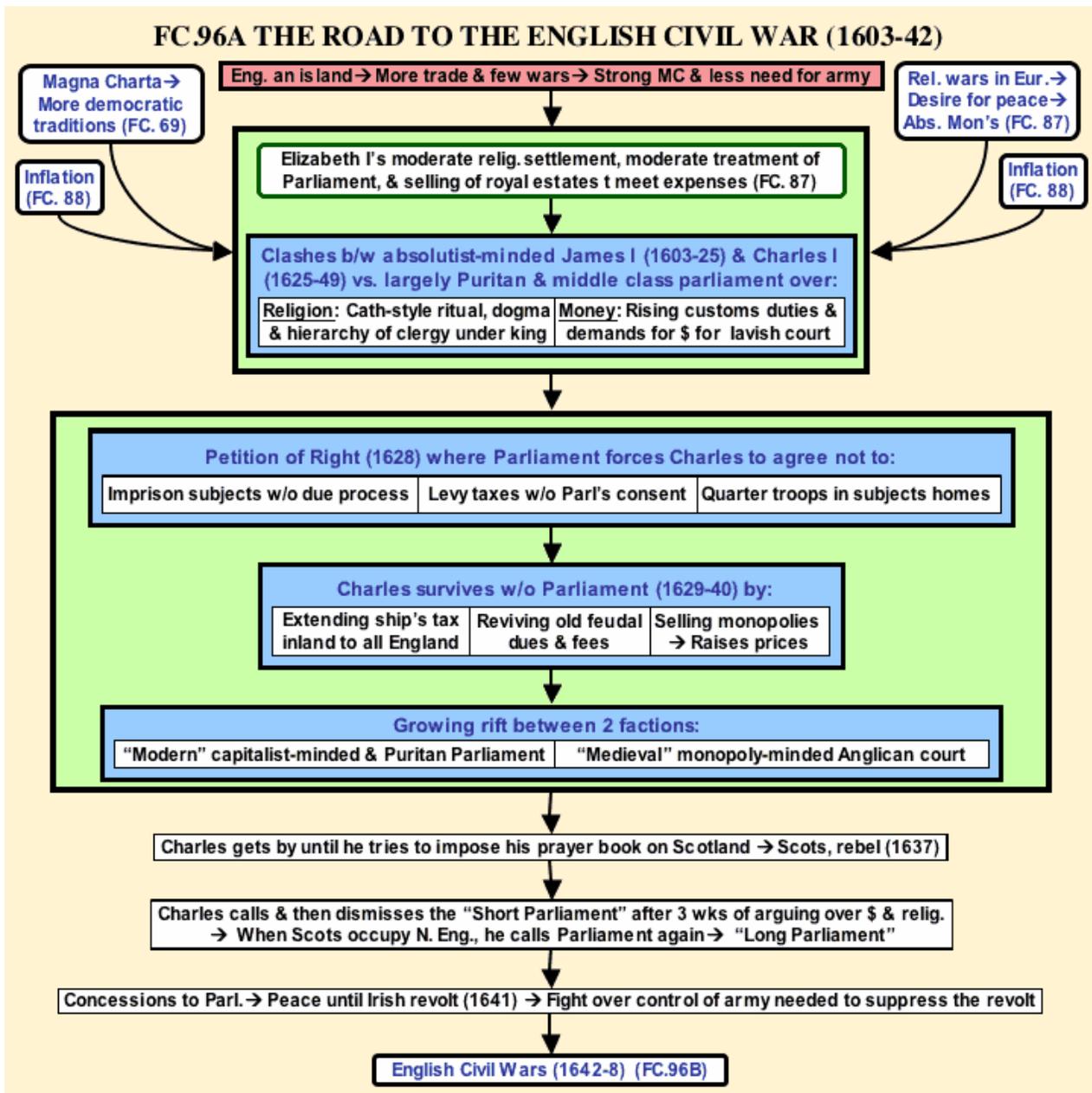
The first stage would see England plunged into civil war (1642-49) that would result in the beheading of Charles I and the rise of the Puritans and Parliament to power. In the second stage, continued fighting over religion and money, this time between Parliament and its army, would bring in military dictatorship under Oliver Cromwell in the 1650's. After Cromwell's death (1658) would come the third stage with the restoration of the monarchy (1661-88). However, the old conflicts over money and religion would resurface in the reign of James II and lead to his overthrow by Parliament with the help of William III and Mary of Holland in 1688.

This time, Britain would resolve its cycle of conflicts in what is known as the Glorious Revolution (1688) This established a constitutional monarchy where the law is above the king, not the other way around as often happened in absolute monarchies. The Glorious Revolution would have three important results. First of all, it would lead to the political triumph of the rich middle class and nobles in Parliament which had the sole right to grant taxes for one year at a time, thus forcing the king to call Parliament each year if he wanted taxes. Also, in order to keep the king from packing Parliament with his own men for an extended period of time, Parliamentary elections were to be held every two years. While the Glorious Revolution resulted in a political victory for a narrow upper class oligarchy, it opened the way for further reforms over the next 200 years to make England a more truly democratic society.

Second, the Glorious Revolution gave all Englishmen a Bill of Rights guaranteeing such civil liberties as speech, assembly, religion (except for Catholics and Unitarians at this time), and due process of law. Both the political and civil liberties gained by the English would help lead to the French Revolution which in turn would spread the ideas of democracy across Europe and the globe.

Third was the establishment of the Bank of England (1694), which was modeled after the Bank of Amsterdam. This national bank would both provide the government with the funds it needed while repaying its loans with interest. This helped foster a more prosperous economy and encourage more investment in the bank, which in turn helped provide the government with more funds, and so on. This feedback of growing profits would eventually provide Britain with the money to start the other revolution that would spread worldwide: the industrial revolution. had plunged into civil war.

FC96A James I, Charles I, and the Road to the English Civil War (1603-1642)



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James I (1603-25), Elizabeth I's successor (who also ruled Scotland as James VI), was much more overbearing and prone to make enemies than Elizabeth had been. He lectured Parliament on the Divine Right of Kings and even wrote a treatise on it, *The Trew Law of Free Monarchies*. Such an attitude did not set too well with Parliament. James' abrasive manner, absolutist beliefs, more Catholic concept of what the Church of England should be, and demands for money to support his lavish lifestyle made him many enemies who dubbed him the "most learned fool in Christendom."

In religious matters, the king headed the High Commission, which exercised powers of censorship and excommunication and appointed the higher clergy who in turn chose the local clergy. News of the outside world came mainly from the clergy who got their news from the higher clergy and ultimately the king. As Charles I: put it: "People are governed by the pulpit more than the sword in times of peace." No wonder that religion became the main focal point of trouble at this time. There was also the issue of observing the Sabbath. Puritans felt that Sundays should be reserved for strictly religious activities and discussions. The king, fearing that such discussions

might breed revolution, encouraged more frivolous sports on Sundays to keep people militarily fit and harmlessly occupied. Such a policy outraged the Puritans and turned them further against the king.

Money was the other big source of conflict, and the House of Commons in Parliament was the primary battlefield. Among Parliament's most jealously guarded liberties was the right to grant taxes. This had not been such a vital issue when kings could largely get by on the revenue from their estates, various feudal fees, and the right to sell monopolies and titles. However, inflation further reduced the value of the royal estates after Elizabeth sold a quarter of them, James own extravagant lifestyle and the rising cost of warfare in the 1500's and early 1600's led to growing friction between king and Parliament over money.

Parliament then was not so democratic in makeup as today. Even the House of Commons consisted solely of gentry (lower nobles) and merchants with an annual income of at least 40 shillings, a sizable sum back then. The rights and privileges they jealously guarded and fought for, such as immunity from arrest and flogging and the right to free speech, were reserved for them alone, not the lower 90% of society. As one Member of Parliament put it: "He that hath no prosperity in his goods is not free." Still, the rights and privileges Parliament fought for and won in the 1600's set a precedent, and eventually would extend to all of society.

James did have one growing source of revenue: customs duties from a rapidly expanding foreign trade. In order to take advantage of this, James raised the taxable value of various commodities to keep up with their real market value, which had risen due to inflation. Naturally, the merchants in Parliament disliked this tactic and disputed James' right to revise those values without Parliament's consent.

Further aggravating James' problems was the lack of an efficient bureaucracy such as was developing in continental states. Taxes were collected by tax farming, where local merchants paid a lump sum to the king in advance and then collected however many taxes they could get away with. This, of course, led to lower royal revenues, more corruption, and rising tensions.

Thus the stage was set for a conflict between the king on one side and Parliament and the Puritans on the other. During James' reign, relations with Parliament were generally stormy. Constant haggling over money and such religious issues as the existence of bishops in the Church of England would reach fever pitch and then subside with an occasional compromise to patch things up. There was even a temporary alliance between king and Parliament when a proposed marriage alliance with Spain (which was very unpopular with Parliament) fell through and got England involved in the broader conflict known as the Thirty Years War. For the time being, this drove king and Parliament together against the common Catholic enemy. However, the overall situation was deteriorating, and by James' death in 1625, relations between the two parties were, at best, strained.

It was said that James steered the ship of state for the rocks, but left it for his son, Charles I, to wreck it. Charles was undiplomatic, insensitive to public opinion, and a weak monarch who let events get out of control and send England drifting toward civil war. Charles, like his father, was largely a victim of the times, being caught between rising prices and the rising aspirations of Parliament and the Puritans on the one hand and his own ideas favoring Catholicism and absolutism on the other. Charles even resorted to forcing loans out of men and imprisoning those who refused to cooperate. In 1628 Parliament reacted by forcing Charles to sign the Petition of Right in which he agreed not to levy taxes without Parliament's consent, imprison free men without due process of law, or quarter his troops with private citizens. After this, he dissolved Parliament and ruled on his own.

For the next eleven years (1629-40) Charles managed to get by without Parliament by stretching various royal rights and fees to the limit. One of these methods was selling monopolies. Under this system only the man who bought a monopoly on a particular type of goods had the exclusive right to sell or grant the right to others to sell those goods. This wreaked havoc with prices and caused a good deal of discontent, especially since the monopolists controlled a wide range of products including buttons, pins, dyes, butter, tin, beer, barrels, tobacco, dice, pens, paper, gunpowder, feathers, soap, lace, and hay to name just a few. Another method was extending the traditional ship's tax (previously levied only on coastal towns) to the whole countryside. As unpopular as these measures were, they raised the king his money and kept him going.

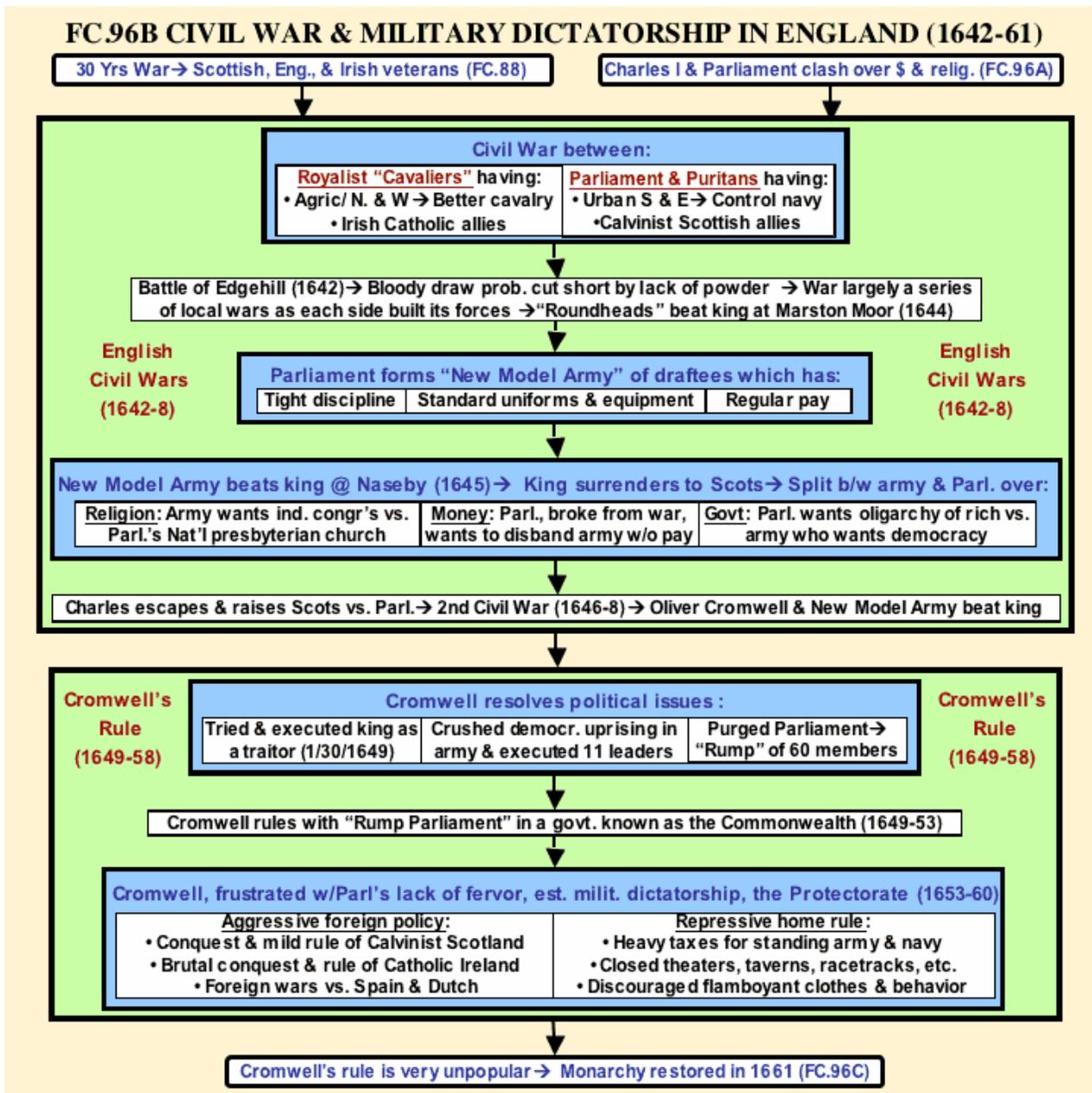
Charles might have continued like this indefinitely, but in 1637, he tried to impose the English Prayer Book on the Scots and triggered a revolt instead. Unfortunately for Charles, many of the Scots were battle-hardened veterans from the Thirty Years War who made short work of his largely untrained rabble. Desperately in need of money to

continue his war, Charles called Parliament in 1640. However, after three weeks of arguing with Parliament over the last eleven years' religious and monetary policies, the king dismissed this "Short Parliament." However, the Scots did not go away. Instead, they occupied part of the north and made Charles promise a large sum of money every day until a final settlement was reached. Charles had no choice but to call Parliament again. This Parliament is known to history as the Long Parliament, because it would sit for over a decade and preside over a civil war and the end of absolute monarchy in England.

The events leading to civil war were a bit more straightforward. Charles, desperate for money and support to take care of the Scots, initially agreed to Parliament's demands. He would not levy taxes or dismiss Parliament without its consent. And he would agree to call Parliament at least every three years. He even let Parliament execute one of his chief ministers, Sir Thomas Wentworth, Earl of Strafford.

However, there was hardly peace between king and Parliament, only an uneasy truce. In November 1641, a spark was struck which led to civil war. A revolt broke out in Ireland, with Irish Catholics killing thousands of English and Scottish Protestants who had taken their best lands. An army was needed, but neither king nor Parliament was going to allow the other to command such an army. When Parliament refused Charles his army, he sent troops in to arrest five Parliamentary leaders. They found refuge in London and support from other towns. Charles left London, and by August 1642, England had plunged into civil war.

FC96BThe English Revolution: From Civil War to Military Dictatorship (1642-60)



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FC96B in the [Hyperflow of History](#);Covered in multimedia lecture [#2032](#)."Trust in God and keep your powder dry."— *remark attributed to Oliver Cromwell*

The English Civil War (1642-45)

Few people on either side wanted civil war. However, the issues involved were so important and the differences between the two sides so great that each party felt itself forced into war. Although both sides had support from all classes, one can generalize about where each side got its support. The king's centers of power were in the more agricultural regions of the North and West. His main supporters tended to be the upper nobles, known as *peers*, from the House of Lords. In the war they were referred to as *Cavaliers* since they mainly fought as cavalry. Parliament's support came mainly from lower nobles (gentry) and the middle class merchants concentrated in the towns and ports in southeastern England. They were known as *Roundheads* for their short haircuts, as opposed to the long hair of the Cavaliers. (In fact, many parliamentary leaders, being from the upper classes, kept their hair long.) Both sides also looked outside of England for help. The king hoped for support from the Catholic Irish,

while Parliament was allied to the Scots. Since the Roundheads controlled the ports and the navy, the king was virtually cut off from his Irish allies. Meanwhile, the Scots could provide very effective aid to Parliament.

Historians used to think that both sides fought poorly in the early stages of the war, since England, being an island, had no standing army and little in the way of a military since the Hundred Years War. However, recent research shows that both sides drew heavily upon veterans from the Thirty Years War and fought more effectively than previously supposed. Despite inferior manpower and resources, the king's forces did have superior cavalry, led by the king's dashing German nephew, Prince Rupert of the Rhine, and could more than hold their own against the Puritans in the early stages of the war.

The first battle, Edgehill (1642), was a bloody draw, probably cut short by lack of gunpowder. Both sides came out of this realizing the need for training, discipline, and supplies. Ultimately, Parliament's superior resources and the Puritans' greater willingness to submit to military discipline would be decisive in the war's outcome. It was here that one of the key figures of English history first emerged: Oliver Cromwell.

Cromwell was an obscure country gentleman and stern Puritan, typical of many gentry who sided with Parliament. After Edgehill, it was apparent that the Puritans needed better cavalry to face Prince Rupert's wild cavalry charges. Cromwell raised and trained such a regiment, later known as Ironsides for its steadiness in battle. Rather than taking mercenaries drawn from the dregs of society, Cromwell relied mainly on men of a religious nature and committed to the cause instead of looting and plundering. Their first test came in 1644 at Marston Moor. Ironsides held fast against the cavaliers, and the king's forces were crushed.

In January 1645, Parliament passed an ordinance to form the New Model Army. Contrary to the myth of the body of "Bible warriors," the New Model Army was made up of draftees and mercenaries fighting for money. However, following Cromwell's example, it was a highly trained and disciplined professional force with regular pay and equipment. In the 1640's and 1650's it would be the most feared army in Europe. Later that year, it met and destroyed the king's last army at Naseby. Charles surrendered to the Scots hoping to turn them against Parliament. However, they turned him over to Parliament.

More bickering and a second civil war (1645-1648)

Charles was right in assuming he could split the victors, and the reasons for that split were largely the same reasons that had first led to civil war: money, religion, and government. The civil war, like most wars, had been expensive, and Parliament did not have the money to pay the New Model Army it had raised. It tried to disband the army without pay, promising to repay it later. This did not set too well with the troops, who refused to disband. Instead, they set up a General Council of the Army composed of generals, officers, and "agitators", elected from the rank and file. This council took custody of the king, occupied London, and forced 11 parliamentary leaders out of the House of Commons.

Religion was another point of controversy between Parliament and army. Both parties were Puritans, but of somewhat different types. Most of Parliament wanted a state run, or Presbyterian, church. Most of the army, including Cromwell, wanted independent churches with freedom of religion. This was what many of them had fought for, and they were not about to give it up to Parliament.

Finally, there was the issue of what sort of government the victors would establish. Parliament and most of the officers, including Cromwell, were property owners who felt that they were most fit to rule since they had so much property to be responsible for. The rank and file in the army, sensing their power, pushed for a much more radical and democratic government. The most radical of these, the Levelers, wanted the vote for all men, a bill of rights, and the abolition of the monarchy and House of Lords. A meeting of the General Council of the Army led to a deadlock between the officers and common troops. Cromwell ended the discussion and ordered the agitators back to their regiments, having one of them shot in order to convince the others to submit.

At this point, events forced army and Parliament to reunite, because Charles had escaped and raised the Scots and English royalists in revolt with promises of establishing a Scottish style Presbyterian Church if he regained his throne. This second civil war was a short and decisive affair. Cromwell, armed with the New Model Army, moved to annihilate the Scottish and royalist forces in quick succession.

Cromwell's Dictatorship (1649-60)

Once this war was over, Cromwell and the army moved just as decisively to resolve the problems in London. First, there was Parliament, which the army especially disliked since some Parliamentary members had entered into negotiations with Charles to restore the monarchy. This led to Pride's Purge, named after a Colonel Pride who used the army to expel some 100 Presbyterian members. This left a "Rump Parliament" of about 60 members who were more agreeable or submissive to the will of Cromwell and the army. Next came the king, who was tried for treason and executed on January 30, 1649. Bishops and the House of Lords were abolished and the religious independents prevailed.

However, the democratic reforms that the Levelers and much of the army hoped for never materialized. Resulting mutinies were quickly put down and Leveler demonstrations led to the arrest of their leaders. Henceforth, military dictatorship would rule England. At first, Cromwell ruled through the Rump Parliament and a government known as the Commonwealth (1649-53). However, frustrated by what he saw as Parliament's lack of fervor for his type of rule, he established a more blatant dictatorship known as the Protectorate with himself as Lord Protector.

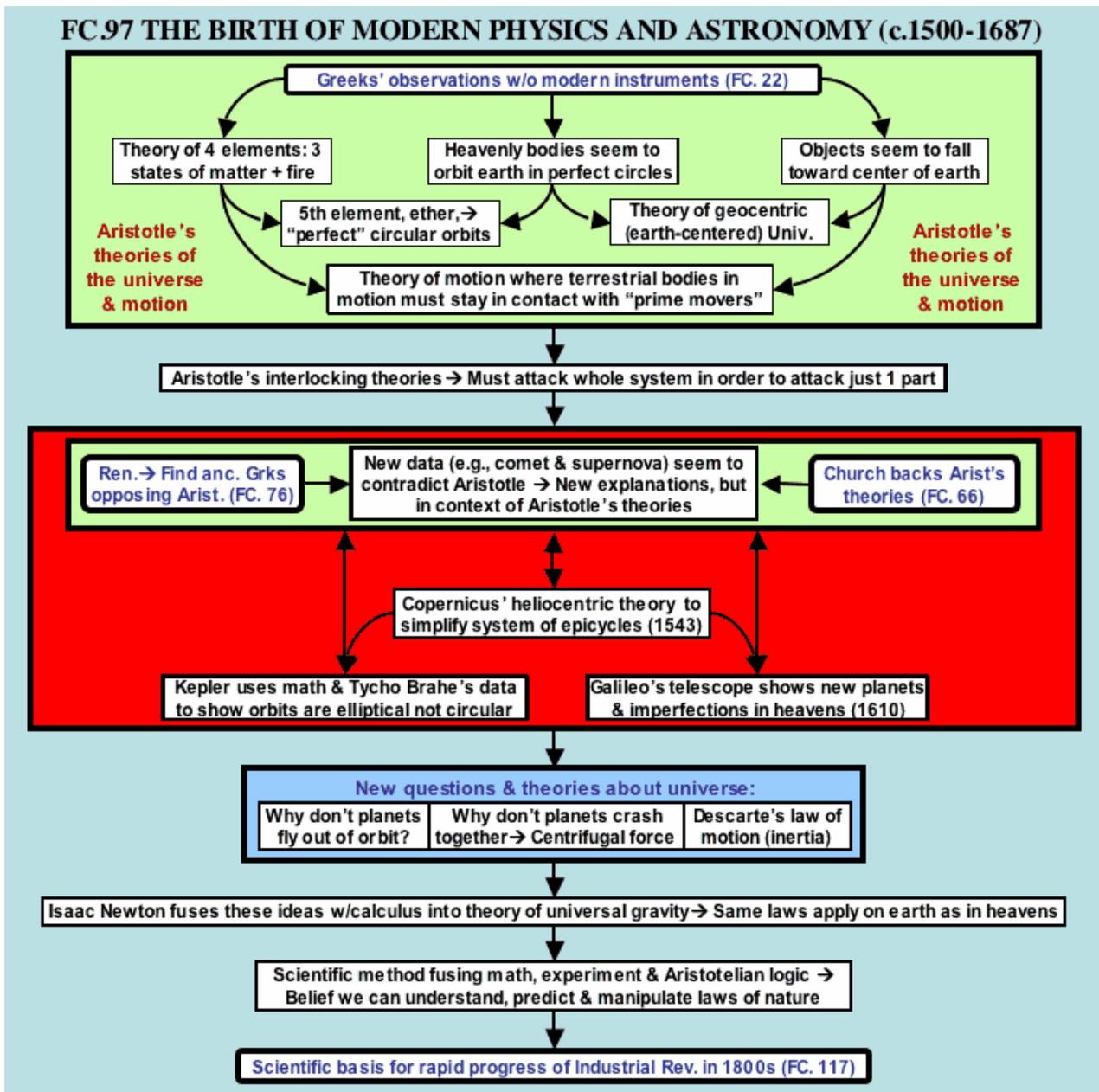
Outside of England, Cromwell faced a war with Scotland, which he conquered and ruled with some moderation since the Scots were fellow Protestants. Catholic Ireland, another enemy, was not so lucky. Cromwell's conquest of Ireland was methodical and brutal, leaving wounds that still have not healed today. Like it or not, Scotland and Ireland were incorporated into the greater Commonwealth of Britain, something no English king had been able to do. Cromwell also had an aggressive foreign policy outside of Britain, fighting successful wars against the Dutch and Spanish. England was becoming a military and naval power to be reckoned with.

Inside England, people felt Cromwell's heavy hand as well. His wars, standing army of 30,000 men, and navy required taxes three times higher than any which James I and Charles I had ever imposed. Churches were more locally controlled, but people were expected to live good religious lives. Theaters, taverns, and racetracks were all closed down. People dressed in somber colors to reflect the mood of the ruling regime. Life under Cromwell seemed like Calvinist Geneva, except on a much grander scale. Rather than put up with this regime, many cavalier families, such as the Washingtons, Madisons, and Monroes, left England for the American colonies, especially Virginia, much like the Puritans had fled to New England from royal repression thirty years earlier. These two ways of life, the aristocratic nobles in the South and the capitalist Puritans in the North, would take root and clash with one another two centuries later. Thus the American Civil War was largely an extension of the English Revolution.

Oliver Cromwell died on September 3, 1658. He was certainly one of the greatest figures in English history, although his motives and the nature of his greatness are still disputed by historians. However, no one of his caliber emerged to take firm control of England after him. His son Richard tried, failed, and resigned. This led to various generals wrangling over power. People in general were tired of the strict Puritan rule. They also longed for a king, since that was the traditional ruler for a country. Finally, a certain General Monk led the army in Scotland to London, restored the Long Parliament, and asked Charles II, Charles I's son who had escaped to France, to come back as the king. England's experiment in government without a king was about to end.

The Age of Enlightenment Unit 15: The Age of Enlightenment

FC97The Birth of Modern Science



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Western science, like so many other aspects of Western Civilization, was born with the ancient Greeks. They were the first to explain the world in terms of natural laws rather than myths about gods and heroes. They also passed on the idea of the value of math and experiment in science, although they usually thought only in terms of one to the exclusion of the other. It is easy for us to be critical of their early scientific theories, but we must remember several things about their world. First, by that time, the human race had learned to exploit the environment for survival (e.g., agriculture, woven cloth, metallurgy, etc.), but knew little about the physical laws that rule nature and the universe. Also, there were no telescopes, microscopes, or other instruments to aid the naked eye in its observations and measurements. Everything they learned about the natural world had to be done with the unaided senses and whatever rational deductions they could make based on them.

Knowing the limitations the Greeks operated under helps us appreciate the scientific view of the world they evolved and handed down to posterity. The Greeks realized the limitations to their observations, and many of them argued that relying on one's senses was a faulty way to unravel the mysteries of the universe. The philosopher, Plato,

compared our perception of reality to that of a man chained to the wall of a cave who only sees shadows from the outside world cast against the opposite wall.

However, other Greek philosophers argued that use of the senses for observation, as faulty as it may be, was still worthwhile. One of these Greeks, and by far the most influential figure in Western science until the 1600's, was the philosopher, Aristotle, who created a body of scientific theory that towered like a colossus over Western Civilization for some 2000 years. Given the limitations under which the Greeks were working compared to now, Aristotle's theories made sense when taken in a logical order.

Three basic observations laid the foundations for Aristotle's view of the universe and laws of motion: First of all, there was the theory of the elements. The Greeks came up with several theories on the elements, including Democritus' atomic theory, the idea that all matter is composed of tiny indivisible particles called atoms (from the Greek *atomon* = indivisible). Other Greeks observed three basic states of matter: solid, liquid, and gas. As a result, they came up with four basic elements to correspond to the states of matter: earth (solid), water (liquid), air (gas), plus fire, which the Greeks saw as an element. Of course, since few objects are made of just one element, it was logical to assume they were compounds of two or more of the terrestrial elements. The Greeks spent a good deal of time figuring out the elements different objects contained by observing the qualities they exhibited. For example, wood is composed of earth (because it is solid), fire (because it burns), and air (because the ash left behind floats on top of water). Second, there was the observation that the stars, sun, planets, and moon seem to orbit the earth in perfect circles. Finally, all dropped objects seem to fall toward the center of the earth. These led to several important conclusions.

For one thing, the theory of four elements plus the perfect circular orbits of the stars and planets gave rise to the idea that the celestial bodies were made of a perfect element, *ether*. Ether was weightless or very light so the stars and planets could easily orbit the earth every day. It must also be perfect, incorruptible, and unrelated to the earthly elements since its motions are always in perfect circles, a motion rarely seen on earth.

Second, the motion of dropped objects toward the center of the earth (no matter where on earth they are dropped) and the apparent orbits of the heavenly bodies around the earth led to the *geocentric theory*, the idea that the earth is the center of the universe. Aristotle and most educated Greeks assumed the earth was round since one can see ships disappear over the horizon, the earth casts a round shadow on the moon during lunar eclipses, and the positions of the stars change as we move north or south.

Finally, there was Aristotle's law of motion. Aristotle saw that heavier objects (made of earth and water) have a tendency to fall or sink toward the center of the earth, while lighter objects (made of air and fire) rise or float. He called these tendencies of the elements to rise or fall *natural motions* and said that all elements have an inclination to rise or fall to their natural resting places in relation to one another. Aristotle called all other terrestrial motions *forced* or *violent motions* since they needed an outside force in constant contact with the object in order to take place. Thus the theory of four terrestrial (earthly) elements and the falling of those elements toward the center of the earth led to a law of motion which said everything must stay in contact with a prime mover in order to keep moving and could only be stopped by some other intervening object or force.

Toward a new universe: the downfall of Aristotle (1543-1687)

There were several factors that worked both to overthrow Aristotle's system and to preserve it. First of all, Aristotle's theories relied very little on experiment, which left them vulnerable to anyone who chose to perform such experiments. However, attacking one part of Aristotle's system involved attacking the whole thing, which made it a daunting task for even the greatest thinkers of the day. Secondly, the Church had grafted Aristotle's theories onto its theology, thus making any attack on Aristotle an attack on the tradition and the Church itself.

Finally, there were the Renaissance scholars who were uncovering other Greek authors who contradicted Aristotle. This was unsettling, since these scholars had a reverence for all ancient knowledge as being nearly infallible. However, finding contradicting authorities forced the Renaissance scholars to try to figure out which ones were right. When their findings showed that neither theory was right, they had to think for themselves and find a new theory that worked. This encouraged skepticism, freethinking, and experimentation, all of which are essential parts of modern science.

Pattern of development

The combination of these factors generated a cycle that undermined Aristotle, but also slowed down the creation of a new set of theories. New observations would be made that seemed to contradict Aristotle's theories. This would lead to new explanations, but always framed in the context of the old beliefs, thus patching up the Aristotelian system. However, more observations would take place, leading to more patching of the old system, and so on. The first person who started this slow process of dismantling Aristotle's cosmology was Copernicus. His findings would reinforce the process of finding new explanations, which would lead to the work of Kepler and Galileo. The work of these three men would lead to many new questions and theories about the universe until Isaac Newton would take the new data and synthesize it into a new set of theories that more accurately explained the universe.

Nicolaus Copernicus

was a Polish scholar working at the University of Padua in northern Italy. The problem he wrestled with was the paths of planetary orbits. Through the centuries close observations had shown that the heavens do not always appear to move in perfect, uninterrupted circles. Rather, they sometimes seem to move backwards in what are known as retrogradations. (This, in fact, occurs when Earth passes another planet in its orbit, thus making it appear to go backwards.) In order to account for these irregularities, astronomers did not do away with Aristotle's theory of perfectly circular orbits around the earth. Instead, they expanded upon it, adding smaller circular orbits (epicycles) that spun off the main orbits. These more or less accounted for the retrogradations seen in orbits. Each time a new irregularity was observed, a new epicycle was added. By the 1500's, the model of the universe had some 80 epicycles attached to ten crystalline spheres (one for the moon, sun, each of the five known planets, the totality of the stars, a sphere to move the other spheres, and heaven). The second century Greek astronomer, Ptolemy was the main authority who put order to and passed this cumbersome system of epicycles to posterity.

Copernicus' solution was basically geometric. By placing the sun at the center of the universe and having the earth orbit it, he reduced the unwieldy number of epicycles from 80 to 34. His book, *Concerning the Revolutions of the Celestial Worlds*, published in 1543, laid the foundations for a revolution in how Europeans would view the world and its place in the universe. However, Copernicus' intention was not to create a radically new theory, but to get back to even older ideas by such Greeks as Plato and Pythagoras who believed in a heliocentric (sun centered) universe. Once again, ancient authorities were set against one another, leaving it for others to develop their own theories.

It took some 150 years after Copernicus' death in 1543 to achieve a new model of the universe that worked. The first step was compiling more data that tarnished the perfection of the Ptolemaic universe and forced men to re-evaluate their beliefs.

Johannes Kepler

At this time, Tycho Brahe, using only the naked eye, tracked the entire orbits of various stars and planets. Previously, astronomers would only track part of an orbit at a time and assume that orbit was in a perfect circle. Brahe kept extensive records of his observations, but did not really know what to do with them. That task was left to his successor, Johannes Kepler.

Kepler was a brilliant mathematician who had a mystical vision of the mathematical perfection of the universe that owed a great deal to the ancient Greek mathematician Pythagoras. Despite these preoccupations, Kepler was open minded enough to realize that Brahe's data showed the planetary orbits were not circular. Finally, his calculations showed that those orbits were elliptical.

Galileo

As important as Kepler's conclusions was his method of arriving at it. He was the first to successfully use math to define the workings of the cosmos. Although such a conclusion as elliptical orbits inevitably met with fierce

opposition, the combination of Brahe's observations and Kepler's math helped break the perfection of the Aristotelian universe. However, it was the work of an Italian astronomer, Galileo Galilei (1564-1642), armed with a new invention, the telescope, which would further shatter the old theory and lead the way to a new one.

In the year 1608, several Flemish gentlemen arrived in Venice carrying a startling new invention: the telescope. Upon hearing of this, Galileo, who was then working in Venice, quickly figured out its principles and built one himself, increasing its magnification from three times to ten. He got the Venetian senate excited about the telescope as an early warning device that could spot enemy ships twenty miles away and make them appear as if they were only two miles away. Galileo's curiosity was a bit more far ranging than spotting enemy ships, and eventually he turned his gaze toward the skies. That was when trouble began.

The impact of that first telescope can better be appreciated by imagining how our views of the universe might change if our technology increased our view of the universe by a factor of ten times. Galileo's findings were probably more disturbing. He saw the sun's perfection marred by sunspots and the moon's perfection marred by craters. He also saw four moons orbiting Jupiter. In his book, *The Starry Messenger* (1611), he reported these disturbing findings and spread the news across Europe. Most people could not understand Kepler's math, but anyone could look through a telescope and see for himself the moon's craters and Jupiter's moons.

The Church tried to preserve the Aristotelian and Ptolemaic view of the universe by clamping down on Galileo and his book and made him promise not to *preach* his views. However, in 1632, Galileo published his next book, *Dialogue on the Great World Systems*, which technically did not preach the Copernican theory (which Galileo believed in), but was only a dialogue presenting both views "equally". Galileo got his point across by having the advocate of the Church and Aristotelian view named Simplicius (Simpleton). He was quickly faced with the Inquisition and the threat of torture. Being an old man of 70, he recanted his views. However, it was too late. Word was out, and the heliocentric heresy was gaining new followers daily.

Galileo's work was the first comprehensive attack on the Aristotelian/Ptolemaic cosmic model. He treated celestial objects as being subject to the same laws as terrestrial objects. However, Galileo was still enthralled with perfect circular motion and, as a result, did not come up with the synthesis of all these new bits of information into a new comprehensive model of the universe. This was left to the last, and probably greatest, giant of the age, Isaac Newton.

Meanwhile, two celestial phenomena added further doubts about the Aristotelian system. First, a bright new star (probably a supernova explosion) suddenly appeared in 1572. Within a year, it was gone from the sky, leaving in its wake doubts about the changeless perfection of the stars. Five years later, a new comet cut across the skies and through the crystalline spheres that were supposed to hold the stars and planets in their orbits. Of course, the question was raised: did such perfect spheres even exist, and, if they did, how could a comet cross through them?

One needs to understand the new problems that the discoveries of the 1500's and early 1600's presented for seventeenth century scientists. Galileo's work had done more to destroy the Aristotelian system than create a new working one. As a result, there was great confusion among scholars as to what the structure of the universe really was. There were three major problems confronting them. One problem bothering seventeenth century scientists concerned the nature of motion. Aristotle's law of inertia said basically two things:

1. An object is naturally at rest unless moving toward its natural resting place. It takes forced or violent action to move that object, and that force must be in constant contact for the object to keep moving.
2. The object will keep moving until something else intervenes to stop it.

The main problem with Aristotle's law of inertia was the assumption that the moving object had to be in constant contact with the moving force. For example, the question was raised of how could an arrow keep flying once removed from the force driving it. This was explained by saying the air being displaced by the arrow went around behind it and pushed it along. This seemed unlikely, since the same air driving the arrow also would also be slowing it down.

This concept of a prime mover had bothered Renaissance scholars, who then came up with the new theory of Impetus. According to this, moving objects were carried forward by some vague force within the object or imparted

to it like the heat in a red-hot piece of iron. The theory of impetus allowed people to discuss motion after contact with a mover was broken. There was just one problem with this theory: it was wrong. Nevertheless, it was an important theory because it challenged Aristotle's authority and opened the way to a new theory. The great French mathematician, Descartes, finally came up with the modern theory of inertia, which said a moving object will keep moving in a straight line until something interferes to stop it or slow it down.

The second problem bothering philosophers was what kept objects from flying out of their orbits and into space. Descartes, like Aristotle, did not believe in the existence of vacuums, since they would create no resistance to moving objects, thus allowing them to accelerate to infinite speed, which, of course, is both impossible and absurd. Space, according to Descartes, was filled with ether and cosmic whirlpools that kept the planets in orbit. Not everyone discounted the existence of vacuums, especially since the experiments of Galileo's student, Toricelli, with barometric pressure proved that vacuums can and do exist. Once again this raised the problem of what keeps the planets and stars in orbit if ether did not

The Englishman, William Gilbert offered a solution in 1600, suggesting that magnetism was the answer. He saw the earth as a giant magnet, keeping both terrestrial and celestial objects from flying off into space. Although his theory was basically wrong, it did open people's minds to the idea of objects exerting a pull on one another. As a result, in 1643, the Frenchman, Roberval, suggested a theory of universal gravitation, the tendency of all matter to have an attraction for all other matter. However, he did not have the math to prove the theory.

Even if Roberval's theory of gravity were right, it raised a third problem: what keeps the moon and other celestial bodies from falling to earth? For Roberval, it was the resistance of ether in space. In 1665, Alphonse Borelli suggested centrifugal force. A mathematician named Huygens figured out the formula for centrifugal force, but he also believed in circular motion. And there was still the problem of what kept the sun, moon, planets, and stars in their orbits. That was where Isaac Newton came in.

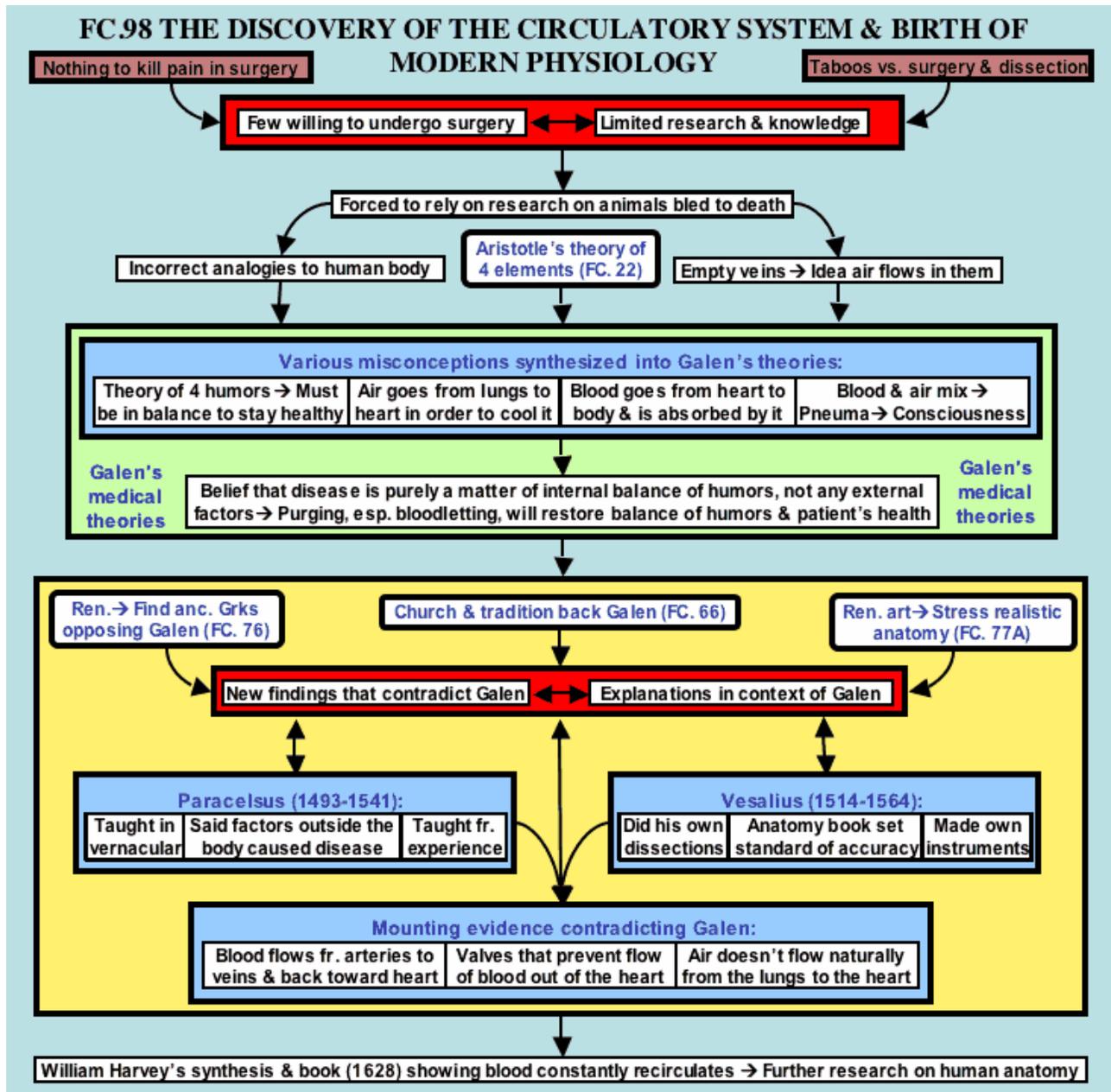
The story of Newton being hit on the head by an apple may very well be true. However, the significance of this popular tale is usually lost. People had seen apples fall out of trees for thousands of years, but Newton realized, in a way no one else had realized, that the same force pulling the apples to earth was keeping the moon in its orbit. Of course, Roberval had suggested this before, but Newton proved it mathematically. In order to do this, he had to invent a whole new branch of math, calculus, for figuring out rates of motion and change. The genius of Newton in physics, as well as William Harvey in medicine and Mendeleev in chemistry, was not so much in his new discoveries, as in his ability to take the isolated bits and pieces of the puzzle collected by his predecessors and fit them together. In retrospect, his synthesis seems so simple, but it took tremendous imagination and creativity to break the bonds of the old way of thinking and see a radically different picture.

The implications of Newton's theory of gravity can easily escape us, since we now take it for granted that physical laws apply the same throughout the universe. To the mentality of the 1600's, which saw a clear distinction between the laws governing the terrestrial and celestial elements, it was a staggering revelation. His three laws of motion were simple, could be applied everywhere, and could be used with calculus to solve any problems of motion that came up.

The universe that emerged was radically different from that of Aristotle. Thanks to Newton, it was within our grasp to understand, predict, and increasingly manipulate the laws of the universe in ways no one had been able to do before. Newton's work also completed the fusion of math promoted by Renaissance humanists, Aristotelian logic pushed by medieval university professors, and experiment to test a hypothesis pioneered by such men as Leonardo da Vinci and Galileo into what we call the scientific method. This fusion had gradually been taking place since the Renaissance, but the invention of calculus made math a much more dynamic tool in predicting and manipulating the laws of nature.

The printing of Newton's book, *Principia Mathematica*, in 1687 is often seen as the start of the Enlightenment (1687-1789). It was a significant turning point in history, for, armed with the tools of Newton's laws and calculus, scientists had an unprecedented faith in their ability to understand, predict, and manipulate the laws of nature for their own purposes. This sense of power popularized science for other intellectuals and rulers in Europe, turning it into virtual religion for some in the Enlightenment. Even the geometrically trimmed shrubbery of Versailles offers testimony to that faith in our power over nature. Not until this century has that faith been seriously undermined or put into a more realistic perspective

FC98 Unravelling the Mysteries of the Heart: William Harvey and the Discovery of the Circulatory System



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It seems amazing that the basic functions of the heart, circulatory system, and other bodily organs remained such a mystery to humans for so long, since they are so close to us and so vital to our very existence. However, early doctors faced serious obstacles in determining those functions. Religious taboos seriously limited the amount of human dissections taking place. Surgery's low status and primitive state is seen by the fact that barbers would typically double as surgeons, since they had the necessary cutting tools. Another major limitation was the lack of anesthetics to kill the pain. Heavy doses of liquor or a blow to the head were the closest thing to painkillers that doctors had before the 1800's.

As a result, people would rarely submit to surgery except in the most extreme circumstances (e.g., amputation for gangrene). And by then it was often too late. Without willing patients, surgery was rarely performed and could not advance. And without such advances, few people would risk operations. Caught in this vicious cycle, doctors had to resort to the dissection of animals. However, inferences made from animal dissections about human anatomy were often incorrect. Also, the practice of dissecting animals bled to death led to the misconception that only air flowed through the arteries and left side of the heart. This plus Aristotle's theory of four terrestrial elements led to various conclusions about human biology as seen in the theories of the dominant medical authority since the second century, the Greek physician Galen.

Galen's physiology

While Galen did clear up the misconception that only air flowed through the arteries, he also passed on several misconceptions. For one thing, he said that air passes directly from the lungs to cool the heart, which is the seat of the soul, a furnace to heat the body, and the source of the blood in the arteries, while the liver is the source of blood in the veins. His second contention was that blood then flows out to the body, which absorbs the blood and does not recirculate it. Third, Galen said that air mixes with the blood to form a spirituous substance called *pneuma*. There are three kinds of *pneuma*, formed in the liver, heart, and brain, and controlling such things as the passions, senses, and consciousness. According to Galen, *pneuma* is the main source of the life process and consciousness in an organism. Finally, drawing upon Aristotle's theory of four terrestrial elements, there was the theory of the four humours (blood, bile, black bile, and phlegm), which must be in balance in order for one to be healthy.

These incorrect conclusions about human biology in turn led to two major misconceptions about disease. First of all, scholars saw sickness as a sign of an imbalance of the four humours that should be treated by bloodletting or other forms of purging. This supposedly would rid the body of imbalanced humours and cause it to restore the balance. This tied in closely with the second misconception: that disease is purely a result of internal balance, not external factors. Therefore, each person's disease was seen as a purely individual matter having no relationship to anyone else's disease, no matter how similar the symptoms may be.

Despite the Church's support of Galen and feelings against dissection, problems started to arise with Galen's theories over time just through normal observations. This and two other factors, both leading out of the Renaissance, led to new research to figure out what the nature of the heart was. For one thing, the Renaissance artists placed increased emphasis on accurate representation of nature and human anatomy. Leonardo da Vinci's notebooks are the best-known examples of this emphasis on realism. Also, the printing press helped publicize and popularize these ideas within the medical community.

Second, in biology, as in physics and astronomy, the Renaissance oftentimes was not so important for breeding new ideas as for discovering other ancient authors that contradicted the accepted authority, thus forcing scholars to seek the truth for themselves. Interestingly enough, the opposing authority was Aristotle, who differed with Galen on several points, claiming the life process was the product of all the various organs in the body, not of *pneuma*. This helped open up discussion on the life process and the nature of disease.

As with Aristotle, the combination of these factors generated a cycle that both undermined Galen and slowed down the creation of a new set of theories. New observations would be made that seemed to contradict his theories. This would lead to new explanations, once again framed in the context of the old beliefs, thus patching up the system. However, more observations would take place, leading to more patching of the old system, and so on. Eventually, the system would be so full of holes that someone would take the new data and synthesize it into a new set of theories that more accurately explained the universe.

Much of this research was done at the University of Padua, which was one of the main centers of research and new theories in the 1500's and 1600's. Being controlled by Venice, which had a bit of an anti-clerical tradition, the University of Padua encouraged more of the intellectual freedom needed to develop new theories that better explained nature. Copernicus and Galileo, had both worked there, as did most of the men who discredited Galen's theory and formed the modern theory of circulation. Two men in particular opened the way for challenging the old theories: Vesalius and Paracelsus.

Paracelsus (1493-1541) never received a medical degree, but he continued to teach, write about, and practice medicine. However, he taught from his own experiences, not Galen's books, and he taught in the vernacular. This was contrary to the Hippocratic Oath by which doctors were supposed to teach in Latin to prevent any trade secrets from getting into the wrong hands and being popularized. Paracelsus' actions made him an outsider to the medical community and caused him to challenge many of its most honored (and mistaken) theories and practices. One thing he claimed was that disease was the result of outside forces acting on the body, not an internal imbalance. Although he had no concept of germ theory, this idea opened the way for a new approach to diagnosing and treating disease. Paracelsus was reviled by the medical establishment of his day, but became something of a folk hero to later generations and inspired further challenges to Galen.

Vesalius (1514-64) also took steps in overthrowing Galen and opening the way for a new theory on the heart and circulatory system. Unlike most medical scholars, who had assistants do the actual dissection while they read the appropriate passages from Galen, Vesalius did his own dissections and saw things for himself. He even saw things he was not looking for and that disagreed with Galen. He had a hard time believing that what his eyes saw was true and that Galen could be wrong. Nevertheless, in 1543, the same year that Copernicus (who also worked at Padua) published his book proposing a heliocentric universe, Vesalius published *De Fabrica*. This book, which was illustrated by the great artist Titian's own art students, provided anatomical drawings of unprecedented accuracy for medical manuals and set the standard for years to come. It also proved many of Galen's anatomical descriptions to be completely wrong.

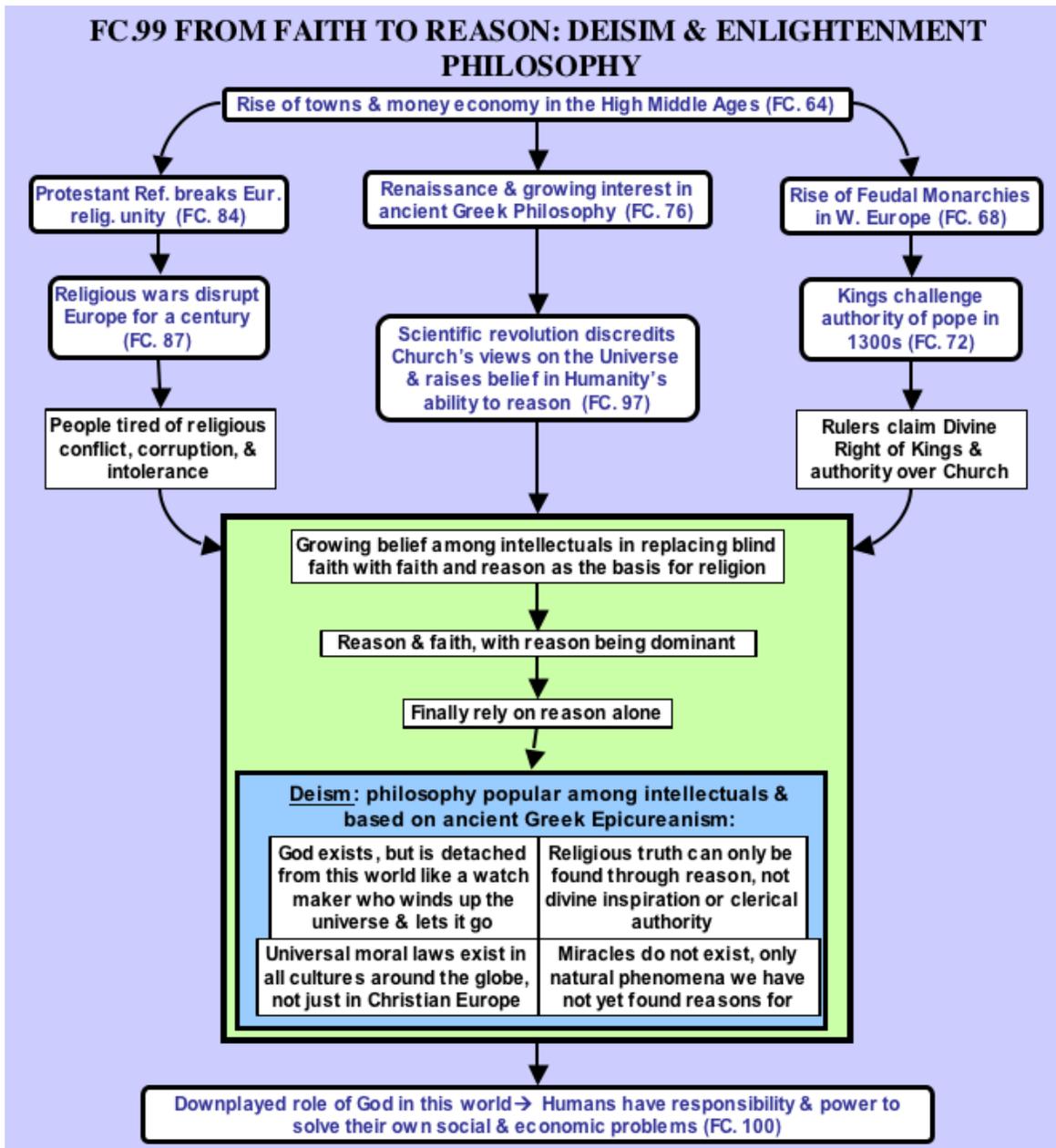
Thanks to Vesalius and Paracelsus, more evidence kept coming in to cast doubts on Galen. In 1559, one of Vesalius' students, Colombo, published a description of how blood went from the right side of the heart to the lungs and then to the left ventricle. However, he still kept the traditional view that blood flowed *out* of the heart through both the arteries and veins. In 1574, Fabricius published a work describing valves in the veins preventing the outward flow of blood from the heart. Still, he refused to see that this meant the blood flowed from the veins *to* the heart. Instead he said the purpose of the valves was to keep too much blood from flowing to the veins from the heart. In 1606, Cesalpino observed blood flowing from the arteries to the veins and toward the heart. However, he also failed to grasp the meaning of this. As obvious as it should have been that Galen's system was not working, scientists' minds were too rigidly set to admit it. Finally, a man came along whose genius, like that of Newton and Mendeleev, was to synthesize the recent evidence into a new system that shattered the old views. That man was William Harvey, an Englishman also working at Padua.

Harvey, who was influenced by Fabricius' work on valves in the veins, developed very modern methods of observation and experimentation. In 1628, nine years after his experiments confirmed his suspicions about Galen's system, Harvey published his findings in *De Motu Cordis* (Concerning the Motion of the Heart). The wealth of evidence it brought to bear effectively shattered Galen's theory forever.

Harvey showed that blood did not seep through a septum and that blood passes through the lungs to be refreshed, although he was not aware of oxygenation. He pointed out that animals without lungs also had no right ventricle and, that in developing embryos, the blood took a shorter route from the right to left side of the heart. Harvey's most important and astounding contribution was the calculation that, in one hour, the heart pumps more than the body's weight in blood. This could only mean one thing: that the blood circulated from the left side of the heart, through the body, then to the right side of the heart, and from there through the lungs and back to the left side of the heart.

It took nearly half a century for Harvey's work to be accepted by the medical community. Once it was accepted, it provided a much better framework for studying the rest of the body. With the mysteries of the circulatory system unraveled, the respiratory and digestive systems could be better understood. And with those in place, other functions of the body could be figured out. Thanks to Harvey's brilliant synthesis, the way to modern biology was opened.

FC99From Faith to Reason: Deism and Enlightenment Philosophy



Nature & Nature's laws Lay hid in night

God said Newton be And all was light — *Alexander Pope*

If God did not exist, it would be necessary to invent him. — *Voltaire*

Blinded by Science

Alexander Pope's short poem largely summarizes the impact that Isaac Newton's work had, not just on science, but also on the imaginations of his contemporaries. The 1700s abounded with heightened interest and discoveries in the sciences. Nobles and monarchs pursued different sciences as hobbies as well as funding serious research. In a popular play of the era, a woman even refuses to elope with her lover because she would have to leave her microscope behind. There were serious advances as well.

In astronomy, William Herschel, noticing fluctuations in Saturn's orbit, surmised they were caused by the gravitational pull of a hitherto unknown planet and discovered Uranus. He also showed the vastness of space by demonstrating the Milky Way is not a cloud of gas but a whole galaxy of stars, and that so-called fixed stars were actually entire distant galaxies. Carl Linnaeus, using his system of binary nomenclature, catalogued the huge

numbers of new plants and animals being discovered across the planet. In chemistry, Henry Cavendish isolated hydrogen; Joseph Black discovered carbon dioxide, and Antoine Lavoisier, separated water, supposedly an indivisible element, into oxygen and hydrogen. This destroyed Aristotle's theory of four elements and opened the way for the emergence of modern chemistry in the 1800s. And in medicine, Edward Jenner created a vaccine against the deadly disease, smallpox, although germ theory would not be developed for another century.

However, not everyone was impressed with the scientific progress of the day. Among them was Jonathon Swift who satirized much of contemporary society, including its obsession with science, in his book, *Gulliver's Travels*. In the following selection, Gulliver visits the science academy of the mythical Laputa, a land where everyone is so absorbed in theoretical speculation that they have lost all touch with reality. Supposedly, he based this fictional account on real experiments being conducted at the time.

The first Man I saw was of a meagre Aspect, with sooty Hands and Face, his Hair and Beard long, ragged and singed in several Places, His Clothes, Shirt, and Skin were all of the same Colour. He had been Eight Years upon a Project for extracting Sun-Beams out of Cucumbers, which were to be put into Vials hermetically sealed, and let out to warm the Air in raw inclement Summers. He told me, he did not doubt in Eight Years more, that he should be able to supply the Governors Gardens with Sun-shine at a reasonable Rate; but he complained that his Stock was low, and entreated me to give him something as an Encouragement to Ingenuity, especially since this had been a very dear Season for Cucumbers. I made him a small Present, for my Lord had furnished me with Money on purpose, because he knew their Practice of begging from all who go to see them.

I went into another Chamber, but was ready to hasten back, being almost overcome with a horrible Stink. My Conductor pressed me forward conjuring me in a Whisper to give no Offence, which would be highly resented; and therefore I durst not so much as stop my Nose. The Projector of this Cell was the most ancient Student of the Academy. His Face and Beard were of a pale Yellow; his Hands and Clothes dawbed over with Filth. When I was presented to him he gave me a very close Embrace, (a Compliment I could well have excused). His Employment from his first coming into the Academy, was an Operation to reduce human Excrement to its original Food, by separating the several Parts, removing the Tincture which it receives from the Gall, making the Odour exhale, and skimming off the saliva. He had a weekly Allowance from the Society, of a Vessel filled with human Ordure, about the Bigness of a Bristol Barrel.

There was a most ingenious Architect who had contrived a new Method for building Houses by beginning at the Roof, and working downwards to the Foundations; which he justified to me by the like Practice of those two prudent Insects the Bee and the Spider....

I was complaining of a small Fit of the Cholick; upon which my Conductor led me into a Room, where a great Physician resided, who was famous for curing that Disease by contrary Operations from the same Instrument. He had a large Pair of Bellows with a long slender Muzzle of Ivory. This he conveyed eight Inches up the Anus, and drawing in the Wind, he affirmed he could make the Guts as lank as a dried Bladder. But when the Disease was more stubborn and violent, he let in the Muzzle while the Bellows was full of Wind, which he discharged into the Body of the Patient; then withdrew the Instrument to replenish it, clapping his Thumb strongly against the Orifice of the Fundament; and this being repeated three or four Times, the adventitious Wind would rush out, bringing the noxious along with it (like Water put into a Pump) and the patient recovers. I saw him try both Experiments upon a Dog, but could not discern any Effect from the former. After the latter, the Animal was ready to burst, and made so violent a Discharge, as was very offensive to me and my companions. The Dog died on the Spot, and we left the Doctor endeavouring to recover him by the same Operation...

Deism

The Enlightenment saw more than new advances in the sciences. In fact the very revolutionary nature of those scientific discoveries ensured that no field of thought would remain untouched. This was especially true of religion and philosophy, which had been so closely intertwined with the old scientific theories.

Starting with the rise of towns in the High Middle Ages, several historical forces converged to produce a revolution in European religion and philosophy. First of all, there was the Protestant Reformation. As we have seen, the Reformation led to a series of religious wars that ravaged Europe for nearly a century (c.1550-1650). One result of those religious wars was that many people grew tired of religion and looked for less restrictive modes of thought. Second, the Renaissance, with its interest in ancient Greek philosophies, gave rise to secular ideas that helped spawn the scientific revolution of the Enlightenment as well as. This helped discredit the Church's old ideas on the universe and raise the status of humanity and its ability to reason on its own. Finally, the rise of towns led to resurgence of feudal monarchies into nation states. We have seen how they started challenging the Church's power during the turmoil of the Later Middle Ages. By the sixteenth century, they were using the doctrine of Divine Right of Kings to undercut the Church's authority in order to elevate their own.

All of these factors converged to undermine the role of blind faith in the Church's authority. While faith was still of prime importance, human reason was also an important element, especially in recognizing and avoiding the pitfalls of religious fanaticism and intolerance. After all, if God gave us the power to reason, should we not use it? As time went on the role of reason in religion increased while the role of faith declined correspondingly. Finally, reason completely replaced faith in a philosophy known as Deism. This was based largely on a Greek philosophy, Epicureanism, which saw God as detached from worldly affairs. Our main purpose in life was to avoid pain, not through sensual self-indulgence, which ultimately brings pain, but through a reasonable and moderate way of life.

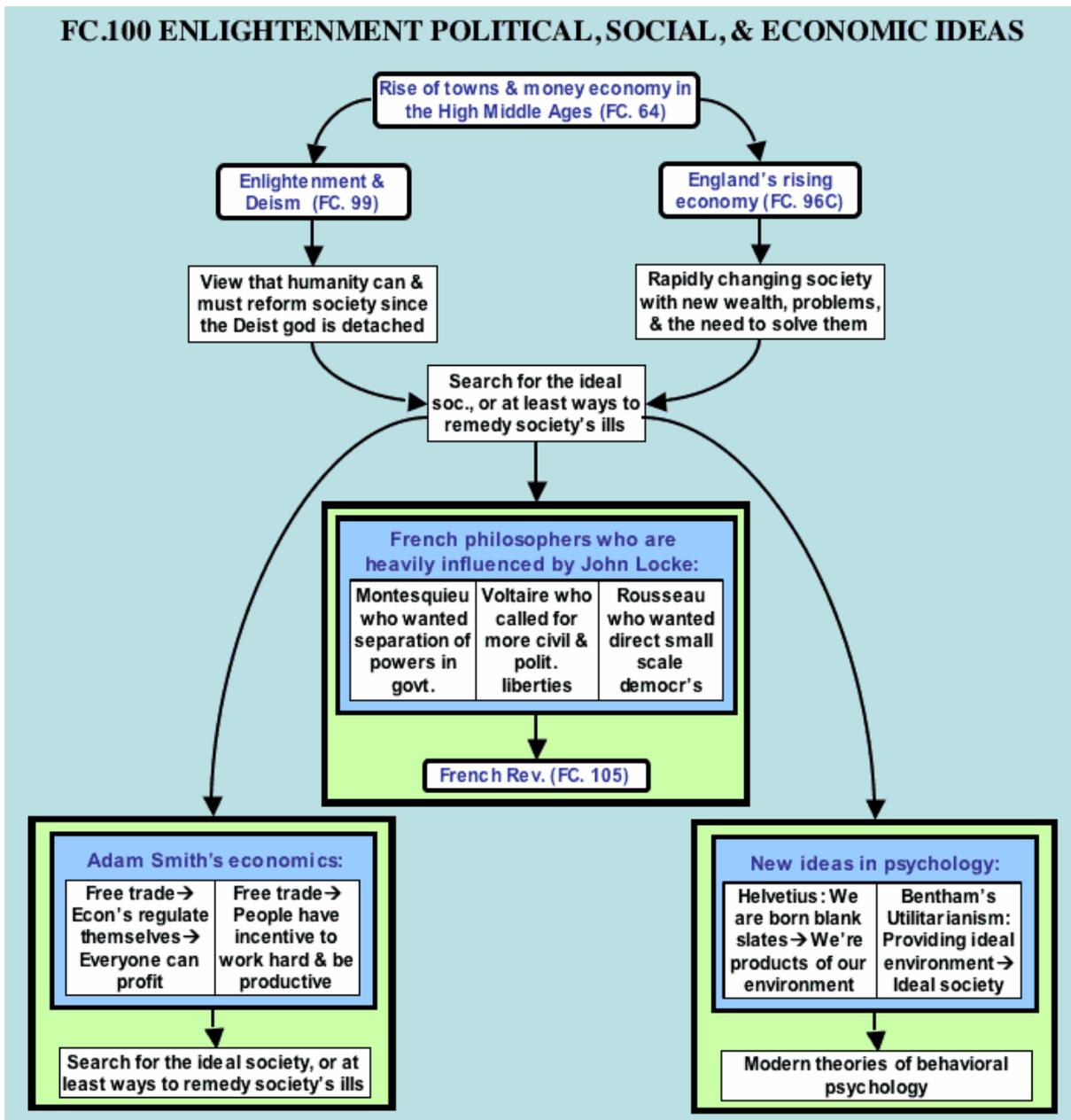
While Deism incorporated the Epicurean ideas and added its own twists, it was not an organized religion with a central dogma and places of worship. However, despite differences on various points, their beliefs can be summarized as follows:

1. God exists, but is detached from the affairs of this world. Drawing upon the mechanistic views of Newtonian science, they saw the universe as a giant clocklike machine that God had set in motion and then left to run on its own.
2. Religious truth can only be found through reason, not divine inspiration or clerical authority.
3. Miracles do not exist, only natural phenomena for which we have not yet found reasons.
4. Universal moral laws exist and can be found in all cultures around the globe, not just in Christian Europe. This reflected the exposure of Europe to other cultures in the Age of Exploration.

Keep in mind that Deism was a philosophy mainly of an upper crust of intellectuals (known then as *philosophes*). Most people in the Enlightenment stayed devout church members totally untouched by Deistic ideas. However, although Deism was confined to such a narrow upper class, including Thomas Jefferson in the United States, its influence was profound, since it was the ideas of these intellectuals who inspired the revolutionary ideas of the later eighteenth and nineteenth centuries. Deism also downplayed the role God plays in this world. This thrust more power and responsibility upon humanity to solve its own social, political, and economic problems, giving rise to remarkable new ideas in those areas as well.

FC100Enlightenment Political & Social Ideas

FC.100 ENLIGHTENMENT POLITICAL, SOCIAL, & ECONOMIC IDEAS



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Killing is murder unless it is done to the sound of trumpets. — *Voltaire*

The Enlightenment was a period of nearly unbounded optimism and faith in the human race's ability to solve its own problems, including restructuring government and society along more reasonable lines. There were two main factors leading into this search for a rational approach to creating a better society. First of all, Deism, with its idea of a God detached from our affairs, gave us the ability and responsibility to solve our own problems. Second, this was a period of rapid social and economic changes, especially in England with its booming colonial empire and economy. London's population jumped from c.700,000 in 1715 to 2.7 million by 1815. Such rapid growth led to squalid living conditions, alcoholism (gin consumption increasing by a factor of 10 times), drug abuse, and crime. While Deism may have given us the power and responsibility to reform society, these conditions provided an urgent need for such reforms. The result was a flurry of new ideas in political science, economics, psychology, and social reform.

Enlightenment ideas on politics were rooted in John Locke's *Two Treatises on Government* (1694). Locke's basic idea was that government, rather than being at the whim of an absolute monarch with no checks on his power,

existed merely as a trust to carry out the will of the people and protect their "lives, liberty, and property." If it failed in its duties or acted arbitrarily, the subjects had the right to form a new government, by revolution if necessary.

Locke's ideas largely summarized the achievements of the English Revolution of the 1600's. They had a tremendous impact on political thinkers in France chafing under the corrupt reigns of Louis XV and Louis XVI. Three of these men, Montesquieu, Voltaire, and Rousseau would profoundly influence French political thought and provide the theoretical justification for the French Revolution.

Montesquieu, sometimes seen as the father of political science, looked at various types of government and analyzed what made them work in his book, *The Spirit of the Laws*. Among the ideas he supposedly derived from England was the separation of powers in government, a vital part of our own constitution.

Voltaire, who first made his name by championing the cause of a Jew wrongly accused and executed for a crime, was probably the most famous of the Enlightenment philosophers. Voltaire wrote on a wide range of topics, but should be remembered here for advocating more civil and political liberties, at least for educated people who can understand the implications of their actions. Voltaire was less clear on what rights the illiterate masses should have.

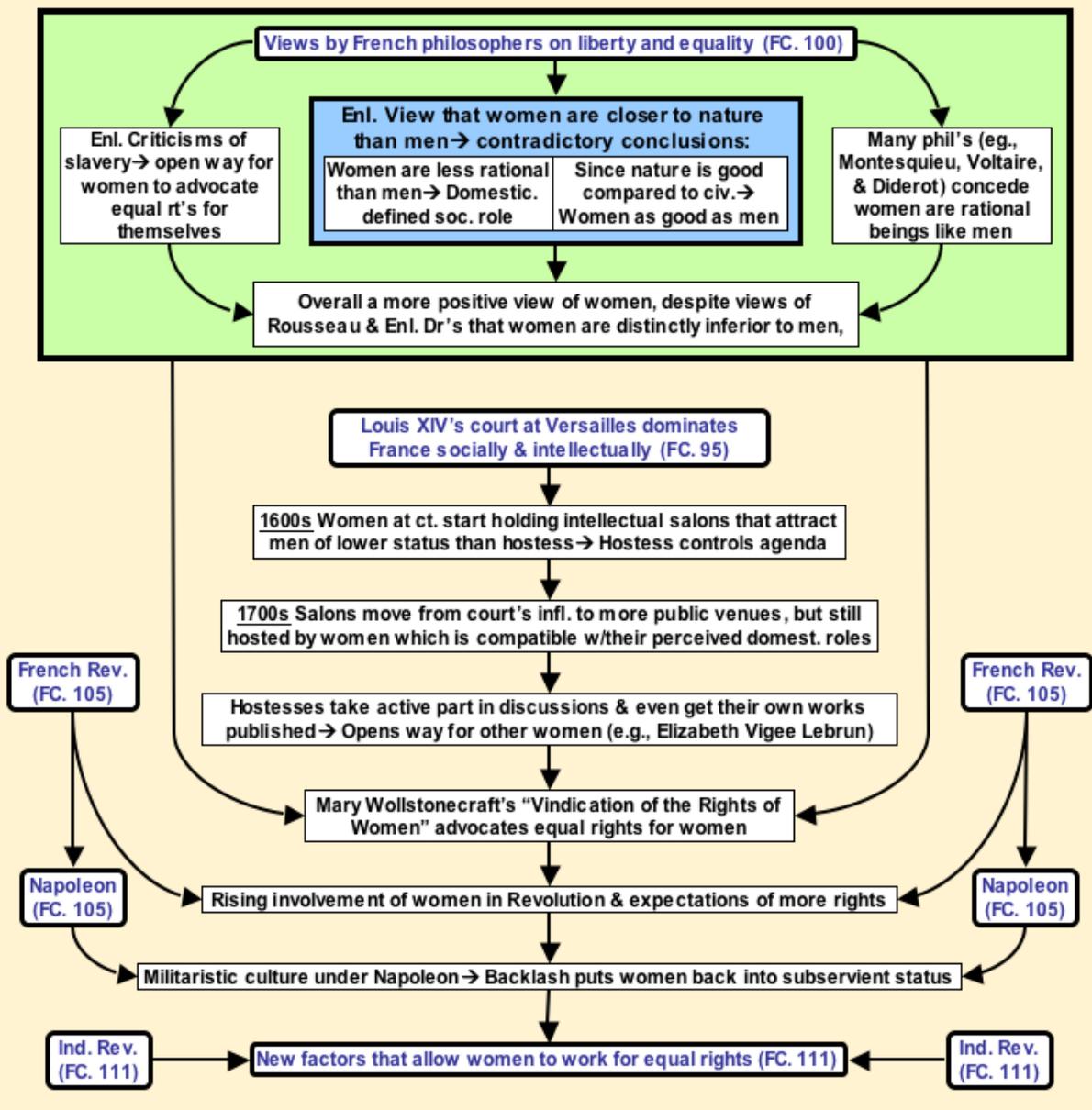
Finally, there was Rousseau who said that people could only legitimately follow laws they themselves have made. Otherwise, they were the victims of someone else's tyranny. Therefore the ideal state is a small-scale democracy in which everyone participates. Together, the ideas of Locke, Montesquieu, Voltaire, and Rousseau provided the basic ideas we have today on personal rights and liberties and how a government can best be structured to guarantee those rights and liberties.

In economics, the most important figure was Adam Smith, whose *The Wealth of Nations* pushed for a wholly new attitude toward economics. Smith saw people as selfish and willing to work much harder and produce much more if they had the incentive to do so. He saw the mercantilism of the 1600's and 1700's, where the state tried to import gold and silver while exporting its goods, as stifling to an economy. Therefore, doing away with mercantilist monopolies and restrictions would provide more incentive to produce. There was no need to regulate the market since people's greed and the law of supply and demand would make the market self-regulating. Smith's free market policy, known as *laissez faire* ("hands off") was widely adopted in the 1800's as Britain, Europe, and the United States rapidly industrialized. It is still a vital part of our economic thinking today.

In psychology, there was Helvetius, who claimed our minds and personalities are blank slates at birth and that we are the products of our environment and the sum total of our past experiences. Combining Helvetius' "blank slate" theory with the prevailing optimism of the age was Jeremy Bentham. He felt we could teach people to act in rational ways by providing an ideal environment where they can learn the right sorts of behavior. Bentham's movement, Utilitarianism, became quite popular and pushed for a wide range of social reforms in such areas as prisons, law codes, and public health.

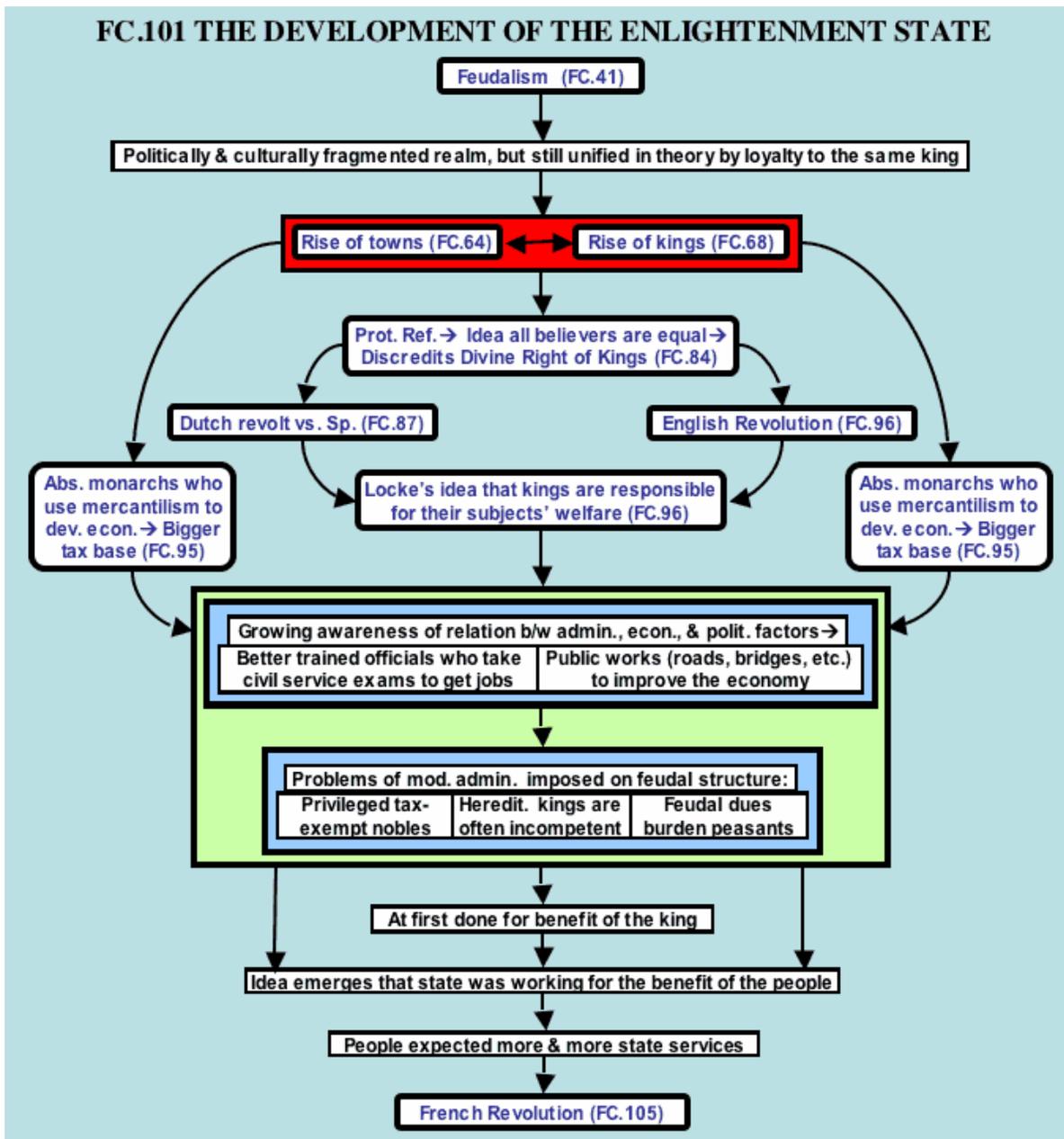
FC100A Enlightenment Salons and the Changing Role of Women

FC.100.A ENLIGHTENMENT SALONS & THE CHANGING ROLE OF WOMEN



Reading in development

FC101 The Rise of the Modern State in Enlightenment Europe



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“It appears that God has created me, pack horses, Doric columns, and us kings generally to carry the burdens of the world in order that others might enjoy its fruits.”— *Frederick II, "the Great", of Prussia*

Introduction

Just as the Enlightenment *philosophes* saw a rational plan in the laws of nature and the universe, they also influenced rulers in building their states along rational lines. For the first time in European history, there was a general realization of the relationship between economic, administrative, diplomatic, and military factors in state building. Despite their vast differences, there was a general trend in both Eastern and Western Europe toward more tightly run bureaucratic states. Public works projects, such as roads, bridges, dams, and canals, multiplied in the hope of building the economy of the mercantilist state. New government departments also appeared in such areas as postal service, forests, agriculture, and livestock raising. States also took censuses and kept statistics in order to plan out policies better.

In order to understand the evolution of the modern state, one needs to understand that the feudal state was *patrimonial*. In other words, the kingdom was the patrimony (hereditary property) of a dynasty. Likewise, the various judicial and administrative offices that ran the kingdom at the provincial and local levels were the patrimonies of privileged families. The modern concept of kings and officials who were accountable for their actions and responsible for the welfare of their subjects was alien to the old feudal state. This made the feudal state more a federation of separate principalities that, in theory, owed allegiance to a common monarch. In the High Middle Ages, this concept of one monarch, among other things, provided at least some degree of order, helping lead to the rise of towns and feudal monarchies which supported each other and increased each other's strength. Over the years, a common language and culture along with the spread of nationalism after the French Revolution united many of these states into what we would call nations. The feedback between the rise of towns and kings produced two lines of development that would help each other in the rise of the modern state.

For one thing, the rise of towns and a money economy helped provide the basis for the Italian Renaissance and Protestant Reformation. Calvinism, in particular, saw all believers as equal in God's eyes, which discredited Divine Right of Kings, helped justify religious/political revolution, and lay the foundations for modern democracy in the Dutch Revolt and English Revolution. By the late 1600's the religious element was fading from theories of revolution. Such political writings as John Locke's *The Social Contract* pushed the idea of the ruler being responsible for the welfare of his subjects. Second, kings were building strong nation-states that, by the 1600's, were assuming greater control over all aspects of the state. For example, the economic theory of mercantilism spurred rulers to work to develop the resources of their kingdoms.

Together these led to a growing realization of the interrelationships between administrative, economic, and political factors in the overall welfare of the state. As a result, more and more royal officials were trained professionals. They had to take competitive exams to gain their positions and did their jobs efficiently and impartially. Kings and their officials also paid more attention to building and maintaining public works such as roads, bridges, and canals to improve the economy. While the purpose of these reforms was to increase the tax base for the kings, they also benefited their subjects. Higher standards of administration made people see their officials as a bureaucracy of service rather than one of privilege. And since they were the king's men carrying out his will, people also saw their kings as public servants rather than as privileged owners of the state. Frederick the Great's quotation at the top of the reading best represents this idea of the king as public servant. As a result, in the 1700's the term absolute monarchy gave way to the term "enlightened despot", a monarch who ruled according to enlightened principles rather than the divine right of kings.

The eighteenth century state still had problems. For one thing, it had a modern political administration superimposed upon a feudal social order. Nobles were still the privileged social class, holding most of the important administrative and military positions. Peasants in Central and Eastern Europe were still downtrodden serfs. Even French peasants, who were otherwise free, had feudal obligations imposed upon them.

In spite of this, the centralized states emerging in the Enlightenment were important in the evolution of our own modern states in two ways. First of all, the emergence of a professional bureaucracy, chosen largely for merit, not money or birth, provided the state with a modern administrative structure that continues today. Second, the idea of the rulers and officials being servants, not owners, of the state was central to the revolutionary ideas that swept Europe starting with the French Revolution in 1789. A closer look at several of the major states of eighteenth century Europe will give a better idea of their accomplishments and limitations.

France

under Louis XV may at first glance have seemed like a strongly unified state. But it had serious problems at the center of government. First of all, the court at Versailles with its petty intrigues stifled the work of most capable officials. Instead of tending to their appointed duties, officials spent more time defending their positions at court. Under Louis XV there were 18 foreign secretaries and 14 controller generals, most of them eventually ruined by palace intrigue. Their average terms of office were between two and three years. At the center of this was the king, Louis, who was a somewhat intelligent, but weak willed and disinterested man who let others run the government for him.

Another problem for the central government was the intense competition between the council of state (from which all laws supposedly emerged) and the various ministers (justice, finance, war, navy, foreign affairs, and the king's household). The ministers carried out and often formulated the king's policies. However, we have seen what court intrigue did to many of the ministers, and one can imagine the confusion and lack of direction in the central government.

By contrast, the provincial government was fairly efficient. The main figures here were the *intendants* that ran the 32 *generalites* (provinces) set up by Richelieu some 100 years before. He was in charge of tax collection, justice, and policing his province, and he had a fairly free hand to carry out these duties as he saw fit. The intendant was the king's agent in the province and was the man most Frenchmen saw as representing royal authority. He also represented the interests of the people to the central government, and his opinion was generally respected by the king's ministers and councilors. In contrast to the unfortunate officials close to Versailles, the intendants generally kept their positions for decades, which allowed them to know their territories and peoples more thoroughly and better rule them. The intendants were often criticized for being too powerful and corrupt. There certainly was some corruption, but in general, the intendants represented efficient and conscientious government. Unfortunately, nobles, anxious to preserve and regain their ancient prestige, even took over more and more intendant positions as the 1700's progressed.

The intendants needed help at the local level. These lower level officials fell into three categories. The first category consisted of feudal officials who had bought or inherited their positions. Such men had little training or care for their work and were a burden to the intendants that were stuck with them. Next, there were subdelegates, who were poorly paid, poorly trained, and also of little use. Finally, there were what we might call true civil servants. These were specialists (engineers, architects, physicians, etc.) who had to take competitive tests to gain their positions. These were the men who usually carried out the directives of the intendants and kept the French state running. It was these officials who would survive the French Revolution and become the nucleus of the modern French civil service.

The Hapsburg Empire

may have been an absolute monarchy, but it was a far cry from being a unified state. The War of the Austrian Succession especially pointed out the need to organize an administration such as Richelieu and Frederick William the Great Elector had done for their respective states a century earlier. The central government in Vienna had a number of governing bodies whose functions overlapped, which led to great confusion. A full one-third or more of all taxes collected never made it to Vienna, so no effective budget could be made. Local government consisted of noble estates (assemblies) that granted or refused the central government its taxes. Nobles in Hungary owned 80% of the land and paid no taxes, leaving the full tax burden to the peasants. The nobles also maintained jurisdiction over the peasants on their lands. It was this mess that the Austrian minister, Count Haugwitz, set out to clean up. He did it at the central, provincial, and local levels. The central government was streamlined into five ministries: foreign affairs, commerce, war, justice, and internal affairs. Typical of the prevailing mercantilist philosophy of the day, the minister of finance was deemed most important in both France and Austria.

At the provincial level, an administrative board known as the *gubernium* largely replaced the power of the noble estates. In 1748, after the disasters of the War of the Austrian Succession, the estates recognized the need to reform the state and granted ten years worth of taxes to the central government. This meant that the empress could rule without the estates for the next decade. As their power withered, that of the *gubernium* increased. Thus the feudal estates were gradually replaced by a more modern system. Another important principle that took over here was that of the separation of powers within a government, specifically between the courts and the executive/legislative branches. This principle was pushed by the French *philosophe*, Montesquieu, and has remained an important part of the modern state down to this day.

At the local level, a Hapsburg official, the *kreishauptmann*, interfered more and more in the affairs traditionally left to the noble estates. The more such officials became involved in the daily affairs of the peasants, the more concerned they and the Hapsburgs were for their welfare and their ability to pay taxes. Therefore, the *kreishauptmann* became the virtual champion of the peasants against the nobles, preventing them from evicting peasants and taking their lands or forcing them to do extra servile labor.

Maria Theresa's government also effected a major fiscal reform to raise revenue. Even nobles and clergy had to pay regular property and income taxes. This distributed the tax load more evenly, but there were still gross inequities. The average peasant still paid twice the taxes that a noble paid. And Bohemia was liable for twice the taxes that Hungary was. Still, her reforms were a giant step forward for the Austrian Empire, and her system remained the basis for Hapsburg administration to the end of the empire in 1918.

Maria Theresa's son, Joseph I, carried the spirit of enlightened rule even further than his mother had. He was an enlightened ruler who was determined to use his power to make his people live according to enlightened principles whether they liked it or not. Joseph's reforms cut across the whole spectrum of the Hapsburg state and society. In the judicial realm, he had the laws codified, tried to get speedier and fairer trials presided over by trained judges, and outlawed torture, mutilation, and the death penalty. He ordered toleration for both Protestants and Jews and legalized interfaith marriages. Along the same lines, he relaxed censorship, restricting it only to works of pornography, atheism, and what he deemed superstition.

Joseph was a devout Catholic, but saw the Church as a virtual department of state that needed some house cleaning. Therefore, in 1781 he closed down many monasteries or converted them into hospitals and orphanages. He also required a loyalty oath from the clergy to ensure tighter control of the Church. He controlled and encouraged education, especially for the purpose of producing trained civil servants. Through a combination of incentives for families who sent their sons to school and punishments for those who did not, Austria under Joseph had a higher percentage of children in school than any other state in Europe.

Joseph's reforms extended to trying to make his subjects' lives easier. Although he failed to abolish serfdom, he did get the number of days per week that peasants had to work for their lords reduced from four to three and evened out the tax burden paid by peasants and nobles. He tried to encourage trade and industry through high protective tariffs, tax relief, subsidies, loans, and the building of roads and canals. He rewarded immigrants, but severely punished those trying to emigrate from his empire. Sometimes, his decrees could interfere with the minutest aspects of people's lives, such as forbidding them to drink the muddy water of the Danube or to eat gingerbread and encouraging peasants to mix vinegar with their water.

By his death, Joseph had increased his empire's revenues from 66 million to 87 million florins, while virtually tripling the size of his army. Unfortunately, no amount of reform probably could have solved the Empire's most serious problem: the large number of different nationalities and cultures forcibly held under Hapsburg rule. German language and culture were imposed throughout the Empire. But in the long run, the Hapsburg Empire was a virtual time bomb of nationalities waiting to explode and fragment into different states.

Prussia

was the state that most people saw as the epitome of the enlightened despotate. At the center of this was Frederick II himself, whose incredible energy, drive, and intelligence were more than equal to what all the ministers and rulers of any other state in Europe were capable of. Frederick clearly saw the interdependence of foreign, domestic, military, and financial affairs and was determined to direct all these affairs personally. Therefore, he served as his own foreign minister, finance minister, and general staff. (He even scouted enemy positions by himself, much to the worry of his officers.)

Frederick's workday started at 4 AM and extended to 10 PM. The vast body of work and responsibilities he undertook required an incredibly organized schedule and work routine. His civil servants in Berlin sent him details and data on specific matters, and he sent back orders he expected them to carry out punctually. His court at Potsdam had neither family, court etiquette, religious holidays, nor other distractions to impair the government's efficiency. The court and government resembled a barrack and were run with military precision. If any one man gave us the idea of the state serving the people rather than the other way around, it was Frederick the Great.

Frederick had little faith in either his troops or bureaucracy and subjected them to severe surveillance and discipline to make sure they did their jobs. Royal agents, known as *fiscals*, combined the duties of spies and prosecuting attorneys to keep the bureaucrats in line. Any examples of corruption led to immediate dismissal. Civil servants had virtually no civil rights (including that of a trial) and have been described as the "galley slaves" of the state. Even with the fiscals, Frederick felt he needed better information about his government and kingdom. Therefore, he

had subordinates report to him about their superiors. He also made an annual tour of the kingdom from May to August, personally examining officials, interviewing private citizens, inspecting local conditions, and gathering immense amounts of information. There were few things of importance that escaped Frederick's notice for long.

Unlike the rest of Europe, where most public offices were either bought or inherited, Prussia required all of its civil servants to earn their positions by passing a civil service exam. Most candidates had a college education in jurisprudence and government management. All of them, regardless of class, also had to spend one to two years on a royal farm to familiarize themselves with the various aspects of agriculture, in particular the new scientific agricultural techniques being developed and the problems of lord-serf relations.

At the provincial level, there were 15 provincial chambers, each with 15 to 20 members. Since the members were responsible for each other's actions, there was little corruption at this level. The provincial chambers had two main duties: to collect taxes; and stimulate the economy to raise the tax base. In true mercantilist spirit, they had sandy wastes reclaimed, swamps drained, and new settlements founded. They went to England and Holland to study commercial and agricultural methods there, sought out markets for Prussian goods, and arrested any vagabonds they found, since laziness and indolence were public offenses in Prussia.

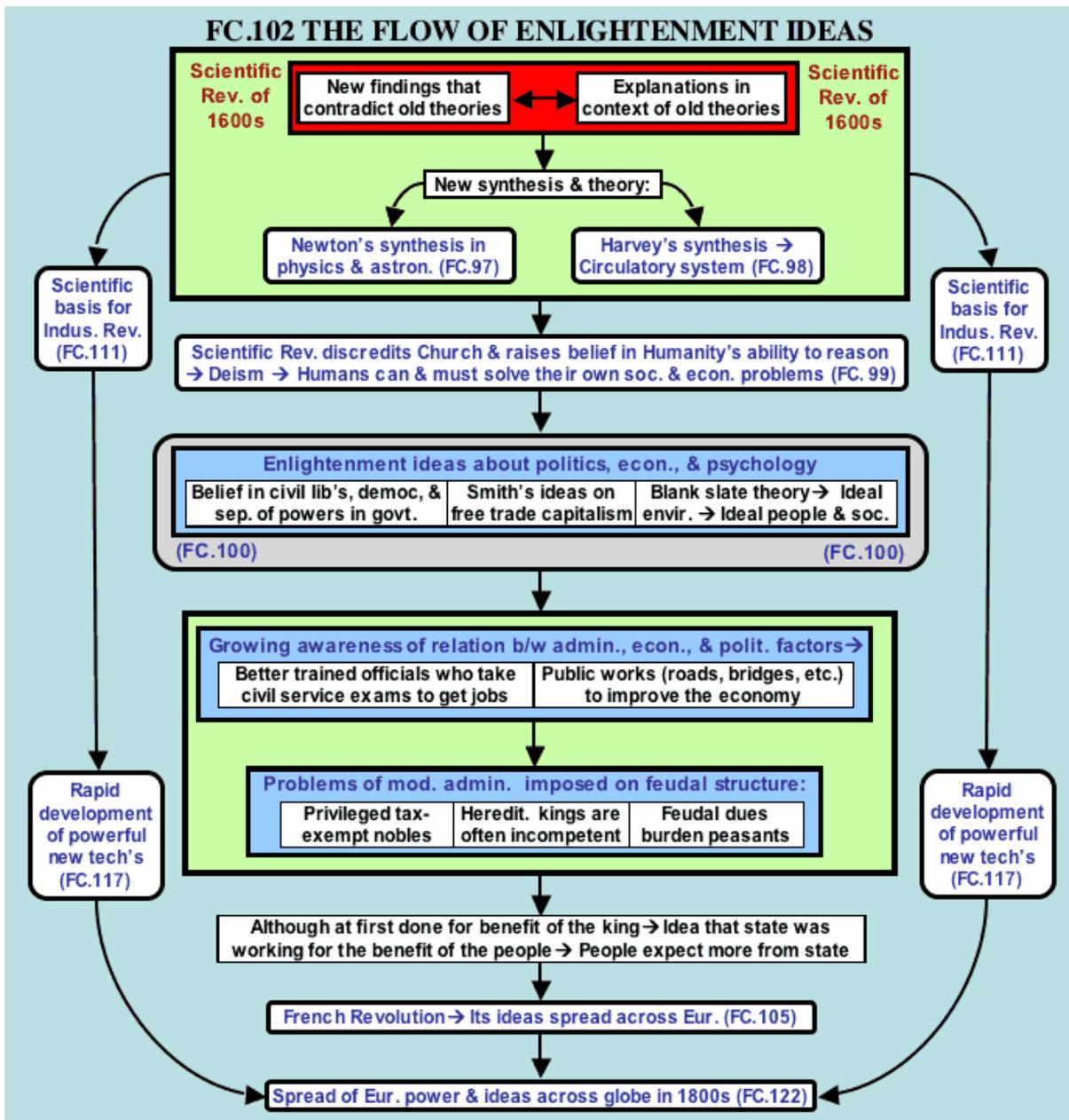
At the local level there were the *steurrat* and *landrat*, who administered towns and rural affairs respectively. The *steurrat* ruled from 6 to 10 towns, and left them little in the way of home rule. In addition to collecting taxes, he fixed food prices, enforced government decrees, regulated the guilds, and kept the garrison properly housed. The *landrat* had much the same duties in the countryside, but was not so closely supervised by the central government, largely because the king had too little money to closely control the *Junkers* (nobles). The *landrat* was always a local noble and estate owner and was elected to his position by his fellow *Junkers* as often as he was appointed by the king. The *landrat* exercised all the functions of local government: tax collecting, administering justice, maintaining public order, and conscripting recruits for the army. As long as he did his job and did not abuse the peasants too severely, the central government largely left him alone.

To a large extent, poverty built the Prussian state of the 1700's. It created a tightly run and loyal officer class by forcing impoverished nobles into service to the state. It also forced Prussia's rulers to adopt the tight-fisted economic measures that became the basis of Prussian discipline and regimentation into this century.

Russia

Catherine the Great of Russia also strived to be an enlightened despot, at least in appearance. However, Russia was too big and too far behind the West for it to be transformed into an enlightened society overnight. The court, to be sure, reflected the fashions and manners of courts in the rest of Europe. However, this was a mere facade to mask the still medieval nature of the rest of society in the countryside. Symbolizing this facade was the series of fake villages stocked with healthy prosperous looking peasants that Catherine's prime minister, Potemkin, set up to fool Catherine into thinking her realm was indeed on a par with the West. Unfortunately for Russia, parity with the West was far from the case, and Russia would pay a heavy price for its backwardness in the years to come.

FC102The Flow of Ideas in the Enlightenment



[FC102](#) in the [Hyperflow of History](#);

Covered in multimedia lecture [#1866](#).

Introduction. Although the Enlightenment spawned ideas on a wide range of subjects from the sciences to religion and the state, it is important to see how all these ideas occurred in something of a sequence that fit together in a fairly unified way. This is especially crucial for us today, since we largely isolate the various academic disciplines from one another rather than see how they relate to one another. Perhaps the twenty-first century will see such a synthesis take place.

Starting with the scientific revolution, we need to go back to the Renaissance with new findings in astronomy and physiology that seemed to contradict old theories, especially those of Aristotle. At first these led to explanations that were still framed in the context of old theories, especially if another ancient authority, such as Plato or Pythagoras, could be used to back it up. However, these natural philosophers, as they were called, kept finding more and more evidence that seemed to contradict the old theories until they had to come up with new syntheses and theories of their own. We have looked at two of these processes in particular: Newton's synthesis in physics and astronomy, and Harvey's synthesis concerning the circulatory system.

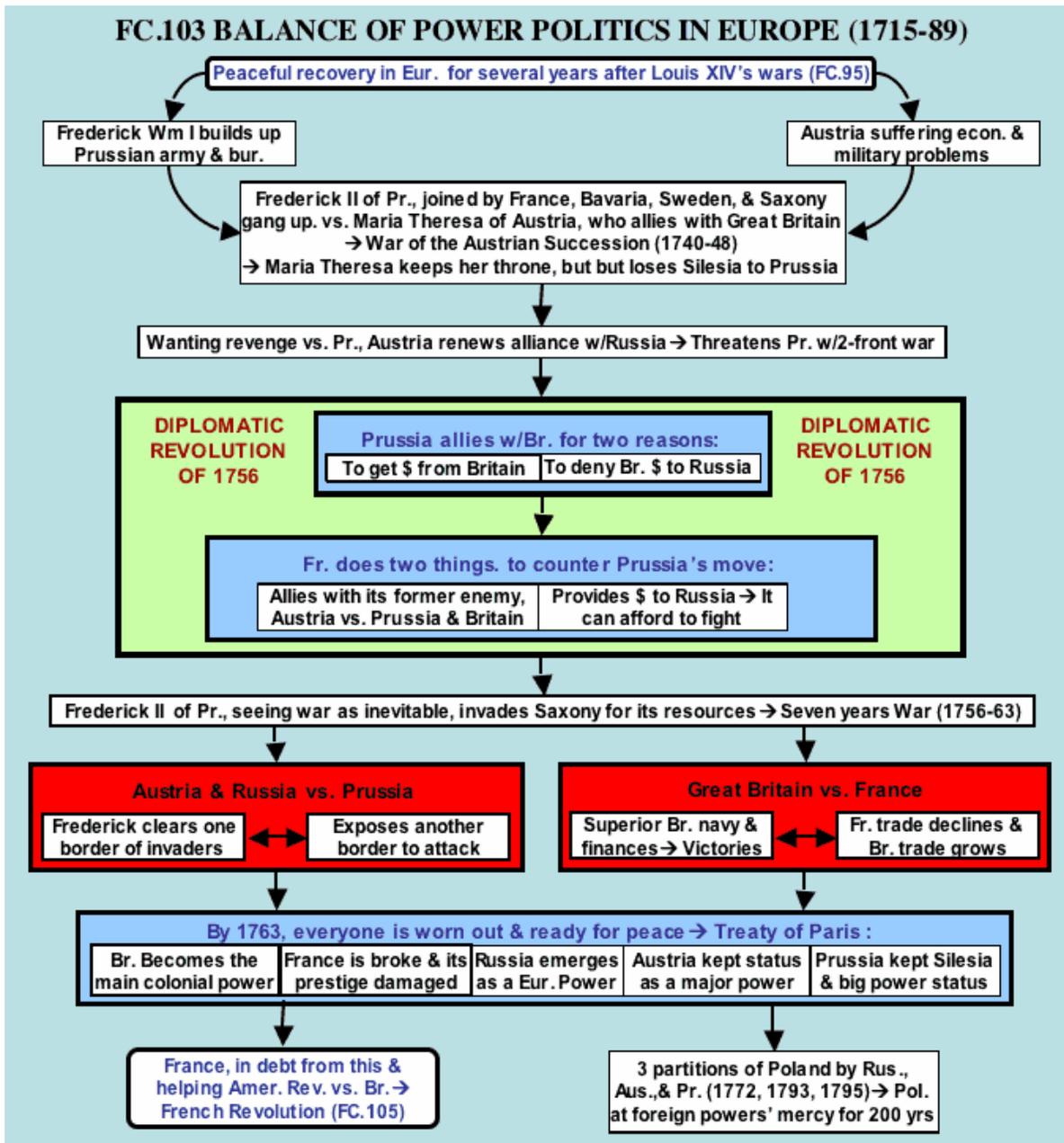
In addition to creating the scientific basis for the industrial revolution in the 1800s, they also opened the way for new ideas outside of science. Key to this was the fact that the scientific revolution had discredited the Church and raised the belief in humanity's ability to reason. For some, this led to the philosophy of Deism, the belief that God exists but is not actively involved with this world, leading to the conclusion that humans can and must solve their own social, economic, and political problems. Out of this came a new branch of study, the social sciences.

In the realm of political science, a whole new body of ideas emerged concerning the state and our relationship to it: the belief in civil liberties for everyone (or at least all men), democracy, and the separation of powers within a government. Central to all of these was the idea that the state, instead of being a divinely ordained absolute monarchy, is an implied contract between ruler and subjects, each with mutual rights and obligations. In economics, the prevailing idea, as expressed in Adam Smith's *Wealth of Nations*, was free trade capitalism. In psychology there was the Blank Slate theory that our characters are purely the result of our environment and experiences. This would spark a nature versus nurture debate that still goes on.

The new theories about the state had a very real impact on many Enlightenment rulers, such as Frederick the Great of Prussia and Joseph II of Austria, who were increasingly aware of the impact of their administrative, economic, and political policies on their own power. Therefore, following the prevailing philosophy of mercantilism, they started establishing better civil services by choosing more of their officials based on merit, sometimes determined by civil service exams. They also created more public works (roads, bridges, canals, etc.) to improve the economy and their tax base. Sometimes these mercantilist policies were too heavy-handed in how they were carried out, but in many cases they benefited society. Unfortunately, at this time, trying to impose these reforms on a society that still had many feudal features also impeded progress: such things as tax exempt nobles, hereditary offices (including the monarchy), and extra feudal dues burdening the peasants.

Of course, these reforms were done in most cases for the benefit of the king, but they also often benefited society as a whole, giving rise to the idea that the state was working for the benefit of the people instead of the other way around. Out of that idea came rising expectations for more benefits from the state. People even started feeling that when those expectations were not met, they had the right to rebel. That is exactly what would happen in France in 1789.

FC103 Balance of Power Politics in the Age of Reason (1715-1789)



[FC103](#) in the [Hyperflow of History](#);

Covered in multimedia lecture [#1864](#).

“Dogs! Do you want to live forever?”— *Frederick the Great, to his troops in the heat of battle.*

Introduction

The period from 1715-1789 was one of transition between the religious wars of the 1500's and early 1600's and the wars of nationalism and democracy starting with the French Revolution. This was also the era of *balance of power politics* where Europe operated as an integrated system, so that one state's actions would trigger reactions from all the other states. As a result, it was hard for one state to gain an overwhelming position in Europe without everyone else, in particular Britain, ganging up to restore the balance. Finally, it was a period of intense competition between European states, a competition that would launch Europe into the two bloodiest centuries in all human history.

Diplomatic maneuvering (1715-1740)

The death of Louis XIV in 1715 ended the bloodiest and most exhausting period of warfare up to that point in European history. The scale of bloodshed and expenditure was so massive that it would take several years before Europe would be ready for another major war. However, mutual distrust kept the various powers eyeing each other suspiciously and constantly maneuvering to maintain a stable or superior position in case war did break out. Spain and Austria conspired to take Gibraltar from England, causing Britain and France to ally to stop this plot. Britain, Austria, and Holland signed the Barrier Treaty in 1718, by which Austria got the Spanish Netherlands (modern Belgium) in return for manning the barrier fortresses against French aggression. Because of this maneuvering (or maybe in spite of it) peace ruled over most of Europe for nearly two decades.

The first major disturbance was the War of the Polish Succession (1733-39). The death of the Polish king led to rival claims by French and Austrian candidates, and these claims led to war. Austria and its ally, Russia, being closer to Poland, emerged victorious over France and Spain. The only compensation was that the Spanish Bourbons got control of Southern Italy and Sicily. The War of Polish Succession symbolized the growing importance of Eastern and Central Europe in diplomatic affairs. In fact, events surrounding two of these states, Prussia and Austria, would dominate European affairs for much of the eighteenth century.

The rise of Prussia

Since the late 1600's, Prussia had been quietly but steadily gaining strength. Under Frederick William the Great Elector (1640-88) and his grandson, Frederick William I (1713-40), Prussia evolved from a small war ravaged principality to a highly centralized independent kingdom. The two pillars of Prussian strength were a highly disciplined and efficient army and bureaucracy. Prussia was a poor country, and Frederick William I did a masterful job of making the most from the least. He did this through a combination of intense economizing and severe discipline and regimentation of virtually every aspect of Prussian society. History has seen few skinflints of Frederick William I's caliber. He cut his bureaucracy in half, cut the salaries of the remaining civil servants in half, dismissed most of his palace staff, sold much of his furniture and crown jewels, and even forcibly put tramps to work. But he expected no more of his subjects than he did of himself as the first servant of the state, probably a legacy of his Calvinist upbringing.

Frederick William's main expense was the army, which is not surprising when one considers Prussia was surrounded by Austria, Russia, and France, all with large armies of at least 90,000 men. By his death in 1740, Prussia's army numbered some 80,000 men. Frederick William's pride and joy was his regiment of grenadiers, all of them over six feet tall (a remarkable height back then). His friends would give him any six-foot tall recruits they could find, while he kidnapped most of the rest. In spite of this military buildup, Frederick William I followed a peaceful foreign policy and left his son, Frederick II, both a large army and full treasury.

Frederick II presents a fascinating contrast to his father. While the old king detested anything that suggested France and culture, his son treasured those very things. This made Frederick's childhood very difficult. On the one hand, he was required to wear a military uniform and live the life of an officer. On the other hand, he took every possible chance to learn music, speak French, and curl his hair and dress in French fashion. This infuriated the king who often beat his son in fits of rage. The king's chronic illness did not help his temper. Neither did Frederick's tendency to tease his father and see how far he could push him. At one point, Frederick tried to escape from Prussia, was captured, court-martialled, condemned to death, and finally released after a lengthy imprisonment. It is a wonder that one of them did not kill the other. However, when Frederick William I died, father and son were reconciled. It is interesting to see how similar to and different from his father Frederick II would turn out to be as king.

The War of the Austrian Succession (1740-48)

Frederick's eyes were turned toward the rich province of Silesia, then under Hapsburg rule. The timing could not have been better for Prussia. Austria was in pitiful shape to fight a war, having just lost a disastrous struggle with

the Ottoman Turks. Its generals and ministers were old men past their prime, while the administration was full of corruption and confusion. And to make matters worse, the old emperor, Charles VI had just died, leaving only a young woman, Maria Theresa, to succeed him. Charles had gotten most of Europe's rulers to sign the *Pragmatic Sanction*, a document recognizing Maria Theresa as the lawful heiress. But many questioned the legality of Maria and her husband taking the throne, and set up the elector of Bavaria as an alternate candidate. This was the situation for the unfortunate Maria Theresa (who was also pregnant) when Frederick invaded Silesia.

However, as Frederick William I had warned the young Frederick, wars were generally much harder to end than start, and this one did not stop at Silesia. France, Spain, Bavaria, and Saxony all joined Prussia, hoping to pick Austria clean. Austria's ally, Russia, was neutralized when Sweden joined the other side against it and Austria. That left Britain, who was already involved in a war with Spain over control of the West Indies trade. Britain, which generally tried to maintain the balance of power and its trade, backed Austria. Unfortunately for Austria, Britain had a small army and was mainly concerned with defending George II's principality of Hanover from neighboring Prussia. As if Frederick William I had been a prophet, a simple move into Silesia had triggered what amounted to a global conflict, with fighting in India and the American colonies as well as Europe.

Mollwitz, the first battle of the War of the Austrian Succession, was a bit embarrassing for Frederick. His army won, but not until he had run prematurely from the field. After that, however, he showed a flair for brilliant generalship and decisive movements that were unequalled until Napoleon some fifty years later. Frederick's victory at Mollwitz left him with Lower Silesia and left Maria Theresa, who had just given birth to a son, somewhat destitute. However, the young queen showed she had some spirit and fight of her own. She rallied the Hungarian nobles to her side, raised an army, and secured an alliance with England. Next, she made a secret truce with Frederick, giving him Lower Silesia if he would drop out of the war. Then, she surprised everyone by invading Bavaria and throwing her enemies, now without Frederick, off balance.

With Austria's fortunes restored, the war dragged on for eight more years. Frederick would occasionally re-enter the war, revive his allies with his brilliant leadership, and then be bought off with more of Silesia. At last, bloodshed and exhaustion led to the Peace of Aix-la-Chapelle in 1748. Frederick kept Silesia, while Maria Theresa had survived and saved the rest of her empire. However, she was burning for revenge against Frederick.

The "Diplomatic Revolution" of 1756

The first thing Maria Theresa needed to do was reorganize the Hapsburg Empire. Therefore, she centralized the government, reorganized finances, and built up the army. Next, she set about looking for allies to help her gang up on Frederick. First, she renewed her alliance with Russia, thus securing her eastern flank and endangering Prussia's at the same time.

In this she was helped by Prussia's own position and actions. The Austro-Russian alliance already threatened Frederick with a two front war. If he were also attacked from the west and faced a three front war, that would be disastrous. His choice for allies lay between France and Britain. France, his traditional ally was slow moving and reluctant to fight another war. England, on the other hand, threatened him with its Hanoverian lands on his western border, and had signed a treaty agreeing to pay for Russian armies. By secretly allying with Britain, Frederick felt he was neutralizing the threats to both his western and eastern borders, since Britain would now guard, not threaten, his western borders, and subsidize his armies, not Russia's.

Frederick felt that Russia could not fight without British money. He also felt France would not mind his alliance with Britain to keep the balance of power in Germany. He was wrong on both accounts. Louis XV was furious about Frederick making this treaty with Britain without consulting France. As a result, France allied with Austria and agreed to finance Russia's war effort. This ended 250 years of hostility between France and Austria and brought about a virtual diplomatic revolution in how the powers in Europe were aligned. Frederick, finding himself surrounded by enemies, took the initiative and invaded Saxony. The Seven Years War had begun. Now it was Frederick's turn to prove himself in the face of overwhelming odds.

The Seven Years War (1756-63)

was actually two conflicts combined into one giant war. In addition to the continental war of Prussia against Austria, Russia, and France, there was also the struggle for colonial empire between Britain and France. The war assumed global dimensions, extending from Europe to North America, the West Indies, Africa, India, and the Philippines.

Prussia's struggle was especially desperate. Frederick, faced with a three front war, was forced to race from one frontier to the next in order to prevent his enemies from combining in overwhelming force. Even then, he still was always outnumbered. Frederick's oblique formation, where he stacked one flank to crush the opposing enemy flank and roll it up, worked time and again to save the day for Prussia. After two brilliant Prussian victories in 1757, Britain came to the rescue with troops to guard Hanover and money to pay for the Prussian army, thus neutralizing the French war effort on the continent.

Even with France out of the picture, the war against Austria and Russia raged year after year and fell into a sort of vicious cycle where Frederick would clear one frontier of enemies. Meanwhile, another enemy would invade Prussia elsewhere, forcing Frederick to rush there to expel this new threat. However, this only exposed another frontier to invasion, and the cycle went on. Against such odds, Frederick lost as many battles as he won. However, his iron will and determination to save Prussia gave him the strength to bounce back, gather a new army, and drive back each new invasion. The Seven Years War became something of a patriotic struggle for the Prussian people, who were called on in greater numbers to defend their homeland. Junkers (nobles) only 14 or 15 years of age rushed to enlist, as did many peasants. The civil service carried on throughout much of the war without pay. The heroic example of Frederick inspired many Germans outside of Prussia to praise him as the first German hero within memory able to defeat French armies. Even French *philosophes* sang his praises.

But the grim business of war dragged on and on. From Frederick's point of view, this was a war of attrition and exhaustion. If he could hang on long enough and inflict enough casualties, his enemies would tire of the war and go home. As luck would have it, the Tsarina Elizabeth died in 1762. Her successor, Paul, was an ardent admirer of Frederick. Not only did he abandon Austria, but also he offered Russian troops to help Frederick. But Paul was soon murdered by his wife, Catherine, who ascended the throne and pulled Russia completely out of the war. This left only Austria and Prussia, who were both exhausted by the war.

Meanwhile, Britain was striving to build a colonial empire and eliminate French competition. Part of its strategy was to protect Hanover in order to keep Frederick in the war and divert French men and money away from the colonial wars. The colonial struggle took place over North America (known as the French and Indian Wars), the West Indies, India, and slave stations on the African coast. In each case, British financial and naval superiority proved decisive, cutting French troops off from home support while bringing British colonial armies overwhelming reinforcements. The resulting British victories cut French colonial trade by nearly 90% while British foreign trade actually increased. This both deprived France of the means to carry on the colonial war and gave Britain added resources for it, which led to more British victories, more British money, and so on.

In 1762, Spain suddenly joined France's side. By this time, the British war machine was in high gear under the capable leadership of Prime Minister, William Pitt. Therefore, British forces easily crushed the Spanish and took Havana in Cuba and Manila in the Philippines.

By the end of 1762, both sides were ready for peace. The resulting Treaty of Paris in 1763 was a victory for Prussia and Britain. Prussia, while getting no new lands, kept Silesia and confirmed its position as a major power. Britain stripped France of Canada and most of its Indian possessions, and emerged as the dominant colonial power in the world. Although Russia gained no new lands, it emerged as an even greater European power.

The Partitions of Poland

The Treaty of Paris had effects in both Eastern and Western Europe. In the East, the emergence of Russia as a major power was a matter of concern to other European nations. The country directly in Russia's path of expansion was Poland. At one point, Poland had been a major power in its own right that had picked on the emerging Russian

state. Now the tables were turned. Russia was a growing giant, and Poland was crumbling to pieces, largely because of a powerful nobility and weak elective monarchy. Frederick also had his eyes on Poland, in particular the lands cutting Prussia off from the rest of his lands in Germany. Since Russia, Prussia, and Austria were still exhausted from the Seven Years War, they agreed to divide part of Poland peacefully among themselves in 1771. However, their greed was not satisfied, and there were two more such partitions in 1793 and 1795, which eliminated Poland from the map. Since that time until the collapse of the Warsaw Pact in 1989, Poland has mostly lived under the yoke of foreign (mainly Russian) domination.

The American Revolution

In the West, the last major event before the French Revolution was the American War for Independence (1775-83). For once, Britain, the big colonial power, found itself ganged up on by France, Spain, and Holland. This war had two important results in Europe. First, it left France bankrupt, which helped spark the French Revolution. Second, it established a democratic republic that many Frenchmen saw as an inspiration for their own revolution and the spread of democratic ideas across Europe and the globe.