Names and Probability

Near the end of the middle ages, in the 12th to 14th centuries, the use of surnames in England began to emerge. Names of occupations, locations, father's name, or other significant events or items were appended to given names and became surnames. Surnames appeared because the number of people was increasing and a method was needed to differentiate families and individuals.

In addition to identifying those that can be seen, the fighting men of the middle ages wore metal suits of armor for protection. Since this suit included a helmet that completely covered the head, a knight in full battle dress was not recognizable. For identity a colorful pattern was painted on battle shields. The patterns were also woven into cloth coats which were worn over their armor, hence the term "coat of arms."

Records were kept that granted the right of a particular pattern to a particular knight. This armoral pattern was inherited by the heir. In some cases several sons or descendants used the same arms, but rights of inheritance governed their use.

Those inheriting arms were called by the term, "Landed Families," or "The Gentry." Many of these families traced their pedigrees to the kings of England. These kings also developed family surnames.

Records and tables were kept about families. Flavius Josephus mentions finding his ancestors in

"the public records." He also mentions tables identifying genealogies for thousands of years. Everyone, including royalty, acquired a surname.

Geoffrey V, Count of Anjou, bore a branch of the yellow broom plant (Planta-genistae) in his helmet. His practice became his surname. This Geoffrey was the grandfather of King John "Lackland" (Plantaganet).

The name Plantagenet, according to Rapin, came from when Fulk the Great being remorseful for some wicked action, went on a pilgrimage to Jerusalem in order to atone for it, and was scourged before the Holy Sepulchre with broom twigs. Another story for the Planta-genistae becoming a surname.

Whatever surname is found in England, most likely our Hales family is probably a relative. The probability ensures this to be true.

In the Genealogist Magazine, a publication of The Society of Genealogist of London, England there is an article on genealogical probability (Volume 18:2). This article states that it is mathematically impossible for anyone having English ancestry to not descended from William the Conqueror or any other person of his time-period. This probability is based on a premise that if ten percent of the people moved once during their lifetime – sufficient to provide a genetic mixture of the population – then it is mathematically impossible for anyone having English ancestry to not be descended from everyone in England who was fertile during William the Conqueror's time.

Since there are 59 generations from William the

Conqueror to Antenor, it is certain that intermarriages would promulgate the blood of Ephraim to all Europeans as well. Hence all those from England and Europe literally descend from the tribe of Ephraim.

This chapter would indicate that most of the people in this book are not adopted into the tribe of Ephraim, but are literal descendants of the Biblical Ephraim, son of Joseph, who was sold into Egypt.

When I am asked to teach classes on genealogical research I use the following examples to illustrate the magnitude of the numbers based on the Genealogists Magazine article on probability.

Would you like to be a descendant of William the Conqueror? Whether you like it or not, you are! Now mark well –

Everyone has 2 parents, 4 grandparents, 8 great-grandparents and so on. Three generations span approximately a hundred years. Therefore, 100 years ago you had 8 ancestors.

Century	Ancestors
	2
1st century	4
	8
	16
2nd century	32
	64
	128
3rd century	256
	512

	1,024
4th century	2,048
	4,096
	8,192
5th century	16,384
	32,768
	65,536
6th century	131,072
	262,144
	512,288
7th century	1,048,576
	2,097,152
	4,194,304
8th century	8,388,608
	16,777,216
	33,554,432
9th century	67,108,864
	134,217,728
	268,435,456
10th century	536,870,912
	1,073,741,824

Between 900 and 1,000 years ago, when William the Conqueror walked the earth, you would have had to have a minimum of 134,217,728 conceptual ancestors. At that time demographers indicate the population of the people in the area of William the Conqueror's reign to be approximately 35,000,000 people. Since many of these people were interrelated, the number of your ancestors could not exceed this amount. However, one of these had to be William the Conqueror.

Another example:
Doubling family group sheets illustrates the concept (each individual has two parents – a doubling and then the parents, also individuals, continue the process). The pile of family group sheets thickens rapidly.

Family group sheet doubling.

	.003"
	.006"
	.012"
	.024"
After five (generations)	.048"
	.096"
	.192"
	.384"
	.768"
After ten (generations)	1.536"
	3.072"
	6.144"
	12.288"
	24.576"
After fifteen (generations)	49.152"
	98.304"
	196.608"
	393.216"
	786.432"
After twenty (generations)	1,572.864"
	3,145.728"
	6,291.456"
	12,582.912"
	25,165.824"
After twenty-five (generations)	50,331.648"

	100,663.296"
	201,326.592"
	402,653.184"
	805,306.368"
After thirty (generations)	1,610,612.736"

This indicates that a pile of five generations of family group sheets would be .048 inches thick and ten generations of family group sheets would measure 1.536 inches thick. This is a reasonable number of family group sheets that would possibly be in the personal library or ancestral file of an individual.

Fifteen generations of family group sheets would measure 49.152 inches thick (more than four feet thick). This is more family group sheets than most individuals would have in their collection.

Twenty generations of family group sheets would measure 1,572.864 inches thick (or 131 feet thick). It would be unreasonable to have this many family group sheets in any persons library.

Twenty-five generations of family group sheets would measure 50,331.648 inches thick (4,194.304 feet or .7897 miles thick).

Thirty generations of family group sheets would measure 1,610,612.736 inches thick (or 25.4 miles thick).

Another example:
There is the story about the wise man in southeast Asia that invented the game of chess. The ruler of the nation was so impressed with this game that he

thought that he would reward the inventor. He gave this wise man an audience with the ruler, informed of his plan to recognize his great achievement and asked what he wanted as his reward.

The wise man replied that he would like the ruler to put one grain of wheat on the first square of the chess board, two on the second, four on the third, eight on the fourth, and keep doubling the wheat on each square until the chessboard of sixty-four squares is covered.

The ruler called for a few bushels of wheat and was surprised to discover that he soon run out. No matter how much wheat he could find would not satisfy the request of the wise man.

Apparently what the wise man wanted was the total production of wheat, for the world, for a period of two-thousand years. That is the amount accumulated when a number is doubled 64 times.

The promise of the Lord to Abraham was that "a father of many nations have I made thee. And I will make thee exceeding fruitful, and I will make nations of thee, and kings shall come out of thee." (Genesis 17:5-6). He was told his posterity would be as great as the sand of the seashore.

Abraham had eight sons. One son from Sarah, one son from Hagar, and six sons from Keturah. Isaac, the birthright son, the first son of the first wife, produced twelve tribes of nations. Ishmael, the son of Hagar also had twelve sons that produced twelve nations of Arabs. The six sons of Keturah were given gifts by Abraham and sent away.

The promise to Abraham is fulfilled. Many nations of the earth can claim descent from him. His posterity reaches into the billions.

Above are examples illustrating the magnitude of numbers that are simply doubled. However, families usually more than double.

I have six sons. At this writing I have twenty-four grandchildren. If my grandchildren continue to increase at this rate, it will take less than sixty-four replications to fill my chessboard.