

## Transmission of *Amsams* and Genes from Seven Generations

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**ABSTRACT** The article in the Tamil magazine *Subayogam* has stated that a man has 84 '*amsams*' in his reproductive age. It includes 28 of his own and 56 passed on from his paternal line forefathers of 6 generations. The present paper has interpreted that the same 84 *amsams* could be present in the gametes of the women and the offsprings receive the *amsams* from the grandmothers of the paternal line as well as from the grandparents of the maternal line. The paper has also attempted the association between the *amsams* and the reported genes in human. The 28 *amsams* specific to the gametes could be more or less equal to the non-identical 30 genes calculated as 0.1 percent from the reported 30,000 genes. From the *amsams* or the genes, it is seen, that the genetic constitution of the cloned cells could be different from that of their parent.

### INTRODUCTION

The genesis of this paper is based on the publication in the Tamil magazine *Subayogam*. The title of the article in Tamil is translated as "a human being has *amsams* (the units of inheritance) from 7 generations." (Title in Tamil: Oru Manidanidam 7 Thalimurai Amsangal).

In the present paper, researchers have further interpreted the contents of the article in Tamil. The paper has also attempted to associate the *amsams* with the reported 30,000 genes in human (Turnpenney and Ellard 2012).

### METHODOLOGY

The article in Tamil states, that a human being has *amsams* which are interpreted as features/traits/ characters from 7 generations. 84 *amsams* are present in the sperms of a fertile man of reproductive age; which would be his own as well as inherited from his ancestors. The breakdown of the 84 *amsams* are:

- 1) 28 of his own;
- 2) 21 from father;
- 3) 15 from paternal grandfather;
- 4) 10 from paternal great grandfather;

- 5) 6 from 4<sup>th</sup> generation-paternal great-great grandfather;
- 6) 3 from 5<sup>th</sup> generation-paternal great-great-great grandfather;
- 7) 1 from 6<sup>th</sup> generation-paternal great-great-great-great grandfather.

Thus, including his contribution, the received *amsams* cover 7 generations. At the time of the death ceremonies performed annually to the forefathers, '*pindams*' (rice and *thil* balls) are given stating the names of the '*pitrus*' (forefathers) from the previous generations.

It is seen from the article in Tamil, that only men and their paternal line grandfathers are included in the transmission of the *amsams*. With due respect, this is understandable, in view of the back ground of the prevailing culture in India.

But, the family tree includes the grandmothers from the paternal line and both the grandparents from the maternal line; so their *amsams* are also transmitted. Moreover, the offspring could be female in the 7<sup>th</sup> generation!

The present paper describes in a family about the transmitted *amsams* of the grandparents from both the paternal and maternal lines. Thereafter, the *amsams* are associated with the reported genes in mankind for 7 generations.

### RESULTS AND DISCUSSION

The transmission of the *amsams* and the genes are shown in Figures 1, 2 and 3 and tabulated in Tables 1, 2 and 3.

Figure 1 and Table 1 gives the breakdown of the transmission of the *amsams*. It is seen that a

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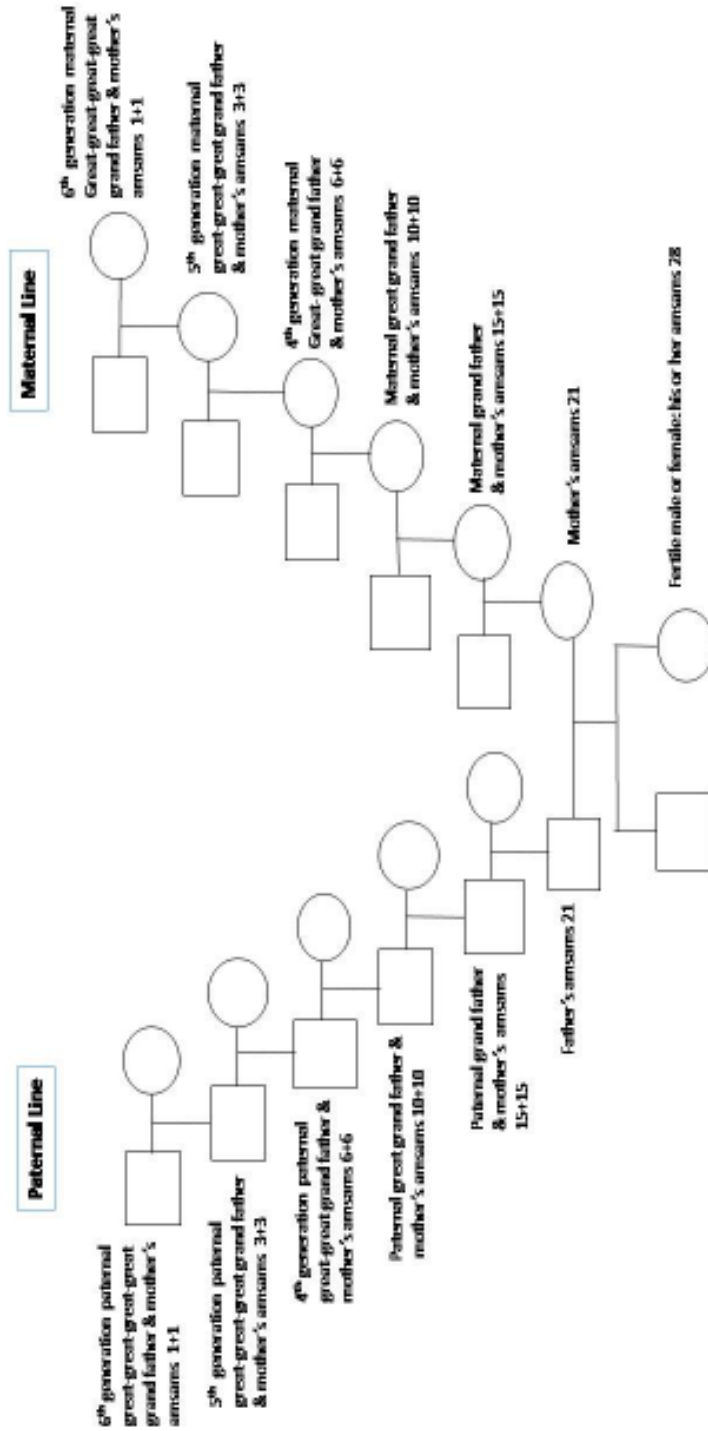


Fig. 1. Transmission of the 84 amsams in 7 generations

**Table 1: Transmission of *amsams***

<i>Generations</i> (6 + 1= 7)	<i>Paternal line grandparents</i> (GPs)	<i>Maternal line grandparents</i> (GPs)	<i>Total innumbers and</i> <i>percentage</i>
6	1 <i>amsam</i> x 32 GPs	1 <i>amsam</i> x 32 GPs	64 (13.7%)
5	3 <i>amsams</i> x 16 GPs	3 <i>amsams</i> x 16 GPs	96 (20.6%)
4	6 <i>amsams</i> x 8 GPs	6 <i>amsams</i> x 8 GPs	96 (20.6%)
3	10 <i>amsams</i> x 4 GPs	10 <i>amsams</i> x 4 GPs	80 (17.3%)
2	15 <i>amsams</i> x 2 GPs	15 <i>amsams</i> x 2 GPs	60 (12.8%)
1	Father: 21 <i>amsams</i>	Mother: 21 <i>amsams</i>	42 (9%)
Male or female offspring		28 <i>amsams</i> of his/her own	28 (6%)
Total		-	466

human being whether male or female gets the *amsams* from their parents and ancestors. 438 *amsams* are contributed from the ancestors of 6 generations and the self-contribution consists of 28 *amsams* and the total becomes 466.

Figures 2 and 3 depict in a family tree the number of individuals in the 6 generations covering both the paternal as well as the maternal line grandparents. These numbers are indicated in the calculation of the transmitted *amsams* and *genes*.

Table 2 shows that a male or female offspring of the family has 30,000 genes; which are received as 15,000 from each of the parent; hence the numbers are 2 x 15,000 = 30,000. Thereafter is given the calculation of the transmitted genes from each grandparent in each generation. For example, out of 30,000 genes, 468.75 genes are transmitted by one grandparent in 6<sup>th</sup> generation. Likewise in 5<sup>th</sup> generation the genes transmitted by one grandparent are 937.5. It is observed that from 6<sup>th</sup> generation to 1<sup>st</sup> generation the number of genes transmitted is increasing.

In Table 3, the association between the *amsams* and the reported genes are given for each generation and for each individual. It is to be noted that the total number of the received genes

from the paternal and maternal line ancestors of the 6 generations to the 7<sup>th</sup> generation offspring are 29,531.25. Therefore, the balance of the 468.75 genes may be considered to be derived from the ancestors belonging to 8<sup>th</sup> to 16<sup>th</sup> generation.

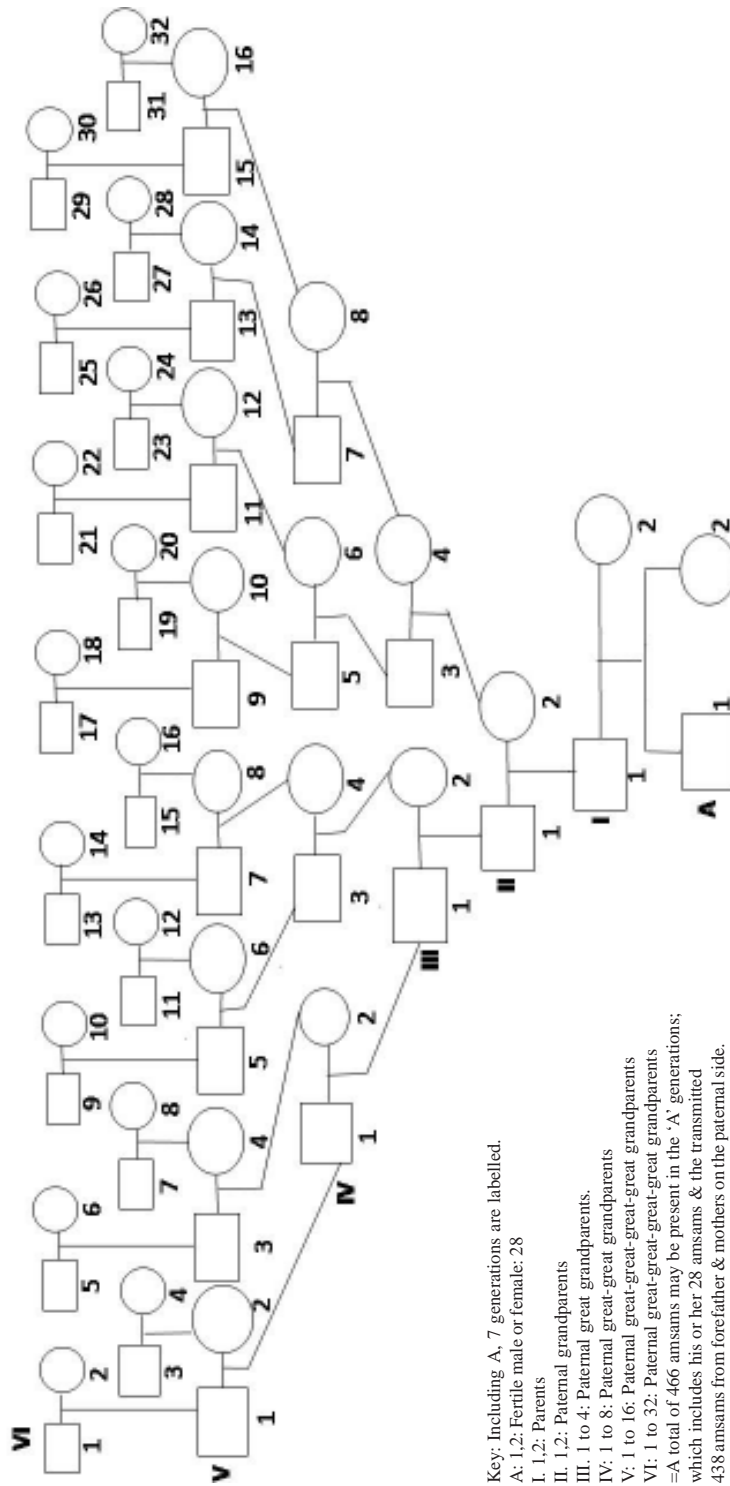
**Table 3: Association between the *amsams* and the reported *genes* per individual**

<i>Generations</i>	<i>Amsams</i> (number/%)	<i>Genes</i> (number/%)
6	1 /1.2	468.75/1.5625
5	3 /3.6	937.5/3.125
4	6 /7.1	1,875/6.25
3	10 /12	3,750/12.5
2	15 /17.8%	7,500/25%
1	21 /25%	15,000/50%
His or her own	28 /33.3%	-
Total	84	(29,531.25) around 30,000

*Note:* The remaining 468.75 *genes* may be considered to be derived from the previous  
 8<sup>th</sup>: 234.75  
 9<sup>th</sup>: 117.1875  
 10<sup>th</sup>: 58.59375  
 11<sup>th</sup>: 29.296875  
 12<sup>th</sup>: 14.6484375  
 13<sup>th</sup>: 7.32421875  
 14<sup>th</sup>: 3.662109375  
 15<sup>th</sup>: 1.8310546875  
 16<sup>th</sup>: 0.91552734375

**Table 2: Transmission of genes**

<i>Generations</i> (6 + 1= 7)	<i>Paternal line</i> <i>grandparents (GPs)</i>	<i>Maternal line</i> <i>grandparents (GPs)</i>	<i>Total number of genes</i> <i>(Number of grand-</i> <i>parents from both sides)</i>
6	468.75 <i>genes</i> x 32 GPs	468.75 <i>genes</i> x 32GPs	30,000 (64)
5	937.5 <i>genes</i> x 16 GPs	937.5 <i>genes</i> x 16GPs	30,000 (32)
4	1,875 <i>genes</i> x 8 GPs	1,875 <i>genes</i> x 8GPs	30,000 (16)
3	3,750 <i>genes</i> x 4 GPs	3,750 <i>genes</i> x 4GPs	30,000 (8)
2	7,500 <i>genes</i> x 2GPs	7,500 <i>genes</i> x 2GPs	30,000 (4)
1	Father: 15,000 <i>genes</i>	Mother: 15,000 <i>genes</i>	30,000 (2)
Male or female offspring		<i>Genes</i> of his/her own	30,000



**Fig. 2. Present generation is indicated as A and above them his or her 6 generations are shown on the paternal side**

It is seen, that in the generations from 6 to 3, between the *amsams* and the genes, there seemed to be correlation in the percentage calculation. Thereafter, differences are seen in the percentages in the 2<sup>nd</sup> generation and in the contribution from the parents.

### CONCLUSION

In human genetics, based on the studies on human genome, it is indicated that the genetic difference in mankind could be on an average 0.1 percentage. That means, in 99.9 percentage of mankind, the genome could be identical. The detected 3 billion base pairs contribute to the reported 30,000 genes in human and the 0.1 percentage of the non-identical genes covers 30 genes. It is stated, that genetically, it is this difference, which leads to the point, that some may be healthy and some may be susceptible to illness. Thus, more or less, association is emerging be-

tween the article in Tamil and in the human genetics, that is, individuals may have their own 28 *amsams* or 30 genes.

### RECOMMENDATIONS

We need more researchers to take up studies which are related to ancient Indian literatures and associate them with modern science. These studies may give the awareness to the world that Indian science has evolved much earlier than in other parts of the world.

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