

# THOROUGHBRED TIMES

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## Drawing the Lines

A look at why some sire lines fade and other flourish

by Rommy Faversham

**W**ith or without the perpetual notions of fashion, the significance of Thoroughbred sire lines is, in fact, a real one.

Fundamental genetics describes the Y chromosome as the unique hereditary factor which gets consistently transmitted along the tail-male line. It follows that any important information carried on the Y chromosome will help to characterize this sire line as a whole.

One well documented example of this is the effects of partial and complete sterility. This Y-chromosome linked condition has been observed in both human and equine populations. The Tetrarch in England and St. Germans in the U.S. are examples of Thoroughbred sire lines that were known to express varying levels of reduced fertility. St. Germans, a leading American sire in the early '30s, averaged only 9 foals per crop. In turn, the majority of his best male line descendants demonstrated low fertility as well. The champions Twenty Grand, Assault and Top Knight were all completely sterile.

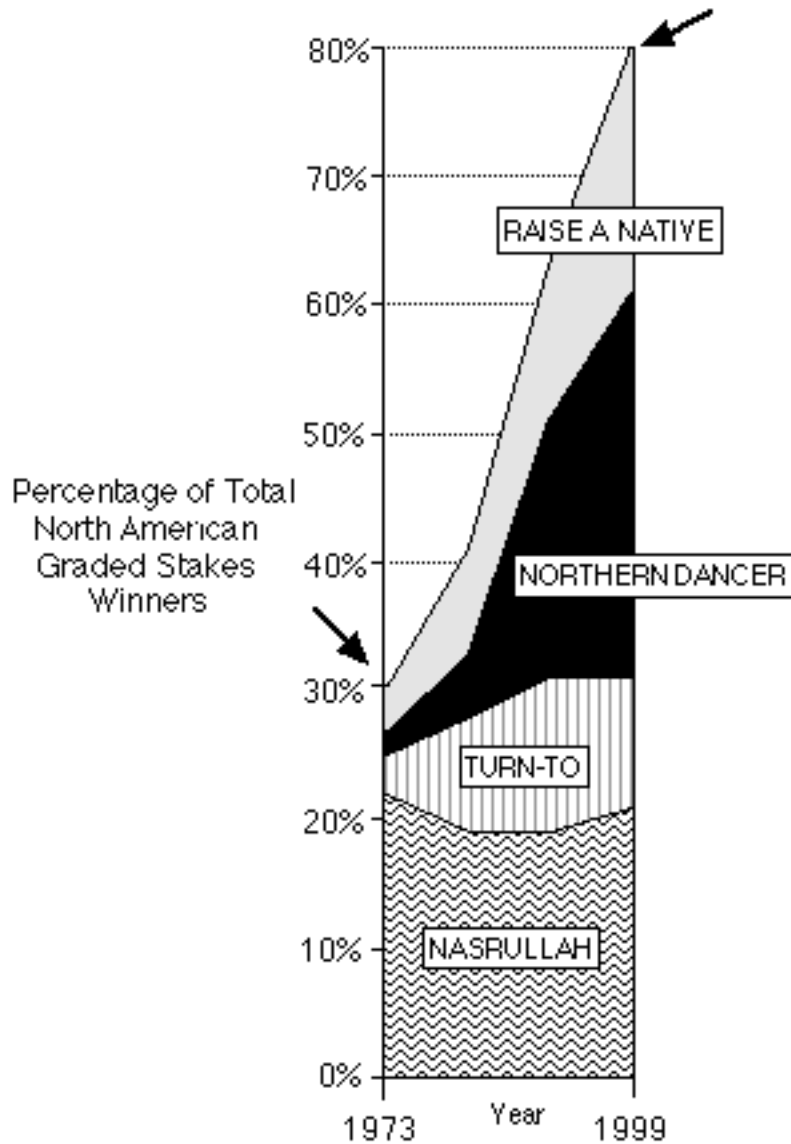
More often, a sire line can be characterized by its female alliances. These frequently determine what qualities and affinities the line will manifest in subsequent generations. As an example, the male line of

Nasrullah, a grandson of Mumtaz Mahal, was profited when ultimately crossed with mares carrying complementary strains of this same great matriarch.

How do sire lines survive and then flourish? The outright answer is, of course, by getting a relatively high rate of superior individuals. More to the point, successful male lines can be characterized as those who were given ample opportunity to succeed. This is achieved by consistently breeding its representatives to a relatively plentiful number of broodmares who were, as a whole, quality runners and/or quality producers. Again, the male line is often advanced when its representatives are bred to those mares that create auspicious inbreeding and affinity patterns.

Figure 1

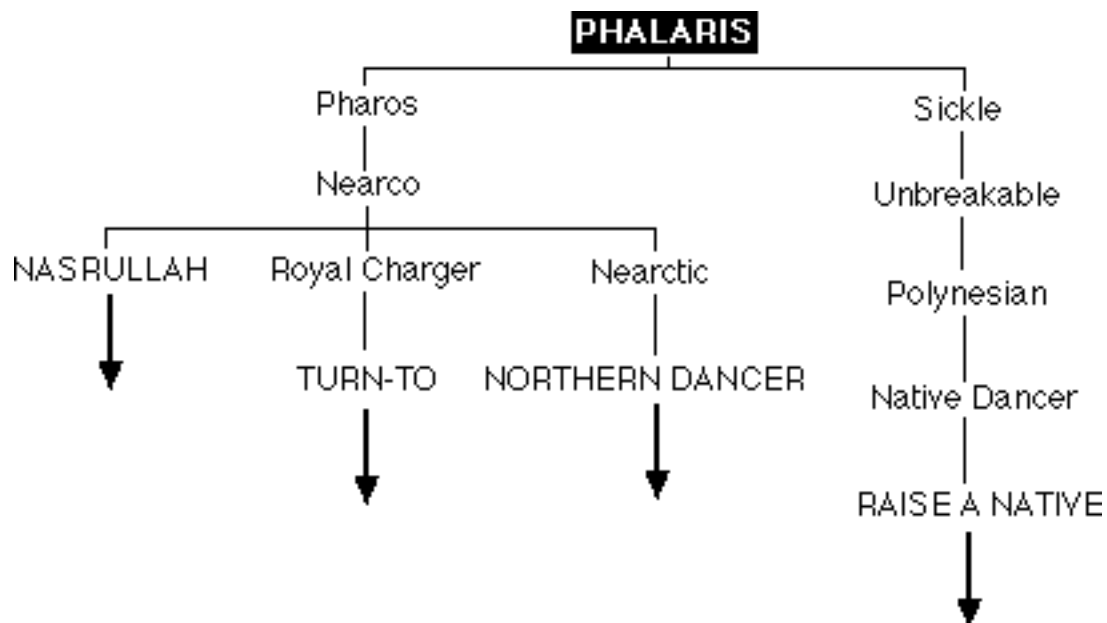
### GROWTH PATTERNS IN THE DOMINANT MALE LINES OF NORTH AMERICA



The first arrow shows that in 1973 the sire lines of Nasrullah, Turn-to, Northern Dancer and Raise a Native made up 30% of the total North American Graded Stakes winners. The second arrow shows the cumulative total of these four sire lines has risen to 80% by 1999. The majority of this rise has occurred through the advancement of the male line descendants of Northern Dancer and Raise a Native.

Several months ago, in this column, John P. Sparkman wrote about the marked changes in distribution amongst the leading North American sire lines (*Harnessing a waterfall*, Thoroughbred Times, March 11th, 2000). Data provided in the article demonstrated drastic shifts in the success rates of the various sire lines in producing graded stakes winners in North America since the graded race system was introduced in 1973. From this data. Figure 1 depicts contemporary growth patterns of the four dominant American male lines. All of the other sire lines have undergone a severe collective recession. Figure 1 shows that between 1973 and 1999:

- 1) the NASRULLAH line has been able to maintain its level of influence (roughly 20% of the total number of graded stakes winners)
- 2) the TURN-TO line has more than tripled in influence (from 3% in 1973 to 10% in 1999), but may now be levelling off
- 3) the NORTHERN DANCER line has shown the most dramatic growth pattern (from 2% in 1973 to 30% in 1999)
- 4) the RAISE A NATIVE line has also shown a dramatic growth pattern (from 3% in 1973 to 19% in 1999).



What inherently binds these four great lines together is, in fact, their common tail-male ancestors. Nasrullah's sire and both Northern Dancer and Turn-to's paternal grandsire was Nearco. In turn, Nearco's paternal grandsire was Phalaris who would also be the tail-male antecedent to Raise a Native. Phalaris, then, is the ultimate source of all four dominant sire lines. Furthermore, his male-line influence continues to expand.

At no point in the past three hundred years of Thoroughbred history has one tail-male line come to dominate all facets of racing and breeding to the extent that we have observed with the Phalaris sire line. It now towers over all others combined by all benchmarks of quality and quantity.

Phalaris (1913) was a bay colt, described as being sound, genial and of 'strong constitution'. He developed into a high class sprinter-miler in England during the First World War. During his own racing career, Phalaris' male line (Stockwell through Bend Or) was clearly overshadowed by stronger lines such as St. Simon. Over the next thirty years, however, the sons and grandsons of Phalaris began to create an international network of tail-male success which would "snowball" and lead to the line's domination during the second half of the twentieth century.

What led these major branches of Phalaris to flourish? In addition to any enhanced opportunities from a better quantity and quality of broodmares, the Phalaris line may also have succeeded for other distinct reasons.

In Franco Varola's 1980 text, *"The Functional Development of the Thoroughbred"*, the author devoted an entire chapter to the phenomenon he referred to as *"the Phalaris Revolution"*. He noted that "one of the reasons why the Phalaris line of sires is still so much predominant worldwide ..... may well be that no great amount of line breeding has ever occurred inside it".

An apparent example of the perils of excessive inbreeding to a male line may have occurred in the ultimate fate of the ancient Highflyer line. Highflyer (1774), a son of Herod, was the outstanding racehorse of his time. In turn, his sireline became the leading source of English classic winners from the late 1700s well into the third decade of the 1800s. By mid-century, however, the Highflyer line began to show a loss of vitality. By the turn of the century, the line was reduced to a thread, well on its way to complete extinction. An examination of the pedigrees of key

descendants describes a marked accumulation of Highflyer strains with each succeeding generation. Breeders apparently believed they could not get 'too much of a good thing'.

Given its ubiquity, the ability to curb an excessive number of Phalaris-line strains has, in recent generations, become increasingly difficult. Nevertheless, it is an issue worth considering.

As a sireline, Phalaris has been enriched by other lines' mares to a much greater degree than the overall maternal contribution it has supplied to distinct (Non-Phalaris) sirelines. Indeed, Varola noted "the *Phalaris revolution* has been an almost exclusively masculine one..... there is an apparent relative mediocrity of the performance of Phalaris-line sires as maternal grand sires of leading winners..... it has acquired a weight on the distaff side of pedigrees by sheer force of numbers...." The reader can study the contrasting impacts of the Phalaris and Non-Phalaris lines on sire and broodmare sire rankings over the past four decades to appreciate this. The current domination of Phalaris-line stallions, starting in the 1990s in the broodmare sire ranks has occurred as Varola put it "by sheer force of numbers".

When a predominant stallion (chef-de-race) has a relatively mediocre record as a broodmare sire of sires it can actually aid in his sireline's perpetuation as it denies any competing male lines from continuing via his own progeny. Through history, in fact, the lines of many important stallions suffered and eventually faded when their daughters (or their sons' daughters) produced sons that became better sires than those of their own male line. Virtually all of the English sirelines St. Simon was in competition with were furthered by his own (and his son's) daughters. Consequently, his male line faltered in England, only to be restored in America (through the importations of Princequillo, Gallant Man and Ribot). Conversely, the line of Phalaris was never an effective female influence during the mid-century when he began to emerge as the world's dominant sireline. None of the key sires along the Phalaris tail-male line (i.e. Phalaris, Nearco, Nasrullah, Northern Dancer, etc.) were as influential as one would have expected in the role of broodmare sire of sires. On the other hand, select Phalaris-line stallions such as Buckpasser and Secretariat have served extraordinarily as broodmare sire of sires. It is, perhaps, not a coincidence, then, that neither presently have a particularly strong sireline branch.

The Phalaris sireline always benefitted from its ability to form strong affinities with a broad spectrum of complementary broodmare sirelines. Furthermore, it has not been unusual for these male line representatives to manifest a singularly powerful cross. For Phalaris, it was with the daughters of Chaucer. These mares provided the foundation stallion with the large majority of his most influential progeny. Of the 24 products of this cross, 9 (38%) became major Stakes Winners (nevertheless, almost none of the daughters became the dams of significant winners or sires.). Subsequent examples include the cross of Northern Dancer with Teddy-line mares (29% SWs) and that of Nijinsky II out of the daughters of Round Table (35% SWs).

Another reason why Phalaris-line stallions were often at an advantage with the mares they were bred to involves the potential they carried to create female family inbreeding patterns. This would lead to the duplication of strains from families along tail-male lines of Phalaris (such as Scapa Flow, Nogara, Almahmoud, etc.)

During the twentieth century, the intrinsically American values of speed and precocity has spread throughout the world. The quest for these qualities has been further stimulated by the increased numbers of horses who are now bred to sell compared to those bred to race. Obviously, in a cost conscious sport, the early maturing juvenile ready to sprint and earn a living is a major plus. No sireline has come close to adapting to our so-called 'contemporary virtues' as well as Phalaris. With its unmistakable tendency towards brilliance, The Phalaris sireline has been the vanguard of the thoroughbred's aptitudinal shift to the left of the Dosage spectrum since World War Two.

Besides brilliance, the other major quality universally sought after is *classcity* : the ability to excel at age three (and beyond) at classic (route) distances. Varola found that, "the (Phalaris) kind of brilliance was intrinsically different from that of other *chefs-de-race*". Phalaris was able to "conciliate classcity with brilliance and make these two things co-exist". Varola referred to this very special talent as "*transbrilliance* " and described it as the ability to transcend sheer (unredeemable) brilliance and reach classic proportions within the same individual, as well as from generation to generation.

The modern-day prototype for success as a stallion most closely conforms to the Brilliant/Classic typology. This split aptitude may be regarded as meeting the most important qualities in today's stallions.

Contemporary names such as Mr. Prospector, Blushing Groom, and Seattle Slew are leading examples. The large majority of Brilliant/Classic *chefs*, in fact, descend in tail-male line from Phalaris.

In a world, that insists upon winners and losers, sirelines must compete just as intensely as the racing progeny that represent them. The forces of natural selection in thoroughbreds are determined by outcomes at the track. Lines that cannot keep up with the biological vigor of others are doomed to ultimate extinction. Physical frailties become isolated and magnified in a 'survival of the fittest' environment. Others slowly fade when not able to properly adapt to the capricious whims of mankind's sporting sensibilities.

The "take-home message", however, is, when any longstanding sireline dies, the Thoroughbred's potential for future bio-diversity becomes irreversibly narrowed. This is because the species' gene pool was *fixed* almost 300 years ago. Barring spontaneous mutations, no new genes can get in. Genes are only being lost. Many of these genes figure to be 'bad'. Many others figure to be 'good'. In the meantime, Thoroughbreds become 'more alike' with each succeeding generation.

The Sireline is to the Thoroughbred what a postage stamp is to a parcel. It doesn't tell you what's inside, but it can help to determine where it's been. Additionally, by observing the qualities of the stamp, one can predict 'how far' the individual is likely to go.

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