

On the Trail of “Hopalong Savage”

From Whom Did Pat Savage Inherit Her Signature Six-Shooter?

By

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Father, Grandpa, Frontiersman, Myth

The elaborate extended family tree posited by Philip José Farmer identifies Pat as Patricia Clarke Wildman, daughter of Doc’s uncle-in-law (brother of Doc’s father’s wife) Alexander Clarke Wildman and May Renfrew, sister of Douglas Renfrew of the RCMP. Doc and Pat are only related through the marriage of her aunt to her uncle-in-law (husband of her father’s sister), with Pat’s paternal grandfather Sir Patrick Clarke Wildman being Doc’s maternal grandfather. Doc’s paternal grandfather is William Cecil Clayton, the Sixth Duke of Greystoke and Pat’s maternal grandfather is the unnamed father of May and Douglas Renfrew. Sir Patrick was most certainly never a Wild West lawman and Douglas Renfrew, a “Wild Northwest” lawman, was only her uncle-in-law (brother of her father’s wife), not her grandfather.

A case can be made for Pat’s unnamed maternal grandfather if one accepts an anecdote, dramatized in flashback, in the Criterion Pictures film *Renfrew of the Royal Mounted* (29 Sep 1937), in which Renfrew explains how his North-West Mounted Police father was killed by smugglers, but doesn’t explain why his sidearm was bequeathed to Pat’s mother May instead of her RCMP uncle Douglas or why it was an American .44-40-caliber Colt Frontier Six-Shooter, not the NWMP regulation British .450-caliber Adams Mark III revolver issued from 1872 to 1886 or the .476-caliber Enfield Mark II revolver issued from 1882 to 1905.

This loose thread in *Doc Savage: His Apocalyptic Life* got me seeking alternatives is that Farmer left a blank with regard to Patricia Wildman’s maternal grandfather in his Wold Newton Family™ tree. He posits Arronaxe Larsen, the daughter of Wolf Larsen and Arronaxe Land, as Doc’s mother but Wolf Larsen was anything but a Wild West lawman. He gives no maternal lineage for Pat whatsoever.

The question of Pat’s pistol-packing patriarch is directly addressed in Chapter 16: “Patricia Savage, Lady Auxiliary and Bronze Knockout” in *Doc Savage: His Apocalyptic Life*, but it’s never actually resolved.

Her father was impatient, as so was her grandfather. The latter, she tells us, did not wait for the Indians to attack him in his log cabin. He went out looking for them. He was “a grand old guy. There were villages named for him all over the northwest.”

(A study of a map of Canada fails to find any villages or towns named Savage or Wildman, Doc’s real name. But the grandfather could have been her mother’s father.)

Since both Senior and Alex Savage are both sons of Stormalong, Pat Savage must be Doc's first cousin and share the same paternal grandfather. "Old Stormy" is even more of a master mariner than Wolf Larsen and thus can't be Pat's hypothetical anonymous Indian-fighting Wild West lawman grandfather.

That leaves only two possibilities: the original owner of Pat's six-shooter must either be Doc's maternal grandfather (the unnamed father of Doc's mother Kendra Robeson) or Pat's maternal grandfather (the unnamed father of Pat's unnamed mother).

The fact that the gun was bequeathed to Pat and not Doc strongly suggests the latter.

While the .45-caliber Colt M1873 Single-Action Army "Peacemaker" revolver, adopted as the standard-issue pistol of the U.S. Army from 1873 to 1892, is widely considered to be "The Gun That Won the West" insofar as sidearms is concerned, the .44-40-caliber Colt 1873 Model P "Frontier" revolver, first produced in 1877 but also manufactured until 1892, is probably more deserving of that accolade. "The Gun That Won the West" insofar as long arms is concerned is without doubt the .44-40-caliber lever-action Winchester Model 73 carbine.

Long arms were the pioneer's first choice for both defense and subsistence, capable bringing both a person or a buffalo down with a single shot from a safe distance. Sidearms were for close-in work against snakes and other varmints, however many feet they had.

The Colt Frontier used the same shells as the Winchester, making it more cost-effective than a sidearm that required its own proprietary ammunition. Professional gunslingers might have preferred the Colt Peacemaker because of the stopping power of its military-grade 225 grain (15 gram) .45-caliber (11.48×33mmR) Colt cartridge, but the men and women who actually settled the West did so with the 200-grain (10 gram) .40-40-caliber Winchester Center Fire (WCF) cartridge used interchangeably in both their six-round Colt Frontier revolvers and ten-round Winchester 73 carbines or the twelve-round Winchester 92 that replaced it.

Switching over to the new lineage posited in "Skull Island," Junior is the son of Senior by Kendra Robeson and Doc's paternal grandfather is the legendary mariner Stormalong Savage.

So far, so good. Pat Savage's father Alex is presumably the brother of Senior, making her Doc's paternal first cousin and giving them the same paternal grandfather. Since Stormalong is a sailor and not a frontier lawman, he *can't* be the grandfather from whom Pat inherited the six-gun.

That brings us back to the same dead end: who was Doc and Pat's mutual maternal grandfather, the father of Kendra and, presumably, her brother or cousin, who I'm tentatively calling "Kenneth Robeson, Senior" whose son "Kenneth Robeson" (Junior) who recorded the adventures of *his* maternal first cousins, Doc and Pat Savage?

NOTE: "The Man of Bronze" (Mar 1933) was originally bylined "Kenneth Roberts" but it was changed to "Robeson" to avoid confusion with (and possible litigation from) forty-eight-year-old historical novelist Kenneth Lewis Roberts, author of *Arundel* (1929), *The Lively Lady* (1931), and *Rabble in Arms* (1933), who went on to fame if not fortune for *Captain Caution* (1934), *Northwest Passage* (1937), and *Lydia Bailey* (1947).

I'd like to think the name "Robeson" was inspired by thirty-five-year-old American bass-baritone concert artist, stage and film actor, professional football player, and political activist Paul Leroy Robeson, famous for his performances as "Joe" in *Show Boat* (27 Dec 1927), the title role in *Othello* (19 Mar 1930), "Brutus" in *The Emperor Jones* (29 Sep 1933).

I'm tempted to follow Farmer's lead and posit that both Kendra and Kenneth are somehow related to Thomas Jefferson "Long Tom" Roberts, but Will Murray gave their family name in "Robeson" not "Roberts" and I'll happily follow *his* lead instead.

But there's another possibility. What if Stormalong Savage had a brother on par with Senior's Alexandre Dumas "Alex" Savage (named for Stormy's favorite author) or a cousin on par with Clark "Doc" Savage, Junior's Patricia "Pat" Savage? It can't be Richard Henry Savage, because he had no male offspring to carry on the *Savage* name, hence his *grandnephew* being named Richard Henry *Benson*.

Given that this unidentified individual would be the brother or cousin of Stormalong by an as-yet unknown mutual paternal great grandfather, I've dubbed him "Hopalong" Savage—a Western lawman as legendary as his seafaring brother Stormalong.

Perhaps they were even bronze, golden-eyed giant *twins*, separated at birth and destined never to meet. The fantastic Savage Brothers, "Hoppy" and "Stormy"—Masters of the American West and Seven Seas!

As is all-too-evident, I've spent *way* too much time and effort trying to find Hoppy Savage, but as will come apparent by the end of this admittedly overlong treatise, along the way I ultimately came to an entirely different conclusion about who he in fact is and how he came to be.

Since both Senior and Alex Savage are both sons of Stormalong Savage, Pat Savage *must* be Doc's first cousin and share the same paternal grandfather. "Old Stormy" is even more of a master mariner than Wolf Larsen and thus can't be Pat's Indian-fighting Wild West lawman grandfather.

So who was the man from whom Pat Savage inherited her signature Colt Frontier Six-Shooter?

That weapon was introduced along with "Age about eighteen" Patricia (not yet "Pat") Savage.

From Chapter V: “The Werewolf Cries” in “Brand of the Werewolf”:

*[Patricia] stepped back from a window. She had a wealth of **bronze hair—hair very closely akin in hue to that of Doc Savage**. She had been watching the brush that circled like a wall.*

She was tall; her form was molded along lines that left nothing to be desired. Her features were as perfect as though a magazine-cover artist had designed them.

She wore high-laced boots, breeches, and a serviceable gray shirt.

*A cartridge belt was draped about her waist. From it dangled a heavy **Frontier Single Action six-shooter—freely admitted by those who know to be one of the most reliable guns ever made**. In the crook of her right arm lay a very modern automatic big-game rifle.*

NOTE: “Frontier Six-Shooter” distinguishes the *civilian* .44-40-caliber Winchester Center Fire (WCF) firing 1873 Colt Model P from the government-issue (GI) *military* .45-caliber Colt Patent (CP) firing “Single-Action Army” (SAA) from which it is derived.

The “very modern automatic big-game rifle” is most likely a Remington Model 8, manufactured between 1907 and 1936, when the Model 81 superseded it. Interestingly, both rifles chambered the .300-caliber *Savage* cartridge as well as the .30-caliber Remington, both created to compete with the .30-30 Winchester hunting cartridge, and accommodated five-, ten-, and fifteen-round exchangeable box magazines.

The only physical trait that Pat has in common with Doc is their distinctive bronze hair is a dominant trait in both sexes in every generation inherited by all direct descendants of Thomas Savage, whose golden-brown (bronze) hair turned prematurely gray, then white when he was twenty-five, earning the nickname “Ancient Thomas” long after the original color was forgotten,

Pat’s matching bronze skin wasn’t acquired until she set up her Manhattan beauty parlor equipped with sunlamps designed by Long Tom.

The golden eyes first appeared on the cover of “Fear Cay” but not in the text, where she is mistaken for Kelima “Kel” Avery, “a tall young woman, blonde, **blue-eyed**” who “as Maureen Darleen, she was considered one of the up-and-coming young movie actresses.”

The distinctive metallic bronze skin, golden eyes and giant stature of “Amber Eyes Bear” enter the Savage line through Thomas Savage’s Powhatan wife Hannaniting, but only for direct male descendants of “Ancient Thomas” Savage and, even then, the giant stature only expresses every other generation (father to grandson).

This is confirmed by the fact that eighty-five year Stormalong is white haired, yellow-eyed, copper-skinned seven-foot (eighty-four inch) giant like “Amber Eyes Bear,” but his son Senior is a silvering, golden eyed, sun-bronzed, “towering” but not giant six-foot-four (seventy-six inch) tall, whose twenty-year-old son Junior is (or *will* be—he may not have reached his full adult height yet in 1920) bronze haired, flake-gold eyed, bronze-skinned six-foot-eight (eighty-inch) giant. Q.E.D.

The fact that Doc’s twenty-seven-year-old [in “Laugh of Death” (Oct 1942, submitted 01 Apr 1942, ©11 Sep 1042)] five foot seven (sixty-seven inch) female cousin Pat doesn’t share any of these three traits confirms that they only express in males. Her father Alex, is never seen, having been killed and buried in a fresh grave marked by a cross a few days before “Brand of the Werewolf” begins, but is likely also a tall but not giant man like his brother Senior. Q.E.D.

Her Frontier Six-Shooter is only mentioned this once and sees no action. She wields the big game rifle but, although she takes safety off, never fires it, and has to resort to taking a “revolver” from one of her captors.

From Chapter XI. “The Vanished Box”:

The man was probably not more than twenty-five, and quite husky. He had a neck like a young bull. He was more than a match for nine out of ten run-of-the-street men.

*Patricia, however, had taken him by surprise. Moreover, **[Patricia] was a young lady who combined good looks with a well-developed muscle.** She not only kept the man from yelling an alarm, but she had his wind completely shut off.*

*The man kicked, struck backward. **Not for nothing had Patricia taken fencing lessons in a finishing school.** She evaded his blows easily. ...*

*Patricia was no butterfly who blossomed forth only at social functions. That did not mean she was a wall-flower [sic] when confronted with the glittering pomp of society. But at the same time, **she was a two-fisted young woman who could go out and do things.** ...*

*Stepping behind a tree, Patricia drew her gun—**the weapon she had taken from the man she had overpowered.** She examined it; the thing was loaded. She waited purposefully. ...*

Patricia was too optimistic, however. A man hurled himself from behind a tree into her path. His gun was in its holster. With bare hands, he sought to seize the fleeing girl.

The fact that the man was not using his gun saved his life. Instead of shooting him, as he no doubt deserved, Patricia made a pass at his head with her revolver barrel.

Clank! went the gun on the fellow's skull. He fell at her feet.

Thinking he was unconscious, Patricia started to step over him. But the man grasped her by the ankles and tripped her.

Too late, Patricia sought to shoot him—through a leg. They scuffled for a moment. Then Patricia lost her revolver.

NOTE: A “finishing school” is a school for young women that focuses on teaching social graces and upper-class cultural rites as a preparation for entry into society. The name reflects that it follows on from ordinary school and is intended to complete the education with classes on deportment and etiquette. It may consist of an intensive course, or a one-year program.

In the United States it's sometimes called a “charm school” and devoted to developing debutantes, but in American parlance the term “finishing school” may also be wrongly conflated with certain small women's colleges, primarily on the East Coast.

Switzerland was known for its private finishing schools. Most resided in the French-speaking cantons near Lake Geneva. It was favored because of its reputation as a healthful environment, its multi-lingual and cosmopolitan aura, and the region's political stability and solid neutrality.

Pat would likely have attended a Swiss finishing school for two years between the ages of fourteen and fifteen circa 1929–1930 with a “middle school” (junior high school) curriculum that would also have included intensive “Physical Culture” athletics including gymnastics, ballet, and the aristocratic sport Modern Pentathlon, consisting of fencing (one-touch épée), freestyle swimming, equestrian show jumping, pistol shooting, and cross country running introduced at the 1912 Summer Olympics.

Pat, of course, would've delighted in and excelled at Modern Pentathlon.

Students would also be required to master English (the language of business), French (the language of diplomacy), German (the language of science), Greek and Latin (the Classical languages from which all medical and scientific terminology derive) and Italian (the language of romance). Each day of the week would have a class conducted entirely in one of these six languages plus Swiss.

Small wonder, then, that Pat learned Doc's Mayan "code talking" so easily.

"Miss Patricia" is called "Miss Pat" by Tiny and Monk but won't become "Pat" Savage until moving from Alex Savage's estate in British Columbia to Manhattan, at which time her Colt is a *gunfighter's* weapon.

From Chapter IV. "The Unseen Message" in "Fear Cay":

*Patricia Savage slid off the seat onto the floorboards, opening her chic hand bag [sic] as she did so. **Out of the bag came an enormous, much-worn single-action six-shooter. The gun had neither trigger nor sights, and a fanning spur had been welded onto the hammer.***

From Chapter VI. "Dan Thunden":

*Farther up the street children were playing, and that prevented Doc and the others from using their superfirers, or Pat her **single-action six-gun.***

*Pat, plugging fresh shells into her **big revolver** as Doc came up, grinned widely.*

NOTE: The Colt .45-caliber Single-Action Army and .44-40-caliber Frontier Six-Shooter were accurate and reliable from the factory when properly aimed with one hand, but it took much longer to load than to empty. The spent revolver had to be ejected at a time while the cylinder was rotated clockwise to align each chamber with loading gate behind the cylinder on the right side and a fresh round "plugged into" each chamber after the spent cartridge was ejected.

Like scissors, it's designed for righthanders, with no thought for lefties.

Removing the trigger and sights and fanning the hammer might make a six-gun faster to draw and "shoot from hip" but difficult if not impossible to aim and hit any target accurately. One longtime firearms instructor, the late great George L. Tooley famously wrote: "Fanning is hard on the revolver, in addition to being inaccurate, and is not recommended."

From Chapter XII. "Death on the River" in "The Annihilist" (Dec 1934, submitted 20 Jul 1934, ©16 Nov 1934):

*Pat Savage was carrying a **large hand bag**, and she wrenched it open and drew out an **enormous single-action six-shooter**. It had been **her father's gun**, and she had practiced with the weapon until she had the proficiency of an old-time Western gun fighter.*

***She shot from the hip, not pulling the trigger, for there was no trigger on the gun, it being stripped down for fanning. She simply rocked the hammer back with a thumb and let it fall.** The concussion as the antique went off was terrific.*

One of the attackers started dancing around crazily, fell down on the snow-covered ground and threshed and kicked and finally became still.

"Tsk, tsk!" Monk clucked. "Such bloodthirstiness!" He took a careful aim with his supermachine pistol.

"Mercy bullet," said Pat. "Doc made some up special for this cannon."

NOTE: Pat could've indeed inherited the Frontier Six-Shooter directly from her father Alex, who was born around the time it was first produced in 1873, and used it twenty years later to homestead in Canada forty years earlier in 1893, with no anonymous paternal grandfather required.

"Fanning" is the technique in which the shooter uses one hand to hold the gun and pull the trigger, while using the other hand to cock back the hammer repeatedly in a slapping-like fashion without touching any other parts of the gun. That's not what Pat is doing here.

"Slip hammering" is another similar technique in which one hand hold the trigger and the other hand to repeatedly cock the hammer, but both hands maintain grasp on the gun through an overwrapping grip, and only the thumb of the outside hand moves to flip back the hammer.

Pat has apparently turned her six-shooter into a "slip gun"—a revolver modified to disconnect the trigger from the hammer—to cause it to fire by pulling back and releasing the hammer.

"Thumbing" has been used to refer to a similar action as fanning except instead of using the opposite hand to pull the hammer while the trigger is depressed, the thumb of the gun hand is used. That's what Pat does here.

The Colt Frontier Six-Shooter is chambered for .44-40-caliber WCF ammunition. Doc's mercy bullets are high-velocity, low-mass .22-caliber Hornet or .220-caliber Swift rifle rounds, on par with modern 5.6×45mm (.223-caliber) NATO rounds used today.

Such rifle cartridges are par with the 9×19mm Parabellum and .38 Special revolver cartridges, which have the same relative “stopping power” as the venerable .44-40-caliber WCF.

The only way Pat could use mercy bullets in her six-shooter is for Doc to make them especially made for her, which he’d happily do because the alternative would be her indiscriminately slinging hot lead around.

In later appearances, Pat’s Frontier Six-Shooter is notable only for its antiquity, large size, and mass.

From Chapter III. “Cautious Crooks” in “Terror in the Navy” (Apr 1937, submitted 13 Dec 1935, ©19 Mar 1937)

*A young woman came up the stairs. She pointed an old-fashioned six-shooter at them—a **six-shooter with a barrel so big that any man present could have put his little finger in the barrel with ease.***

“They gave me this thing to cut my teeth on!” the girl said, jiggling the six-shooter in her hand. ...

Fuzzy gulped, “Who’re you?”

“Patricia Savage,” the woman said. “Oh, you’ve never heard of me, probably. Doc Savage is my cousin. I have a beauty establishment uptown where I charge outrageous prices, and the customers like it.”

*Fuzzy swallowed. **The mouth of the six-shooter seemed incredibly big.***

From Chapter II: “The Eye on the Mast” in “Poison Island” (Sep 1939, submitted 21 Mar 1939, ©18 Aug 1939):

*That afternoon, the girl [Pat Savage] stood on the aft deck with **a long-barreled single-action six-shooter of the variety popular during the heyday of Jesse James.** The schooner was sailing through a stretch of sea where many Portuguese men-o’-war floated, like small purple toy balloons. The girl nonchalantly popped away at the floating men-o’-war with her cannon. **She shot at least fifty times. Herb March was positive she hit at least fifty men-o’-war.** He stood there with his mouth open.*

Such sharpshooting obviously requires both fixed sights and good trigger control.

NOTE: The “heyday” of Jesse Woodson James (05 Sep 1847–03 Apr 1882) was a mere five years between Monday, 29 April 1871 and Thursday, 07 September 1876, and just fifty-three years earlier.

Both Jesse James and Wyatt Earp favored the .45 Smith & Wesson Model 3 Schofield Revolver manufactured from 1875 to 1878. It was ambidextrous with a “top-break” cylinder from which all six rounds ejected all at once and reloaded with pocket-size speed loaders. Now *that’s* a *gunfighter’s* weapon!

This confirms that Pat could've inherited the Frontier Six-Shooter directly from her father Alex, not a hypothetical anonymous paternal grandfather. Q.E.D.

From Chapter VII: "Six Arguments" in "Poison Island":

*GLENDARA SMITH returned to her small apartment and dug in an old telescope valise for **the one material heritage she had received from her father.** Dara was an orphan. **Her male parent had been Twisty Jim Smith, who had owned a reputation in the Southwest.** Twisty Jim's nickname did not come from any deformity, but from the convulsion he went through when he drew a six-shooter and shot a bad man. **Twisty Jim had been a famous sheriff. Dara had inherited his six-shooter.***

The six-gun was a young cannon. It was a single-action thing, having no trigger or trigger guard, and with a spur welded onto the hammer. It was fired by fanning the hammer back with either the free hand or a thumb.

Dara loaded it, and put spare cartridges in her handbag. Then she heard a knock on her door. She opened the door and stepped back; the gun ready.

From Chapter XVI: "A Mystery Creeping" in "Poison Island":

*Dara Smith was not only calm; she was eager. If she had any qualms or fears, the parade of hectic events had erased them. **She was completely the daughter of old Twisty Jim Smith, gun-fanning Western sheriff.***

Now that Pat is acting responsibly on Doc's behalf, she abandons her previous irresponsibility and is accordingly the level-headed "adult in the room" even under pressure, so reckless endangerment with firearms falls to rival female firebrand Glendara "Dara" Smith.

NOTE: This is the first mention of a six-shooter (presumably the fabled .45-caliber Colt Single-Army "Peacemaker") being described as being inherited from "a famous sheriff" with "a reputation in the Southwest" but, as with Pat, it's inherited from a father (one generation back) not a *grandfather* (two generations back). One could be a modern young woman with an old, grizzled Western "frontier" dad but not necessarily still alive anymore.

Thereafter, fanning six-shooters were the purview of those old enough to have used them Way Out West.

From Chapter VIII. “Old Man with a Gun” in “The Devil’s Black Rock” (Dec 1942, submitted 28 May 1942, ©06 Nov 1942)

The little man was homely enough to startle a tree stump.

*But **the gun in his fist**, which was what Monk had seen, **was large enough to have even more effect. The gun had no trigger guard, no front sight, nothing to hamper its rapid withdrawal from a holster. A fanning hammer, a long horn of metal, had been welded to the hammer.***

*The little brown, utterly homely man let them inspect **the very large speaking end of his weapon.***

*“I’m Donkey Sam Davis,” he said. **“I can shoot either eye out of a rattlesnake at fifty feet. But let’s not have a demonstration.”***

The first mention of Pat’s paternal grandfather (i.e., Alex Savage’s father) as an Indian fighter (not as frontier lawman or six-shooter-fanning gunfighter) comes late in the series toward the very end of World War II in “Violent Night” (Jan 1945, submitted 29 Jun 1944, ©24 Nov 1944,)

Here, the distinguishing traits of Pat’s six-shooter are its antiquity, size, and mass, plus ivory grips, with no mention of a fanning spur or lack of trigger or sights. Although it’s a “cherished heirloom” there’s no mention of from whom she inherited it or how many generations back it goes.

NOTE: Back in 1873, “ivory” came more often than not from walrus, hippopotamus, narwhal, whale, and warthog rather than from elephant tusks. When carved, walrus and whale ivory is called “scrimshaw.” Unvariegated white grips made from buffalo, cattle, elk, moose, ram, and stag horn or camel, cattle, giraffe, walrus, and whale bone are often mistaken for ivory, especially after they’ve yellowed from age.

Fun Fact: The revolver shown on the Modest Stein (22 Feb 1871–26 Feb 1958) cover for “Violent Night” is a muzzle-loading .44-caliber 1858 Starr Double-Action Army Percussion revolver and thus doesn’t use cartridges (“shells”) of any kind. Artistic license or reference research error?

From Chapter II. in “Violent Night”:

*Pat turned and pointed at the waiting cab. The red-headed man looked at the cab, and while he was doing that, **Pat hit him over the head with an object which she took from her purse.** The red-headed man sprawled down in the grass.*

Monk said, astonished, “She knocked him cold!”

“That’s Pat,” Doc agreed. “As subtle as a ton of bricks.” ...

Doc was glad when the cab got moving. “What did you hit him with?” he asked Pat.

*“**My six-shooter,**” she said.*

*“It’s a wonder you didn’t brain him. **It was about as subtle as shooting a sparrow with a cannon.**” ...*

DOC lowered the red-headed man beside some bushes, indicated Monk and Pat should watch the fellow, and said, "I'll look around to be sure we won't be bothered here."

He walked a few yards into the brush, and unloaded **Pat's overgrown gun, putting the shells in his pocket. ...**

He crouched beside the red-headed man, still dangling Pat's six-gun idly in his fingers. ...

He crouched beside the red-headed man, still dangling **Pat's six-gun** idly in his fingers.

He had never lied to Monk, Pat, or Ham. Not exactly. He had shaved the truth a few times, and always regretted it.

While he was repenting, the red-headed man snatched the **big six-shooter** out of his hands. ...

Pat stared at the gun. **It was large, so much larger when you were looking at the producing end. Age and use had made the metal shiny and smooth, and the large ivory grips were as smooth as pearls from much use.** The red-headed man's hand looked so strained that it was a little yellow on the grips, and it was sweating. **Leaving a beautiful set of fingerprints, Pat thought.** She hoped she wouldn't be shot with her own gun, not with **a weapon that was a cherished heirloom like this one.**

From Chapter III. In "Violent Night":

"Loan me your six-shooter."

"You could get hold of a lot better shooting iron," Pat said. "After all, **this was made before the day of Jesse James.**"

NOTE: While eleven-year-old Jesse James gleefully bushwhacked "Free Staters" in "Bleeding Kansas" (30 May 1854–29 Jan 1861) in 1858 the same way that Clark Savage tried but failed to enlist with the U.S. Cavalry to fight Indians in 1879, James' "day" as an outlaw was between 1871 and 1876, when Clark was between three and eight and Alex between one and six.

From Chapter V. In "Violent Night":

The red-headed girl said, "I'm Barni Cuadrado. You do not know me, of course."

A waiter came. Pat ordered coffee and hot milk, half and half, stumbling with the Portuguese words, until the other girl helped her out. The waiter went away.

"All right, Barni," Pat said grimly. "Who the dickens are you? And what were you trying to do?"

Barni Cuadrado asked, "Aren't you Patricia Savage?"

"Yes."

"Then I bungled what I was trying to do."

From Chapter VI. In "Violent Night":

Barni nodded. She looked frightened. After a few minutes, as if to fight the silence in the room, she began talking. "I am not used to this sort of thing," she said. "I am Swiss. In Switzerland, your folks do not bring you up for such things as this."

"I've been to Switzerland," Pat said. "I liked it." ...

This suggests if not confirms that Pat indeed attended a Swiss finishing school. Q.E.D.

Barni got up and went to the door. She tried it. She pounded on it with her fists, quick nervous beating that got no answer. She was much paler when she came back.

The two girls sat in silence. Each minute, Pat had supposed, and hoped, that she wouldn't get more scared. She was wrong. Her nerves were crawling. She would think of the blank-faced men, and stifle an impulse to be sick.

Barni asked, "What about you? You must lead an awfully exciting life, associated with Doc Savage."

"I'm not associated with him," Pat explained wryly. "I just barge in on his cases once in a while. I'm only his third or fourth cousin, not very closely related, although we have the same coloring."

"I supposed you were his sister, possibly."

"No, no, I was even born in Canada. Doc is from the States. I lived out in the wild west; what time I wasn't being educated to the eyebrows. My parents are dead. I met Doc when he was in Canada on one of his wild cases, and he sort of took me under his wing. I own a beauty shop in New York now."

Pat is clearly shading the truth here, purposely distancing herself from Doc lest she be used against him. She may be rightfully suspicious of the woman with whom she was locked in or feared eavesdroppers who might be listening beyond that door or both. Pat was even more suspicious a fellow woman than any man.

From Chapter XIV. "Sacrifice in the Sun" in "The Men Vanished" (Dec 1940, submitted 15 Apr 1940, ©15 Nov 1940):

*Pat's eyes, searching, located Junith Stage. She was seated near the ugly-faced man and his group of associates. Pat watched her closely. **Pat had an inner impulse to distrust all women, and to her notion, Junith Stage had shown little reason to be trusted.***

Whatever her rationale, Pat has every reason to be cagey with regard to her familial closeness to Doc. On this topic, at least, she is an "unreliable narrator" in downplaying the exact degree of their kinship.

From Chapter XII. In "Violent Night":

*Pat glanced at Barni. "Did you get asked about **the six-shooter?**"
"The ... what?"
"The piece of artillery that **my grandfather used to fight Indians with,**" Pat said.*

Two years later, Pat and her six-shooter make their final appearance as the first-person narrator of the fifth of five sequential such novels submitted in 1947 in which she's self-deprecating enough as to border on "humblebrag" when not speaking with forthright frankness and candid honesty. Here, she says she inherited the Frontier Six-Shooter from her father, who taught her how to use it, who she implies in turn inherited it from his father, her grandfather, who did the same.

From Chapter II. in "I Died Yesterday" (Jan/Feb 1948, submitted 15 Jul 1947, ©05 Dec 1947):

*I went into my office, opened a cabinet, and took out a family heirloom, a little more than **four pounds of old-fashioned single-action six-shooter.** Hoglegs, [sic] those implements of mayhem were called in their day. **I had inherited it from my father, who hadn't exactly used it as a paperweight in his time.** I could stick five matches in a crack in a fence post at thirty yards and light at least four of them with it, and **that was my father's doing too. He had shown me how.***

*Stowing the **family treasure** in a **handbag a little smaller than a valise,** I went out to look for murderers. ...*

*I gave some thought to that, to the effect that excitement seems to have on me, while I was sauntering along the hallway looking for anything suspicious, and the result of my thought was a thankfulness that Doc Savage was not there watching. **Excitement in any of the three forms it usually takes—danger, suspense or anticipation of violence—undeniably has a stimulating effect on me, and this trait, if it should be called a trait, must be a family inheritance just as much as the six-shooter in my handbag.***

From Chapter III. in “I Died Yesterday”:

Impatience, presumably, is a sour taste that everyone has in varying degrees. Some bear it better than others. We Savages, I think, carry it poorly. I know my father was that way, and his father before him, our grandfather had been little inclined to sit in his log cabin waiting for the Indians to attack, but had gone out looking for them instead. A grand old guy. There were villages named for him all over the northwest.

While Farmer famously seized on this to make his spurious connection of the Canadian Savages to *Renfrew of the Royal Mounted*, even he avoided suggesting that said grandfather’s rough-hewn “log cabin” cited here and her father’s grandiose and, by Friday, 15 September 1933, thoroughly modern “log cabin” cited in “Brand of the Werewolf” were one in the same.

ValiDate™: “The northwest” now includes the American states of Oregon, Washington, and Idaho, and the Canadian province of British Columbia. Some broader conceptions reach north into Alaska and Yukon and south into northern California. Other conceptions may be limited to the coastal areas west of the Cascade and Coast mountains.

The various definitions are due to overlapping commonalities of the region’s history, culture, geography, society, and other factors over time. The culture of the Pacific Northwest is influenced by the Canada–United States border, which the United States and the United Kingdom established at a time when the region’s inhabitants were composed mostly of indigenous peoples.

Two sections of the border—one along the Forty-Ninth Parallel south of British Columbia, disputed until the Treaty of Oregon on Monday, 15 June 1846 and one between the Alaska Panhandle and northern British Columbia, disputed since the Alaska Purchase on Friday, 18 October 1867, throughout the Klondike gold rush (16 Aug 1896–1899) and resolved on Tuesday, 03 March 1903—have left a great impact on the region’s history and character as determined by the fluidity of those borders.

It’s possible that Pat’s hypothetical anonymous paternal grandfather may have been involved in the January 1846 border dispute during the Polk presidency that gave rise to the slogan “Fifty-four Forty or Fight!” six months before the Treaty of Oregon and twelve years before the Colony of British Columbia was established on Monday, 02 August 1858. If so, he was operating in the Old West, before the California Gold Rush, at which time the most advanced firearms available were .36-caliber M1838 Colt Paterson revolver and the matching 1838 Colt Paterson revolver rifle. Both are percussion “caplock” muzzle-loaders predating cartridges by a generation requiring a laborious six-step partial

disassembly for loading, with no provision for safely carrying the revolver with all five chambers loaded.

His log cabin could've been on, near, or on either side of the Forty-Ninth Parallel that resolved the dispute, so he could've been fully American, with no ties to the Dominion of Canada, established by the British North America Act on Monday, 01 July 1867, much less the Colony British Columbia, established nine years earlier, which didn't exist yet in the Northwest.

Possible, but highly unlikely, given that said paternal grandfather remains anonymous, hypothetical, *and* entirely *hearsay* from *two* unreliable narrators, Pat Savage and Philip José Farmer.

Farmer appears to have again conflated two different aspects of several Doc Savage novels to spin his own narrative in service of his Wold Newton Family™ tree and Chronology. Pat or may not have had an Indian fighter paternal grandfather infamous across the Northwest for going out looking for trouble instead of waiting for it come his way. That could've been a yarn she spun to explain her own modifications to turn the stock Colt Frontier Six-Shooter into a “Wild West gunfighter” fanner for her own amusement.

Will Murray seems to have been skeptical of Pat fanning her six-shooter, probably for the same accuracy and safety issues that consign the practice to fiction and Hollywood Westerns, not live fire other than blanks, much less a shootout where aim counts far more than speed.

NOTE: Hollywood Western films spread the idea that “gunslingers” in the “Wild West” fanned their revolvers in actual gunfights because it makes for a great visual, especially with black powder firearms. That they did so with any regularity is considered a caricature.

Hollywood picked it up from “Buffalo Bill” Cody’s Wild West (1883–1906) touring show shooting exhibitions, where trick marksmen entertained crowds with exotic shooting shows, inspiring all-too-many unwise imitators before the advent of the legal disclaimer “Don’t try this at home, folks!”

It was probably uncommon, if ever even used, in actual firefights because it does not lend itself to most real-life tactical situations, accuracy, or the use of cover and the aforementioned safety hazard.

That said, the thumbing technique using a well-maintained slip-gun is evidently the safest and least damaging way to perform this trick.

Chapter VI. “Frightsomen Old Man” in “Desert Demons” (26 Jul 2011, set in Aug 1936):

While Kling was speaking, Monk Mayfair had been poking deeper into the mine interior. He gave a lusty shout and bent over.

“Doc—lookit!”

*The apish chemist returned holding a **single-action six-shooter known in the days of the Old West as a hogleg.** [sic] ...*

*The bronze man held onto the six-shooter. He did not normally carry firearms, believing that a man who did so soon became too dependent on them. But this particular firearm was a family heirloom. **It belonged to Pat Savage’s father, and to his father before that.***

From Chapter VII. “Terror in Neptune Field” in “Deserts Demons”:

*Although the bronze man never carried firearms for fear that he might grow overly reliant on them at the expense of his wits and ingenuity, that did not mean he was not proficient in their use. Hours of practice gave Doc a rare mastery over weapons of all kinds. From his coat he extracted **Pat Savage’s enormous six-shooter.** ...*

*Casually, Doc Savage set the six-shooter along the sill of the driver’s side door window, and began working the pistol. **It was a single-action model, requiring cocking before each trigger pull.** ...*

From Chapter XIII. “Rampage in Red” in “Desert Demons”:

*A NEWSPAPER REPORTER had once, in jest, nicknamed Patricia Savage, “Calamity Pat.” He went on to remark that the bronze-haired girl, who could **shoot her grandfather’s six-shooter** with unnerving accuracy, was a modern cross between Calamity Jane and Annie Oakley. ...*

*“We were worried sick about you. **We found your six-gun** in that cave and thought you were dead,” Ham said*

“I left it there deliberately. Didn’t you get my message?”

From Chapter XX. “Trickery Trap” in “Desert Demons”:

*Before throwing open the hatch, **Pat checked her six-shooter**, which she had discovered in a map pocket upon awaking in the racing plane’s cockpit where no doubt Doc Savage had secreted it for safekeeping. **Taking a leaf from past experiences, Pat stuffed it with mercy bullets and tear gas shells, then filled her pockets with more taken from stores back of the cockpit.***

The discrepancy between the two widely different descriptions of Pat’s six-shooter is finally addressed and cleverly resolved by Will Murray, but the question of whether it originally belonged her hypothetical paternal grandfather, bought in 1873, or her father, bought circa 1893, remains.

From Chapter XXIV: “Sky Scorpion” in *The All-New Wild Adventures of Pat Savage*, Book I (No. 1) “Six Scarlet Scorpions” (13 Oct 2016, set Jun 1939):

Patricia Savage had the borrowed six-shooter in hand, and was checking the action

*“This is a similar shooting iron to the one **that belonged to my grandfather,**” she was saying in an effort to distract Monk’s mind from his troubles. **“Only this one has a trigger.”***

Monk corrugated his rather small brow.

“I know you like to fan your grand-pappy’s six-shooter, but it seems to me I’ve seen you work it with a trigger, too.”

*Snapping the gate back into its frame, Pat said, **“I put a trigger into it a time or two, but I always end up taking it out. I prefer to fan my grandfather’s old pistol.”***

“Don’t that make it harder to hit the target?”

“Exactly,” said Pat firmly, lining up the gunsights and squinting one eye while she look down the barrel with the other.

Monk frowned deeply. “I don’t exactly follow.”

“If I can hit what I am fanning at with a smoke wagon, I can’t hardly miss when I squeeze the trigger.”

From Chapter XXXIV. “Death and Company” in “Six Scarlet Scorpions”:

*Tall Turkey was standing over the fallen form of publisher Marrs, and in his hand was a well-worn single-action Frontier-era six-shooter that Pat Savage instantly recognized. **“My grandfather’s six!”** she said fiercely.*

*Pocketing the red vial, she leapt upon the Osage, gave his gun wrist an artful twist—and sent him sprawling on the sandstone floor, **the antique six-gun** firmly in her hand now.*

*Leveling it at the remaining Osages, **she rocked the fanning spur back with an audible click** and warned, “If this dog barks, somebody’ll get bit. Any takers?” ...*

*“Say that to me, won’t you?” Pat spun smartly, **fanned the hammer once**—and the blowgun jumped out of the man’s gloved hands, neatly cut in twain. Pat made a show of blowing gun smoke from the long barrel, remarking, “Annie Oakley, step aside for your betters!”*

NOTE: The Colt Single-Action Army and Frontier Six-Shooter famously have *four* distinctive clicks, one for each of the notches in the hammer: **Safety** (a short distance back from the resting position and disengaging it from trigger and locking it place), **Half-Cock** (pulling the hammer further back from the resting position and releasing the loading gate and ejector to load and unload each chamber), **Cylinder Stop** (aligning the cylinder solidly with the barrel and locking them in place), and **Full-**

Cock (unlocking the hammer, engaging the trigger ready to fire with a single *squeeze*, **not** a *pull*).

“Going off *half-cocked*” is a malfunction of the safety mechanism caused by applying excessive force to the trigger, dropping the revolver or *fanning the hammer*, thus jarring the pulled back hammer out of its notches to fall unobstructed, firing at least one round.

Normal trigger “pull” (force) is five pounds. Thirty-five pounds or more of trigger pull is *excessive*. If the cylinder and barrel aren’t fully stopped and aligned, the revolver might be blown apart as it misfires.

Fanning the hammer, dropping the revolver, and applying excessive force to the trigger can all cause one or more, if not all four hammer notches to break, rendering it unreliable and unsafe to shooter and bystander alike.

Both Stormalong and Hopalong lived during the “Old West” era between the enactment of the Kansas–Nebraska Act on Tuesday, 30 May 1854 opened those Territories to American settlement under the “Manifest Destiny” doctrine and the raising of the 48-star American flag representing the Continental United States on Thursday, 04 July 1912, and the “Wild West” era between with the joint introduction of the ten-round .44-40-caliber Winchester Model 73 Lever-Action Carbine and .44-40-caliber Model P Colt Frontier Six-Shooter (“The Guns that Won the West” by chambering the same ammunition) on Wednesday, 24 September 1873 and the last of the Alaskan Gold Rushes in the “Last American Frontier” on Friday, 22 Jul 1910.

If “Hoppy” and “Stormy” were indeed twins, they’d both have been nineteen in 1854, thirty-eight in 1873, seventy-five in 1910, seventy-seven in 1912, and eighty-five in 1920. Possible, but highly unlikely.

Distant Relatives Close Enough to Touch?

Richard Henry Savage (12 Jun 1846–11 Oct 1903) was an American military officer, diplomat, engineer, attorney, and author of more than forty books of adventure and mystery published 1891 and 1904, based loosely on his own experiences. Savage’s life may have been the inspiration for Doc Savage. Though they never met, Doc Savage co-creator H. W. Ralston joined Street & Smith publishers one year after a collection of Savage’s short stories were published and was familiar with him and his extraordinary life. In the absence of Stormalong Savage, a case could be made for him being the father of Clark Savage and thus the paternal grandfather of Doc were it not for the fact that he was already fifty-seven when died on Sunday, 11 October 1903 at Roosevelt Hospital after being knocked down and injured in the ribcage on a New York City street by a horse and wagon on Saturday, 03 October 1903 and his branch of the Savage family name died with him.

On Thursday, 02 January 1873, at the German Embassy in Washington, D.C., then-twenty-seven-year-old Savage married the then-twenty-seven-year-old aristocratic Anna Josephine Scheible (21 Feb 1846–07 Jul 1910), a German widow who’d arrived in war-torn America in 1864 with her first husband, Gustav, whom she had married aged sixteen, to look after family-owned

land in Georgia. Gustav Scheible died in 1866 and Anna became a favorite of the Washington social circle. Her marriage to Savage produced one daughter, Alice (24 Sep 1873—?), who later married Anatol de Carriere (no vital statistics), a Moldavian *boyar* and an Imperial Russian Councilor of State.

Both Richard Henry Savage and Clark Savage, Senior served in Havana, Cuba during the Spanish–American War at the same time and within a few miles of one another at any given time. Street & Smith had just published Richard Henry Savage’s short-story collection *Our Mysterious Passenger and Other Stories* (01 Jan 1899), bringing him to the attention eighteen-year-old assistant bookkeeper Henry William Ralston (born Rothstein), future president of Street & Smith.

52-year-old Senior Major Richard Henry Savage’s unit was assigned to Marianao, six miles north of Havana, to build “Camp Columbia” for the Army of Occupation and were present at the surrender of Havana on Sunday, 01 January 1899. Weakened with yellow fever, Savage is mustered out of the Volunteer Engineers in April 1899 and assigned Captain with the Twenty-seventh Volunteer Infantry, but continuing illness prevented him from traveling with his unit to the Philippines and he is honorably discharged.

31-year-old brevet Lieutenant Clark Savage distinguishes himself first as company commander at the surrender of Havana on Sunday, 01 January 1899 and then by hoisting the first American flag in Havana Province on Sunday, 10 December 1899.

There’s no record of 53-year-old Richard Henry Savage and 31-year-old Clark Savage ever meeting in Havana despite never having been more an hour’s ride apart the whole time, but Clark Savage’s command of the American flag raising at Havana has been historically misattributed to Richard Henry Savage for two and a quarter centuries.

In August 1903, Savage’s wife and daughter were in Kishinev, Russia, where Savage’s son-in-law Anatol was serving the Russian government. Savage’s wife sent word through Breslau to London that twenty-seven of the Kishinev pogrom rioters had been given prison sentences. The de Carrières hid some forty Jews in their house during the rioting. Anna Savage warned that if further bloody riots were encouraged by the Tsar’s government, “the wealthy Russian aristocracy will be in danger of their lives.” Anna Josephine Savage died at 28 West Sixty-third Street in New York City, the age of sixty-seven on Thursday, 07 July 1910 after a long illness with her then-thirty-seven-year-old daughter Alice de Carriere at her side. Anna had been a noted supporter of women’s right to vote for thirty years, but I can find no historical mention of Alice aside from her family relationship to the Savages and de Carrières.

His parents were Richard Savage (1817–1903), a lawyer and manufacturer whose family had lived in the Utica area for years who joined the California Gold Rush in 1850 and became famous as one of the discoverers (along with Henry Comstock, Potosi, William Billy Chollar, Hale and Norcross, Gould and Curry, Best and Belcher) of the “Comstock Lode” in Nevada in 1857, and Jane Moorhead Ewart (no vital statistics).

Five-year-old Richard Henry Savage and the rest of his family left New York in 1851 to join his father, arriving in San Francisco in February 1852. His paternal grandparents are Richard and Elizabeth Savage, and maternal grandparents are Robert and Jane (Nevin) Ewart, making him a

descendant of the Savages of Worcester, Worcestershire, England; the Nugents of Portaferry, County Down, Northern Ireland and the Ewarts of Stirling, Lanarkshire, Scotland.

His paternal grandfather Richard Savage of Worcester, Worcestershire was a civil engineer who came from Great Britain about 1805. He's a ninth cousin of the Savages of Chester, Cheshire from whom thirteen-year-old Thomas Savage who emigrated to Jamestown in 1608 is directly descended.

This makes Richard Henry Savage a ninth cousin twice removed from Stormalong Savage!

Richard Henry Savage had five siblings: Nellie Alice Savage (1853–?), John Ewart Savage (1856–?), and Lincoln Ewart Savage (1864–?). If any of his siblings had a daughter named Alice Nellie Savage after Nellie Alice Savage born 1880 who married a man named Benson circa 1900, then Richard Henry Savage would be the granduncle of Richard Henry Benson, who famously became "The Avenger" to avenge the deaths of his wife Alicia (surname unknown, but the Bensons were flying from Buffalo NY to Montréal, Québec to attend her unnamed dying mother) and daughter Alice (named for Alice Nellie Savage Benson) as recounted in *The Avenger*, Vol. I, No. 1 (Issue 1) "Justice, Inc." (Sep 1939).

In that spirit and tradition, I envision a bookshelf tucked away in a corner of the Savage office reception room displaying all the published books of Richard Henry Savage and both Clark Savage Senior and Junior during their respective lifetimes. What literary family wouldn't have such a thing, along with a Family Bible inscribed with a register of birth, marriage and death?

Of course, all this becomes moot if Pat indeed inherited her Colt Frontier Six-Shooter directly from her Pacific Northwest homesteading father Alex, which seems by far the likelier scenario. That said, I have the perfect candidate in mind, a Western lawman who looks exactly like Doc, having been painted by thirty-year-old artist Walter Martin Baumhofer using twenty-eight-year-old gymnast and lifeguard Carl Hewitt as his model.

"Pistol Pete Rice" was the gunslinging grandfather of the modern-day version chronicled in *Pete Rice Magazine* (Nov 1933–Aug 1935) and *Pete Rice Western Adventures* (Sep 1935–Jun 1936). Both men served as Sheriff of Buzzard Gap, Trinchera County, Arizona two generations, with character reverting from being contemporaneous to being period in the short stories in *Wild West Weekly* (15 Aug 1936–30 Dec 1939) published after *Pete Rice Western Adventures* was canceled.

Pistol Pete Rice had crossovers with outlaw Sonny Tabor in "Pete Rice Rides Down Sonny Tabor" (15 Aug 1936) and "Sonny Tabor's Sheriff Pard" (12 Nov 1938) and this a candidate for being the maternal grandfather of Doc's cousin Patricia "Pat" Savage if Stormalong Savage's younger son Alexandre "Alex" Savage married an anonymous sister of Pistol Pete Rice's anonymous son, who then named his own son after his illustrious father.

Shaving the Barber With Occam's Razor

But there's another possibility, one that answers the question without posing others.

Stormalong Savage's two sons Clark and Alex were born in 1868 and 1872 respectively and thus would've grown up in the "Wild West" era. Clark was five and Alex was one year old in 1873

and both the storied “Guns That Won the West” introduced then were manufactured continuously up until 1892, when Clark was fifty-five and Alex was fifty-one.

Alex was twenty-one when he homesteaded his estate on the shores of the Strait of Georgia in British Columbia in 1893 and was likely equipped with one of the last 1873 Colt Frontier Six-Shooters manufactured in 1892 and one the first twelve-round Winchester 92 lever-action carbines that replaced the ten-round Winchester 73.

NOTE: The gun belt for the Colt Frontier Six-Shooter has eighteen cartridge loops, enough to reload the Six-Shooter three times, reload both the ten-round Winchester 73 carbine and the Six-Shooter once with two rounds to spare, or reload both the twelve-round Winchester 92 carbine and Six-Shooter once. Very practical!

Forty years later, Pat paired it with a modern fifteen-shot .30-caliber Remington Model 8 automatic rifle instead of the ten-shot .44-44-caliber Winchester Model 73 carbine of old.

Eighteen-year-old Patricia Savage, raised in Canada by her sixty-one-year-old father Alex, second son of Stormalong and his anonymous wife, who bought his 1873 Colt Frontier Six-Shooter, forty years early (circa 1893) when he homesteaded his cabin on the coast of Vancouver Island, British Columbia taught his daughter to shoot and gave it to her when she was old enough to inherit all his worldly belongings, as he knew was inevitable would, before being murdered as his brother was before him, with Doc Savage, raised by scientists to become the Man of Bronze that he is, meets her in the course of solving his murder, after which she follows him back to Manhattan armed with her father’s six-shooter ready to take arms against a sea of troubles, and by opposing end them in the Savage family tradition.

I’m also struck by the coincidence of the Canadian connection linking the Reid and Savage families.

The likelihood that Pat inherited her six-shooter directly from her deceased father, not a hypothetical anonymous paternal grandfather, as we have long been led to believe, is far higher than any other.

—end—