[INVESTIGATIVE FILES JOE NICKELL

Joe Nickell, PhD, is CSI's senior research fellow and curator of the Skeptiseum (online at www.skeptiseum.com).

'Pop' Culture: Patent Medicines Become Soda Drinks

The soda fountains of yesteryear—a particularly American phenomenon—were in drug stores for a reason. Introduced in pharmacies at the end of the eighteenth century and increasing in the 1830s, they were an effective means of dispensing medications: adding a small amount of flavoring along with some seltzer (effervescent water) made medicine more palatable (New Orleans, n.d.; Mariani 1994, 291). As part of my studies of snake oil and other cure-alls (Nickell 1998, 2005, 2006)—which ranged over several years and included collecting antique bottles and ephemera and visiting such sites as the Coca-Cola museum—I was struck by the fact that several famous soft drinks had originated as patent medicines, which in turn had their origin in herbal and other folk remedies (see figure 1). Pharmacists claimed the added ingredients "made medicines taste so good, people wanted them, whether they needed them or not, and that's how soft drinks evolved" (New Orleans, n.d.).

Advent of Soda 'Pop'

Mineral water, including naturally carbonated water (figure 2), has long been promoted as a curative for various ailments. As early as the beginning of the sixteenth century, scientists tried to duplicate nature's carbonation process. It fell to Dr. Joseph Priestley (discoverer of oxygen) to advance the first practical process in 1772, thus helping to launch the soda-water industry. In time, flavored soda waters caught on.

Some early soda bottles, such as those for English ginger ale, had rounded bottoms, so they could not be stood upright. This prevented their corks from drying out and shrinking, which kept the gas pressure from causing them to "pop."[1] Later "pop" bottles had patented stoppers (again, see figure 2), including the familiar one from 1891 still used today, called the *crown cork* (a crimped metal cap with a cork liner) (Munsey 1970, 101–10).

Root Beer and Sarsaparilla

Two plant roots particularly, sarsaparilla and sassafras (figure 1), were early recognized for their potent flavor and presumed medicinal properties. In 1830, in his treatise on medical botany, Constantine Rafinesque described the American sassafras tree (an aromatic member of the laurel family) and its qualities, noting that "Indians use a strong decoction to purge and clear the body in the spring." Sassafras has long been used as a tea and "home-remedy spring tonic and blood purifier" (Rafinesque 1830). (I dug the root as a boy in Kentucky, seemingly coming by my interest naturally: my great, great grandparents, Harry and Martha Murphy, were Appalachian herbalists and folk doctors.)

Sassafras was an original, major ingredient in many recipes for root beer, which was brewed in the eighteenth century as a mildly alcoholic beverage. Reportedly, in 1870 an unknown pharmacist created a formula that he billed as a cure-all and offered to the public. However, it was not actually marketed until Philadelphia pharmacist Charles Hires produced a liquid concentrate in small bottles (see figure 3), introducing it at the Philadelphia Centennial Exhibition in 1876. By 1893 the Hires family was selling bottled versions of their carbonated drink, thus securing a place in soft drink history ("History" 2010; "Root beer" 2010). One slogan was "Join Health and Cheer/Drink Hires Rootbeer [sic]" (Munsey 1970, 274).

Ironically, in time, root beer's healthfulness was seriously questioned after safrol (a substance in sassafras oil) was found to cause cancer or permanent liver damage in laboratory animals. The U.S. Food and Drug Administration (FDA) banned sassafras oil in 1960, but inventors soon discovered a process to remove the harmful substance while preserving the flavor ("History" 2010).

Another common ingredient of root beer was sarsaparilla, which was originally sold for medicinal purposes. As early as 1835, the famous religious society, the Shakers, offered in their herb catalogs a syrup of sarsaparilla touted for a variety of ailments, including digestive troubles, rheumatism, jaundice, "secondary syphilis," and more. It contained not only sarsaparilla root but dandelion, mandrake, Indian hemp, and other roots, as well as juniper berries and additional ingredients (Miller 1998, 84–85). Among many famous brands of suppos-

edly curative sarsaparilla were Corbett's (made by Shaker doctor Thomas Corbett), Hood's, and Ayer's (Fike 2006, 214–21).[2]

Like root beer, sarsaparilla evolved into a soft drink (figure 4), a flavored, carbonated concoction that was in time sold only for its taste (Sioux City Sarsaparilla is a current major brand ["Sarsaparilla" 2010]). Both drinks were original concoctions, predating colas and other popular soda drinks ("History" 2010).

Other plant-extract-based drinks, such as birch beer (emerging in the 1880s to compete with root beer), ginger beer, and ginger ale, have histories paralleling root beer and sarsaparilla. Because ginger has been used for centuries for medicinal purposes, ginger ale predates most of the other medicinal soft drinks. Indeed, Vernors brand, said to have originated in 1866, has been called "the first U.S. soft drink" ("Ginger ale" 2010). Then there was Dr. Brown's Cel-Ray, a celery tonic served in New York delicatessens from 1869 and sold as a bottled soda since 1886 ("Dr. Brown's" 2010).

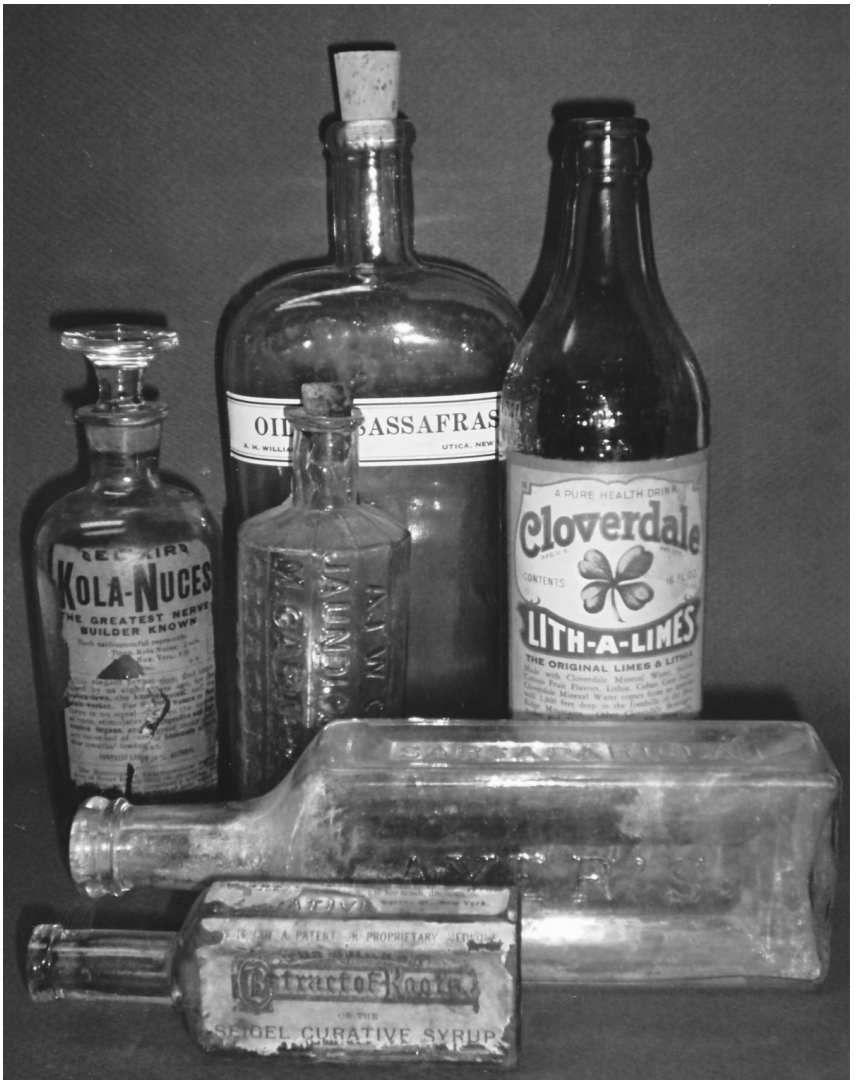

Figure 1. Assortment of bottles representing antecedents or contemporaries of famous early soft drinks—like Coca-Cola and 7 UP—that began as patent medicines. Rearmost bottle: "Oil of Sassafras"; next row, left to right: "Elixir Kola-Nuces," "Atwood's Jaundice Bitters," and "Cloverdale Lith-A-Limes/The Original Limes & Lithia"; next, "Ayer's Sarsaparilla"; and, in front, "The Shaker Extract of Roots or the Seigel Curative Syrup" (containing, among many ingredients, gentian and sassafras). (Author's photo of his collection)

Moxie

Among the earliest patent-medicine-turned-soft-drinks was a New England-based variety, now of limited sales but still remembered for the slang expression, "You've got a lot of Moxie"—meaning a lot of pluck or nerve. The drink was created by Dr. Augustin Thompson, who alleged that it contained extracts from a rare South American plant. Thompson claimed that the unnamed botanical was discovered by his "friend," a Lieutenant Moxie ("Moxie" 2010). Moxie was supposedly a cure for "brain and nervous exhaustion, loss of manhood, imbecility and helplessness, softening of the brain, locomotor ataxia and insanity" (Klein 1999).

Moxie was first formulated circa 1876, but, as its present advertising notes, it has been marketed "Since 1884," by which time Thompson was selling the bottled drink as well as a bulk syrup intended for soda fountains. Moxie was described as "a delicious blend of bitter and sweet, a drink to satisfy everyone's taste." Its unique flavor has been attributed to a key ingredient, "Gentian Root Extractives" ("Moxie" 2010)—gentian root is an ingredient of some types of bitters: a medicinal liquor made by steeping certain botanicals in alcohol (Munsey 1970, 111–13; Balch 2002, 70). (Again, see figure 1.)

Coca-Cola

This classic soft drink originated as a patent medicine selling for five cents a glass at Jacob's pharmacy in Atlanta, Georgia, on May 8, 1886. Because Atlanta and Fulton County had passed prohibition legislation, doctor and pharmacist John S. Pemberton created a non-alcoholic version of a coca wine, then—accidentally it is said—one day added carbonation. The new drink was soon marketed to other drug-store soda fountains where carbonated water was sold in the belief that it was healthful (seltzers were touted, for example, as a cure for obesity [Munsey 1970, 103]). Pemberton claimed that his Coca-Cola cured such diseases as dyspepsia and impotence (Munsey 1970, 105; "Coca-Cola" 2010). It was billed early as "The

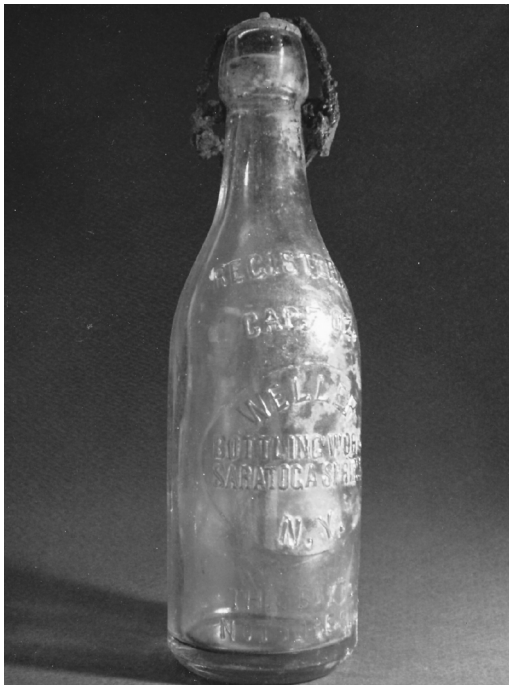

Figure 2. Carbonated water required bottles with strong closures, like this one from historic Saratoga Springs, New York. (Author's photo of his collection)

Figure 3. Hires, one of the original root beers, was sold as early as 1876 in a concentrated "Household Extract" form (front), as was Hires ginger ale, and was also later marketed as a carbonated beverage (left, right). Both "pop" bottles shown had crown caps; the one on the left dates from about the end of the nineteenth century, and the other from after May 26, 1936, when that bottle was patented. The latter contained "plant extractives" of birch, sassafras, licorice, sarsaparilla, ginger, and so on, as well as carbonated water, sugar, dextrose, caramel, "and flavor." (Author's photo of his collection)

Ideal Nerve and Brain Tonic. It Cures Headache, Invigorates the System" (CNBC 2010). Pemberton also claimed the drink cured morphine addiction.

In fact, the coca leaf and kola nut (figure 1) used in the drink yielded the addictive substances cocaine and caffeine—hence the name Coca-Cola. However, in time, the small amount of cocaine was reduced and finally eliminated at the turn of the twentieth century (Mariani 1994, 291). (The current product contains only coca flavoring.) Caffeine remained, but in 1912 an amended U.S. Pure Food and Drug Act required that such "habit-forming" and "deleterious" substances in a product be listed on its label ("Coca-Cola" 2010).

Until 1894, the drink was sold exclusively at soda fountains. However, on March 12 of that year, the first Coca-Cola was sold in bottles provided by the Biedenharn Candy Company in Vicksburg, Mississippi. By 1895 the product was distributed throughout the United States and its territories. Cans of the drink were first marketed in 1955 (New Orleans, n.d.; "Coca-Cola" 2010).

Pepsi-Cola

Coca-Cola's main rival began as a carbonated soft drink first called "Brad's Drink" after its creator, Caleb Bradham of New Bern, North Carolina. At his pharmacy there in 1898, he began to concoct a fountain drink that was intended to both aid digestion and boost energy. Its main ingredients—pepsin (a digestive enzyme) and kola nuts—appear to have prompted its later name, Pepsi-Cola. Its trademark application was approved in 1903, and Bradham moved his operation to a rented warehouse where, the following year, the drink began to be shipped out in six-ounce bottles. The first logo was created in 1905, then redesigned in 1926 and 1929.

In 1931, during the Great Depression, Pepsi went bankrupt (largely due to speculation on sugar prices that fluctuated wildly in the wake of World War I) and its assets and trademark were sold. A second bankruptcy just eight years later put the company in the hands of a candy manufacturer, Loft Inc., whose retail stores had soda fountains. Loft's president, Charles Guth, was miffed at Coke's refusal to lower the price on its syrup and intended to replace Coke with Pepsi. He had his chemists reformulate the syrup formula. In 1936, Pepsi introduced a double-sized, twelve-ounce bottle for ten cents, then responded to slow sales by cutting the price to five cents. During the 1940s, a new president, Walter Mack, targeted the African American market with ethnically positive ads. In time, Pepsi became a serious rival of Coke ("Pepsi" 2010).

Dr Pepper

Another popular American soda was first served in about 1885 in Waco, Texas. A concoction created by Charles Alderton, the pharmacist in Morrison's Old Corner Drug Store, the drink was first dubbed a "Waco." Alderton gave the recipe to the owner, Wade Morrison, who christened it Dr. Pepper (seemingly after Dr. Charles T. Pepper of Christiansburg, Virginia, where Morrison once worked as a young pharmacy clerk).

Dr. Pepper was initially sold as an energy drink and "brain tonic." The drink was not nationally marketed until 1904. In the 1950s, the period punctuating "Dr" was dropped. This was for stylistic reasons as well as to eliminate any suggestion of a medical link to the product, which was called "The Friendly Pepper Upper." Courts have held that Dr Pepper is not a "cola" but a distinctively flavored drink. During the early 1980s, after the Dr Pepper company became insolvent, the Federal Trade Commission blocked its acquisition

by Coca-Cola; it then merged with Seven Up (to create Dr Pepper/Seven Up, Inc.) ("Dr Pepper" 2010).

7 UP

St. Louis businessman Charles L. Grigg launched a new soft drink just two weeks prior to the stock market crash of 1929. Originally called "Bib-label Lithiated Lemon-Lime Soda," it contained lithium citrate. Lithium is an element found in many mineral springs (mineral water was often bottled and sold for its allegedly healthful properties), and it was once prescribed for many ailments, including gout, rheumatism, and kidney stones. It did little good for these problems, but it is known as a mood-stabilizing drug. In marketing his drink, Grigg used the slogan, "Takes the 'ouch' out of grouch." The drink's name was later changed to "7 UP"—supposedly the "7" indicated its seven-ounce bottle and the "UP" the rising bubbles from its strong carbonation (Klein 1999; "7 UP" 2010; Nickell 2005).

Like other such "health" drinks, 7 UP had problems. For example, toxic levels of lithium, which is still used to treat manic depression, are rather near its therapeutic levels (Nickell 2005). By the mid-1940s, lithium was fortunately no longer listed on the 7 UP label. Over the years the beverage has been reformulated many times: A diet version (called "Like") was discontinued in 1969 after cyclamate sweetener was banned; the drink's high sodium content was reduced by substituting potassium citrate for sodium citrate; and 7 UP's claim to be "100% Natural" was dropped after the Center for Science in the Public Interest threatened to sue on the grounds that its high-fructose corn syrup resulted from a manufacturing process ("7 UP" 2010; Klein 1999).

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As these major examples show, popular modern soft drinks evolved from late nineteenth- and early twentieth-century patent medicines. Ironically, the touted medicinal effects were actually somewhere between nonexistent and dangerous, but over the years the harmful effects have been rather consistently addressed. We can now turn our attention elsewhere: to the dubious health and medical claims that continue to proliferate under the term "alternative medicine"—often old-style quackery, even if newly bottled. ■

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Notes

1. English poet Robert Southey in 1812 described ginger ale as "a nectar, between soda water and ginger beer, and called pop because 'pop goes the cork' when it is drawn" (qtd. in Munsey 1970, 104–5).

2. Although sarsaparilla continues to be promoted by naturopaths and other herbalists as a curative for "a wide range of systemic problems" and is allegedly "especially useful for rheumatoid arthritis" (Naturopathic 1995, 119), peer-reviewed research generally fails to support the claims ("Sarsaparilla" 2010).

Figure 4. Sarsaparilla famously transitioned from a medicine to a soda drink. With the nineteenth-century Hood's bottle (left)—from C.I. Hood & Co., Apothecaries, Lowell, Massachusetts—is a flyer advertising that brand as a "cure" for "Rheumatism," as well as "Dyspepsia, Biliousness, Sick Headache, Indigestion, General Debility, Catarrh & Kidney and Liver Complaints." The soda version (right), from Rochester, New York, dates from after 1903. (Author's photo of his collection)

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