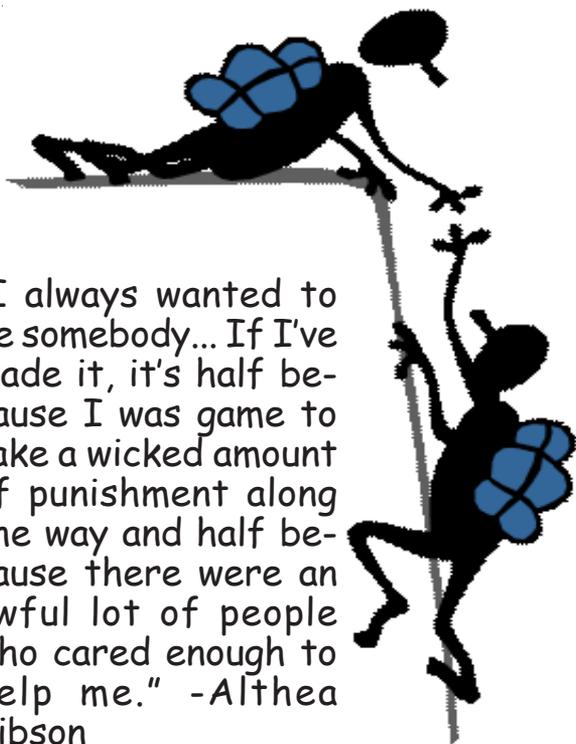


Chemical Bond

**Volume 58
Number 6
September 2007**

St. Louis Section, American Chemical Society



"I always wanted to be somebody... If I've made it, it's half because I was game to take a wicked amount of punishment along the way and half because there were an awful lot of people who cared enough to help me." -Althea Gibson

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Chemical Bond

Volume 58

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Meeting & Seminars

Board of Directors

St. Louis Section–ACS Board of Directors meets on the second Thursday of each month, at the **Glen Echo Country Club** (map available on website). Meetings are open to all members, and all are encouraged to attend. Elected officers and chairs of major committees have the right to vote; others in attendance have voice but no vote. If you want to attend the dinner, please contact Steve Kinsley at least one week prior to the meeting date (kinsley@wuchem.wustl.edu). The cost of dinner is \$20. Members wishing to become active in section activities are welcomed to their first dinner for free, compliments of the section.



REMINDERS

Can't wait for Snail Mail? Get the Chemical Bond at <http://www.umsl.edu/~acs/>

Date: September 13
Social hour: 5:30 pm
Dinner: 6:30 pm
Business Meeting will start during dinner.
Future Meetings: October 11, November 15

Receive e-mail reminders of upcoming ACS events and activities! To subscribe to the Reminders Listserve, send your e-mail address to ALEXA.SERFIS@SLU.EDU.

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From the Hill...

Landmark Innovation Law Signed ACS Celebrates Major Victory

On August 9, President Bush signed into law landmark legislation to bolster U.S. competitiveness in the global economy by authorizing more than \$43 billion of new funding over the next three fiscal years to boost federal investment in basic research in the physical sciences, expand math and science education programs at the K-12 and university levels, and revitalize policies that encourage innovation. The enactment of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act, H.R. 2272—more commonly known as the America COMPETES Act—represents the culmination of more than three years of intense effort on the part of the scientific, education, and business communities to push for bold action to strengthen the foundations of American scientific and technological competitiveness.

ACS President Catherine Hunt thanked the bill's sponsors for their efforts: "The COMPETES Act represents a truly bipartisan effort to ensure that our great nation remains the world's economic and technological leader by renewing our focus on research and development in the physical sciences, science and math education, and other policies that encourage innovation. This bill is a huge victory for science and for our country."

"This package of legislation is proactive and far-reaching. It puts in place measures designed to invigorate U.S. innovation, which in turns stimulates our economy," said House Science and Technology Chairman Bart Gordon (D-TN). Securing a brighter future for our children is simply not a partisan issue. I'm proud that my colleagues and I have been able to work together to move this bill forward—this is truly a team effort."

"Keeping America's brainpower advantage is the single best way in a global economy to keep good jobs from going overseas to China, India, and other fast-growing countries," said Senator Lamar Alexander (R-TN), who served as lead Republican conferee on the legislation in the Senate. "Congress will enact no more significant piece of legislation this year."

The *America COMPETES Act* is based largely upon the recommendations of the widely regarded 2005 National Academies' report, *Rising Above the Gathering Storm*. That report, requested by a bipartisan, bicameral group of lawmakers, found that the U.S. stands to lose its competitive edge over other nations without action. The American Chemical Society and its members played a leading role in building support and crafting the details of this sweeping legislation that will bolster research accounts at key federal research agencies and will devote substantial resources to improve science, technology, engineering, and mathematics (STEM) education. Legislative Action Network members sent more than 21,000 letters and emails to Congress discussing aspects of this legislation and ACS members made over 75 district visits to discuss the importance of these issues with legislators and their staffers. (<http://www.chemistry.org/portal/a/c/s/1/acdisplay.html?DOC=government%5ccapitolconnection%5cccAug07.html>)

Chemical Science and Technology Award Call for Nominations

The St. Louis Chemical Science and Technology Award will be presented to a chemist in the St. Louis area who has demonstrated a high degree of professionalism and scientific contribution. Criteria used to judge the award include technical proficiency, presentations, coaching/teamwork and additional professional activities. The award will consist of a plaque, a check for \$500.00 and dinner for the awardee and a guest at the annual Chemical Progress Week Awards Night. The award will be presented at the Awards Night event, which will be held in April of 2008.

This award will be presented to a person whose training includes successful completion of an Associate, Bachelor or Masters Degree in a chemistry or chemistry-related curriculum.

Letters of nomination must be received by Sue Dudek, Pfizer Corp., mail code T2A, 700 Chesterfield Parkway West, Chesterfield, MO 63017 by December 22, 2007. Nominations, including seconding letters, must not exceed six pages. The nominating letters should address the criteria above. A current work address, phone number and fax number must be provided for each nominee. Please include an e-mail address.

Nominees need not be a St. Louis Section member to be eligible for this award. This award is administered by the St. Louis Section of the American Chemical Society (ACS). For more information contact Sue Dudek 314-274-2464
FAX 314-274-4426 susan.dudek@pfizer.com



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***Contact: Steve Kinsley
(kinsley@wuchem.wustl.edu)***

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***Sponsored by the St. Louis Section of the
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2008 St. Louis Award Call for Nominations

The St. Louis Award, sponsored by the Monsanto Company, is presented to an individual who has made outstanding contributions to the profession of chemistry and demonstrated potential to further the advancement of the chemical profession. The award, consisting of a \$1,500 honorarium and a plaque, is presented at the St. Louis Award Banquet, the final event of Chemical Progress Week in April.

Please help the Awards Committee identify outstanding chemists in the St. Louis Section by submitting your nominations to the St. Louis Award Chair. The nominations should include a nominating letter, two or more seconding letters from individuals who have had a close professional affiliation with the nominee, a brief biography, a description of the nominee's accomplishments, and a list of publication and patents.

At the time of the nomination, the nominee must be a member or affiliate of the St. Louis Section of the ACS. The deadline for nomination packets to be received is December 7, 2007. Please send nominations and inquiries to:

Dr. Joseph Ackerman
St. Louis Award Chairman
Department of Chemistry
Campus Box 1134
Washington University
1 Brookings Drive
St. Louis, MO 63130-4899
Phone: 1-314-935-6593
FAX: 1-314-935-4481
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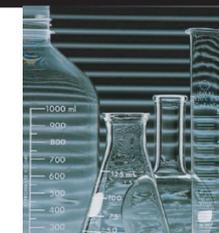
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Part III: A look at St. Louis and the Nation in 1907

by Ted Gast



In 1907, Carl Gast, my grandfather and co-founder of the Carl F. Gast Company, was 2 years old. As a family, the Gasts had been established in St. Louis for 25 years. They lived at the corner of Grand and Kissuth in North St. Louis. Carl's grandparents lived in a flat behind them on O'Bear Avenue. My great-grandfather had a barber shop on North Grand near Robison Field. This was the old stadium at Beaumont on Natural Bridge (as mentioned by Steve) not Sportsman's Park. As a boy, my grandfather's job was to clean up after the horse's in front of the shop.

My great-grandfather charged 10 cents for a shave and 25 cents for a haircut. Men did not shave themselves; most men had beards. The clean shaven look did not become popular until after World War I. Most men used pocket watches, as wristwatches hadn't caught on yet either. My great-grandfather had made enough money, through some real estate deals, to send his son to the University of Missouri in Columbia to study mechanical engineering.

On the other side of my family, my great-grandparents were married a year later in 1908. My grandmother still has their wedding certificate, issued by the City of St. Louis. It was printed in German, which was perfectly normal and legal in those days. In fact, until the start of the First World War, her grandfather insisted *in diesem Haus wird deutsch gesprochen* (German will be spoken in this/my house). When I was little, my grandmother would speak in German to her mother, when they wanted to say something that they didn't want me to know.

My great-great-grandfather, Opa Weis (as he was called), had one of the first cars in St. Louis, a Dorris. The Dorris was a big touring car with a rumble seat in the back and a canvas top. It was a convertible and had detachable Eisenglas windows, which were stored under the seats. When it rained, bottoms went up because everyone had to scramble to put up the windows. My great-great-grandfather didn't know how to drive, but his sons did. The women did not drive. Every weekend, my grandmother's family would get a turn to use the car. Otherwise, they would have to walk. Sometimes they would drive 10 blocks from Jefferson down to Harford and Arkansas where Oma Rund lived.

The south city Germans were called *Scrubby Dutch* because they insisted on cleaning everything. My great-grandfather scrubbed the porch every week with cleanser. My aunt remembers him doing it, when she was a little girl. Uncle Joe (as

they called him) also carried an oilcan for scooters, wagons and bicycles. If you could think of something to clean that your neighbors didn't, such as under the icebox, there was a great coup and you would earn great bragging rights. Because, soon everyone else would be doing it, too. Household products didn't exist, so a lot of people made their own, dabbling in chemistry in their kitchens, basements, and garages. If you had a garage, it wasn't attached to the house. This was a hold-over from stable days. And, maybe, in the back of your house was an alley.

My grandmother remembered taking the streetcar down to Union market with her mother on Saturday to buy butter and then spend the rest of the day baking. If you wanted bread, coffee cake, cinnamon rolls or anything else, you made it yourself. Ready-made foods did not exist.

The Krausses were less well off. They lived on the northside, in Hyde Park, near the Mallinckrodt works. They were members of the *Turnverein* and the historic Friedens church. Great-grandpa Theodore (my namesake) and his brother sold Buck stoves. It was a vast improvement over the old pot-bellied stoves, which most people had. It still burned wood, but it burned hotter, cleaner, and with less smoke. Later he and his wife operated a grocery store on Blair and Penrose. The building is still there. They lived on the second floor of the building, above the store. A man named Schnucks owned a store a few blocks away. (Yes, it was that Schnuck's.)

My grandfather, also named Theodore, didn't keep the store. He got his lay degree at Washington Univeristy and became a lawyer. He met my grandmother at a church function and they attended Washington University together. She graduated in 1931. At this time, it was very unusual for women to go to college, but she was an only child and her father wanted her to go.

Thirty percent of the population of St. Louis spoke German. There were many newspapers and magazines published in Ferman, includein the *Tagesblatt* (Daily News). There were also many breweries, including the Gast (no relation), Falstaff, Lemp, and Anheuser Busch. Other industries included Flour milling, packing houses, Lava soap, and tobacco. Ligget and Meyers made plug tobacco and cigarettes. Their warehouse was on Laclede's Landing. St. Louis ranked among the largest cities producing a range of different products at various times during the Gilded Age. St. Louis was first in production of lead paint pigments, plug chewing tobacco, and flour milling. It was also the largest distributor of coffee west of the Mississippi and had substantial operations in groceries, lumber, and meat processing. It lost its top national ranking in flour milling to Minneapolis in 1890. Furs were a major commercial product until the 1920's.

Automotive

After leaving the St. Louis Motor Carriage Company in 1905, George P. Dorris founded the Dorris Motor Car Company. At \$2,500 the automobiles produced by this company were twice the price of the average motorcar price of the time, but the company's motto was "Built to Last." Dorris continued to strive for excellence in engineering, developing at least 12 new patents for automotive improvements.

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Utilities

Many sewers were laid in those days most lined with bricks. Sewers had been operating in the City of St. Louis since the 1880’s as people added modern plumbing to their homes. Modern plumbing did not become mandatory in the City of St. Louis until the 1930’s. That’s right! Until then many poorer homes had outhouses. In another shameful act of City history African Americans were prohibited from living west of Grand Avenue until the 1950’s.

Births and Deaths

Now, let’s take a look at some births in 1907 some famous, others obscure (for you trivia buffs): Disney animator Arthur Babbitt, Canadian geometer Harold Scott MacDonald Coxeter, British novelist Daphne du Maurier author of the novel *Rebecca*, British golfer Henry Cotton, American bacteriologist Herald Rea Cox champion of polio research, Philadelphia Athletics first baseman and 500 homerun hitter Jimmie Foxx, actors John Wayne and Laurence Olivier, Michael Todd inventor of Todd AO and producer of the movie *Around the World in 80 Days*.

Rachel Carson biologist and writer (*Silent Spring*, *The Sea Around Us*) was also born that year. Jazz singer, Cab Calloway was born on Christmas Day in Rochester, New York. Carl Anderson, physicist, was born in NYC. He won the 1936 Nobel Prize for his discovery of the positron. Orville Redenbacher, agronomist and popcorn entrepreneur, was born in Clay County, Indiana. His motto was “Do one thing and do it better than anyone.” Israel Baline, renamed Irving Berlin by a printing error, published his first song (*Marie of Sunny Italy*), earning himself 37 cents.

Sports

In 1907, the Chicago Cubs won the World Series beating the Detroit Tigers four games to none. Has a familiar ring doesn’t it? St. Louis beat the Tigers last year (2006) having lost to them in 1968 in a heartbreaking 7th game when center fielder Curt Flood dropped a critical out. My mother and brother went to that game.

The first World Series had just been played in 1904. Baseball great Ty Cobb played for the Tigers. In one notable game on September 2, 1907, Cobb reached first, stole second, stole third, and then stole home on consecutive attempts. This was the only time home base would be stolen in a World Series.

Countries

King Oscar II of Sweden died in Stockholm. Norway had been independent from Sweden only 2 years. Prussia dominated the German union, which consisted of more than 30 independent cities and states. Bavaria, Saxony, and Wirttemberg were all independent kingdoms. France and England were major colonial and economic powers. The third republic, *la Troisième république*, was in power in



NATIONAL CHEMISTRY WEEK 2007

National Chemistry Week (NCW) is a community-based program of the Office of Community Activities. This annual event unites ACS local section, businesses, schools, and individuals in communicating the importance of chemistry to our quality of life. NCW will be celebrated on October 21-27, 2007 with this year's theme being "The Many Faces of Chemistry". We will be holding our "Chemistry Expo" at the St. Louis Science Center. Volunteers are needed for this and other activities that are being planned for that week. If you want to volunteer or have another activity that you want to present, please contact Greg Wall by phone, 314-772-0037, or by e-mail at gwall37@msn.com. Join us for the fun and show your face of chemistry. An outline of activities will appear in the October Chemical Bond.

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Let Us Know What You Think!

Take our 2007 Local Section Member Survey

Please share your thoughts about the activities of the Saint Louis Section by completing our 2007 member survey. Your input will help us better understand what you hope for from the Local Section in the future, your awareness of our activities, your interests and how they may be changing, and what we can do to better serve you and all of our members. Please take the survey even if (*especially*) if you've never participated in any local section activities before. We'd like to know how we're failing to interest you and what we can do to make your local section membership more meaningful to you.

This year, our survey is available on-line and can be accessed by visiting the Local Section website at <http://www.umsl.edu/~acs/> and then clicking on the survey link near the top of the page. The survey should not take more than 10 minutes to complete. If you wish, you may print a copy of the survey from the Local Section website where it is available as a PDF file and mail it to Keith Stine, the Local Section Chair-Elect, at the address given below. If you are unable to access the internet, we would be glad to mail you a copy of the survey that you can fill out and return to us. Please send these requests to Keith Stine at the below address or call him at (314) 516-5346. We ask that you complete the survey by September 30, 2007. Your input is important and will impact our future planning and activities.

Member Survey, Attn: Keith J. Stine
Department of Chemistry and Biochemistry
One University Boulevard
University of Missouri, St. Louis
St. Louis, MO 63121



Ziegfeld Follies, 1907

France. Edward VII was King of England. China was ruled by the Ching (Qing) dynasty, the Manchu Emperor, Guangxu and Japan by the Meiji. There was no Poland. Russia was still ruled by the Czar and the dual monarchy of Austria-Hungary dominated central Europe.

Employment and Service

There were still many veterans of the Civil War alive and collecting army pensions. In 1906, Congress recognized that old age alone could be recognized as a justification for a pension.

There was no social security or retirement. Most people worked until they were too sick or the day they died. Most firms just kept you on, but the average life expectancy in St. Louis in 1907 was only 54 years old for a male and a little longer for females - depending on occupation. Many people did

cleaning and manual labor. A girl doing light housekeeping and childcare earned \$5.00/month.

Science

Quoting local ACS member Hal Harris:

“I would emphasize that Gilbert Lewis and Irving Langmuir were among the first Americans to have contributed at the forefront of chemistry and physics. Lewis invented the “octet rule” largely based on experimental correlations and his own chemical intuition. He established the chemistry department at UC Berkeley as the first university of scientific excellence west of Chicago and made great contributions in thermodynamics. Langmuir is the namesake of the ACS journal because of his outstanding of chemical bonding. Langmuir did not start at the GE labs until 1909, so I think he must have been in Germany in 1907.”

Religion

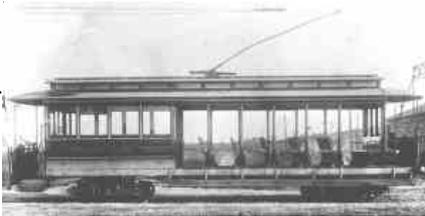
Pius X (1903-1914, Giuseppe Sarto) succeeded Leo XIII as pope. Under him, the revision of Canon Law was begun. He also conducted a reform of the papal administration. The Catechism for the archdioceses of Rome and the Brevier were revised. Pius X. emphasized bible studies and the discipline of the clergy; he turned against the Modernism (Reform Catholicism) advocated by a number of theologians in France, Italy, Britain, and the U.S. Even non-Catholics recognize his apostolic spirit, his strength of character, the precision of his decisions, and his pursuit of a clear and explicit program. He would be named a saint in 1954.

The Vatican still ruled Rome. Vatican City was not declared an independent state for another 12 years. For over a thousand years, the states of the church had been a unique religious enclave. The church provided the rationale for the existence of the state, to allow the pope freedom of action without owing loyalty to any secular prince.

Entertainment and Culture

Phonograph Records and cylinders were rare and played two to four minutes of music. In 1907, opera tenor Caruso’s recording of “*Vesti la giubba*” from *Pagliacci* was the first record to sell a million copies. Sheet music was another form of home

entertainment. Simple tunes could be purchased that could be played at home by anyone on a piano. Vaudeville and music halls were popular forms of entertainment. In addition, Eddie Cantor was a big Vaudeville star. Boxing and baseball were major sports. Leading Broadway shows were *The Wizard of Oz*, *Babes in Toyland*, and the *Merry Widow*.



The leading movie of 1907 was *Daniel Boone* and a French version of *Ali Baba and the 40 Thieves*; both silent of course! Directed by Georges Méliès these short films were all of 8 minutes long. Another popular film *The Teddy Bears* directed by Wallace McCutcheon, an adaptation of “Goldilocks and the Three Bears,” was 18 minutes and was produced by Edwin Porter. *Jack and the Beanstalk* was also released this year. This was before the famous studio system and Thomas Edison and his associates still controlled the distribution of films from their headquarters in New Jersey. Hollywood wasn’t even an orange grove then. Mary Pickford did not star in a picture until 1909 and Charles Chaplin would not be credited in a film until 1914. Edwin Porter began D.W. Griffith’s film career by casting him as an actor. Chaplin and Pickford along with Douglas Fairbanks and D.W. Griffith, also recognized in 1909 would not found United Artists for another 12 years. It would take another 20 years for sound in movies to appear; thanks to the work of controversial engineer Lee DeForest. There are 573 movie titles in the internet movie database for 1907. There are 22,846 titles for 2006. Color photography (not video) premiered in France with Autochrome from Lumière (<http://www.talkinbroadway.com/bway101/2.html>).

In the art world, neoclassical sculptor Augustus Saint-Gaudens died. Matisse and Kandinsky were causing a sensation with their artwork. In 1907, the Fauves held the last of three exhibitions.

By this time Matisse was used to hostility and rejection. The abuse that had pursued him from his first public emergence as a wild beast or Fauve in 1905 would continue right up to his last years, when the paper collages he made in his seventies and eighties were almost universally dismissed, at the time and afterward, as the product of a second childhood.

Marc Chagall was still in Russia. Guillaume Apollinaire and Robert Delaunay were also active at this time.

In the United States beaux-arts dominated architecture, reflecting the optimistic American sense that the nation was the heir of Greek democracy Roman law and Renaissance humanism. Wikipedia contributors contributors, “Gilded Age.”

Europe had moved on to something called Jugendstil or art nouveau. The gilded age in America ended with the assassination of McKinley. Roosevelt ushered in the progressive era, which remained in vogue until the 1920’s. Ideas and styles changed much more slowly in those days.

Thank you for joining me on this wonderful tour of St. Louis and the world one hundred years ago. I hope this has helped give an idea of what things were in *fin de siècle* America. In addition, I would like to acknowledge and thank Lisa M. Balbes for her comments, suggestions, and editing skills. However, all omissions and errors are purely my own.

- Ted Gast

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from back of previous issue*

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