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The Ford Highland Park factory, home to mass production of the Model T in the early 20th century, was of the type that designed car assembly so that it started on the top floor of the plant and worked its way down to the ground level, often using gravity as an assist. The Henry Ford-Albert Kahn relationship peaked with the opening of the Highland Park facility, home of the \$5/workday.



PHOTO COURTESY OF KAHN

From left are architect Albert Kahn, auto pioneer Henry Ford and aviation expert Glenn Martin, who is examining magnetos. The Ford-Kahn relationship helped shape the Motor City.

Ford, Kahn Credited with Motor City Label

By Gerald Scott
Staff Reporter

The Henry Ford-Albert Kahn relationship is famous in the auto industry for the prolific number of automotive buildings it resulted in, but the Ford-Kahn friendship perhaps resulted in something even more significant.

According to local historian Mike Skinner, Ford-Kahn was as responsible for metro Detroit ultimately becoming the 20th century Motor City as much as any historical or geographic reasons.

That was the gist of a recent talk by Skinner entitled, "Ford and Kahn: The Centennial of an Extraordinary Relationship," which was given at the Clinton Macomb Public Library in Clinton Township.

Skinner is a founding member of the Henry Ford Heritage Association – now up to more than 1,000 members – and he's also a tour guide and docent at the Ford Fair Lane estate in Dearborn, so he's well schooled in all things Ford Motor Co.

Ford-Kahn most famously resulted in the development of the Ford Highland Park plant, as well as Ford Rouge, but it went beyond even that.

"Albert Kahn is sometimes referred to as the world's greatest industrial architect, having earned this distinction

for a large part because of his work with Edsel, Henry Ford and the Ford Motor Co.," Skinner said.

Indeed, both Kahn and Ford were born in the 19th century and were shaped by the Industrial Revolution, which followed the American Civil War.

Kahn was born in Germany and eventually migrated to Detroit while Ford famously grew up on a farm in what became the Detroit suburb of Dearborn.

Maybe what's less well known about Kahn is that, ironically enough, as a German Jew, he coincidentally helped develop more than 500 factories and industrial buildings in the Soviet Union in the 1930s, all as a hedge against the Great Recession and the falloff of auto work in the U.S. in that era.

The irony is that those same Kahn-built factories in the Soviet Union switched from building tractors to tanks and armored cars during World War II, meaning that he helped to sow the seeds of defeat for Nazi Germany in this less-well-known historic fashion.

Kahn was able to do architectural work all around the world largely because of all the prolific work he'd done earlier for Packard Motor Car Co. and then Ford Motor Co.

He was so busy shaping American industry in the early

part of the 20th century that reportedly 19 percent of all industrial architecture work in the U.S. in the 1920s was being done by Albert Kahn Associates, the famous architect's legacy firm that he founded back in 1895.

Also not well known is that while working at Mason and Rice in Detroit in 1893, "Louis Sullivan, the most prominent architect of the day, offered him the position of chief assistant – that had been vacated by Frank Lloyd Wright. Kahn declined this job in Chicago and remained with Mason and Rice until he went out on his own in 1895," Skinner said.

"When Albert Kahn began his career, architects focused primarily on the design of museums, libraries, monuments, mansions and the like – factories were thought to be beneath their dignity."

Not for Kahn, of course, who made his name around it.

Designing the Packard Plant on East Grand Blvd. in Detroit in 1903 brought him to the attention of Henry Ford.

The Ford Highland Park plant (1910) and then the Ford Rouge plant (1917) helped cement Kahn's relationship to the growing Ford automotive enterprise.

Kahn's factories were among the first to let natural light inside to help inspire the

workforce and connect the environment to inside the plant. Indeed, the Ford Highland Park plant was known as "the Crystal Palace," so pronounced was the use of glass and the influx of natural lighting being allowed into the building.

Ford Highland Park, of course, was not just the home of the Model T, but also birthplace of modern 20th century mass assembly as well.

The Michigan Historical Marker now at the Highland Park site, which has since become an industrial warehouse, reads as follows:

"The Ford Motor Co. Highland Park plant was built between 1909 and 1920 on the lot bounded by Woodward, Manchester, and Oakland avenues, and three railroad tracks," it reads.

"An office building, a garage and several machine shops once stood on this site (at Woodward and Manchester).

"At this plant, Ford instituted the '\$5/workday,' a generous wage for its time.

"In Factory H, located directly east of here, he began mass producing automobiles on moving assembly lines. Detroit architect Albert Kahn designed the complex, which included offices, factories, a power plant and a foundry.

"In 1927, Ford shifted his production to the River Rouge



PHOTO: GERALD SCOTT

Historian Mike Skinner discussed the Henry Ford - Albert Kahn automotive legacy.

plant in Dearborn, limiting Highland Park to truck and tractor manufacturing.

"The Highland Park plant is a National Historic Landmark."

Kahn was nonetheless part of the migration of Ford's manufacturing center of gravity from Highland Park to Dearborn, but it also becomes easier to understand Skinner's premise that metro Detroit might not have become the Motor City unless Ford and Kahn collaborated at Highland Park in the first place. Their collective industrial legacy continues to define and inform the local auto business to this very day, he said.

Ford, MIT Study the Effects of Technologies on Driver Stress

Ford Motor Co. and the Massachusetts Institute of Technology's New England University Transportation Center revealed results from a nine-month advanced research project that shows drivers are less stressed when using selected new technological advancements in the car. This study is an extension of an ongoing alliance between Ford and MIT to improve driver focus, wellness and safety through the integration of vehicle technology.

"Ford's collaboration with MIT and NEUTC is an important pathway to the future of transportation," said Joe Coughlin, director of MIT's New England University Transportation Center. "This study, which yielded significant results, showed ways we can use new technology to improve well-being and performance behind the wheel."

The study monitored drivers as they performed perceived "high-stress" tasks such as parallel parking and backing out of parking spaces with restricted visibility. The results showed a reduction in both self-reported stress levels and objective physiological measures used to monitor driver stress load. These findings were strongest in the parallel parking study, where use of Ford Motor Company's Active Park Assist feature in the Lincoln MKS helped significantly reduce stress on drivers compared to the manual operation of performing the same task. When backing out of parking spaces with Cross-Traffic Alert, drivers were more likely to appropriately stop and yield to an approaching vehicle than when the Cross-Traffic Alert system was unavailable.

Today's consumers are seeking every edge they can in the pursuit of healthier and

happier lives, yet record levels of stress are being reported. According to the Gallup-Healthways Well-Being Index, people in their late 30's to mid-50's are actually reporting the lowest state of well-being over their lifetimes. Just as stress builds up incrementally throughout the day, taking proactive steps to decrease stress is important to counterbalance and maintain overall well-being.

"The fact is that middle-aged Americans are at the highest point of stress and unfortunately at the lowest point of well-being in their entire life span," said Coughlin. "The volume, velocity and the complexity of today's lifestyle is causing individuals to report an increase in stress and a decrease in enjoyment behind the wheel."

For the past seven years, Ford has been actively collaborating with MIT's New England University Transportation Center to understand the correlation between stressors and driving performance and identify technological advancements that both mitigate stress and create a more enjoyable experience.

"As an industry leader at the forefront of vehicle safety and security, Ford is investing in research to reduce driver stress, increase driver focus and ultimately renew the positive experience of driving and riding an automobile," said Andy Sarkisian, Ford global product planning and strategy manager. "Since 2004, Ford has been committed to implementing technological innovations that continues to further the democratization of technology so every driver has access to affordable, convenient, intuitive features."

The research objective of this study was to measure and monitor physiological

changes in heart rate during and following the completion of driving challenges, including parallel parking and backing out of a concealed parking space. Using biometric results as well as self-perception evaluations, the research measured the impact of new parking technologies on stress levels. A white paper describing the results of two experiments will be released today by the New England University Transportation Center at MIT.

In the study of Ford's Active Park Assist system, data were collected from 42 subjects equally distributed between males and females across three age groups – drivers in their 20's, 40's and 60's. Prior to testing, each of the subjects was given an in-depth briefing and demonstration of both the technology at the focus of the study as well as related systems. They then gained experience with the systems prior to the defined assessment period. For example, in the parallel parking study, subjects were given three practice opportunities to both manually parallel park and use Ford's Active Park Assist feature to grow accustomed to the technology and experience parking the Lincoln MKS.

Following this introduction, each of the test drivers was monitored using heart rate as an objective method of assessing driver workload and stress on the road. In addition, a subjective measure was monitored by asking subjects to rate their perceived stress level at the completion of each driving maneuver. Detailed evaluations of their experience and impressions of the technology were also collected at the end of the experiment.

"The test subjects averaged



Ford has entered into a unique collaboration with the Massachusetts Institute of Technology's New England University Transportation Center to study the impact of technology on driver stress.

more than 12 beats per minute lower heart rate when using the Active Park Assist system compared to manually parallel parking the vehicle in what was a highly statistically significant decrease," said Bryan Reimer, associate director of research, New England University Transportation Center at MIT. "The substantial changes in the objective physiological markers of driver stress, couple with changes in perceived stress, suggest that the driver's well-being can be increased through this technology."

During the evaluation trials when drivers were anticipating engaging in a manual parking exercise, mean heart rate was 75.9 beats per minute. During the evaluation trials when drivers were anticipating parking using Active Park Assist, heart rate was 72.5, or 3.4 beats per minute lower. This

indicates that prior to the physical work involved in maneuvering the steering wheel to manually park, the anticipation alone associated with undertaking the task was more stressful than when drivers were anticipating parking with Active Park Assist.

This difference is particularly notable in that it was observed in individuals who had only had the opportunity to develop experience and trust in this technology for a relatively limited period of time.

"An important aspect of this collaborative research has been Ford's willingness to support the collection of data on where the implementation of these new technologies might further be improved," said Bruce Mehler, research scientist at New England University Transportation Center at MIT and a study collabora-

University of Detroit Mercy Tabs Garibaldi As President

University of Detroit Mercy Board of Trustees has named Antoine M. Garibaldi as the University's new president, announced Board Chair John D. Lewis late last week.

Garibaldi, who is currently president of Gannon University in Erie, Pa., will assume the position on July 1, 2011 to become UDM's first lay president.

"We are very pleased to have President Garibaldi join the University of Detroit community," said Lewis.

"Given his tenure as a Catholic university president, he brings strong leadership skills and extensive experience that will enable UDM to continue its mission of providing a quality academic experience within a Catholic and urban context."

Recognized as a national scholar in higher education, Garibaldi's career spans more than 35 years as a tenured professor, accomplished researcher and educational administrator.

Garibaldi has served as Gannon University's president since 2001. During that time, the university's enrollment has increased by 24 percent – from 3,401 to 4,238 students, the highest in 17 years and its endowment also more than doubled in that same timeframe.

"I am honored to be selected as the first lay president of the University of Detroit Mercy," said Garibaldi. "As a nationally-ranked Catholic university with its distinctive Mercy and Jesuit traditions, I look forward to working with the faculty, staff, students and trustees to continue to advance the academic excellence and student-centered emphases that are reflected in the UDM mission."

Added Liz Roberts-Kirchoff, UDM associate professor and faculty representative on the search committee, "Dr. Garibaldi brings a depth and breadth of administrative experience in higher education and Catholic higher education from department chair to Dean of the College of Arts and Sciences, to Provost and Chief Academic Officer to President," she said.

Garibaldi succeeds former UDM President Gerard Stackhausen, who stepped down.