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An Accelerated Learning Curve: Understanding the Benefits of Motorsports within Academic Disciplines

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AN ACCELERATED LEARNING CURVE: UNDERSTANDING THE BENEFITS OF MOTORSPORTS WITHIN ACADEMIC DISCIPLINES

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ABSTRACT

This article examines the growing need for college and university programs focusing on the motorsports industry. Many institutions fight against the age-old academic debate between classical or "high" culture and popular or "low" culture. Since motorsports affect large, general audiences, they are traditionally deemed "low" culture. As this article states, however, the need for college-educated engineers, designers, and business people in the rapidly expanding motorsports industry is slowly pushing automobile racing into the arena of an established and necessary academic discipline. The benefit of such a discipline is that graduates are successful in finding jobs with many of the biggest and best racing teams in the sport. As racing grows in popularity and sophistication, so will the number of jobs requiring university-trained team members.

INTRODUCTION

As an English professor and an active popular culture scholar, I often find myself walking a tightrope of academic acceptance. Most of my colleagues from more "traditional" or canonically-directed English departments at professional conferences listen to my presentations and wonder--sometimes out loud--how someone could actually keep a teaching position while engaging in such "lowbrow" research topics. Many of my colleagues from colleges or universities that recognize popular culture as a significant part of everyday life, however, listen to my lectures and nod in interpretive and/or analytical agreement. They, too, admit to feeling like academic lepers in institutional environments based on the eternal influence of classical works and the valuable lessons they teach.

The debate between "high" culture and "low" culture has been raging since the word "culture" was ever used to describe influences upon human behavior. "Society is driven by the values instilled through culture," a scholar of the "mainstream" disciplines will say, "so it is vital that we concentrate on educating people from the best cultural elements that a society can offer." Taxpayers and civic leaders will respond with an enthusiastic "Harrumph!" The general public, believing in the rationale that a degree-carrying, gainfully-employed professor cannot be wrong, is certain that the tui-

tion they pay for their children's courses each and every semester must go toward the task of creating well-educated future citizens. Meanwhile, the children of these concerned taxpayers sit at home with friends debating the meaning of the latest video on MTV or the merits of violence in the new blockbuster "slasher" film they saw at the local shopping mall the previous evening.

Welcome to the world of popular culture studies. Criticism about the value of learning from "everyday" artifacts like movies, television, fashion, music, professional sports, the internet, and other elements of consumer-oriented mediums that affect a worldwide mass audience has been at the center of a philosophical firestorm since the topic was organized into an academic discipline by Ray Browne in the 1970's at Bowling Green State University in Ohio.

THEORY

Traditional scholars find nothing of use in popular culture. Real lessons are learned from reading classic works of literature, not trashy paperbacks with ripped bodices and heaving bosoms on their covers. Life is meant to be contemplated through the lilting melodies of Beethoven or Bach, not from the sampling of lyrics and thumping rhythms of hip hop or rap music. It is the timeless nature of "higher" art that educates, not the crass commercialism of the here and now. As popular culture scholar Marshall Fishwick once wrote:

> Pop is now--faddish--in: the emphasis is on time. It's vernacular--folksy--earthy: the emphasis is on place. It's universal--electronic--instant: the emphasis is on technique. Pop is rooted in socio-economic factors of our time: physical and social mobility, mass production, abundance, anxiety. The definition is protean (4, p. 9).

Fishwick's attitudes toward popular culture reflect what can be called a "modernist" school of thought, the fact that popular culture is often considered to be a product of contemporary life. Ray Browne, on the other hand, takes more of a "classical" approach. The "classical" school of thought ascertains that popular culture is not just a product of our here and now, but rather that some form of popular culture has always been present within civilization. An Eddie Murphy movie of today can be seen as popular culture, but so may an Irish reel performed in a cabin on a Saturday evening in 1870. The debate between these two modes of philosophy, as outlined by Jack Nachbar and Kevin Lause in the early 1990's, has been over the significance of the changes which took place in Western life around the eighteenth century and not over the fundamental nature of what it means to be 'popular.' The Classicists argue that an old culture changed while the Modernists believe that a new one was created. Both groups agree that we need to examine that which is (or has been) accepted or approved of by large groups of people. . . . (10, p. 12).

Even though the rhetoric within these two schools differs, their principle focus remains the same; academic discourse should not ignore the elements that affect the customs, behaviors, beliefs, and values of a mass audience while concentrating on the ideals espoused by what has been relegated to the canon of Western civilization. Both sides of this cultural spectrum must be studied and understood to better recognize how and why humans live according to the guidelines they do.

One of the most popular and influential aspects of human life is the world of sports. It is a multi-faceted world, one where simple games can assume significance within the areas of business and industry, entertainment, fashion, and technology. An event involving a ball and a stick can be raised to the pinnacle of national mythology, as we can see with baseball in America or golf in Scotland. Something as childlike as running and kicking a ball can be transformed into a cultural and social fixture, such as the World Cup for soccer and its effect on millions and millions of people around the globe. Whether it be the Olympic Games or the Super Bowl, the traditions and folklore of sports are at the center of our world's popular consciousness.

As an automobile historian, it is the role of motorsports within this popular consciousness that is of special interest to me. Even this form of popular activity, however, reflects an inherent division between aspects of racing that might be considered "high" and "low." Sports are a unique way to study how cultures operate; by looking at how different classes of the same basic activity are defined by the public, we can see how barriers might be built to insure implied social stratification.

OBSERVATIONS AND ANALYSIS

Formula One racing from Europe is seen as the highest form of technologically-advanced motorsports competition. State-of-the-art machines piloted by daring young men are the highest link in the automobile racing chain. A slightly lower link in this chain might be endurance racing like that of Le Mans or Sebring. At the bottom of the social stratification "chain" might be a link to a motorsport like demolition derby, which involves an automobile, but little else that is similar in comparison to what might be found in more "sophisticated" levels of racing or endurance contests.

The highest level of motorsports in America is NASCAR competition. This form of automobile racing has been the most popular spectator sport in the United States since the mid-1990's. What makes NASCAR--as in the National Association for Stock Car Automobile Racing--such a big part of popular culture is its appeal with a huge national (and international?) audience. Television ratings for NASCAR events during 1999 increased to record numbers, as did the numbers for total attendance at all Winston Cup races. According to ESPN The Magazine writer Peter Keating:

> Attendance at Winston Cup races has almost doubled this decade [the 1990's] to more than 6.3 million fans. Retail sales of official NASCAR merchandise have rocketed 1,100% since 1990 and are now a $1.1 billion business. And since 1993, Winston Cup TV ratings have increased 19% on the broadcast networks and 33% on cable (7).

National television coverage of every Winston Cup event has been the biggest factor in NASCAR's popularity explosion. Early efforts to televise NASCAR races were limited to taped and edited coverage of whole races, or portions of races televised live. Programs like ABC's "Wide World of Sports" carried the NASCAR Winston Cup Series in an "after-the-fact" format, editing a four-hour event at Atlanta Motor Speedway down into a one-hour highlights film and sandwiching the footage with sports like figure skating or something more spectacular like cliff diving from Acapulco. A car that did not smack the outside retaining wall or

catch fire would likely not make the broadcast reel. If you were lucky enough to win the race, you were lucky enough to be seen on national TV.

The breakthrough for NASCAR Winston Cup racing on national TV was CBS Television's February 1979 presentation of the Daytona 500. This event marked the first time an entire NASCAR race was aired live, flag-to-flag in its entirety on a broadcast network. A major snowstorm had crippled the Northeastern part of the United States, so ratings for the broadcast of "The Great American Race" were especially good. What made the race even more successful with viewers and programmers alike was its Hollywood-type ending. A last lap wreck near the end of the backstretch took out the two leading cars of Cale Yarborough and Donnie Allison. As the two leaders crashed and spun into the infield grass, the third-place car of Richard Petty led the field through the final two corners and won the race, finishing just ahead of a hard-charging Darrell Waltrip. As "King Richard" and his STP-sponsored team celebrated in victory lane, an amazed viewing public got to watch as the wrecked Yarborough and Allison squared off against each other in a fistfight before CBS's live cameras. The 1979 Daytona 500 was a wild debut for CBS's experiment. By the next morning, all of America recognized the NASCAR Winston Cup Series.

Cable television coverage of NASCAR racing was instigated by ESPN, a fledgling network out of Connecticut that saw the potential for NASCAR as a major ratings attraction. This 24-hour sports network aired events that other networks felt were not attractive to broadcast, such as short track races at North Wilkesboro, North Carolina, and Richmond, Virginia. As ESPN's NASCAR coverage grew in national popularity during the 1980's, the network developed new ways to make the races more visible. The in-car camera became a staple of ESPN telecasts, as did the use of computer telemetry to show a car's speed and engine performance (even though, in an ironic twist, such telemetry is illegal in NASCAR competition). The network developed a broadcast team of racing experts, including retired drivers Ned Jarrett and Benny Parsons, and matched them with a reporting team that featured such knowledgeable people as Dr. Jerry Punch and John Kernan. By the 1990's, ESPN had become the flagship network for NASCAR coverage. In the meanwhile, CBS continued to air the Daytona 500 while adding events to its ever-popular NASCAR schedule.

All of the momentum generated by ESPN and CBS shifted in the fall of 1999, however, as a new multi-year television agreement was announced that joined NASCAR and a combined broadcast package made up of NBC, FOX, and Turner Broadcasting. The agreement, which will take effect in 2001, sold the rights for NASCAR coverage to the aforementioned networks for a six-year period. The sanctioning body will receive roughly $460 million a year for Winston Cup Series events, while CBS, ESPN, and their sister networks (TNN and ABC, respectively) will have to fill in the holes left in their Sunday afternoon schedules.

NASCAR hopes that this new television arrangement will carry its events to a larger, more national audience. Winston Cup races carried over major "free TV" networks like CBS and ABC attracted a new base of fans from a vast array of backgrounds. No longer was NASCAR stock car racing limited to its traditional, more regional exposure; the advent of a national TV audience meant an infusion of nationally distributed NASCAR

racing fans. This meant more NASCAR team sponsors received more television coverage, and this contact with newly-created race fans meant more sales--and profits--for the companies who paid for the privilege of having their name and/or logo splashed across the hood or fender of a Winston Cup stock car.

Such economic growth frightened NASCAR "purists" in the media and throughout the garage area, however, because they believed that all this new sponsorship and added national exposure would result in immediate and overwhelming changes within the sport. More money could result, as some within NASCAR felt, in inordinate pressure from "Fortune 500" firms that demanded victories over and above strong top-ten performances. The stress level on drivers, pit crewmen, car owners, and crew chiefs would become astronomical, and attention toward the race car might be diverted toward new sponsor-directed responsibilities like personal appearances, commercials, and other public relations-related non-racing events. As seven-time NASCAR Winston Cup champion "King Richard" Petty once told a reporter from The New York Times, "A man don't want to get above his raisin's, you know" (5, p. 97).

Unfortunately, NASCAR rose above its "raisin's" as early as 1996. On September 29th of that year, the Winston Cup Series ran its last race at the famed North Wilkesboro Speedway in North Carolina. The facility, a part of NASCAR competition since the sport's inception in 1949, was at one time a .625-mile dirt oval carved out of the red clay foothills of an area known for its role in the moonshine industry. Built in May of 1947, the small "bullring" (racers' slang meaning a short, oval-shaped, dirt track) was home to such bootleggers-turned-racing-drivers as the Flock brothers (Bob, Fonty, and Tim) and Curtis Turner (3, p. 824).

North Wilkesboro was also home to Junior Johnson, the "daytripper" (another term for a moonshine hauler) immortalized by journalist/author Tom Wolfe in his May 1965 Esquire magazine article, "The Last American Hero is Junior Johnson." Wolfe told the story of Junior Johnson to a national audience who had never heard of the Wilkes County farm boy who turned his ability to outdrive federal agents on the rugged backroads of rural North Carolina into a career as one of NASCAR's greatest racers and car owners. Johnson's story was eventually reprinted in Wolfe's 1965 volume of essays about automobile culture of the 1960's entitled The Kandy-Kolored, Tangerine-Flake Streamline Baby, which made Johnson's exploits the stuff of respected American literature.

The NASCAR of early North Wilkesboro was, however, much different from the NASCAR that held its final event at the track in the fall of 1996. Junior Johnson was no longer a competitor, having sold his race equipment and retiring from the sport a year earlier. The tiny oval had been paved with asphalt in 1957 in hopes of attracting the new cars and stars driven by NASCAR's newfound attention toward what would become known as its superspeedway era. By 1959, NASCAR would be running its inaugural Daytona 500 for Grand National (what are today called Winston Cup) cars on the high-banked, two-and-a-half mile paved tri-oval located near the shore of the Atlantic Ocean. North Wilkesboro Speedway, like several of the facilities that hosted NASCAR races, prepared for stock car racing's anticipated growth by insuring itself a spot on NASCAR's annual competition schedule. As a result, North Wilkesboro remained a

constant link between NASCAR's pioneer past and its popular present.

It was the explosion of NASCAR Winston Cup coverage nationwide, mainly because of an increase in television broadcasts during the decade of the 1990's, that ultimately sealed North Wilkesboro's fate. With the final event at the North Carolina short track in September of 1996, race fans witnessed the dawn of a new era in audience-driven motorsports. It was this new era that ushered in such modern, fan-friendly facilities as Las Vegas Motor Speedway in Nevada, Texas Motor Speedway near the city of Fort Worth, and California Speedway in Fontana. NASCAR interpreted its popularity with race fans and TV viewers alike as a sign that the Winston Cup Series required more superspeedway events and fewer short track races at places like North Wilkesboro. Subsequently, the .625-mile paved track in Wilkes County was sold to Bruton Smith, chairman of Speedway Motorsports, Incorporated, and Bob Bahre, who built a new race facility in New Hampshire. Since the track was sold to Smith and Bahre, both of North Wilkesboro's Winston Cup weekends have been distributed to the Texas and New Hampshire speedways.

This is typical of how NASCAR racing is changing. As the Winston Cup Series and other NASCAR divisions reach out for a new, broader base of fans, many of NASCAR's traditional methods are getting replaced by a more specialized, corporate-influenced style of operating procedure. A mechanic used to build a race car in his backyard, tow it to a regional speedway, and compete against the biggest guns in professional stock car racing. Up through the mid-to-late 1970's, drivers who were interested in running Winston Cup events could get a chance at making the big time simply by making the right contact with the right car owner. This "open door" policy toward automobile racing was what made NASCAR so unique.

Tighe Scott of Pen Argyle, Pennsylvania, was one such aspiring NASCAR driver who benefited from the Winston Cup racing's simpler days. Scott began his racing career during the late 1960s on dirt tracks in New Jersey, New York, and Pennsylvania. He started driving a Big Block Modified, a small, low racer with open wheels, no fenders, and a large eight-cylinder motor, in 1968. Tighe's first race car had a "big block" 301 cubic inch Chevrolet engine which produced plenty of horsepower for the dirt "bullrings" where local talent competed against regional heroes every weekend. A discussion with a fellow racer led to Tighe driving a stock car for car owner Walter Ballard in the 1976 Daytona 500, and that experience led to Scott's 89-race, six-year NASCAR Winston Cup career.

Despite NASCAR's rich history as a Horatio Alger-type of sport--a business where anyone with a solid work ethic and plenty of courage can make it to the highest levels of success--today's motorsports climate is anything but a "do-it-yourself" exercise in outrunning your competition. The newest generation of NASCAR comes into the sport from the halls of academia; today's race teams are comprised of specialized staff with a number of college degrees from an always-increasing number of respected university programs. Motorsports in the twenty-first century will be the domain of highly trained engineers, designers, computer technicians, and business people. The era of the shade-tree mechanic will be replaced in full by an influx of race team members carrying masters degrees--and even doctorates--in specific fields of motorsports-related study.

Several colleges and universities throughout the United States are already offering degree programs in motorsports subjects. While most of these programs involve engineering education, there is the potential for degree programs in other motorsports areas like marketing, advertising, public relations, communications, journalism, computer science and/or information systems, and business administration. It takes more than engineering to make a racing team successful; success rides on a team having the ability to function effectively in all aspects of the sport's evolution.

I recently attended the 2000 meeting of the Society of Automotive Historians in Los Angeles, California, where scholars and administrators from all over America gathered to discuss the need for motorsports-based college curricula. As a college professor who works and writes within many areas of motorsports, I see the need for specialized courses aimed toward students who are interested in playing a future role in the sport of automobile racing. Many of these roles require more than the ability to turn a wrench and replace faulty parts; most jobs in modern motorsports require candidates with highly developed critical thinking, analytical, and problem solving skills. These are the kinds of skills best taught by university programs, and these are the skills that need to be addressed by college faculty members at all levels.

It is the stigma, however, about motorsports and other "lowbrow" topics that keeps colleges and universities from pursuing these topics as part of a forward-thinking curriculum. While community colleges that offer coursework to train certified automobile technicians are found to be well within their boundaries of appropriate subject content, larger universities are criticized for "lowering" their standards to address such base, utilitarian skills. The argument, at least according to my own personal and professional experience, has always been one where the merits of, let's say, late-nineteenth century British Victorian poetry outweigh the educational benefits of understanding the social and/or cultural ramifications of the automobile within American civilization. Again, as was stated earlier, the emphasis is on the eternal, timeless, "classical" canon, not the pragmatic knowledge that shapes the current environment in which we live.

This is the struggle those of us concerned about the future of motorsports wrestle with almost everyday. For every established and respected academic program regarding motorsports as an industry in need of qualified personnel--like those found at Clemson University in South Carolina or at the University of North Carolina at Charlotte--there are dozens of similar institutions across America that willingly ignore the potential for student placement as either interns or graduates with successful, corporately connected race teams.

Many colleges and universities ignore the need for comprehensive motorsports education out of ignorance. While attention is placed on the study of sports marketing and management within the more traditional areas of "mainstream" sports like baseball, football, or basketball, the sport of automobile racing--in all of its forms--is routinely overlooked as being too closely aligned with entertainment than with athleticism. As a result, students miss out on potential jobs tied to major corporate sponsors simply because their degree program emphasized "stick and ball" sports that imply a higher rank of social status and acceptance.

Academics working within the field of motorsports, however, see a much different picture. We recognize the rapid and consistent growth of professional motorsports, especially within the various divisions run by NASCAR. The sanctioning body organizes and officiates the Winston Cup Series, the Busch Grand National Division, the Craftsman Truck Series, the Slim Jim All-Pro Series, the Winston West Series, the Featherlite Modified Tour, the Goody's Dash Series, and a number of regional racing divisions associated with the NASCAR Winston Racing Series hosted by a number of regional speedways scattered throughout the United States and Canada.

If we consider just the basic mathematics behind NASCAR--staffing each of the teams competing in each of the aforementioned series--we are looking at a huge number of positions needing to be filled by qualified personnel. The average NASCAR Winston Cup team usually has somewhere around thirty members. Many team members work everyday in the race shop where a stable of maybe eight or more cars are built and maintained for future events. Several of the team's staff will work on the car at the race track, making necessary adjustments or repairs for both qualifying and the race itself. Some team members double as pit crew personnel on race day, changing tires and refueling the car during the event. There are other team members working behind-the-scenes in such areas as media communications, marketing, promotion, and public relations. Take thirty people and multiply them by the forty-seven or so teams that attempt to qualify for a Winston Cup event, and you need a minimum of 1,410 people to staff just one racing division. Granted, not every team running in every NASCAR series requires as many people, but the numbers shown here are indicative of what just one sanctioning body needs to keep going.

The key is qualified personnel. This means more than simply being a mechanic or a press agent; this means having the skills necessary to work with new technologies and changing demands on race car performance. Aerodynamics is one area currently under speculation in NASCAR. In the early years of NASCAR, during the days when stock cars still resembled cars you saw on the street, aerodynamics were an afterthought. Some of the more crafty teams concentrated on cutting the air cleanly with sharp lines on a well-designed car, while most teams focused on horsepower and chassis setup. Racing a 1965 Ford Galaxie at Daytona was like driving a railroad boxcar; the car required a talented driver who could manhandle the racer for 200 laps in traffic. As sheer horsepower gave way to body styling--in part because body styles were changing on production cars--attention was shifted toward such concepts as drag and downforce. These kinds of aerodynamic concepts demanded more engineering expertise, which required a more specialized background.

NASCAR races today are won or lost in a wind tunnel as teams work toward the cleanest, most efficient body shape that still falls within NASCAR regulations. Much has been written about NASCAR aerodynamics in recent months, especially with the introduction of two new body designs for the 2000 Winston Cup racing season. The Ford Taurus and Chevrolet Monte Carlo have been the subjects of great debate, mainly about unfair advantages of one body type over the other. Despite a 2000 Winston Cup season that has seen eight different winners in eight different races, and victories for all the body types currently running in

NASCAR, there is still a constant rumble about who has the best aerodynamics.

This is the kind of argument where specialized personnel play the largest role. Team engineers coming out of bachelors, masters, and even doctoral programs in motorsports technology are at the center of such a battle, and the demands on such specialists will grow with the advent of NASCAR's new proposal to level the high-banked playing field of Winston Cup racing: the use of a common template to equalize the shape of cars running in NASCAR competition. Gaining an aerodynamic advantage will be put into the hands of team members who understand not only the mechanics of aerodynamics, but more importantly the theory behind aerodynamics as well. Knowing "why" will now mean more than merely understanding "how."

Unfortunately, the majority--if not all--of university curriculum committees would bristle at the thought of implementing courses aimed at educating engineering, marketing, and business students in motorsports-related areas of study. People involved with motorsports see the need for specifically trained college graduates, especially since the current era of an international "Information Age" requires more and more ability to handle and master sophisticated computer technology. Whether it's an engineer designing chassis components using a CAD system (Computer Aided Design) or a team's public relations representative distributing up-to-the-minute press releases via an e-mail network, the ability to utilize computer hardware and software is critical to the efficiency of a racing operation. An added advantage is having personnel with the analytical and humanistic skills to communicate and innovate effectively. Advances in race team performance come from the higher-thinking skills taught and developed by a college education. When matched with the ability to use the latest in computer technology, such competitive advances equate into big dollars for race teams through corporate sponsorships and on-track success.

An example of how universities can benefit students by educating them for ever-increasing specialized jobs in automobile racing is the Motorsports Engineering Program at Clemson University in South Carolina. The program is part of the Robert H. Brooks Sports Science Institute, which grew out of a $2.5 million donation from Clemson alumnus Brooks following the death of his son in a 1993 private plane accident. Mark Brooks was en route to Bristol, Tennessee, with 1992 NASCAR Winston Cup champion Alan Kulwicki when their aircraft crashed while attempting to land. Kulwicki's primary sponsor was a business owned by Robert Brooks.

The Robert H. Brooks Sports Science Institute at Clemson "combines the interdisciplinary studies of sports engineering, management, marketing, and communications." (2) What makes the Institute's program so interesting is that it places students in "real life" racing situations. This at-the-track experience gives students the opportunity to learn in an environment where a premium is placed on decision making, the ability to deal with people, and the ability to deal with the uncertainties of motorsports competition. The Clemson University classroom or laboratory is replaced by the grime, noise, and stresses of pit road--the place where program graduates will be plying their skills and expertise.

Recent developments within the world of motorsports make an effort toward organized and accredited curricula even more critical. NASCAR's announcement on May

8th that the 2001 Winston Cup schedule would expand by two events (one in the greater Chicagoland area and the other near Kansas City) raised questions of how teams could staff pit crews and race shops. Given that Winston Cup teams are looking at more than forty weeks per year on the road with either points-paying events, specialty races like The Winston Select, or testing sessions at various speedways, it appears that NASCAR teams will go to a "double team" strategy.

In this situation, a Winston Cup race team will have two pit crews. The crews will work a split schedule, meaning that one crew will work on the car at two or three events, then a second crew will work the next two or three races. This on-again/off-again arrangement will force teams to hire more qualified people. With new technologies in stock car racing always on the increase--such as computer diagnostics, the use of telemetry, and in-house chassis design--educating young people to fill these forthcoming new positions will be of the utmost importance.

New, educated personnel will also be needed by Indy Racing League (IRL) teams and competitors running the Championship Auto Racing Teams (CART) circuit. With two-car teams like Chip Ganassi Racing running both the full CART schedule and the IRL's Indianapolis 500, additional engineering and computer staff will likely be required. Getting the right people for these jobs means looking to colleges and universities for the best in highly-trained and experienced people. With colleges supplying the education, and race teams providing on-track experience, the next generations of motorsports professionals will be ready to face the challenges of innovation, dedication, and competition.

The proliferation of colleges and universities with motorsports programs is amazing at this current time. Four-year schools, two-year community schools, and graduate programs are all embracing the need for specialized technical education. NASCAR crew chiefs took the initiative during the summer of 1999 and searched for fabricators and assemblers educated in the Bobby Isaac Motorsports Technology Program at Catawba County Community College in Hickory, North Carolina (6). This program has placed eighty percent of its graduates with race teams, a sign of the success that such motorsports-based programs can enjoy in today's era of rapid growth.

Other options for motorsports training may be found in any number of training facilities. Some of these facilities are meant to prepare students for careers as automobile technicians, with the added potential for graduates to possibly find a job in racing. In the spring of 1999, NASCAR announced its association with Universal Technical Institute of Phoenix, Arizona, to build and operate the "NASCAR Training Institute." The seven-million dollar facility in Charlotte will be part of a network of such training schools across America, providing practical education in a "'NASCAR-oriented environment.'" (1)

Programs such as the one done in conjunction with NASCAR and UTI are another way to supply the ever-expanding motorsports industry with qualified employees. The difference between these programs and the ones at major universities like Clemson, the University of North Carolina at Charlotte, and the University of Central Florida is the fact that the major university programs teach the theory that leads to the innovations that are then put into practice by the crew or shop personnel. Whereas graduates of these major university programs research and cre-

ate many of the developments that might soon become part of racing technology, it is the graduates of the training programs that often put the new ideas into motion on a car at the track. The important fact we need to remember is that both elements of motorsports education--the theoretical as well as the tangible--are required to secure a team's competitive advantage.

Race teams have many jobs that must be filled with educated staff. Personnel working on a NASCAR team must handle such critical and diverse day-to-day tasks as aerodynamics, CNC (Computer Numerical Control) machining, data acquisition, engine assembly, CAD drafting, cylinder head preparation, fabricating, and gear specialization. Other jobs away from the shop floor, such as marketing, bookkeeping, and business management require specific education as well. As race teams expand into multi-car operations, and as racing schedules increase with new events in more widespread locations, the need for such specialized personnel will only grow. For technical programs, colleges, and universities to ignore this kind of demand is irresponsible. There is no better way for an academic or technical program to gain placement for graduates and public recognition than by getting actively involved in the high-profile, media-saturated arena of motorsports.

The essential aspect of this entire situation is to make sure that college and university administrators understand that education programs in motorsports technology and/or business is not simply a fast track to the "dumbing down" of American academia. Just the opposite is true: an institution that pays close attention to the demands of an ever-growing motorsports industry is providing a path to jobs and opportunities that no other sport within the collegiate sphere can provide. The National Football League does not add new teams each year, nor does Major League Baseball divide one ballclub into two or three separate organizations. The National Basketball Association can only take so many players, yet racing divisions like NASCAR, CART, the IRL, the SCCA, and the NHRA are in almost constant need of fresh talent with the latest in training and education.

Motorsports education is more, however, than just time spent at a desk or a drafting table; racing involves a solid hands-on component at speedways and in race shops all over the nation. Research opportunities abound, as do internship and fellowship programs with teams, speedways, corporate sponsors, and even sanctioning bodies like NASCAR itself. In the case of NASCAR, the summer of 2000 marks the debut of its Diversity Summer Internship Program, eight weeks of paid, practical experience for multi-ethnic coed students following their junior year of collegiate study (8).

Such practical education is what universities want for their students, especially when there are positions for them to fill within the industry. Mary Beth Marklein, in a recent article for the on-line version of USA Today, found that schools "can't produce graduates fast enough." Whereas traditional programs in engineering and automotive technology are often considered as being too textbook-oriented, the new programs in motorsports provide students who "can actually relate to the real world" (9). When your laboratory is a NASCAR Winston Cup stock car capable of running 200 miles per hour at tracks like Daytona, Talladega, or Michigan, your education experience better prepares you for the rigors and requirements of a career in big time, corporate sponsored, professional sport.

CONCLUSION

As the 2000 NASCAR Winston Cup season progresses, suddenly the subject of motorsports education in colleges and universities doesn't sound as "lowbrow" as it once may have. With ever-increasing demands for highly-trained specialists in automotive engineering, aerodynamics, and computer technology, the academic community has begun to recognize automobile racing for what it is: a aspect of our popular culture that turns sport into innovation while carrying the potential for good jobs, positive university public relations, international corporate marketing, and prospective students wanting to develop the unique skills they need to fill a niche in the rapidly-growing arena of motorsports. It looks like 6.3 million NASCAR fans can't be wrong, regardless of how "lowbrow" their favorite sport may appear.

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