IRON GAME HISTORY

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THE RETURN OF *IRON GAME HISTORY*

As many of you know, Jan and I had a rough time last year what with the loss of our country cabin to fire on the Fourth of July followed by a historic Halloween flood which kept us—and Jan's mother—out of our main house and guest house for approximately six months. What's more, although we tried to inoculate ourselves from another holiday disaster by using mordant humor, a phone call Thanksgiving morning brought the shattering news that Mike Jenkins, the bright, quick-witted young man who won the 2012 Arnold Strongman Classic, had suffered a heart attack during the night and died at 31. Mike's death triggered a decision on our part to feature in our next issue of *Iron Game History* an article profiling Mike and examining the circumstances surrounding the heart attack which took him. Accordingly, we reached out to Simon Bronner, who chairs the department of American Studies at Penn State University in Harrisburg. Professor Bronner had developed a friendship with Mike and his wife, Keri, and even did some Strongman training at their gym in Harrisburg. Academically, Bronner is also interested in the cultural aspects of physical strength, and he attended the 2014 Arnold Strongman Classic, taking photos and gathering information. Bronner, of course, shared our profound sense of loss and agreed to not only write the article, which appears on page 54, but to serve on our Editorial Board moving forward.

As anyone looking at the new *IGH* can tell, it's a good deal thicker than an average version, but we decided to make it longer as a way to express our gratitude to you (our subscribers) and to apologize for taking so long to produce it. If the issue has a binding agent it would be the subject of Performance Enhancing Drugs (PEDs) Three other articles—besides the one on Mike Jenkins—focus to one degree or another on this topic: John Hoberman's essay on why competitive athletes face much more criticism in our society for their use of PEDs than do other groups—some of whose members are users, such as law enforcement officers, college students, actors, military personnel, people of middle-age and beyond; John Fair's article about the decline of U.S. weightlifters relative to those from other countries; and my essay on the meaning of Tatiana Kashirina's world record snatch. In a way, such a focus isn't all that unusual given the widespread use of PEDs in sport these days. In any case, we hope you find things of interest in these 84 pages.

Another reason it was difficult for us to finish an issue of *IGH* any sooner is that we've been increasingly busy here at the Stark Center doing the sorts of things it was designed to facilitate: hosting meetings, teaching students, writing, organizing symposia, attending academic conferences, lecturing, raising funds for the Center, and entertaining the increasing numbers of visitors we've been having. One thing which makes us proudest is that over the past year or so, three of our graduate students have completed their dissertations and earned Ph.D.'s in Physical Culture and Sport Studies, a degree that we—mainly Jan—designed and managed to have accepted by our Department of Kinesiology and Health Education. The first of these men to finish was Jason Shurley, whose dissertation was called, "Strength for Sport: The Evolution of the Science of

Strength and the Birth of Professional Strength Coaching, 1900-1978." (Jason also assisted us with the Thomas DeLorme article which appears in this issue.) Jason, who was formerly the captain of the UT Powerlifting Team—and whose wife, Valerie, was also a member of the team—is now an Assistant Professor at Concordia, an excellent liberal arts college here in Austin. The next to finish was Tolga Ozyurtcu, who finished this summer after completing his dissertation: "Flex Marks the Spot: Histories of Muscle Beach." Tolga's dissertation isn't a comprehensive history of Muscle Beach, but a very interesting attempt to understand the Santa Monica site as a mythic place in our cultural imagination. Tolga just joined our department as a faculty member and we're happy to have him. Last, and finally, is Baker Harrell, who back in November of 2007 published "A Perfect Storm: An Analysis of the American Youth Obesity Epidemic," in *IGH*. Baker created and still runs a very active non-profit in Austin called "It's Time Texas," which focuses on healthy living and youth fitness. His dissertation is titled: "Beyond Obesity: Historical, Social Change Approaches to Improve the Fitness of Americans." Baker took a long time to finish because of his work with his non-profit, but he never gave up his dream of a Ph.D. and we expect great things from him.

In late Spring, we took what might be called a "full team" to the annual meeting of the North American

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Society for Sport History—a trip Jan and I have taken almost every year since 1986, when Jan's paper, "Bernarr Macfadden: Reformer of Feminine Form," was selected as the best paper by a graduate student. At this year's meeting our department had—of all the universities represented—the largest number of graduate students. Those students—most of whom came to the University of Texas to study with us and to use the archives in the Stark Center—were there to present the following papers, which represented their areas of research interest: Tolga Ozyurtcu (Muscle Beach); Florian Hemme (weightlifter/world champion wrestler George Hackenschmidt); Sam Twito (Indian Clubs); Jason Shurley (ACL injuries in women athletes); Ben Pollock (world weightlifting champion Joe Dube); Dominic Morais (who won the NASSH graduate prize in 2012, with a paper on Eugen Sandow) using archives in teaching history; George Kioussis (soccer); and Lauren Osmer (international Olympic policy). In addition, the following faculty members presented papers: Thomas Hunt (1968 Olympics); Kim Beckwith (pioneering weightlifter and official Judy Glenney), Jan Todd (early physical culturist Belle Gordon), and John Fair (British physical culture). The newest student in this program has just arrived—Dan Rosenke—an elite sprinter from Canada who could have been accepted almost anywhere, but decided to come to U.T. to do sociocultural research on sports doping and take his Ph.D. It should be added here that two of our people—Drs. John Fair and Thomas Hunt—are also publishing books this year. Fair's book on the history of the Mr. America contest will be released this fall as part of our U.T. Press series, and Dr. Hunt's book, with Routledge Press, is entitled, *A Global History of Doping in Sport: Drugs, Policy, and Politics.* We also take pride in the U.T. Men's Powerlifting Team's victory at the USAPL Collegiate National Championships. The team was coached by our own Kim Beckwith, who was named "Collegiate Coach of the Year" by the USAPL.

Other manifestations of our activities this past year include two conferences hosted by the Stark Center. The first was the brainchild of Dan Keating, Professor and Dean at the Washington University School of Law in St. Louis, and was designed to honor Clarence Bass, the lifelong lifter who, at 76, by exercising, studying, and eating very carefully since his early teens, has developed and essentially maintained a level of overall fitness well beyond most active athletes in their thirties. Held at the Stark Center, the conference celebrated Bass' most recent book, entitled *Take Charge: Fitness at the Edge of Science,* and featured presentations by a number of fitness experts and admirers of Bass. Among those who spoke was U.T. Exercise Physiologist Ed Coyle, who also chaired a panel on "The Aerobics/Strength Alliance." The second panel was led by Dr. Joe Signorile, a professor of exercise science at the University of Miami and was called, "The Rise of Intervals." There was also a third panel, led by Professor Keating, on the subject, "Forget Heavy, Think Effort." The conference ended with a fine dinner at the Center and featured keynote speaker, Dr. Waneen Spirduso, retired Professor of Kinesiology and Health Education and an international expert on physical activity and aging.

The Stark Center was also the co-sponsor—with the Athletic Performance Center, a division of the Department of Intercollegiate Athletics at Texas—of a strength coaching clinic in May 2014. The Athletic Performance Clinic drew approximately 200 people, most of whom were strength and conditioning coaches. It was sponsored by the Sorinex Equipment Company, which built the beyond-the-state-of-the-art training facility for U.T.'s Olympic athletes (track and field, rowing, cross-country, softball, volleyball, and so on) in the Athletic Performance Center. The two day clinic was keynoted by Dr. Bill Kraemer, professor of exercise science and medicine at Ohio State University and the most prolific strength researcher in the country.

As golf is one of our areas of specialization at the Stark Center, we also worked with the Austin History Center last December to host a memorable event that brought together Austin's two most famous golfers—Ben Crenshaw and Tom Kite—both students of the legendary golf guru Harvey Penick, both winners for the University of Texas of the national golf championship, both longtime Austinites, both donors to the Stark Center, and both among the most successful professionals in the world over the past 40 years. The evening consisted of a long, informal conversation between these two old friends and rivals as they recalled their many decades playing "the auld game" in Austin and far, far beyond. It was televised by ESPN's Longhorn Network.

Last, but hardly least, over the past year we also received from outside sources the final $200,000 from the second of the Weider Foundation's $1,000,000 pledges, the final shipment of art and books from Joe and Betty Weider, and over $100,000 in additional monies to support staff salaries.

–Terry Todd

Doped Athletes as Enhancement Models for The Twenty-First Century

John Hoberman

The University of Texas at Austin

By now even those of us who take little or no interest in sports are aware that many elite athletes have become dependent on doping drugs to perform at the world-class level. In the media, the doping scandals that have erupted in Major League Baseball, the Tour de France, and in various Olympic sports are routinely presented as resulting from transgressions committed by corrupt athletes who have betrayed their athletic communities. The incentives to dope that are built into the system by politicians, sports federations, and corporate sponsors are routinely ignored. Scapegoating athletes is much less disruptive to the sports entertainment industry than taking a hard look at the most powerful beneficiaries of Olympic medals and the international recognition that comes with sportive success at the top level.

A more realistic alternative to presenting doping scandals as the result of individual moral failures is to see them as the noisy and disturbing forerunners of current and future debates about enhancing the human organism in controversial ways. Today's disputes about whether an athlete's use of a drug like testosterone deserves a "therapeutic use exemption" can be seen as a public rehearsal of similar debates about the enhancing of ordinary citizens. We should, therefore, see the pharmacological enhancements that trigger today's sports doping scandals as analogous to the broad range of human enhancements not directly related to sport that are already accepted by many people and are only lightly regulated by governmental agencies like the FDA.

Various forms of the doping of everyday life have become routine outside the world of athletic doping. There are mood-brightening drugs, Adderall for the epidemic "brain-doping" among college students, sexual functioning drugs, "anti-aging" hormone therapies, including the explosion of "low testosterone" propaganda on television, the proliferation of cosmetic surgeries, Modafinil (Provigil) for shift-workers, super-caffeinated "energy" drinks, and countless "supplements." Athletic performances constitute a very small fraction of the human performances that are required to build our careers, cultivate our hobbies, and sustain our relationships. Projecting our enhancement desires and doubts onto a tiny athletic elite thus makes a great deal of practical sense, in that it displaces the responsibility for potentially dubious "doping" behaviors onto a very small number of conspicuous people who have been cast as "role models" for the general population.

Athletes are well suited to be pharmacological role models, because their performances are public, carefully scrutinized, and are easy to judge in terms of their success or failure. Successes ascribed to doping drugs may well drive up the use of these drugs outside the ranks of elite athletes. (This imitative process is most obvious among hyper-muscular bodybuilders.) The assumption that elite athletes do promote the use of performance-enhancing drugs is widely accepted even though it is based on indirect evidence. In recent decades athletic drug use has spread both vertically and horizontally: down into the ranks of even the youngest adolescents and up into the ranks of senior citizens who engage in a competitive sport such as Masters track & field. The Masters category includes athletes who are over forty years of age and is divided into progressively older age groups. A few years ago USA Track & Field was actually weighing the idea of drug-testing senior athletes over the age of eighty. Athletic drug use has spread horizontally into the ranks of recreational athletes such as runners and cyclists who can benefit from pain-killing drugs and oxygen boosters such as erythropoietin (EPO). The ostensibly absurd idea of drug-testing aged people points to the charismatic role of the high-performance athlete as a cultural icon whose drug-free status continues to have wide currency as a sign of integrity. Interestingly, this iconic role has managed to survive the endless doping scandals that have involved many elite athletes who are supposed to exemplify drug-free competition.

Doping in sport has also served as a symbolic

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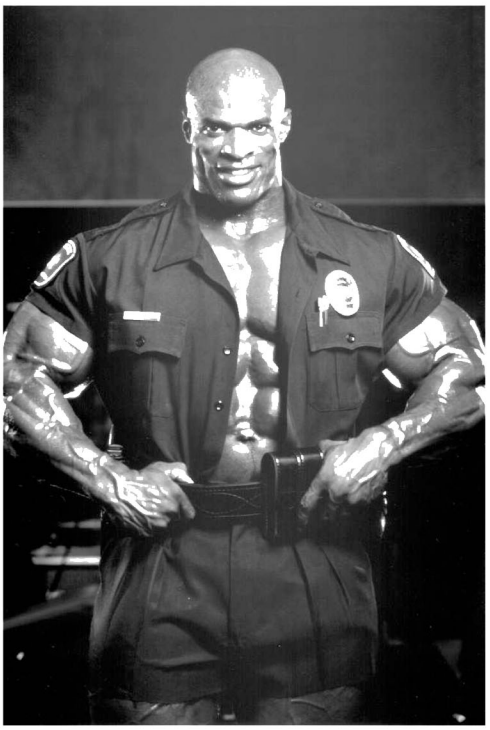
precursor to other enhancement procedures. Peter D. Kramer's mega-bestseller *Listening to Prozac* (1993), a classic exploration of the ethical implications of human enhancement, regards the athlete as the forerunner of other enhanced human performers, and anabolic steroids as the prototype enhancer against which other enhancers are measured. He compares Prozac as a form of "cosmetic psychopharmacology" to "psychic steroids for mental gymnastics" and speculates darkly about the use of antidepressants as "steroids for the business Olympics." When he asks one patient whether she might want to resume her use of Prozac, she becomes concerned about the idea of "cheating" on life and replies: "Wouldn't that be like taking steroids?" It is a testimony to the power of today's enhancement ideal that this young woman's misgivings about using "psychic steroids" is less influential in our vernacular than the descriptive expression "on steroids," which refers in a non-judgmental or admiring way to anything that possesses a special energy or dynamism.



Ronnie Coleman, the eight-time Mr. Olympia, served as a police officer in Arlington, Texas, from 1989 to 2000 and then as a "reserve officer" until 2003.

The conjoining of drugs with visible and often quantifiable athletic performances also promotes in other performance venues the twin fantasies of pharmacological efficacy and safety. For example, the many college students who engage in "brain doping" by taking Adderall or other stimulants assume that these drugs have predictable and reliable enhancing effects and that there are no physiological penalties to be paid for using them. Many elite athletes have used (or been injected with) performance-enhancing drugs in a comparable state of ignorance. And some students compare high-stress studying with the pressures of high-performance sport that drive elite athletes to dope themselves.

Today the fundamental issue for many people regarding performance-enhancers is how to use them without being stigmatized in the process. The doping epidemic that has spread throughout high-performance sport since the 1960s is the result of mankind's encounter with limits to athletic performance that are inherent in the human body. Performance-enhancing drugs have thus served as a kind of solution to the problem of human limits within this sphere of activity. The problem with this solution is that sports officials and much of the sporting public continue to regard doping as dishonest and illicit. We have seen that this norm can also be applied to a psychotropic drug like Prozac that was famously presented as a performance-enhancer. How, then, do prospective dopers in both athletic and non-athletic venues legitimize the use of performance-enhancing drugs while attempting to avoid the traditional stigma associated with taking them?

The solution is to demonstrate (or rationalize) that doping is actually a form of therapy. The blurring of the line that separates therapy from enhancement has been happening for many years. The ambiguous status of cosmetic surgeries, which can be seen as either narcissistic or healing procedures, was evident almost a century ago. In recent years these operations have become commonplace, driven in part by the idea that they offer therapeutic benefits in the form of a greater sense of "well-being."

Sports officials try to manage the therapy/enhancement conundrum by granting Therapeutic Use Exemptions (TUE) to athletes who can demonstrate legitimate medical needs for banned substances. (Inevitably, many athletes have attempted to abuse the TUE system.) Masters athletes often have medical needs that justify TUEs and routinely ingest many substances on the banned list. Mixed Martial Arts (MMA) cage fighters try to get TUEs for Testosterone Replacement Therapy (TRT) that will supposedly repair the endocrine damage done by their previous abuse of anabolic steroids. But athletes are not the only performers who apply for TUEs. Of greater social significance are the many thousands of anabolic steroid-consuming police officers in the United States who break the law each time they buy or use steroids without a medical exemption.

The demand for testosterone and other anabolic steroids in this group is so intense that the many officers who have been caught using them have generated a long list of medical rationales and alibis to justify their behavior and thereby keep their jobs.

Police officers, their lawyers and their doctors have claimed that anabolic steroids have been prescribed to officers to restore flexibility in ligaments, to promote the healing of a knee, to counteract chronic fatigue syndrome, to delay the aging process, to restore sexual functioning, to treat back pain, to lose weight, and to treat hypogonadism (low testosterone), pituitary dwarfism, fatigue, and "adult onset testosterone deficiency." The United States Anti-Doping Agency (USADA) that supervises drug use among athletes looks at testosterone therapy from a very different angle. "The use of testosterone as an anti-aging medication for men," according to its TUE policy, "is not justification for a TUE. Similarly, generalized fatigue, slow recovery from exercise and a decreased libido are not, in isolation, justification for the granting of a TUE for testosterone."

Managing demand for powerful drugs such as alcohol, nicotine, opiates, growth hormone, and the sex hormones testosterone and estrogen is a difficult regulatory task for any modern society. Over the past twenty-five years, the regulation of performance-enhancers has fallen most heavily on the elite athletes who have inherited a misplaced role as social exemplars. Their vulnerability to disgrace and punishment derives in part from their largely decorative role; unlike drug-consuming truck drivers, shift workers, police officers, college students and caffeine-dependent employees of all kinds, they are ultimately dispensable, because they are not essential to the functioning of a modern economy. That is why they are subjected to far more surveillance than police officers or college students, who are subjected to very little, if any, surveillance. Regulation also differs within the sports entertainment industry. The six-billion dollar professional baseball industry conducts far more effective drug-testing than the nine-billion dollar professional football industry, which has largely managed the doping issue by means of effective public relations. In short, the regulation of doping within various social venues differs in interesting ways at a time when both scientific and commercial interest in human enhancements is expanding. And there is also an important medical dimension within which sports doping has become a role model for the doping of everyday life.

The performance-enhancing sports physicians who have flourished during the Age of Doping are the ambitious predecessors of the many entrepreneurial physicians who have gone into the business of prescribing hormone treatments for a rapidly aging population. What is more, doctors who practice "anti-aging" medicine sometimes serve athletes and non-athletes alike. Before his conviction for conspiracy to distribute anabolic steroids and human growth hormone, Dr. James Shortt, a practitioner of "longevity medicine" in South Carolina, was dispensing these drugs to professional football players at the same time he was engaging in flagrant and multifaceted medical malpractice by administering testosterone to non-athletic patients. The Board of Medical Examiners eventually declared in 2005 that Dr. Shortt was "unfit to practice medicine."

Modern societies are fixated on the doping practices of elite athletes because their hormone doping models in important ways the prospect of a biomedical future that both fascinates and disturbs us. Public anxieties about violating human limits remain far more focused on athletes than on others who make more essential contributions to the functioning of a modern society. This curious discrepancy is due in part to the sensationalism that results from exposing concealed drug use. Performance-enhancing drug use by elite athletes has occurred inside secretive subcultures, employing medical drugs but cut off from the medical culture in which these substances originated and where they still have legitimate therapeutic uses.

Even as athletes continue to bear the primary burden of modern ambivalence about human enhancements, the integrity of other kinds of performances are being questioned without the fanfare of athletic doping scandals. There are many concerned commentaries about academic doping with stimulants, and there are hundreds of local reports about cops on steroids. But neither the "brain doping" reportedly practiced by students and scientists, nor the anabolic steroid doping of police officers and firefighters and security personnel, have ignited national debates, let alone national censure or Congressional hearings. This ambivalence toward confronting the implications of performance-enhancement outside the sports world tells us that the tension between the current enhancements boom and our instinct to preserve human limits will persist for a long time to come.

New at the Stark:

The Max Furek/*Steele Jungle* Collection

John D. Fair

The University of Texas at Austin

In March of 1978 Chester Yorton, the 1966 IFBB Mr. America and 1966 NABBA Amateur Mr. Universe, staged a Natural Mr. America Contest in Las Vegas under the rubric of the Natural Bodybuilders Association. It set a precedent. Such was the increasing popularity of drug-free bodybuilding over the next several years that Yorton's concept gave rise to Tom Ciola's Natural Bodybuilders of America in 1981 and numerous other spin-off organizations over the next decade, all with corresponding contests, newsletters, and magazines touting their particular approach to resolving the drug problem in competitive bodybuilding.

Although these initiatives were applauded by those physical culturists who wished to restore purity to the sport, they were largely ignored by the majority of promoters, competitors, and editors who realized either financial gain or personal fame from the steroid culture. Worse, the emergence of so many natural bodybuilding federations led to dissension and duplication of efforts that was counter-productive to their common cause. What was needed was an entity that would serve as an umbrella to unite the various conflicting and largely self-serving interests.

This was the object of *Steele Jungle*, a tabloid founded in 1992 by Pennsylvania bodybuilding promoter Max Furek who sought to publicize activities of the anti-drug movement and to promote natural physique and figure competitions. Born in Berwick, Pennsylvania, on 28 January 1947, Max had always been active in sports, first in wrestling and track and field at school, and then as a competitive runner, having reportedly completed 12 marathons with a best time of 3:13 in 1987. Despite his love of sports and fitness, Max had no personal bodybuilding experience when he decided to start the magazine. His interest stemmed, rather, from his education and profession. With an undergraduate degree in psychology from Aquinas College in Michigan and an M.A. from Bloomsburg University in Pennsylvania, he became a counselor and educator for persons suffering from drug, alcohol, and other addictive disorders.

This background caused Max to develop a fascination with how bodybuilding competitors could so radically change their appearance with steroids. He soon noticed that virtually all the major muscle magazines, while often decrying their use, were featuring drug-enhanced physiques as positive role models to readers. Steroids, Max believed, were dangerous, illegal, and unethical, and he wanted to give greater publicity and credibility to the natural side of competitive bodybuilding. He particularly wanted to present a counterpoint to Dan Duchaine and his highly influential *Underground Steroid Handbook*. Thus his own publication, *Steele Jungle*, a play on words from the iron game, British rocker Tommy Steele, and the anabolic jungle that Furek perceived to be out there. Soon he developed a relationship with all the natural organizations and became an important component of the drug-free community.

Despite opposition from the National Physique Committee, *Steele Jungle*, in 52 issues from 1992 to 2005, carried news of drug-free competitions, features on natural athletes and promoters, exposes, editorials, and discussions on challenges confronting the sport. How drugs contributed to the demise of the iconic AAU Mr. America Contest in the 1990s is one of many important topics addressed by the publication. "I believe," Furek told me in an interview, that "we raised awareness of these issues." He also organized bodybuilding and fitness competitions in Pennsylvania, New Jersey, and North Carolina and manned a *Steele Jungle* booth for ten years at the annual Arnold Sports Festival in Columbus, Ohio.

In 2013 Max officially donated his collection of materials related to the publication of *The Steele Jungle* and a full set of the magazine to the H.J. Lutcher Stark Center. Researchers who use this great gift will gain a fuller understanding not only of the forces responsible for the bigger physiques that emerged in the 1990s but the far less-publicized drug-free physique movement which emerged in opposition to it. The Furek/*Steele Jungle* Collection is an invaluable resource for those interested in the history of bodybuilding and we at the Stark Center are very grateful to Max for his generosity.

Breaking the Physique Barrier:

Steve Reeves and the Promotion of *Hercules*

Jan Todd and Michael O'Brien

The University of Texas at Austin

On 20 February 1958, a movie was released in Italy that would, over the course of the next two years, vault American bodybuilder Steve Reeves from a level of relative obscurity to international stardom. The low budget *Le Fatiche di Ercole* (*The Labors of Hercules*) was filmed using recycled Hollywood sets and non-"A-list" actors, yet it obtained a level of success in Italy that had not been seen since the golden years of Italy's silent film era.[1] The film's surprising popularity with Italian audiences attracted the attention of independent film producer Joseph E. Levine, then living in Boston, who purchased the distribution rights to the film, exported it to the United States, and marketed it so successfully that it became, according to Reeves, "the most successful picture in the world . . . the entire world, in 1959."[2]

Scholars in film studies have generally argued that the film's success in America was due primarily to the massive advertising campaign Levine created as he promoted the movie—renamed simply *Hercules*—in ways not used by other film distributors in the fifties.[3] However, perhaps equally important to the film's success was the charismatic Reeves—an actor who looked physically unlike any other leading man in this—or any previous era. While many film critics panned *Hercules* as cheaply made, badly dubbed, and starring a man with limited acting skills, the public paid scant attention to these high-brow opinions and fell in love with *Hercules* and its handsome star.[4] President John F. Kennedy even counted himself among Reeves' fans, as did British Prime Minister Winston Churchill who, according to an inside source, "especially admired Steve Reeves as Hercules."[5]

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The enormous popularity of the film—and Reeves—during the waning years of the 1950s—marked the first wave of a cultural shift in the appreciation of the male physique on the big screen. After *Hercules,* the idea that leading men would display muscularity along with their handsome faces became, while not ubiquitous, far more widely accepted, and the built body—the bodybuilder body—began appearing in a number of other costume dramas that followed in its wake.[6] As film historian Steven Cohan wrote about *Hercules* and the other "peplum" ("Peplum" refers to the thigh-high kilts and tunics worn in these early epics.) or "sword and sandal" films of this era, "Like the physique photography of the period, which supplied the conventions for representing the muscular body on screen, the . . . films dispensed with the pretense of disavowing the eroticism of the male body beautiful . . . these spectacles appeared to reinscribe a very orthodox understanding of masculinity."[7] This was certainly true for *Hercules*, and the affirmation of Reeves' body as strong, attractive, hyper-masculine, and "monetizable," would launch dozens of other "sword and sandal" epics starring weight-trained actors in the decades that followed, epics which also impacted muscularity in traditional films.[8]

While much critical attention has been given to the muscular, hard-bodied stars of the 1980s such as Sylvester Stallone and Arnold Schwarzenegger, this essay focuses on the birth of the modern peplum era through a history of the early career of Steve Reeves and the marketing of *Hercules,* his first major film.[9] While most critics agree that Reeves and *Hercules* launched a new and very popular genre of films—dozens of other sword and sandal epics were made in the decade after its release—scholarly discussions have focused primarily on the peplum genre as a whole rather than unpacking

Reeves' body played a large role in the success of *Hercules* and throughout the film Reeves struck poses that showed his wide shoulders and narrow waist to advantage. In this scene, near the end of the film, Reeves gets ready to mimic Samson and wrap the chains that had been holding him prisoner around the pillars of the palace of Jolco and pull it to the ground.

the story of how Reeves, Levine, and an unlikely low budget film made in Italy made it all happen.[10] This essay attempts to fill that gap.

The Age of the Chest

Historical epics set in Biblical/Classical times were not unknown in Hollywood when Reeves was cast as Hercules. Victor Mature had starred in *Samson and Delilah* in 1949 and *The Robe* in 1953. Kirk Douglas made *Ulysses* in 1954, while Charlton Heston played Moses that same year in the *Ten Commandments*.[11] The bare male torso had been on display in enough movies by 1958, in fact, that critic Richard Armour suggested in *Playboy* that the era might well be remembered as the "Age of the Chest." According to Armour, Marlon Brando led the new turn toward exposing the male body in his performance as Stanley Kowalski in *A Street Car Named Desire* (1951), but he had been followed by Burt Lan-

caster in *From Here to Eternity* (1953), William Holden in *Picnic* that same year, and then, in 1954, by Kirk Douglas in *Ulysses*.[12] Despite Armour's prescience on the growing popularity of male muscles in the movies, these mainstream actors possessed what one might call "good physiques," but their bodies looked nothing like those of the top bodybuilders of this era—George Eiferman, Clarence Ross, Bill Pearl, Reg Park, and, of course, Steve Reeves.[13] Brando and Douglas, for example, had visible biceps, prominent deltoids, and modest pectoral development, yet their bodies had none of the fullness of muscle or overall symmetry that caused Eiferman to recall that when Steve Reeves walked along Santa Monica Beach men and women often followed him as if he were some sort of "exotic and beautiful new species."[14] According to film historian Steve Cohan, the difference in these earlier films and the films that came out post-*Hercules,* was that, "the peplum films . . . glorified the physiques of their starring actors and were thus able to appeal to both women and men."[15]

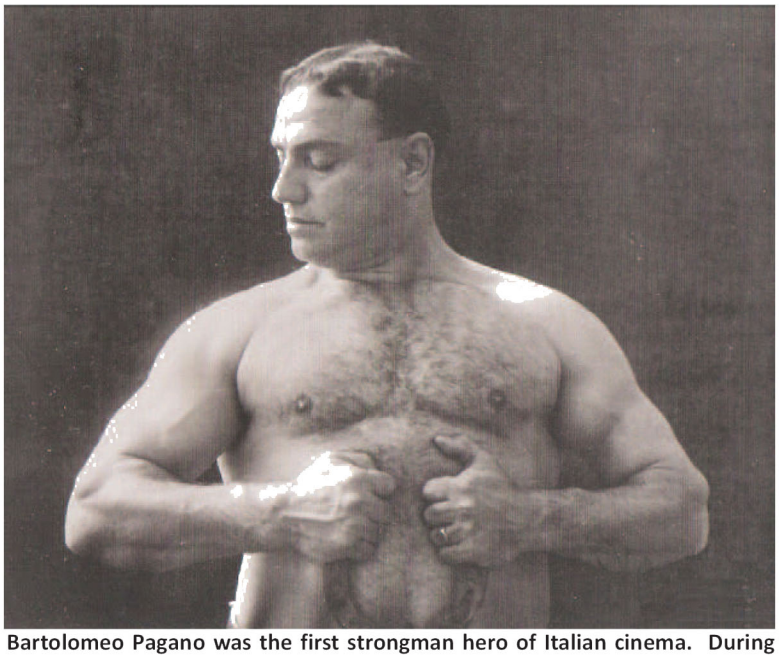
The difference between the fully-muscled Reeves body and that of other leading men in this era can be easily seen in this photograph of Kirk Douglas in *Spartacus*, released in 1960.

And appeal Reeves did. Reflecting on the unusual path of his career, Reeves commented later in his life that, "As Jackie Robinson broke the color barrier in baseball, I broke the physique barrier in show business."[16] While silent film star Bartolomeo Pagano (famously known for playing the Italian strongman Maciste), and various American Tarzans (such as Johnny Weissmuller and Buster Crabbe), might argue with Reeves' claim, his breakthrough performance in *Hercules* unquestionably helped other weight trained men—particularly bodybuilders—make the transition to the big screen in the years that followed.[17] Reg Park, Gordon Scott, Ed Fury, and Mickey Hargitay, all of whom starred in their own sword and sandal epics in the 1960s, may have been Hercules' immediate heirs, but Schwarzenegger's *Conan The Barbarian* (1982) and the other films of the 1980s in which the built body was vital to the film's ticket sales, were also its descendants. Sylvester Stallone, whose ripped body has been central to the success of his *Rocky* and *Rambo* serials, has talked openly and frequently about the debt he owes Reeves. In an on-stage interview in 2014, Stallone told an audience, "When they say that films don't influence people's behavior, that's not true. When I walked into a theater and saw Steve Reeves, it changed my life. I went outside and started lifting everything I could. I'm telling you it was truly a seminal moment in my life. And, if I hadn't seen that film, I wouldn't be here today."[18] On another occasion, Stallone went further, telling a reporter that seeing Reeves in that darkened theater was "like seeing the Messiah."[19] Thousands of other young men had similar personal conversion moments while watching *Hercules*. Ralph Bansigore, to give just one example, wrote in a Steve Reeves fan magazine, "As a teenager I was overweight and flabby . . . [but when I saw *Hercules*] my life was changed—forever. The impact of that perfect physique was profound and permanent. I went home, took off my shirt and looked in the mirror. I have been working out ever since."[20]

Becoming a Bodybuilder

Stephen Lester Reeves was born on 21 January 1926 in Glasgow, Montana, to parents Lester Dell Reeves and Golden "Goldie" Boyce.[21] Steve's father, Lester, died in 1927 in a tragic accident when a pitchfork

became trapped in a wheat threshing machine and, as the workers were trying to release it, it catapulted through the air and punctured his abdomen. Although he lingered for several days, doctors were unable to repair his ruptured organs and he died of peritonitis.[22] Steve was only eighteen months old at the time of his father's death, and so never really knew him, although older family members recalled that Lester had also had an impressive physique and unusual strength.[23] Steve and his mother were living separately from Lester at this time, staying with her parents on the Boyce's ranch in Peerless, Montana. Steve remembered these early years as among the happiest of his life. His grandfather taught him to ride by the time he was three and, as Reeves recalled, he'd "get up in the morning, play in the woods, or in the river . . . or get on my horse and ride all day . . . I was totally carefree."[24]



Bartolomeo Pagano was the first strongman hero of Italian cinema. During the silent film era he appeared in more than 30 films under the stage name "Maciste" and was a great favorite with Italian film audiences.

Sadly for Steve, the carefree life didn't last. In 1930, with the ranch faltering and the Great Depression settling over America, Steve's grandmother passed away, and Goldie and her son moved to Great Falls, Montana, so she could find work and relieve her father of the need to financially support her and her preschool son. She found work as a waitress at the Rainbow Hotel and for the first couple years in Great Falls, she and Steve boarded with a young married couple and the woman looked after Steve when Goldie went to work. In time, Goldie began searching for a better job and was hired as the live-in cook for the town's physician, a man named Dr. Porter. While Goldie was no doubt happy to be offered the better paying position, she was not allowed to keep Steve with her in the doctor's private home. In what was probably a heart-wrenching decision on her part, she then made arrangements to send Steve to a boarding school/orphanage located in Helena, Montana, a two-and-a-half-hour drive southwest of Great Falls.[25] The Montana Deaconess School was home to a number of "rural boys and girls whose parents, for a variety of reasons were unable to care for their children" during the early years of the twentieth century.[26] Steve stayed there for the next three years, reportedly seeing Goldie primarily at Thanksgiving and Christmas.[27] When other boarding students went home in the summers, Reeves instead went to his Uncle Earl's ranch (the brother of his mother) where he helped out, worked with horses, and deepened his love of ranch life.[28]

The summer after he turned ten, Steve stayed with the Hall family, friends of Goldie's, at a cabin on the Smith River. Steve soon noticed that seventeen-year-old Vernon Hall, who chopped the firewood for the family that summer, possessed an impressive physique. Reeves later recalled that, "When Vernon would take off his shirt and swing that hefty axe, his muscles flexed with every move."[29] Vernon, although young, had already found his way to barbell training, and even though Reeves was not around Vernon much after that summer, he always cited Vernon as the reason he began to think about bodybuilding.[30] Reeves no doubt enjoyed that summer hiking, camping, and swimming with the Hall children, and at the end of his stay there Goldie did not send him back to Helena to school.[31] Instead, mother and son moved to Oakland, California, where Steve lived for the next eight years of his life—although again—not always with Goldie.[32]

Goldie and Steve arrived in Oakland in 1936 and moved in with a former waitress friend from Montana named Frances Chamberlain and her husband. The plan was for them to stay with the Chamberlains until Goldie found work and could get her own place, but, despite her best efforts, she was unable to find work in Oakland. Finally, she took a job as a live-in housekeep-

Backstage, following the 1947 Mr. America contest in Chicago, Reeves poses with several members of the "Olympettes," who helped hand out trophies and assist in various decorative capacities during the show.

er in Napa, about fifty miles north of Oakland but, once again, Steve could not live with her. For the next three years they saw each other primarily on weekends and holidays while Steve lived with the Chamberlains.[33] In 1939, she returned to Oakland and soon afterwards married Earl Maylone, who worked as a repairman for the phone company. Steve, Goldie, and Earl then moved to their own home in East Oakland where Steve lived until leaving for the Army.[34]

According to his biographer, Chris LeClaire, Steve always had some kind of part-time job, and gave money to Goldie to help support their small family. However, he also seemed to enjoy his teen-age years in Oakland, making friends, watching movies, and eventually thinking about how to build strength and muscle. It was in Oakland, with money he earned, that Reeves began attending the Saturday matinees at the local movie theater. Like most teenage boys he was drawn to films featuring action and strong leading men such as Gary Cooper, Clark Gable, and especially Johnny Weissmuller, his favorite actor during his boyhood.[35]

To get around the city in these years, Reeves rode his bike. He began cycling at around age twelve, riding to school and using his bike to deliver newspapers to the customers on his paper route. Riding a bicycle without gears on Oakland's hilly streets proved to be a great physical challenge for Reeves. There was one particularly steep, two-mile hill between his home in the Oak Knoll neighborhood and East Oakland—where several of his main friends lived—that he reportedly attacked as if it were part of a Spartan workout.[36] After winning his bodybuilding titles, the Oakland bike rides became part of the legend of how Reeves created his exceptional body at such a young age. Reeves later claimed that he viewed these rides as if they were training rides: "I got a lot of my thigh development from riding my bicycle up the hills in Oakland. I really worked at it."[37]

Reeves first lifted weights when he was about fourteen after losing an arm-wrestling match to a smaller friend named Joe Gambina. Surprised that his larger size hadn't allowed him to dominate, Reeves learned that Gambina worked out with weights and so had had an edge on him.[38] After the match, Gambina loaned Reeves

a *Strength & Health* magazine with John Grimek on the cover and then invited him to come over to his house to train with him.[39] The memories of Vernon Hall, and the images of Grimek and other bodybuilders, inspired Reeves—who had never really had the opportunity to participate in team sports—to take lifting seriously. And so, after some workouts at Gambino's house, and a brief period of training in his own garage with a set of weights he bought from his paper route earnings, Reeves began looking for a better place to train and someone to give him sound advice.[40] He found the perfect place at Ed Yarick's Oakland gym and he also found, in Yarick, an able coach, a supportive friend, and a badly needed father figure.[41] The story of the physical transformation Reeves made under Yarick's direction is the stuff of screenplays. Reeves began working out at Yarick's gym at age sixteen and gained thirty pounds of muscle in his first four months of training. When Reeves graduated two years later in 1944 at age eighteen, Yarick wrote, "he weighed a solid 203 pounds," and "in the opinion of many experts Reeves could have won the Mr. America contest that year if he had entered."[42]

Reeves wasn't able to enter the contest, of course, because America was at war and like most male high school graduates that spring, he enlisted in the Army almost as soon as he had his diploma in his hand. Reeves spent six weeks in basic training that summer, and was then shipped to the Philippines where he saw action at the Battle of Balete Pass and managed to catch a severe case of malaria that brought his bodyweight down to 175 pounds. After two months in the hospital, and several more reoccurrences of the disease, Reeves was transferred to the Quartermaster Corps and sent to Japan where he was stationed outside Tokyo as part of the occupation force.[43]

Discharged from the Army on 18 September 1946, Reeves made his way back to Oakland to see Yarick and his mother and to begin trying to figure out what he was going to do for the rest of his life. At Yarick's gym he began training regularly again, regained most of his weight, and entered and won his first bodybuilding title—Mr. Pacific Coast on 21 December 1946. He won the contest again in 1947 and then quickly added Mr. Western America 1947, Mr. America 1947, Mr. World 1948, and Mr. Universe 1950 to his resume.[44]

After winning the Mr. America title in Chicago in June of 1947, Reeves began emerging as a true sport celebrity. Both the Associated Press and United Press International covered the contest and their wire reports sent Reeves' name and photographs around the world. Major and minor newspapers across America showed Reeves in posing trunks, holding his trophy, with a million dollar smile on his handsome face, or posed with bathing-suit clad models to affirm his masculinity. It wasn't that most of the previous Mr. Americas hadn't also been handsome men, it was simply that they hadn't been *this* handsome, or a war veteran, or so disarmingly shy and nice. The Harrisburg, Illinois, *Daily Register*, for example, described him as a shy, blue-eyed, war veteran who apparently really told reporters, "Gee, it's wonderful, I'm the luckiest guy in the world."[45] Closer to home, the San Bernardino County *Sun* carried the AP story reporting that seven of the eight judges had found Reeves to be "physically perfect" and that the crowd watching the contest had whistled and stamped their feet when he began posing.[46] The Associated Press even did a feature profile on Reeves the following month, entitled, "New 'Mr. America' Handy Around the House, Too," that in addition to explaining that Reeves could cook and sew played up his attractiveness to women. According to the article, Reeves was so handsome that women often gave him wolf-whistles and came up to him without knowing who he was to ask for his autograph, or feel his muscles. "Steve gets a lot of feminine double-takes," the reporter concluded in an understatement.[47]

Reeves' victory at the Mr. America had also made him an international star in the world of bodybuilding and the darling of the muscle magazines on both sides of the Atlantic. Over the next several years his photographs appeared on the cover of nearly every muscle magazine in the world—at least once—and the descriptions of his physique in some of those magazines were so hyperbolic that they could have been written by a publicist.[48] *Muscle Power* author Gene Jantzen described Reeves as "one of the most astonishing muscle men ever to make his appearance at a best physique contest," going on to write that Reeves' physique resembled that of cartoon character Little Abner's, as Steve had "tremendous shoulders and latissimus muscles tapering into a wasp-like waist of scarcely 29 inches."[49] The normally reserved Peary Rader was even more extravagant in *Iron Man* following Reeves' Mr. America victory in 1947:

Most of the audience left the Auditori-

um amazed that such a muscularly perfect specimen existed. It was unbelievable that anyone could have such huge muscular size and yet retain the perfect balance in proportions, the excellent separation that Steve Reeves displayed. Here was a man who combined the massive muscular development that appeals so much to barbell men with the broad shoulders and slender hips that the average man prefers. Here was a man who not only had a magnificent physique, but also combined it with a very handsome face crowned with beautiful jet black, curly hair, a magnetic personality and a flashing smile that showed his ivory white teeth.[50]

Gordon Venables of *Strength & Health* similarly wrote, "You have to see this young man to really appreciate his build and good looks. Photos don't do him justice, he's twice as good as his pictures!" Venables then went on to claim that Reeves was more than just another bodybuilder, he was going to be a culture changer. "I believe a change has been wrought in the conception of the perfect male physique!" Venables enthused, "His tremendous breath of shoulders and extreme slimness of waist are symbolic of the New Physique."[51] Venables could not possibly have predicted just how accurate his words would be in the years ahead as Reeves and his classically-inspired physique would impact far more than the world of bodybuilding.[52]

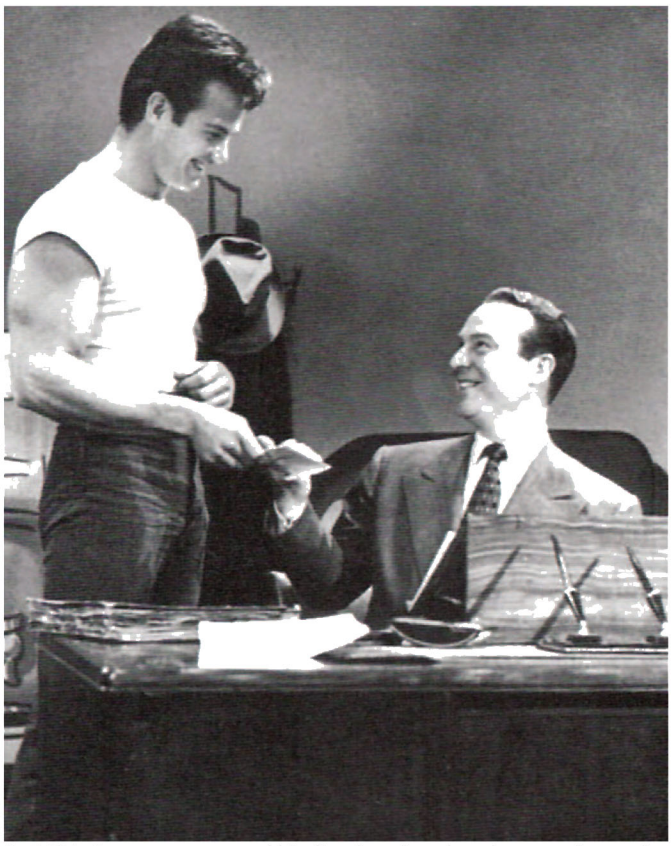
Becoming an Actor

After giving his last interview at the Lane High School auditorium in Chicago, where approximately three thousand people had watched him win the 1947 Mr. America title, Reeves returned to his hotel to find a letter waiting for him from Wallace Downey, a theatrical agent from New York who'd been at the show. The agent had written, Reeves recalled, "If you're interested in show business, I think you have potential. Give me a call or write me a letter and I'll see that you go to acting school on the GI Bill of Rights. We'll find you a little apartment, and on weekends we'll get you into vaudeville acts so you can make some extra money."[53] Reeves took the letter back to Oakland with him—where he had started attending chiropractic school on the GI Bill with the idea that he might go into the gym business—and waited several weeks before calling the agent to explore the idea of acting. Following that call, Reeves transferred his GI Bill credits to the Stella Adler Dramatic School for Acting in New York City, moved into a small apartment that had just been vacated by James Garner, and began taking classes at the acting academy that counted Marlon Brando among its alumni.[54] Reeves never felt comfortable at Adler's and soon left because of a disagreement with an acting coach who could only visualize him as a character actor. He stayed in New York, however, and enrolled at the Theodore Urban School of Acting, where he found the training more useful to his career goals.[55] Like other young, struggling actors in New York, Reeves went to casting calls, worked a variety of odd jobs to cover his expenses, and with help from his new agent worked as the straight man for Dick Burney in a vaudeville-type, stand-up comedy act appearing in resorts and small theaters on the weekends. Burney and Reeves were playing at a movie house in New Jersey when a talent scout for Hollywood director Cecil B. DeMille saw Reeves for the first time and asked him to come in and do a screen test. He was interested in Reeves as DeMille was starting a new project, a biblical epic called *Samson and Delilah,* and thought Reeves was perfect for the part. Reeves took the screen test in his street clothes at Paramount's New York office and was ecstatic to be offered a seven-year contract to work for the studio with the idea that he'd take further acting classes in California and play Samson when DeMille got the film into production. He flew back to California on his twenty-second birthday, feeling like his future was assured.[56]

Upon meeting DeMille in his Hollywood office, Reeves discovered that the director had a copy of Tony Lanza's famous photograph of him with his arms stretched overhead. The photo was sitting next to shots of Paramount stars Dorothy Lamour, Bing Crosby, and Bob Hope.[57] Initially heartened by this, Reeves was understandably surprised when DeMille told him that in order to play Samson, he expected Steve to lose twenty pounds because he would otherwise look too large on screen. The idea that he should be smaller and less muscular to play Samson—a heroic strongman—made no sense to Reeves, and so, while he eventually dropped about seven pounds, he refused to lose all the weight. Reeves admitted in later years that at that point he was still too wrapped up in bodybuilding to be willing to compromise his hard-earned physique. "I didn't have my priorities straight," he recalled, and so when the contract

came up for review at the end of its first six months, he was not surprised when DeMille released him.[58]

After being dropped by Paramount, Steve was at loose ends. He moved to Santa Monica for a time, living with fellow Mr. America George Eiferman in a boarding house right on Muscle Beach.[59] He continued looking for acting work in the Los Angeles area but to pay his rent and make ends meet, he also held a variety of odd jobs—parking cars, working in the post office, modelling, and eventually working at Bert Goodrich's American Health Studio.[60] His most successful television work was on Ralph Edward's show during 1951 where he did the on-air commercials, held props, and acted as straight man for Edwards.[61] The exposure on Edward's nationally broadcast show helped Reeves land a part on Broadway the following year in the well-regarded musical, *Kismet*, which kept him busy through 1954.[62] In the spring of 1954, during a break from his theater work, Reeves returned to LA to play Ed Perkins, a Mr. Universe contestant, in the MGM romantic musical comedy *Athena*, starring Jane Powell and Debbie Reynolds. It was his biggest role to date and although he had relatively few lines, his physique was featured prominently.[63] In July of 1954, he appeared in a summer stock production in Sacramento of a play called *Wish You Were Here*, getting excellent reviews for his depiction of the character "Muscles," a teen-aged boy involved in a summer romance at a camp in the Catskills.[64] After the show closed, Reeves went back to Muscle Beach for a couple of weeks before heading to New York to resume his work in *Kismet*. At the beach he met eighteen year old Sandra Smith, whom he married on 31 January 1955. After the close of *Kismet* in the fall of 1954, Steve landed another Broadway role in Carol Channing's *The Vamp*. Unfortunately, the play closed about a month later and Reeves was again out of work and growing tired of New York winters. According to LeClaire, the couple then drove to Florida, eventually landing in Fort Lauderdale where Reeves decided to put acting aside and go into the gym business. The Steve Reeves Gym in Fort Lauderdale, opened in February of 1956 and had several hundred members within a couple months. Although she stayed with Steve in Fort Lauderdale for a time, Sandra was never happy there and soon moved back to California to stay with her parents, while Steve stayed behind. They officially divorced in September of that year, and Steve moved on as well, selling the gym to one of his members before returning to Los Angeles.[65]



In 1951, Reeves got one of his first breaks when he was chosen by *This Is Your Life* and *Truth or Consequences* host Ralph Edwards for a recurring role on his *Ralph Edwards Show*. Edwards decided to hire Reeves as his on-air sidekick because the program was on during the daytime and he thought—accurately as it turned out—that Reeves would prove attractive to women.

Becoming Hercules

Meanwhile, in Rome, Italian producer-director Pietro Francisci had been looking for at least five years for a male lead with "the right combination of muscularity and drop-dead good looks" to play Hercules in a film based on a script that he had co-authored with Ennio De Concini and Gaio Fratini.[66] According to Reeves, it was Francisci's thirteen-year-old daughter who saw him in *Athena* and insisted her father go immediately to the theater and see the movie.[67] After seeing Reeves in the film, Francisci began trying to track him down and eventually sent a telegram to Bert Goodrich's gym in California, hoping that it would reach Reeves. In an interview about the making of the film, Reeves told Steve Helmer that he got the telegram but at first ignored it as he'd promised Ray Wilson that he was giving up show business so that he could be a bigger part of the expansion of Wilson's American Health Studios chain. Within

Hercules director, Pietro Francisci, on the far left, relaxes with Reeves and some of the production crew in a courtard outside the Titanus studio in Rome. Francisci reportedly had a difficult time locating Reeves after seeing him in *Athena* and used his son's muscle magazines to track down the star. Francisci directed both of Reeves' *Hercules* films, paying the actor only $10,000 for each movie. In today's dollars that translates to just over $80,000 per film.

a couple of weeks, however, an envelope arrived at Goodrich's containing a plane ticket to Rome and a five thousand dollar advance. The enclosed letter explained that the film company, Lux-Titanus, was preparing a mythological film to be shot in Italy and that they wanted him to star as Hercules. Steve later claimed that at this point in his career he'd essentially decided to stay in the health club business, as the pattern of his acting career had been that he'd occasionally land a small part here and there when a man with muscles was needed, but then never seem to get chosen for larger or more traditional roles. Reeves believed that the main reason he hadn't had more success in the early part of the 1950s was that his body was *too* built—too large and perfect—and that the leading male actors in this era effectively blackballed him. According to Reeves, "people like Gary Cooper, Gregory Peck and Burt Lancaster said they wouldn't let me work with them. In other words if there was a part for me, and they were going to cast me Lancaster said, 'No.' And Peck said, 'No.' And Gary Cooper said, 'I'm not going to walk with that guy in the swamps of Louisiana with my shirt off!'"[68] Further, American Health Studios had become the largest chain of health clubs in the country, and Ray Wilson had promised Reeves a chance to grow with the company. He could imagine a solid future there doing public relations work, perhaps even settling down.[69] Ultimately the reality of the plane ticket in his hand and his hunch that this might be his last chance to star in a movie—even if it was a movie made in Italy—trumped the security of southern California. Reeves decided to gamble on the man often described as "the Cecil B. DeMille of Italy," told an unhappy Wilson he was quitting, and flew to Rome to begin filming in June of 1957.[70]

Several factors made the late 1950s a perfect time for the emergence of the modern peplum genre in Italy. Before *Hercules*, the Italian film industry was mostly producing black and white so-called neorealist films that depicted the depressed conditions then existing in Italy in the aftermath of World War Two. Neorealism was a film movement that began in 1946 with Roberto Rosselinni's *Roma, Citta Aperta*; included Anthony Quinn's starring turn in the somber strongman film *La Strada,* in 1954; and also included Vittorio De Sica's highly acclaimed *Umberto D* in 1955. Although well received by critics, the films primarily focused on the crumbling Italian economy and the generally low national morale.[71] In contrast, *Hercules* and most of the peplum films that followed it were like modern romance novels and never pretended to be more than escapist fare. Filmed in color with sets depicting Ancient Rome,

Ancient Greece, and other mythic landscapes, these historical costume dramas reminded Italians of their country's glorious past and created a simple moral universe that posited good versus evil. Francisci's hope with *Hercules* was that Italy—and, if possible, the rest of the world—might be ready to dispense with reality for a time and escape to myth and romance.

Francisci had reason to think his gamble was not entirely crazy. He'd directed Dino de Laurentis' successful 1954 costume drama called *Attila* starring Sophia Loren and Anthony Quinn.[72] In the United States, he also knew that most major Hollywood studios had begun making historical epics in an attempt to renew the public's interest in movies after World War II. The rapid growth of television had eroded ticket sales and so Hollywood began re-thinking the kinds of movies that would appeal to the public.[73] The production of large, grandiose epic films shot in the new colored film stocks (Eastman Color or Technicolor) and projected on the gigantic movie screens needed for the wide-screen formats of Cinemascope, Vista Vision, and Panavision, brought new excitement to the movie-going experience and meant that these costume dramas looked nothing like 1950s television. As Hollywood had hoped, the public responded by more frequently forsaking the small screen in search of grander entertainments in movie theaters.[74] Because Biblical and mythological scripts were perfect for the needs of these new technologies, a number of American film companies began working out of the Cinecitta and Titanus studios in Rome so that they could use the surrounding countryside for their outdoor scenes.[75] In the late 1940s and 1950s Hollywood production companies were also offered tax breaks by the Italian government for using Italian studios.[76] Italian filmmakers like Francisci directly benefitted from these American productions as most film companies left behind their sets, props, and costumes rather than transport them back to California. This made it possible for *Hercules* to be made for only $110,000 and yet look like a "big budget" movie.[77]

While the American epics of the 1950s came to Italy for authenticity, the Italian peplums made in this same era—like *Hercules*—settled for mythological simplicity. Patrick Luciano explains the difference succinctly in the introduction to his book, *With Fire and Sword: Italian Spectacles on American Screens*. "But unlike the traditional Hollywood spectacle, which attempts to reproduce as much historical accuracy as possible," and even prominently displays the names of their historical advisors in their credits, Luciano wrote, "the Italian spectacle relies heavily on presenting simple, yet popular stories based on national lore and the idea of moral uplift."[78] Adherence to the historic version of a tale, and

Before the movie's final sequence, the makeup team made sure that Reeves' physique would be seen to best advantage by applying oil to his arms as if he were getting ready for a bodybuilding contest. Note also the thick-soled sandals Reeves wore throughout the film to make him appear even more Herculean.

Reeves' love interest in both *Hercules* and *Hercules Unchained* was Italian actress Sylvia Koscina who had her first big break when Francisci cast her as Iole, the princess of Jolco. Koscina appeared in more than 100 films and television shows, most filmed in Italy, before her death in 1994.

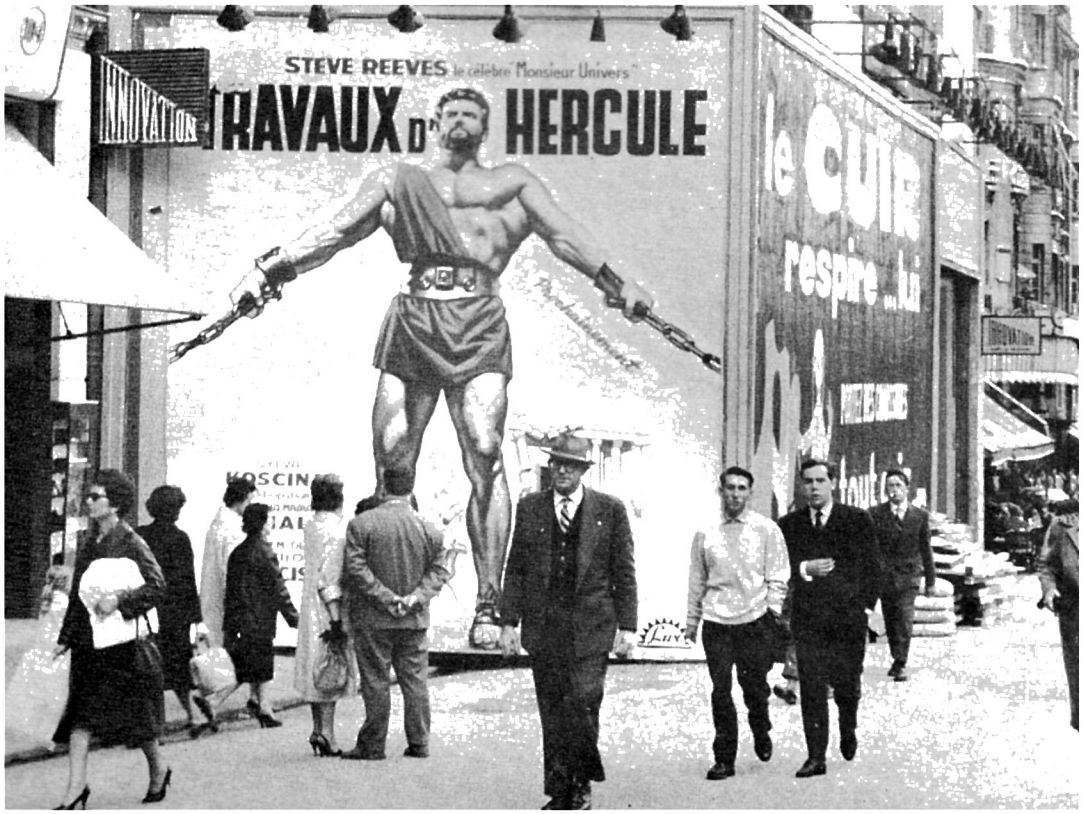
even logical thinking, were often suspended in such tales in order to fulfill the standard plot tropes necessary for good to conquer evil. Francisci's version of the Hercules tale certainly fits this description. After it opened, critics of the film harped frequently on the many liberties taken with the Hercules myth. *Time* magazine dubbed it "muddled mythology" and *Life* magazine later described it as challenging the credulity of a fourth-grader.[79] Historical and mythological accuracy didn't deter the film's American promoter Joseph Levine, however, as he claimed in an interview with *Esquire* columnist Gay Telese that what he'd been drawn to when he first screened the film was that "it had something for everybody. It had a dragon for kids, musclemen for growing boys, a shipwreck scene for waiters and clerks. Who doesn't dream of getting stuck on an island with some broads? And the picture had Steve Reeves. He appealed to women."[80]

The plot for *Le Fatiche di Ercole* epitomizes what film historian Jon Solomon, in *The Ancient World in Cinema*, describes as Francisci's "unique recipe for comic, light, tongue-in-cheek heroism and romance."[81] The film is a very loose adaptation of the Hercules myth and in it Hercules is portrayed not as a non-thinking brute but as a compassionate and intelligent hero. Reeves, in an interview with *Newsweek*, reflected on why he was well cast for this particular version of Hercules: "Of course my muscles helped, but my face was important too. It had to be a typical American-boy face, a sympathetic one . . . If a man has a tough face and gets into a tough spot, people say it served him right . . . But if you have a sympathetic face, they are sympathetic."[82]

The film begins with Hercules uprooting a large tree in order to stop the runaway chariot of Iole, the princess of Jolco, played in the film by Sylva Koscina. Once rescued, Iole joins Hercules as he is also travelling to Jolco, where King Pelias (Ivo Garrani) has recruited him to train the soldiers and to be a mentor to the king's son, Iphitus (Mimmo Paimara). Soon after he arrives, and in front of various characters from different Greek myths not normally associated with the Hercules tales, Hercules hurls a discus completely out of sight causing the spectators to realize that he cannot be mortal. Fearful of what he has brought to his kingdom, the king sends Hercules away, challenging him to kill a lion that has been terrorizing his subjects. This segment of the film is loosely based, of course, on one of the Labors of Hercules that the film's Italian title references. Hercules successfully subdues the Nemean Lion, but not before it delivers a fatal blow to the young prince Iphistus, next in line to the throne. The council of Jolco and Princess Iole both blame Hercules for the prince's death and Hercules is sent away by the king on a redemption quest to slay the Cretan Bull. Hercules leaves the city and seeks the counsel of the Sybil, who helps him renounce his immortality so that he can feel emotion, fight like other men, and have a family. This plot point is an important contribution in establishing the new peplum genre, Luciano argues, as Hercules could then be viewed by the audience as mortal, rendering him truly heroic and making him the object of sympathy, hope, and aspiration.[83]

From this point, the film shows Hercules finding and slaying the Cretan Bull; rescuing Jason of the Argonauts (Fabrizio Mioni) and travelling with him in search for the Golden Fleece; visiting the island of the Amazons, and resisting their allure; battling the dragon that guards the Golden Fleece; and being thrown into prison when he returns with Jason to Jolco and it is understood that Jason is actually the rightful king of the land. Although now mortal, Hercules is, of course, still preternaturally strong and the film concludes with him ripping his shackles from the wall, demolishing a small

army of soldiers who try to subdue him, and in the most iconic scene from the film, wrapping the long chains that are still cuffed to his wrists around two pillars, flexing all of his muscles, and pulling down the palace in which he was imprisoned, *ala* Samson. As the credits prepare to roll, Jason ascends to the throne of Jolco, while Hercules and Iole drive away with the teen-aged Ulysses riding in the back of their cart. The sequel, *Hercules Unchained*, released on 14 February 1959, and also starring Reeves, picks up their tale where *Hercules* ends.



***Hercules* was big in Europe! This two-story poster for *Les Travaux d'Hercule* (*The Labors of Hercules* as it was known in France), graced the famous *Avenue des Champs-Élysées* in Paris, in 1958. The photo was taken by Renald Muchow, a Muscle Beach regular, then touring Europe with the acrobatic act known as Renald and Rudy.**

Italian Release and Reception

Reeves stayed in Rome for an extra week after *Hercules* wrapped and met the woman who would become the second Mrs. Reeves during that time. Blonde, blue-eyed Aline Czartjarwitz, who could claim to be a Polish princess, had been educated in Switzerland, spoke six languages, and worked in the Italian film industry handling contracts and legal matters. She met Reeves at a party in Rome and the couple went out several times during his last week there.[84] He then took a short vacation in Majorca and returned to California where Ray Wilson agreed to let him work at a new gym that was opening in San Diego.[85]

Meanwhile, in Italy, Francisci opened *Le Fatiche di Ercole* on 20 February 1958 with a gala premiere in Rome, and the film took off like a rocket.[86] It earned back its production budget in its first week and by the end of its Italian run had taken in 900,000,000 lire (approximately 12,000,000 dollars).[87]

Where the neorealist films had been aimed at an upper class Northern Italian demographic, *Hercules* appealed to a new film demographic—the less educated, lower classes of Italy.[88] These viewers, many of whom were living in the hard economic times portrayed in the neorealist films, were delighted by this lighter fare and didn't mind that the *Hercules* script muddled the myth because most of them didn't really know the myth anyway. What they liked was the action, the beautiful women, and the fact that the handsome hero vanquished the villains.[89] Based on the response *Hercules* received in Italy, it seems safe to say that these kinds of viewers also liked and appreciated muscle.

Rural people in all cultures generally have a greater understanding for and appreciation of physical strength. Farm and other rural workers understand that all men are not equal when it comes to strength and that there can be great value in possessing a muscular body. Richard Dyer, in *White*, argues that the film appealed to rural Italians in large part because they and other rural people have always admired "big strong men . . . giant

boy babies were a source of wide interest, seen as a blessing, not least because their strength was of the greatest economic significance in rural labour."[90] Film historian Maggie Gunsberg also contends that an aspect of the film's success in Europe was the "popular tradition of . . . strongman shows in public squares and circuses."[91] The neorealist film *La Strada* depicts Anthony Quinn as exactly this sort of travelling strongman. Quinn plays Zompano, who travels like a busker and exhibits his strength in small villages in Italy by breaking a chain as he expands his chest. Unlike Hercules, however, Zompano is no longer young, and the tone of the film is dark and fatalistic. Reeves' Italian film debut would offer viewers a much more conventionally handsome image for the strongman character as he was still in the full-muscled beauty of young manhood when he took on the role of Hercules. Reeves represented, therefore, a body type that had both economic and aesthetic value to these viewers. They could imagine him working alongside them with a team of oxen, or pulling rocks from a field, and yet his body was more muscular and graceful than theirs—looking like the statuary from their early history—inspiring awe as well as understanding in the viewer.

The Americanization of *Hercules*

Reeves and most Americans had little knowledge of the film's success internationally because it had still not opened in the United States more than a year after its release. Despite the fact that it was outperforming high budget Hollywood films such as the Elizabeth Taylor/Rock Hudson/James Dean vehicle, *Giant,* which had nine Academy Award nominations and a win for Best Director in 1957; and the British war epic, *The*

Joseph Levine launched his marketing campaign with what he called the "Explodation Lunch" at the Waldorf Astoria in New York. He served lunch to more than a thousand people—film executives, theater owners, and journalists—who dined under the gaze of the nearly three-story-tall figure of Reeves dressed as Hercules.

Bridge on the River Kwai, which won seven Academy Awards including best picture that year; no American distributor had picked up the rights to show *Hercules* in America. Levine, who had partnered with Francisci on *Attila,* finally decided he should take a look.[92]

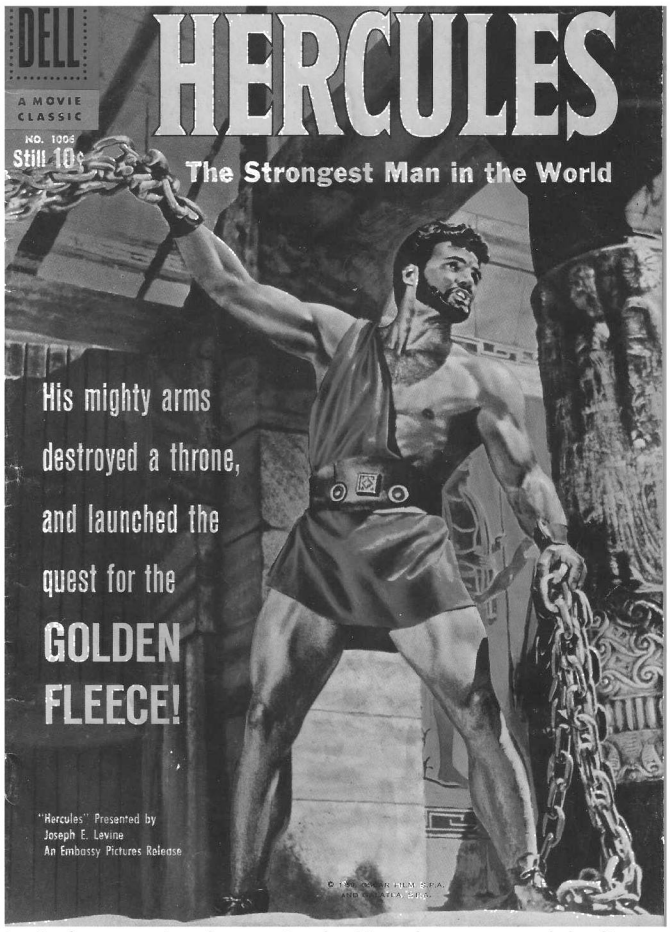
The football-shaped Levine (5'4" tall and generally well over two hundred pounds) began his career in Boston as a restaurateur.[93] He soon found his way into movie distribution, turning a small profit on the re-exhibition of several old Westerns. He then picked up the Japanese film *Godzilla: King of Monsters,* making it into an unexpected hit in the United States, before purchasing the rights to distribute the joint Dino de Laurentis/Pietro Francisci film titled *Attila* starring Sophia Loren and Anthony Quinn, which earned him two million dollars in America.[94]

Although it had no known stars to help drive it, Levine knew *Hercules* was doing big business internationally and so he flew to Rome to meet with Francisci in mid-1958 and screen it.[95] He later recalled, "The picture broke down when we were showing it, but there was something about it that made me realize there was a potential fortune in it . . . It had action and sex, a near shipwreck, gorgeous women on an island and a guy tearing a goddam building apart. And where did you ever see a guy with a body like Reeves has?"[96] He bought the American distribution rights for $120,000 and began planning the biggest, most expensive advertising campaign ever devoted to a film up to that time.

Levine had spent more than half a million dollars promoting *Attila* and so he already knew that you had to spend money to make money in the film promotion industry. However, for *Hercules* he set aside more than a million dollars just for advertising, an unheard of figure in this era when films generally opened slowly and there was little advertising on television. As Levine had hoped, the sheer magnitude of the figure, and Levine's unmitigated *chutzpah* worked as publicity magnets and became a major part of the press coverage surrounding the film.[97]

According to Levine's wife Rosalie, the idea for the launch party for *Hercules* began with a comment from an industry executive who said in response to Levine's publicized budget that he wasn't planning to launch *Hercules,* he was planning to "explode it."[98] Upon hearing that remark, Rosalie decided that the exploding movie idea should be the luncheon's theme and so sent out invitations to twelve hundred industry executives and journalists consisting of small black boxes inside which were miniature rubber bombs she had specially made and imprinted with the details for the "Explodation Luncheon."[99] The ballroom of the Waldorf Astoria Hotel in Manhattan filled with more than a thousand guests for the $40,000 affair on 29 March 1959. Each guest received fancy press kits, posters featuring Reeves, and other marketing trinkets.[100] The press-books Levine distributed that day were also Herculean, measuring 30 inches by 40 inches as opposed to the standard 15 inches by 10 inches, and instead of stacking them on tables, women in revealing togas handed them out to attendees.[101] A nearly three-story cardboard cutout of Reeves, dressed in a leopard skin costume, towered over the diners, sharing wall space with dozens of other banners noting Levine's marketing partnerships with magazines such as *Life, Look,* and *Seventeen*. The Meyer Davis Orchestra backed up popular singer Vaughn Monroe who sang the theme song to *Hercules*.[102] The only thing missing, in fact, was Reeves himself, who was not invited by Levine and probably couldn't have come anyway because he was then back in Italy making a new film.[103]

Levine dedicated $350,000 to television advertisements releasing eight different trailers for the film.[104] Before *Hercules*, television had not been used as a major medium for movie advertisements, but he believed that seeing some of the action from the film would help build ticket sales.[105] Levine also advertised extensively on radio and spent more than $300,000 on print advertisements in newspapers and magazines. Full-page ads appeared in 132 magazines, including such major publications as *Life*, *Look*, *The American Weekly,* and the Sunday newspaper supplement *Parade,* which then reciprocated with a full-page feature story on Reeves, glowingly titled, "The World's Best looking Man."[106] Fan magazines such as *Movie World*, *Photoplay*, *Modern Screen*, and *Silver Screen* featured ads intended to appeal to avid moviegoers. At least twenty-five male-oriented magazines such as *Front Page Detective* and *Official Detective Stories* also featured full-page ads.[107] Chapman argues, "the hunky movie star showed up in just about every national men's periodical," because Levine "realized at once that other out-of-shape postwar males all across North America would respond in a big way to the handsome, muscular, prize-winning athlete who starred in this extravaganza."[108] According to film historian Luciano, an estimated 136 million people saw a *Her-*



Levine's promotional campaign for *Hercules* was one of the first to include spin-off products like this Dell comic book released in conjunction with the film in 1959. It was drawn by the famous comic artist John Buscema.

cules ad in a publication somewhere that year.[109]

As for the muscle magazines, Levine doesn't seem to have placed any ads in them but he did send numbers of photographic stills from the movies for them to use. Bill Doll, who'd formerly done publicity for *Around the World in Eighty Days*, and several other Hollywood blockbusters, was hired by Levine to direct the press campaign for *Hercules*. Doll created a six-page pamphlet with a drawing of Reeves as Hercules on the cover, "Joseph E. Levine" in large type over "Hercules" and a quote stating, "Immense and Immortal Was Hercules' Strength Like the World and the Gods to Whom He Belonged." Reeves' name does not appear on the front cover but he is featured inside, on the back page, as "The Star," in a brief bio that describes his meteoric rise to the top of the European film industry.[110] In addition to the pamphlet, Doll also sent a press release announcing the American opening of the film, and a set of captions entitled, "The Story of 'Hercules' Told with Photographs," that made it easy for magazine editors to use the images in large magazine spreads, such as the one in *Mr. America* entitled "All Italy Goes for Mr. America."[111] The movie stills of Reeves in his Hercules costume, helped ensure that the movie and Reeves' body appeared and reappeared in the muscle magazines at little cost to Levine. They remain desired collectibles.

In our modern era, spin-off products are part of the marketing of most films, and here again Levine led the way, working with Dell Comics to release a Hercules comic for children.[112] Levine also appealed to the youth market by distributing "Herculean Hamburgers" in some cities and he strategically deployed test-your-strength machines in several locations scattered around America so that when someone succeeded in hitting the bell on one of these machines, Levine made a donation towards a charity.[113]

The *Hercules* campaign seemed unending. Posters of Reeves as Hercules were displayed on telephone poles and store walls as the movie came to different cities.[114] The promoter even sent out more than 700 four-pound chocolate statues of Reeves to film critics and theater owners to garner their support for the film.[115] The message was simple: *Hercules* was coming to a theater near you, and it would have something for everyone. You were going to want to see it.

Levine had the formal premiere for *Hercules* at the Paramount Theater in Hollywood in May of 1959. It then opened in 145 neighborhood theaters and earned $900,000 in its first week. In week two, Levine did something that no film distributor had ever done before. On 25 July 1959 he opened the film simultaneously in 600 theaters across America. *Hercules* played at 125 theaters in New York City alone. The Pathe film lab, which made the six hundred copies of the film, reported that it was the largest order they'd ever had for a movie.[116] The film industry had never seen anything like it and began to talk about Levine as if he were a genius. A profile of Levine in *Life* magazine explained that "Levine's most basic instincts direct him to numb the customers with thunderous broadsides of advertising and then lure them simultaneously into hundreds of theaters to see simultaneous screenings of just one picture."[117] The article went on to suggest that this two-step process, consisting of "The Levine Campaign" and "The Levine Saturation," had more than worked. It had made a hit of what should

have been a B level film and it had also elevated Levine into the most important movie producer in Hollywood. The film wasn't perfect, the *Life* profile continued, but "These unseemly criticisms, died away . . . into murmurs of awe . . . The reaction in Hollywood was similar to that which could be expected at Indianapolis if an unknown Boston tire salesman had won the Memorial Day 500 on an Italian motor scooter."[118]

By the time Levine was finished, *Hercules* had played in 11,465 theaters in America. Box office analysts reported that 24,000,000 people saw the film that year and it grossed $18,000,000 in the United States alone.[119] Adjusted for inflation, that's a staggering $140,000,000 in 2014 dollars.[120]

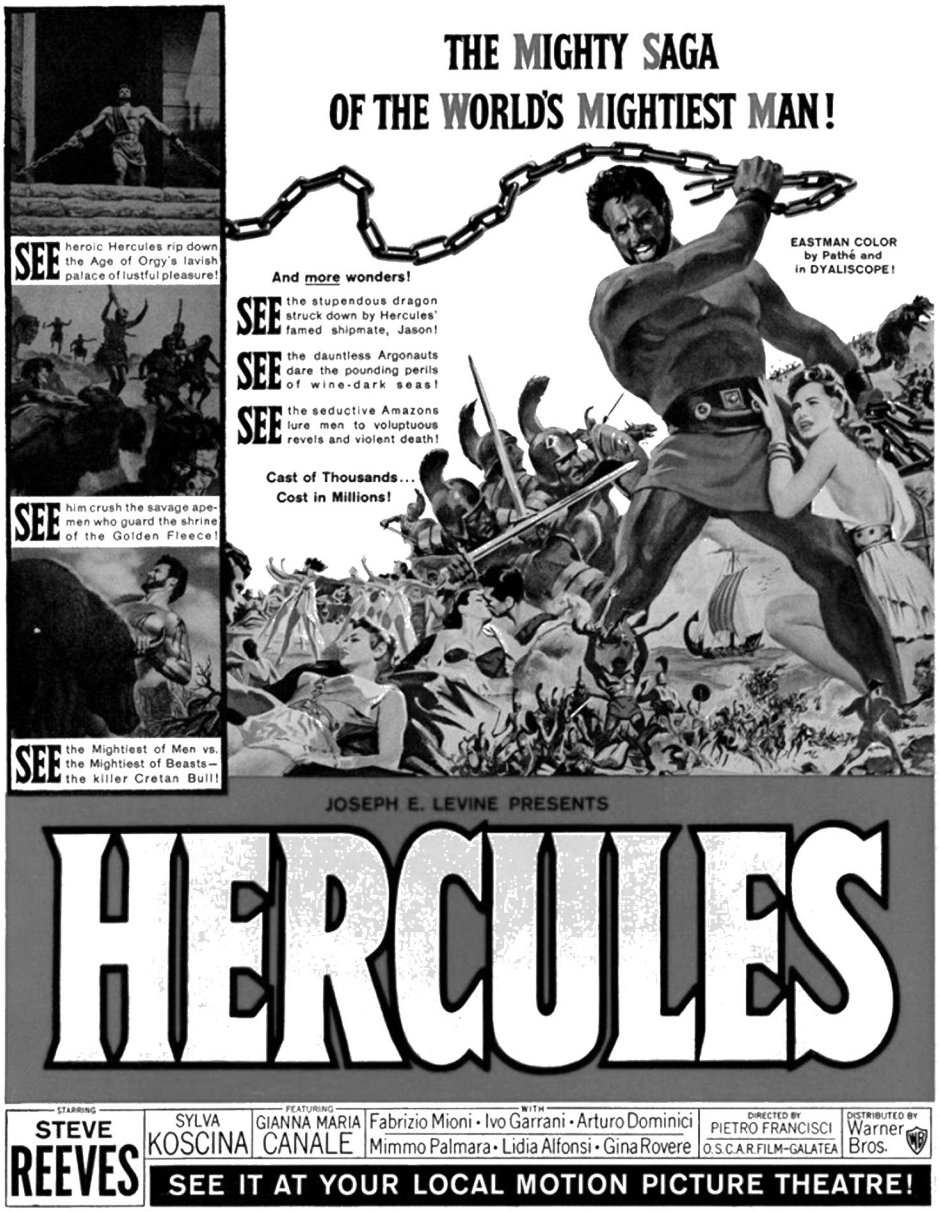
Becoming an Icon

Despite everything Levine did to promote the film, his "Explodation Campaign"—remembered by film scholars as a turning point in the marketing of feature films—would not have worked had Reeves not been the star of *Hercules*. Film critic Marjory Adams, writing for *The Boston Globe Herald*, may have not been impressed with the film, but she found Steve Reeves unforgettable. "The best thing about *Hercules* seems to be those rippling muscles of Steve Reeves. I don't think I have ever seen such powerful fluidity in any picture, dating from silent films until now. Victor Mature's physique in the role of Samson seems puny compared to that of the gorgeously stacked Steve . . . he looks like the kind of half-man-half-god who just might have gone through some of the adventures set down in this story."[121] Similarly, Ruth Waterbury of the *LA Herald Examiner* also found the film's value in Reeves, writing that "Hercules in the figure of Steve Reeves—and I do mean figure—is taller, bigger, heavier and at the same time smaller around the waist than any hero you ever saw. Or any human being."[122]

The summer of 1959 was the high point in Reeves' film career. LeClaire notes, "Reeves became 1959's number one box-office star in America as well as in 26 European countries, the Middle East, and Australia, edging out Rock Hudson, Doris Day and John Wayne."[123] He was truly an international sensation. *Hercules* played four times a day over the course of a two-year period in Calcutta, India. It was also a huge success in Japan and Asia.[124] Reeves was quickly recalled to Italy to film a sequel to *Hercules* titled *Ercole e la regina di Lidia* (released as *Hercules Unchained* in the United States on 13 July 1960). Levine imported this feature as well and launched a similar campaign to that used for the first *Hercules* feature. This time the debut luncheon was held outdoors at Hollywood's Beverly Hills Hotel, as "Chanel No. 5 came spraying from the bushes every thirty seconds and a solid-ice Hercules stood melting in the Southern California heat, with colored electric light bulbs frozen into his muscles."[125] The film was not as successful as its predecessor in America, but it still fared well internationally. It became the most financially successful film up to that time in Great Britain where it played on a record four thousand screens.[126]

The unexpected fiscal success of *Hercules* ignited a great many changes in the film industry. For one thing it made clear the potential of foreign imports in America. Also, saturation distribution and heightened publicity campaigns were used increasingly thereafter to maximize film profits. According to *Life*, Levine was "instantly acclaimed a genius and a leader of the industry." The Italian government honored Levine with the *Ordine al Merito della Republica* because of the increased attention the success of *Hercules* brought to Italian film productions. American industry professionals tried to duplicate Levine's epic success and immediately flew to Rome to see what pictures might be available for redistribution in America.[127] Howard Hughes notes that in the next eight years, US film companies would spend "approximately $35 million per year to finance or buy the distributions rights to Italian films, or to make their own films with Italian studios as their production base."[128] Levine went on to form Embassy Pictures and would continue to import foreign movies as well as produce several important American films, including *The Graduate* and *The Lion in Winter*.[129] Meanwhile, Reeves would forever be identified with the role of Hercules, enjoying international stardom for the remainder of his acting career.

The rest of Reeves' films would never match the popularity of these first two, however. Despite an increased salary of $250,000 for his third feature, *The White Warrior*, his fame dwindled during the 1960s despite starring in 13 other films.[130] Levine would take a chance on two more of Reeves' features, *The Thief of Baghdad* and *Morgan the Pirate*, but despite having received a more limited version of the "Levine treatment," neither film was a major financial success.[131] Nonetheless, Reeves left behind an incredible film lega-



Levine ran full-page advertisements like this one in *Life* and many other American magazines in the summer of 1959. In the small boxes on the left, the ad exhorts readers to "See the Mightiest of Men vs. the Mightiest of Beasts—the killer Cretan Bull!"; and "See him crush the savage ape men who guard the shrine of the Golden Fleece!"; and, even more hyperbolically, "See heroic Hercules rip down the Age of Orgy's lavish palace of lustful pleasure!" Other small print in the ad also claims a "Cast of Thousands . . . Cost in Millions," even though Francisci's production budget reportedly totalled only $110,000.

cy. Scholars estimate that from the Italian release of *Hercules* in 1957 until 1967, between two and three hundred other peplum films were produced.[132] Reeves recalled that the rush to create movies like *Hercules* happened almost immediately. When he returned to Italy to film *Hercules Unchained*, "we began noticing other crews like ours, two and three beaches down from us, setting up cameras and filming *Hercules* films just like ours. It was unbelievable. They were using the same costumes, props, and even ideas as Francisci." As Reeves explained it, it suddenly seemed that "everyone wanted in on it."[133]

The presence of the bodybuilder body came to define the peplum films more than anything else, and Reeves became the illustrative epitome of a new type of hero. In this way Reeves inspired millions of men to begin progressive resistance training and pursue better bodies for themselves.[134] Historian David Chapman notes, "Bodybuilding in the 1960s was still considered the recreation of a few cranks or narcissists of unreliable sexuality, but that would change, and part of that change can be laid at the sandaled feet of the peplum hero. It became okay, even cool, to go to the gym and try to look like Steve Reeves or Gordon Scott."[135] One only has to look toward the action stars of the 1980s, 1990s, and 2000s to see how Reeves changed the paradigm for action heroes in film. The high visibility of his role as Hercules coupled with other peplum films featuring bodybuilders inspired a great number of viewers, including Schwarzenegger and Stallone. They, in turn, set a new standard for modern movie stars including Chris Hemsworth, Jason Statham, Hugh Jackman, Daniel Craig, Mark Wahlberg, Brad Pitt, and Dwayne "The Rock" Johnson—who starred in a new *Hercules* in 2014. The glob-

al marketability of these actors can be linked back to Levine's recognition of Reeves' near perfect combination of good looks and sculpted physique. One only has to look at the recent outpouring of movies such as *Iron Man*, *The Dark Knight* trilogy, and the *X-Men* films to see the continued importance of muscled bodies in the movies. A significant portion of current media coverage is devoted to the ways in which certain actors prepare for these roles and how their bodies are often enhanced digitally. This was certainly the case of *300*, a movie which itself fits the requirement of a peplum film and inspired an eponymous workout routine. While Reeves may be overlooked in many cultural histories, the impact of his body on the big screen and the movement to embrace muscularity in the movies, remains pervasive, particularly in contemporary action films.

Reeves' film career ended quietly after filming his first western, *A Long Ride to Hell,* released in 1970. He wrote and starred in the film, but it did not fare well at the box office. Reeves always did all his own stunts—because it was almost impossible to find a stunt man with equivalent proportions—and during the shooting of the western he suffered a serious shoulder injury that convinced him it was time to hang up his sword, sandals, and six-shooter. He never retired his spurs, however, and spent his later years raising Morgan horses on a ranch property near Escondido, California. Reeves passed away in 2000, at 74, when a blood clot broke loose after exploratory surgery related to lymphoma.[136]

Summing up the Reeves and *Hercules* legacy is a bit like trying to kill the many-headed Hydra. However, whether he was the Messiah, as Sylvester Stallone suggested, or a "demi-god" as some claimed in bodybuilding circles, or just an amazingly handsome man blessed with ideal genetics and the intelligence to know how to capitalize on them, Reeves through *Hercules* inspired thousands of young men to join gyms and take up weight training. It also opened a door, where there had not been a door before, to the idea that the built male body—the bodybuilder body—was heroic, masculine, desirable, and, most importantly, would sell movie tickets.[137] Arnold Schwarzenegger, his direct heir in Hollywood, wrote in his *Encyclopedia of Bodybuilding*, that Reeves "was handsome, personable, and had a magnificent physique . . . crowds used to follow Reeves when he walked along the beach, and people who knew nothing about him would stop and stare, awestruck . . . Reeves made movies and became an international star . . . [and] in the 1950s . . . there was only one famous bodybuilder: Steve Reeves."[138] More than 50 years after the release of Francisci's *Hercules*, Dwayne "The Rock" Johnson, in an interview for his 2014 version of *Hercules*, also claimed Reeves as his inspiration when asked by an interviewer, "Who was *your* Hercules growing up? Steve Reeves, Lou Ferrigno? Who was the character for you?" Johnson replied, "It was always Steve Reeves, yeah . . . Always Steve Reeves. When I was a kid . . . I appreciated the movies, and I was able to see them on VHS . . . but I was so enamored by the one-sheets . . . the posters. I had them in my room when I was a kid. So yeah, it was always Steve Reeves. He's the first one, you know."[139]

NOTES:

1. Howard Hughes, *Cinema Italiano: The Complete Guide from Classics to Cult* (New York: IB Tauris, 2011), 1.
2. Steve Reeves, "In Steve's Words," *Classic Physique Magazine*, 5, no. 2 (Fall 1999): 21.
3. Measuring impact for films is difficult because there are many factors to consider. In terms of ticket sales, *Life* magazine estimated that *Hercules* was seen by more than 24 million people because of Levine's efforts at promotion. Paul O'Neil, "The Joe Levine Saturation Treatment Will Get You, Too—To a Movie: The Super Salesman of Super Colossals," *Life* (27 July 1962): 76-82. See also: Howard Hughes, "*Hercules* Conquers the Box Office: Mythological Epics," in *Cinema Italiano*, 2. The website "Top Films by Year," ranks *Hercules* as the top grossing movie for 1959 based on unadjusted domestic totals. Viewed at: http://www.filmsite.org/box office2.html. See also: Maria Elena D'Amelio's essay entitled "Hercules, Politics and Movies," in Michael G. Cornelius, ed., *Of Muscles and Men: Essays on the Sword and Sandal Film* (Jefferson, NC: McFarland Publishing, 2011), 15-27.
4. Richard Mason, "*Hercules*: Film Review," *New York Times*, 23 July 1959. Mason wrote: "It is a slow-paced and stilted affair studded with routine spectacles that have been seen since movies immemorial . . . Steve Reeves throttles the screen evils with his big muscles in the old manner of Tarzan. There is added but unintended humor in the fact that his voice has the querulous pitch of a bank clerk's. Most of the dubbing is bad." (Reeves' voice was not used in the film.) Erskine Johnson similarly opined in his column that, "The incredibly bad Italian-made Hercules . . . is cleaning up at the box office. The hard sell million-dollar exploitation campaign is better than the film." "Erskine Johnson, "Hollywood Glances," *Miami Daily News-Record*, 18 August 1959.
5. Roy Howell quoted in "Books: Titan in Closeup," *Time* (25 February 1966): 48. Howell authored *Churchill's Last Years*, (London: McKay Publishing, 1966.) President John Kennedy reportedly also loved "sword and sandal" films and told a reporter that his favorite movie was *Spartacus*, released two years after *Hercules* first appeared. Alex Moisi, "Five Presidents' Favorite Films: What They Watched When the World Wasn't Watching," *Moviefone*, viewed at: http://news.moviefone.com/2010/08/11/5-presidents-favorite-films/.

6. Kirk Douglas exhibits more upper body muscle in *Spartacus*, released in 1960, for example, than he did in his earlier films. For information on the 1960s era of sword and sandal epics featuring bodybuilders Gordon Scott, Reg Park, Mark Forrest, Reg Lewis and Gordon Mitchell see: David Chapman, *Retro Stud: Muscle Movie Posters from Around the World*, (Portland, OR: Collectors Press, 2002); Steve Cohan, *Masked Men: Masculinity and the Movies in the Fifties* (Indianapolis, IN: University of Indiana Press, 1997), and Maria Elena D'Amelio, "Hercules, Politics and Movies," in *Of Muscles and Men,* 15.

7. Steven Cohan, *Masked Men,"* 182-183. The term "peplum" refers to the short skirts or tunics worn by Reeves and other actors working in this genre. The term is widely used in Europe, especially Italy, when describing these kinds of films. In America, the descriptor "sword and sandal" is more common. See: Michael G. Cornelius, "Of Muscles and Men: The Forms and Functions of the Sword and Sandal Film," in *Of Muscles and Men,* 3-4.

8. See Hughes, "*Hercules* Conquers the Box Office," 1-27, and Chapman's book, *Retro Stud,* for a discussion of the films that came after *Hercules.*

9. For analyses of the impact of Stallone and Schwarzenegger see, for example: Steve Cohan, Ina Rae Hark, eds., *Screening the Male: Exploring Masculinities in the Hollywood Cinema* (London: Routledge, 2012); Dave Saunders, *Arnold and the Movies* (London: I.B. Tauris, 2009); Richard Corliss, "Box Office Brawn," *Time* (24 December 1990): 52; and Lance Morrow, "The Body Beautiful: Pumping Ironies," *Time (*17 June 1985): 84-5.

10. Chris LeClaire's authorized biography remains the only book on Reeves' life. Chapman's *Retro Stud* discusses Reeves at some length, but the book is designed as a history of film posters rather than a biographical history. David Dowling and George Helmer's, *Steve Reeves: His Legacy in Films* (Palm Springs, CA: Classic Image Productions, 2003), is an excellent but non-scholarly treatment of Reeves' film career. The other major source is a dissertation about Joseph Levine that discusses the marketing of *Hercules:* A.T. McKenna, "Joseph E. Levine: Showmanship, Reputation and Industrial Practice 1945 – 1977," Ph.D. diss., (University of Nottingham, England, 2008).

11. Cornelius, ed., *Of Muscles and Men,* 64, 104, & 201. See also: International Movie Database (IMDB in future footnotes) entries for Victor Mature at: http://www.imdb.com/name/nm0001514/; Kirk Douglas at http://www.imdb.com/name/nm0000018/?ref_=fn_al_nm_1; and Charlton Heston at: http://www.imdb.com/name/nm0000032/?ref_=nv_sr_1.

12. Richard Armour, "The Age of the Chest," *Playboy* (July 1958): 69-70. See Cohan's chapter entitled "The Age of the Chest," in *Masked Men, 164-201,* for a more nuanced discussion of these and other 1950s films in which the male body was exposed to viewers.

13. Biographical information on these bodybuilders can be found in Bill Pearl, et. al, *Legends of the Iron Game*, Vol. 2 (Bill Pearl Productions, 2010), 107-113 (for Clarence Ross); 129-135 (for George Eiferman); 173-181 (for Reg Park); and 197-207 (for Bill Pearl).

14. Jan Todd, Interview with George Eiferman, Las Vegas, Nevada, 12 August 1999.

15. Cohan, "Age of the Chest," 167.

16. Quoted in Dowling and Helmer, *Steve Reeves: His Legacy in Films*, 2.

17. For a discussion of the other bodybuilders who became actors in the 1960s, see David Chapman's *Retro Stud*; Howard Hughes' *Cinema Italiano*, 1-27; and Dowling and Helmer, 1-8. Born in 1878, Bartolomeo Pagono worked on the docks in Genoa until being discovered by Italian director Giovanni Pastrone, who cast him as a Nubian slave named Maciste in the 1914 Roman epic *Cabiria.* The Italian public loved the large, muscular actor and the following year Pagano starred in a film built around his slave character titled simply *Maciste*. Pagano's fame as Maciste was so great that he adopted it as his own stage name, and went on to star in more than 30 films during the silent era. A good discussion of his career can be found at: "San Francisco Silent Film Festival: *Maciste*, 1915," viewed at: http://www.silentfilm.org/archive/maciste-1915. The first screen Tarzan was Elmo Lincoln who appeared in the silent *Tarzan of the Apes* in 1918. Several Olympic swimmers also played the aristocratic jungle dweller, including Buster Crabbe (who also played Flash Gordon) and Johnny Weissmuller, who appeared in 12 Tarzan films, the first in 1932. See: Beth Rowan, "Tarzans through Time," at: http://www.infoplease.com/spot/tarzan.html.

18. "Sylvester Stallone about Steve Reeves," YouTube video at: http://www.youtube.com/watch?v=dDN_HVfntpQ.

19. Chris LeClaire, *Steve Reeves: Worlds to Conquer: An Authorized Biography* (Chatham, MA: Monomoy Books, 1999), 184.

20. Ralph Bansigore, "Steve Reeves Mailbox," *Steve Reeves International Society Newsletter* 2, no. 3 (July 1996): 3.

21. Rick Lyman, **"**Steve Reeves, 74, Whose 'Hercules' Began a Genre," *New York Times*, 5 May 2000.

22. "Lester Reeves Victim of Fatal Accident While Threshing Wheat West of Richland; Dies Tuesday Morning," Scoby, Montana, news clipping from October 1928, viewed at: www.stevereeves.com/Family/family.html.

23. LeClaire, Worlds to Conquer, 19-20. See also: "In the Beginning," *Steve Reeves International Society* 1, no. 1 (1995). Lester Reeves was reportedly 6'1" tall and weighed about 200 pounds. "Family" viewed at: www.stevereeves.com/Family/family.html.

24. Quoted in LeClaire, *Worlds to Conquer,* 24.

25. *Ibid*., 24-25.

26. The Montana Deaconess School was both a home for orphans and a boarding school in the 1930s when Reeves stayed there. It is now called Intermountain. Ellen Baumler, "Into the Heart-Life of Children: Intermountain and a Century of Healing," viewed at: http://www.intermountain.org/cen/.

27. LeClaire, *Worlds to Conquer,* 25.

28. *Ibid*., 26.

29. "Bodybuilder" Steve Reeves International Society website, viewed at: http://www.stevereeves.com/Bodybuilder/bodybuilder.html.

30. "California—Here He Comes!" *Steve Reeves International Society* 1, no. 3 (1995), viewed at: http://www.stevereeves.com/Bodybuilder/bodybuilder.html.

31. *Ibid*.

32. LeClaire, *Worlds to Conquer, 30.*

33. *Ibid.*

34. *Ibid*., 32.

35. *Ibid.,* 34. Also: *"*An Interview with Steve Reeves," *Perfect Vision Magazine* 6, no. 22 (July 1994) viewed at: http://www.drkrm.com/reeves2.html.

36. *Ibid*.

37. Terry Todd and Jan Todd, "Steve Reeves: The Last Interview," *Iron Game History: The Journal of Physical Culture* 6, no. 4 (December 2000): 14. A photograph of Steve on his bicycle while hitting a biceps shot also circulated on the wire services following his Mr.

Levine's ability to generate enthusiasm for the relase of *Hercules* can be plainly seen in this photo of the film's opening at the Pilgrim Theater in Boston. A marching band of bagpipers paraded down Washinton Street, followed by cars of "dignitaries" and the impressario himself—Joseph E. Levine.

America win in 1947. "Cyclist," *The Record-Argus* (Greenville, PA) 19 December 1947.

38. LeClaire, *Worlds to Conquer,* 34.

39. See: "Those High School Days," *Steve Reeves International Society* 1, no 4 (1995). See also: Rick Lyman, "Steve Reeves, Whose Hercules Became a Genre," *New York Times*, 5 May 2000.

40. According to Ed Yarick, Reeves visited his gym and Jack Lalanne's gym frequently before deciding to train with him, and Reeves may also have lifted weights at Castlemount High School where he graduated, as there were weights there. Ed Yarick, "The Steve Reeves I Know and Remember," *Muscle Mag International* 2, no. 1 (May 1976): 33-34.

41. Reeves did not apparently view Earl Maylone as a father figure. "Earl was the kind of guy to buy everyone a round of drinks and he'd come home with half his paycheck gone," claimed Reeves. LeClaire, *Worlds to Conquer,* 32.

42. Yarick, "The Steve Reeves I Know and Remember," 33-34.

43. *Ibid.,* 35 and LeClaire, *Worlds to Conquer,* 52. Reeves earned several service medals during the war.

44. "Bodybuilder" viewed at: http://www.stevereeves.com/Bodybuilder/bodybuilder.html. See also: Todd and Todd, "Last Interview," 3.

45. Claire Cox, "War Vet Happy When Named Mr. America of '47," *Daily Register (*Harrisburg, IL), 30 June 1947.

46. Associated Press, "Oakland Man Wins 'Mr. America' Title at Male Beauty Contest," *San Bernadino County Sun*, 1 July 1947.

47. Associated Press, "New Mr. America Handy About the House, Too," *Corpus Christi Caller Times*, 20 July 1947.

48. A sampling of some of these covers appears in Milton Moore, *Steve Reeves: A Tribute* (Dallas, TX: By the author, 1982), 28-29.

49. Gene Jantzen, "Steve Reeves: Mr. America 1947," *Muscle Power* 3, no. 7 (December 1947): 26. Little Abner was the heroically-muscled lead character in Al Capp's syndicated cartoon strip which appeared in American newspapers between 1934 and 1977. Viewed at: http://lil-abner.com/about-lil-abner/.

50. Peary Rader, "Steve Reeves—Mr. America, 1947," *Iron Man* 7, no. 5 (August 1947): 7.

51. Gordon Venables, "The 1947 Mr. America Contest," *Strength & Health*, (August 1947): 27.

52. Reeves believed in the Ancient Greek aesthetic maxim that suggested that the neck, biceps and calf should all have the same measurements. At his best, Reeves almost achieved this goal, having a

measurement of 18.5 inches in the neck and 18.25 for his calf and biceps. "Bodybuilder," at: www.stevereeves.com/Bodybuilder/bodybuilder.html.

53. "An Interview with Steve Reeves," *Perfect Vision Magazine*.

54. Todd and Todd, "Last Interview," 7.

55. LeClaire, *Worlds to Conquer,* 88; see also Todd and Todd, "Last Interview," 8.

56. "An Interview with Steve Reeves," *Perfect Vision Magazine*; and Todd & Todd, "Last Interview," 8.

57. Lanza had titled the photo, "Perfection in the Clouds." Le Claire, *Worlds to Conquer,* 92.

58. Todd and Todd, "Last Interview," 8; and LeClaire, *Worlds to Conquer,* 92.

59. Todd and Todd, "Last Interview," 7.

60. In his early days at Muscle Beach, Reeves claimed: "There was a guy at Muscle Beach named Leo. He had Leo's Hot Dog Stand and things like that. He also owned a gas station. So, during that time I would go one day a week and work for about six or eight hours at his gas station and get a few bucks. And then a friend of mine named Dick Webster, he used to park cars at the Captain's Table there on La Cienega, a very elegant seafood restaurant. And he wanted one day a week off so I parked the cars one day a week for him. And then every once in a while some television show would call up and say, "Hey, we want you to be on the show. This is the Dinah Shore show and we need somebody like you." I'd say, "All right," and I'd make a few bucks that way." Todd and Todd, "Last Interview," 10. See also: "An Interview with Steve Reeves," *Perfect Vision Magazine*; and "Hercules Movie Interview with Steve Reeves and George Helmer at: https://www.youtube.com/watch?v=y9lCgBi5CSg. See also: "1948: Raves for Reeves from Europe to Hawaii," *Steve Reeves International Society* 2, no. 2 (1996); and Bill Pearl, "Steve Reeves," *Legends of the Iron Game*, Vol. 2, 135-144.

61. Aline Mosby, "Ralph Edwards has 'Male' Answer to TV's 'Dagmar,'" Unidentified newspaper clipping, Steeve Reeves Photography File, Todd Collection, H.J. Lutcher Stark Center at the University of Texas at Austin. See also: "From Mr. Universe to Mr. Movie Star," at: http://www.stevereeves.com/Newsletter/newsletters-1997-volume-3-issue-4.html.

62. In addition to his performances on *The Ralph Edwards Show*, Reeves played a prison doctor in *Stars Over Hollywood* (1951). He also appeared on *Topper* in an episode called "Reducing," in 1953. Although not listed on the IMDb database, Reeves also worked on *The Red Skelton Show*, The Jimmie Durante Show, *Ozzie and Harriet,* and The *George Burns and Gracie Allen Show*. Todd and Todd, "Last Interview," 10; and "Steve Reeves," IMDb website, viewed at: http://www.imdb.com/name/nm0716302/.

63. "Actor" *Steve Reeves International Society* at: http://www.stevereeves.com/Actor/actor.html. For a fairly accurate list of Reeves' film and television appearances see his entry on the IMDb database at: http://www.imdb.com/name/nm0716302/.

64. LeClaire, *Worlds to Conquer,* 159-160.

65. *Ibid*., 159-168.

66. "Famed *Attila* Director has big new hit in *Hercules*," *The Times* (San Mateo, CA), 4 July 1959. See also: Patrick Luciano, *With Fire and Sword: Italian Spectacles on American Screens 1958-1968* (Metuchen, NJ: Scarecrow Press, 1994), 41; and Chapman, *Retro Stud*, 6.

67. "Hercules Movie Interview with Steve Reeves and George Helmer," viewed at: www.youtube.com/watch?v=y9lCgBi5CSg. See also: Chapman *Retro Stud,* 5; and D'Amelio,"Hercules, Politics, and Movies," 22.

68. Todd and Todd, "Last Interview," 10. See also: Associated Press, "Shoulders Prove Asset in Italy," *Bridgeport Post*, 21 June 1959.

69. LeClaire, *Worlds to Conquer,* 169.

70. "Hercules Movie Interview." See also: LeClaire, *Worlds to Conquer,* 170. Ten thousand dollars in 1957 is equivalent to a salary of approximately $85,000 in 2014.

71. Robert Sklar, *A World History of Film* (New York: Harry N. Abrams, 2002), 256.

72. "Attila," IMDb, viewed at: http://www.imdb.com/title/tt0046731/.

73. The growth of suburbs in the 1950s also impacted film viewing as people now had to drive and park to attend movies. Another factor was the Supreme Court's verdict in the Paramount Decision of 1948, which effectively broke up major studio monopolies, causing many theaters to close. See: Douglas Gomery and Clara Pafort-Overduin, *Movie History: A Survey*, (New York, NY: Routledge, 2011), 214-215. At the end of 1946, only 44,000 homes had a TV set; by the end of 1949, there were 4.2 million TV homes. By 1953, 50% of American homes had televisions. "Post War American Television," viewed at: http://www.earlytelevision.org/american_postwar.html. See also: "This Day in History: 3 May 1948—U.S. Supreme Court Decided Paramount Anti-Trust Case," viewed at: http://www.history.com/this-day-in-history/us-supreme-court-decides-paramount-antitrust-case.

74. Gomery and Pafort-Overduin, *Movie History*, 215. Often, as was the case with the poster for *Quo Vadis* (1951) the word "Technicolor" was printed in type nearly as large as the names of the film's stars, Robert Taylor and Deborah Kerr.

75. "Cinema: Hollywood on the Tiber," *Time (*6 June 1950): 42. See also: Gomery and Pafort-Overduin, *Movie History,* 216.

76. "Cinema: Hollywood on the Tiber,"42.

77. For a history of Italian film studios in the 1950s see: "The In-Crowd: Ten Cities that Shook Cinema," *Sight and Sound* 11, no. 9 (2001): 30-33.

78. Luciano, *With Fire and Sword*, 2-3.

79. "Hollywood: All Muscle," *Time (*27 July, 1959): 34. "The scriptwriter seems to get Hercules mixed up with Samson, the Amazons with the ladies of Lemmos," wrote *Time*. See also: O'Neil, "Joe Levine Saturation Treatment," 77.

80. In a later interview Levine added "and men" when talking about Reeves' sexual appeal. See McKenna, "Joseph E. Levine: Showmanship, Reputation, and Industrial Practice," 73, and Gay Telese, "Joe Levine Unchained: A Candid Portrait of a Spectacular Showman," *Esquire*, (January 1961): 64-8.

81. Jon Solomon, *The Ancient World in Cinema*, (South Brunswick, NJ: A. S. Barnes, 1978), 173.

82. Quoted in LeClaire, *Worlds to Conquer,* 184.

83. Luciano, *With Fire and Sword*, 41, writes: "Even more crucial to the value of the peplum film, and yet problematic with respect to the narrative since it slightly varies the pattern, is Francisci's emphasis on characterization with regard to Hercules' abdication of immortality . . . in this sense, the films kept their body-builders mortal and exacting deeds from traditional heroics that were always 'fraught with peril.'"

84. Steve and Aline married on 24 June 1963 in Lucerne, Switzerland. LeClaire, "*Worlds to Conquer,*" 174-176 and 221.

85. *Ibid*., 176-177.

86. "Hercules," at www.imdb.com/title/tt0050381/releaseinfo?ref_=tt_dt_dt; and Kristi Wilson, "Hero Trouble" in *Of Muscles and Men: Essays on the Sword & Sandal Film*, 29.
87. Maggie Gunsberg, *Italian Cinema: Gender and* Genre (New York: Palgrave MacMillan, 2005), 101. Gunsberg writes, "The typical Italian audience of this peplum cycle was mainly lower class (proletarian and peasant), poorly educated (semi-literate or illiterate), and predominately inner city, Southern or provincial, viewing these films in *seconda* or *terza vision* cinemas with ticket prices under 300 lire [fifty cents]." Seconda or terza vision cinemas were second or third run theaters, where movies that had been released in theaters months prior earlier were re-played for lower ticket prices.
88. Richard Dyer, *White: Essays on Race and Culture* (New York: Routledge, 1997), 166.
89. *Ibid*., 168.
90. Gunsberg, *Italian Cinema*, 98.
91. LeClaire, *Worlds to Conquer,* 173. See also, "The Bridge on the River Kwai," at: http://en.wikipedia.org/wiki/The_Bridge _on _the_River_Kwai, and "Giant (1956 film)" at: http://en.wikipedia.org /wiki/Giant_(1956_film). See also: O'Neil, "Joe Levine Saturation Treatment," 77.
92. O'Neil, "Joe Levine Saturation Treatment," 76.
93. Attila was produced by Dino De Laurentis and directed by Francisci. P. K. Scheuer, "Meet Joe Levine, Super(sales)man!" *Los Angeles Times*, 27 July 1959.
94. LeClaire, *Worlds to Conquer,* 178.
95. "Hollywood: All Muscle," *Time* 74, no. 4 (27 July 1959): 34.
96. Levine was also featured in David Nathan, "The Man Who Sold Hercules," *Daily Herald*, 7 December 1960.
97. Skippy Harwood, "Even the Levine Parties are Major Productions," *Palm Beach Daily News*, 6 April 1986.
98. *Ibid.*
99. Luciano, *With Fire and Sword*, 13.
100. McKenna, "Joseph E. Levine: Showmanship, Reputation, and Industrial Practice," 101.
101. Chapman, *Retro Stud*, 8; see also LeClaire, *Worlds to Conquer*, 177-178.
102. For those unable to make the event, Levine mailed out a letter addressed to "Friend Exhibitor," detailing the initial ten-day campaign that would include "the greatest TV saturation in every local market." McKenna, "Joseph E. Levine: Showmanship, Reputation, and Industrial Practice," 101.
103. "Hollywood: All Muscle," 34.
104. Luciano, *With Fire and Sword*, 13.
105. Lloyd Shearer, "The World's Best Looking Man," *Parade: The Sunday Picture Magazine*, (31 May 1959): 2. See also: Chapman, *Retro Stud,* 13.
106. Luciano, *With Fire and Sword*, 13.
107. Chapman, *Retro Stud,* 13.
108. Luciano, *With Fire and Sword*, 13.
109. "Hercules" (Embassy Pictures Corporation, no date), Todd Collection, The H.J. Lutcher Stark Center for Physical Culture and Sports, The University of Texas at Austin.
110. The hiring of Bill Doll is discussed in"Hedda Hopper," *Tucson Daily Citizen*, 13 March 1959. Press Release entitled "The Princess and the Strong Man: Winning Screen Fame in 'Hercules,'" and, "The Story of Hercules Told with Pictures," (Typescript, Embassy Pictures Corporation, no date), Todd Collection, The H.J. Lutcher Stark Center for Physical Culture and Sports, The University of Texas at Austin. Joe Weider, "All Italy Goes for Mr. America," *Mr. America* 2, no. 2 (August 1959): 20-24.
111. See for example, the image of Reeves that ran in *Strength & Health* in conjunction with Ray Van Cleef's article, "Strongmen the World Over," in September 1959, page 20; and the three pages of *Hercules* photos connected to the "Let's Gossip," column in *Muscle Builder* 9, no. 11 (August 1959): 21-23.
112. Dell Comics, No. 1006 *Hercules the Strongest Man in the World*, (New York: Dell Publishing, 1959.) A second comic was released in conjunction with *Hercules Unchained*. It is Dell No. 1121 and was released in 1960.
113. Chapman, *Retro Stud*, 8. Levine gave away hundreds of Hercules bicycles when *Hercules Unchained* was released in 1960.
114. O'Neil, "Joe Levine Saturation Treatment," 77; and "Joe Unchained," *Time* (24 February 1961): 66. The statues bore the statement, "Made from the Strongest Chocolate in the World – If It Breaks You Can Eat It!"
115. LeClaire, *Worlds to Conquer*, 180. Many of the openings were at drive-in theaters, catering to the youth market.
116. O'Neil, "Joe Levine Saturation Treatment," 77.
117. *Ibid.*
118. Luciano, *With Fire and Sword,* 13.
119. Dowling and Helmer, *Steve Reeves: His Legacy in Films*, 3-14. Conversion figure is from: http://www.westegg.com/inflation.
120. Quoted in LeClaire, *Worlds to Conquer,* 183. This Samson was the role that DeMille initially offered to Reeves.
121. *Ibid*.
122. LeClaire, *Worlds to Conquer,* 183.
123. Dowling and Helmer, *Steve Reeves: His Legacy in Films*, 3-14.
124. "Joe Unchained," 66.
125. Dowling and Helmer, *Steve Reeves: His Legacy in Films*, 3-14.
126. O'Neil, "Joe Levine Saturation Treatment," 77.
127. Hughes, *Cinema Italiano*, xi.
128. *Ibid*., 3.
129. LeClaire, *Worlds to Conquer,* 184.
130. O'Neil, "Joe Levine Saturation Treatment," 78. Hollywood gossip columnist Erskine Jones reported that Reeves was paid $200,000 to star in *The Last Days of Pompeii* and *The Battle of Marathon*. Erskine Jones, "In Hollywood: Steve Reeves Out-Recipes Hercules in Italian Film," *Redlands Daily Facts*, 10 June 1959. See also: Erskine Johnson, "Hollywood Today: Male Beauty Contest Winner Crashes Movies as Hercules," *Corpus Christi Caller-Times*, 11 June 1959.
131. Cornelius, "Introduction," *Of Muscles and Men*, 5.
132. LeClaire, *Worlds to Conquer,* 178.
133. Dowling and Helmer, *Steve Reeves: His Legacy in Films*, 1-12.
134. Chapman, *Retro Stud*, 35.
135. Todd and Todd, "Last Interview," 1.
136. LeClaire, *Worlds to Conquer,* 11-12.
137. Arnold Schwarzenegger and Bill Dobbins, *Encyclopedia of Bodybuilding* (New York: Simon and Schuster, 1985), 41-44.
138. "One-sheet" is a film industry term for a 27" x 41" movie poster displayed in theater lobbies.
139. Gig Patta, "Roundtable Interview with Dwayne Johnson for *Hercules*," *Latino Review* website, 24 March 2014, viewed at: http://www.latino-review.com/news/2014/03/cinemacon-2014-roundtable-interview-dwayne-johnson-hercules.

THE USA VS. THE WORLD:

AN ANALYTICAL NARRATIVE OF AMERICAN, WORLD, AND OLYMPIC WEIGHTLIFTING RESULTS, 1970-1992

Part Two of a Three-Part Series

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It was my reaction against having grown up in Europe, where government was totally in charge of everything, and 70 percent of people worked for the government, and the highest aspiration was to get a government job. That was one of the reasons why I left for the United States.[1] ***—Arnold Schwarzenegger***

Data presented in the first installment of this series were designed to serve as groundwork for an interpretive analysis of how and why American weightlifting failed to stay abreast with the rest of the world from the end of the 1960s to the early 1990s. What follows is by no means the first attempt to identify the factors that influenced changes in the power structure of the sport. Louis Simmons, from a powerlifting perspective, attributes American inferiority to a lack of basic power. "Our lighter lifters especially must increase their leg and hip strength," Simmons argued in 1994, adding that foreign lifters perceive U.S. lifters as lacking strength. "To succeed at weight lifting . . . you must be very strong."[2] Long-time weightlifting coach Carl Miller concurs. "Olympic Lifting is actually Powerlifting," he contended in 1985, "To the purist, it is to the 4th Dimension. Doing something athletically using speed, timing, agility, and flexibility in the coordinated power chain of hips and legs, back, and then arms against an immovable object! Now this is real power!! The most powerful sport of all!!!"[3] The 2005 scientific formulations by Mike Stone and a team of researchers draw much the same conclusion—"that maximum strength is strongly related to weightlifting performance independent of body mass and height differences."[4]

Lyle McDonald's 2008 internet series, "Why the US Sucks at Olympic Lifting," regards such views as simplistic, that "maximal strength is only relevant to OL performance up to a certain point, beyond that point it doesn't help (and may even hurt)." Yet McDonald's own interpretation of American weightlifting woes, smothered in a welter of 22 lengthy discourses, covers Kenyan runners, cycling, NASCAR, baseball, doping, swimming, speed skating, and much else while never directly addressing the actual state of American weightlifting, much less how it developed.[5] While informative and entertaining, McDonald's focus is more on the present than the past. Andrew (Bud) Charniga's six-part series, "There Is No System," published in 2009-2010, exhibits historical awareness, but its perspective is limited to the 1950s and 1960s with scant attention to the critical changes that were taking place during the 1970s and 1980s. Despite its inclusion of a multitude of data and references to foreign sources, Charniga's account is premised by unwarranted assumptions that early American success was almost totally the result of devastation wrought by World War II on Soviet and Eastern European nations and that American decline was attributable largely to "the commercialization of the 'Power Rack' (Functional Isometrics)," an obsession with big muscles, and reliance on static strength training.[6]

Yet embedded in these rambling accounts is a verity that coincides with the hypothesis drawn at the conclusion of the first part of this series. McDonald's stream of consciousness brings to light an underlying element of compulsion and conformity within the Soviet and Eastern European regimes. "First and foremost," he concludes, was the belief that, "the success of the state as a whole is more important than the success of the indi-

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vidual. Folks are raised to put the success of the country before their own individual needs and that means doing what they are told is best for the country. . . . It was about proving that Communism was a superior political ideology without having to go to actual war and risk getting nuked."[7]

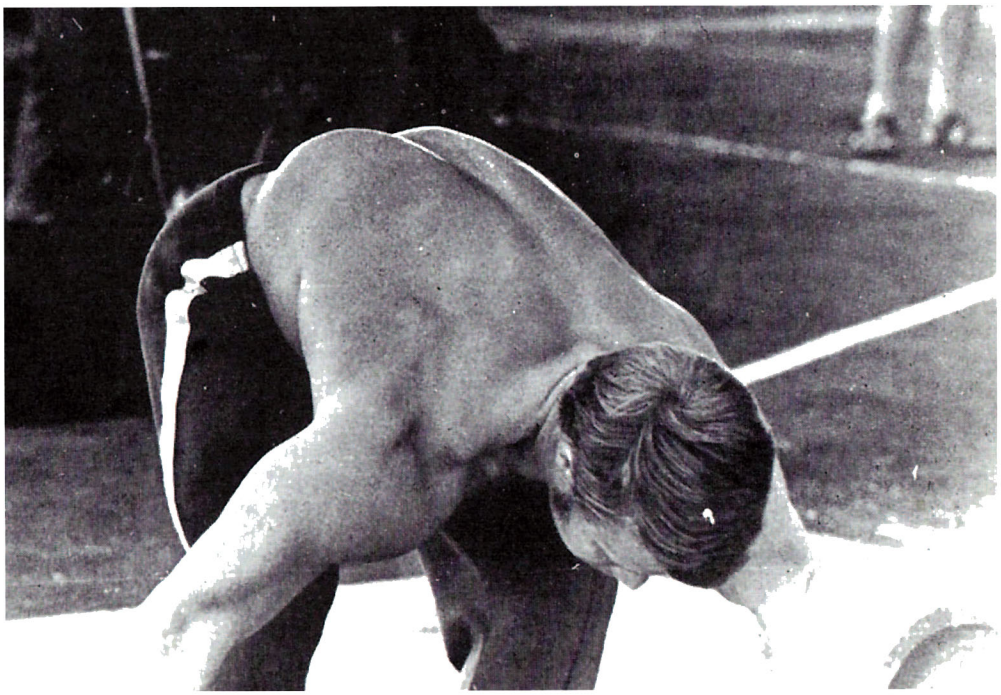
Charniga is even more direct. "The reasons for the USA's rise and fall in the international weightlifting arena, if enumerated one by one, are many," he admits, but "the core reason for the descent can be summed up in one word: communism." As for America, he argues, "There Is No System."[8] The current study, drawing largely on the periodical literature from 1970 to 1992, seeks to show the historical process whereby the democratic/free enterprise West was directly challenged by the collectivist/totalitarian Eastern bloc for weightlifting supremacy.[9] But this USA vs. The World encounter on the weightlifting platform was merely a reflection of a larger power struggle between conflicting ideologies. While the influence of leaders, lifters, and drugs cannot be discounted, America's increasingly lackluster performance was systemic in nature, rooted deeply in the ethos of its capitalist culture.

Within this broader context, the six Olympic cycles discussed in the preceding data analysis provide a framework to identify some of the agents of change. While it was possible to overlook or rationalize America's decline to a second-rate weightlifting power in the 1960s, the staging of the 1970 world championships in Columbus, Ohio, the first ever in the United States, provided a stark awareness that the performance gulf with the rest of the world was a problem that was only going to get worse. Despite a silver medal by mid-heavyweight Phil Grippaldi and a bronze by heavyweight Bob Bednarski, Soviet bloc lifters dominated the competition, leading *Strength & Health* editor Bill Starr to ask "What was so different about the European lifters, and especially the Russians, from our own men?" He responded that for every registered American lifter, the Russians had hundreds, hence a "larger crop" from which to draw elite athletes. Once identified, the talented lifter "gains much more attention in the USSR than he does in this country. This, naturally, stems back to the national system of government support. The Soviet lifter is provided with facilities, coaching, and constant encouragement." Hence he can "give his full attention to the sport" and with more time to train "can train harder. . . . The point does have to be brought home to our younger lifters, however, that larger and larger doses of anabolics, gimmick training methods, and the like are not the secrets of success. It was once said that any type of technique and any type of program will result in success if you work at it hard enough. Unquestionably the foreign lifters were stronger. . . . Strength, weightlifting fans, is still the name of the game."[10] Starr also expressed concern that some officials care more about themselves than their athletes and that most American lifters believe that the "gap" between athletes and administrators "has widened, which is quite tragic for the sport."[11]

No athlete is more closely identified with the supremacy of the Soviet weightlifting system than superheavyweight Olympic and World Champion Vasily Alexeyev. During his long career, Alexeyev broke 80 world records, won gold medals in the 1972 and 1976 Olympic Games, and won a total of eight World Championships in weightlifting as the Olympic Games are also the world championships in the year the Games are held.

Iron Man editor Peary Rader concurred that "American lifting has a problem." Rader, benefitting from on-site observations and conversations at Columbus with Polish coaches, was told that "we were following the wrong training methods and that when we change our methods and get better organization (they claim we are very poorly organized and have no unity in our efforts) it will still take at least two years before we can change our downward trend and level off and eventually get started back up again and that it may be 10 years or more before we can come back." Similarly, an American observer backstage told Rader that "one of our failures was in the area of team spirit. He felt that the USA team members were individualists and were in there for themselves whereas the European lifters worked as a team and encouraged each other tremendously." While there did not appear to be much difference in training exercises or diets, European programs seemed more intense. In contrast to the frequent or long layoffs Americans often took between meets, Iron Curtain athletes rarely let a day or two elapse between sessions and were usually back to hard training immediately after a meet. Perhaps it was some new drugs they were using, but it was obvious to Rader that their lifters were stronger than the Americans. He was impressed with the development of the spinal erector muscles on many Russian lifters, especially light-heavyweight Gennadi Ivanchenko as he bent over for a snatch pull in the training hall. "It was the most amazing sight I have seen in a long time." For Rader as well as Starr, it appeared that state socialization led to more efficient training practices, camaraderie, and strength.[12]

The response to these kinds of concerns was a desire for greater regimentation of American lifting protocol. It appeared to be a daunting task inasmuch as the Soviet Union was supposedly devoting billions of rubles yearly to the development of its sports programs where its elite athletes, posing as students, army officers, or factory workers, received full government support to train and rewards for winning Olympic and world championship medals. "Sport is a profession" admitted heavyweight Olympic weightlifting champion Yuri Vlasov.[13] In America most weightlifters were scattered throughout the country and had full-time jobs. One way to reach them was through periodic clinics, a task voluntarily undertaken by Carl Miller, a physical educator from New Mexico, who offered budding lifters a choice of three routines, all of which stressed a combination of power and form. The one from Russia "has been copied to a great degree with success," he noted.[14] Chairman Rudy Sablo reported at the 1971 annual meeting of the



No wonder Peary Rader was so impressed with the lower back of Russian light-heavyweight Gennadi Ivanchenko. In his caption for this photo in *Iron Man* (February 1971): 49, Rader wrote: "We have mentioned before our amazement at the lower back development of some of the Russian lifters . . . and managed to snap this photo . . . showing the unbelievable depth of development of the erector muscles. Keep in mind that he is bending over so that the muscles are stretched and flattened. Now try to imagine, if you can , how they bulge when he stands erect. They must have a depth of three or four inches. We could not believe it was possible and wonder how it was done. Some say high pulls, but we have seen men doing high pulls who have nothing like this." On that same page Rader also noted that the erectors of several of the Russian lifters, "look like two huge balled biceps muscles."

National AAU Weightlifting Committee that numerous successful clinics had been held around the country, including a five-hour session at the national championships, and Athletes Representative Russ Knipp, a former Olympian and world record holder in the press, presented a blueprint calling for national coaches, more lifting clinics, and greater communication through a national newsletter with up-to-date information on training methods and techniques.[15] Sablo's successor, Bob Crist, reiterated the importance of clinics but placed the highest priority on recruitment of top lifting prospects to be carried out by an international selection committee composed of 11 leaders throughout the country. "Lifting the USA to a world power in weightlifting is still our primary goal," Crist insisted.[16]

Much would depend on engaging the nation's youth, but high schools and universities did not stress Olympic sports, and strong prejudices persisted among coaches that weightlifting would make their athletes muscle-bound, slow, and inflexible.[17] According to Ray Yeager, the nascent Junior Olympic Weightlifting Program, funded in part by Quaker Oats, provided "the most practical vehicle at our disposal" to train young boys, mostly at YMCAs. What was needed in the meantime, however, was "a nation-wide system of coaches reporting to a national coach, better organization of local weightlifting committees—with a real responsibility to the national coach."[18] By now, after another dismal performance by Americans at the 1971 world championships in Lima, Peru, the idea of greater central direction through a national coach was gaining momentum in official circles, owing in part to the comments by Armenian heavyweight Sergo Ambartsumian to the question of "Why are the Soviet lifters so strong?"

> *The secret of the successes of our weightlifters is due to the mass character of Soviet sports in general and in particular, weightlifting. Presently, there are specialized weightlifting sports schools in many cities of the country. Each year they become bigger. Highly qualified specialists with a superior education in physical culture are employed in order for the weightlifters to have a good material and technical basis, many specialized palaces and halls for weightlifting have been built in recent years. Of no small importance is the fact that the coaching has been assigned to former greats of the 'iron game' such as Rudy Plukfelder, Fedor Bogdanovsky, and Alexy Medvedev. These are the factors, in my opinion, that form the basis for success.*[19]

Proof of the efficacy of the Soviet system cited by Ambartsumian was 1971 mid-heavyweight world champion David Rigert, who started at one of the Soviet sports schools in 1966 and went on to set twelve world records.[20]

American officials estimated it would cost about $25,000 per year and require at least four years to implement a national coaching scheme to resemble the Soviet model, but all proposals calling for financial contributions by the sport's membership were rejected at the 1972 national committee in Detroit.[21] Nevertheless, with AAU funding for a coach but not the program, the executive committee approved a national coaching plan at the 1972 Olympics in Munich to be effective 1 January 1973.[22] Duties would include the conduct of clinics throughout the country to train coaches and young lifters and supervise a coaching school at a central headquarters. Hopes were high that Tommy Kono, America's greatest weightlifter and national coach for Mexico in 1968 and Germany in 1972 would accept the position, but he wisely turned down the meager recompense and instead became Director of Physical Fitness for the Recreation Department of Hawaii which included a handsome salary, benefits, and a settled family life. Instead the committee chose Carl Miller who had directed a successful teenage weightlifting camp in July 1972 at the Marine Corps Training Center in Arlington, Virginia. Here 16 budding champions were subjected to a grueling week-long program modeled on successful European training methods. They included a variety of general fitness activities and two lifting sessions where the teenagers were exposed to the Russian Split Routine and the Russian 4-Day Routine. "Athletes! That is what we had at the 1972 Teen-Age Weightlifting Camp," boasted Miller. "You can talk all about your European and Asian weightlifters being able to do gymnastics, track & field, soccer, etc.," he explained, "But after coaching the champion teenagers of this country I wouldn't trade our teenagers for any of them. These guys could do anything—splits, back flips, front flips,

jump 30" above their height, standing broad jump ten feet, wrestle, play a good game of soccer. You name it, they can do it, and well.[23] What most impressed Miller, despite their long hair and psychedelic attire, was "the emotional soundness of these athletes. They have their feet on the ground."[24] Still, by the end of the summer no provision was made for the coach's salary or his headquarters. It remained to be seen whether a voluntary system drawing on limited financial and human resources could successfully emulate and compete against the massive state systems put into place decades earlier.

Results from the 1972 Olympics were hardly uplifting. American lifters made their poorest showing in recent times and for the first time in modern Olympic history won no medals. Nor was the future international outlook encouraging, with athletes from 53 countries entering weightlifting events and 11 of them represented on the medal stands. Furthermore Bulgaria, a nation of under 9,000,000 and a GNP of 2.7% that of the Soviet Union (with 253,000,000), toppled the highly favored Russians to win team honors, showing that a government managed sports system could be effective in producing remarkable results. The message was clear: if Bulgaria can be a giant killer, any nation can do it with the right system.[25] Ignoring the ideological implications, pundit Herb Glossbrenner had a different view of the Bulgarian triumph, reasoning that the American team accomplished more than the Soviets by having fewer lifters (one vs. four) who failed to make a total. "Weightlifting is once again on the up-swing in this country," he believed, "we should be proud of this year's Olympic squad . . . Let us have more bouquets and less brickbats for our lifters."[26] Peary Rader was no less upbeat, confident that the hiring of a national coach was the beginning of "a huge effort" that would result in some gold medals in 1976 at Montreal. "We learned a great deal about how other teams are making champions in our stay in Germany this year. It isn't all the fault of our lifting fraternity, but partly the fault of our society in general. Can we meet the challenge? We think we can."[27] Hope persisted that the United States, the world's richest and most powerful country, could beat the socialist countries by making sufficient adjustments to its free enterprise sports economy.

Such aspirations, however, were out of synch with reality. Part of the problem was that most financial support for American weightlifting, by way of training facilities, travel, and even jobs, had come from Bob Hoffman and York Barbell since the 1930s. His model of corporate socialization had fostered a "golden age" of American weightlifting until the state socialization model put in place by the Soviet Union after World War II began producing athletes superior to Bob's lifters in the 1960s. Stinging from this Cold War defeat and consequent loss of international prestige, Hoffman increasingly directed his attention and resources to softball, powerlifting, national politics, and other activities. Prior to 1973, Bob devoted an estimated $25,000 yearly to softball and over $100,000 in subsequent years. At one time he sponsored 17 York County teams and even sent them on extensive trips.[28] "Power lifting is sweeping the country by storm," observed Peary Rader in 1969. By 1973 it had clearly surpassed Olympic lifting, according to Denis Reno, who predicted that it would soon become the "number one lifting sport in the world" and "placed in the Olympic Games by 1980."[29] As Bob Crist explains, "Bob wanted to go out a winner." He not only sponsored numerous national competitions but supported the creation of an International Powerlifting Federation (IPF) and hosted the first world powerlifting championships in York in 1971. It was he who "bankrolled the IPF and really got powerlifting moving" in the 1970s.[30] All of this left Olympic lifters in the lurch.

A vicious cycle ensued whereby the more Hoffman's interests diverged from Olympic weightlifting the more his residual influence was resented, especially as a generation gap emerged between athletes and their elders. It culminated in the firing of his editor Bill Starr for a 1971 article which was not so much a defense of the use of steroids and amphetamines by youthful lifters as an assault on the hypocrisy of the York establishment.[31] The article was a clarion call for rebellion to many of the rising generation of athletes. From that point, as Hoffman became less committed and more disengaged with American weightlifting, it became imperative that the national weightlifting committee fill the void. But national chairman Crist, although an unpaid volunteer, was expected not only to supervise fund raising and national coaching efforts for weightlifting but to administer AAU powerlifting and physique, and serve as IPF president after 1972. It seemed like an impossible challenge, but he seemed undaunted. Crist even hosted the 1973 Senior National Weightlifting Championships at the College of William and Mary near his home in Virginia. Despite Crist's best laid plans to showcase

weightlifting to the American public, cameras from CBS *Sports Spectacular* recorded the sorry spectacle of lifter after lifter bombing out or performing below his potential. Evidence of drugs, both ergogenic and recreational, were much in evidence not only in the lifting but in a tragic episode of lawlessness and destruction afterwards. "What has happened to us?" asked Tom Holbrook, Starr's successor. There was "something drastically wrong." Light-heavyweight Joe Puleo

> *recently told me that when he looked at [Gennadi] Ivanchencko and [Vasily] Kolotov at the '70 World Championships, 'I could see the handwriting on the wall.' He knew we weren't ever going to win again and in his opinion, our lifters have simply given up. . . . The comment of Dick Smith also comes to mind. He said that many of our lifters don't even act like men any more. . . . The sport has been infiltrated by a collection of freaks who are trying to corrupt everyone around them. Like a bunch of demented pharmacists, they can be seen snaking their way around the meets bent on perverting others to the insanity of their world.*[32]

Holbrook concluded that "we are in trouble!"[33] The descent continued at the 1973 world championships in Havana where four of the seven Americans failed to make a total, and the team finished twelfth behind Czechoslovakia, Iran, Italy, and Cuba, the most hated Communist vassal state. "NO OTHER AMERICAN TEAM EVER MADE SUCH A MISERABLE FAILURE," Hoffman exclaimed. "U.S. WEIGHTLIFTING IS AT ITS LOWEST EBB."[34]

The lifters responded by submitting two reports that blamed their administrators for the team's poor showing in Cuba. They complained not only about the incompetence of their coaches and assistants but about the "lack of knowledge and awareness" of the numerous "tourists" who accompanied the team. The lifters felt few members of the American delegation "seemed concerned about the athlete's needs, his aspirations, and how to best help him to perform to his optimum level." Their second report recognized that "the gap separating the U.S. from the other major lifting powers has been growing wider at an ever increasing rate." It focused on proposals to restore America to a "respected," if not dominant position in the world. Their implementation would cost money, and "unfortunately, he who currently foots the bill (Bob Hoffman) and who does love the sport enough to do so, does not also have the best personnel for the job."[35] But there were no other sources of funding in sight. Furthermore, at the annual AAU convention in October at West Yellowstone, Montana, the reaction of members of the national weightlifting committee to the lifters' grievances, reported Clarence Bass, was "point the finger back at the athletes and say that they were not sufficiently disciplined, etc. Little was said in defense of the athletes. The discussion seemed to focus on finding a better way to pick our athletes for future international competitions." But the committee was no more successful than the athletes in identifying sources of funding to implement reforms. The USOC had allocated $15,000 to weightlifting for 1973, but stipulated that none of it could be used to fund salaries. "We cannot have the full time coaches we need without salaries," Bass pointed out. Hence Carl Miller's position was downgraded from coach to national coordinator. For the period leading up to the 1976 Olympics, the committee requested $170,000 or $56,700 per year from the USOC, mostly to fund clinics, camps, and international travel.[36]

Feeling that the legitimate proposals of the Havana seven had fallen on deaf ears, other lifters with similar feelings of bitterness and frustration, led by ex-York lifter Charlie Shields, formed the American Weight Lifting Association (AWLA) to serve the lifters and provide an outlet for grievances against the AAU. That it planned an annual budget of $25,000, mostly from membership fees, to send top unaffiliated lifters to national and world championships, however, would put a pinch on already limited funding sources within the Iron Game.[37] Obviously the dissension between youthful lifters and their elders had a lot to do with the dramatic slump in American lifting in 1973, leading three of the signatories to state they "never want to compete in another World Championship. It's just too damned frustrating when you know you're beat before you even start."[38]

Their defeat, however, was no less a product of advancement in world weightlifting standards. The most obvious explanation was the elimination of the press. Conventional wisdom suggested that records in the snatch and clean and jerk would soar. Tom Holbrook

believed, with less work and time devoted to pressing muscles, there would be a significant improvement in the remaining lifts of "at least 2½ to 5 kilos higher in most classes." David Rigert concurred that "there'll be greater possibilities for rapid growth in the quick lifts, especially for the younger lifters."[39] *Strength & Health* even featured a ten-part series authored by leading lifters on "Training Without the Press" to assist with the transition.[40] According to Bud Charniga, America's top lifters had been "keeping up internationally in the press but falling behind in the other two movements."[41] However, a compilation of data of all three movements by Herb Glossbrenner shows that America, despite the widening performance gap that appeared in 1973, was no less adept than the Russians historically in the quick lifts and even somewhat inferior in the press. Of the top 100 pressers through September 1972, regardless of year or bodyweight, 49 were Russians and 12 were Americans, while comparable figures for the snatch and clean and jerk were 48 to 15 and 58 to 15 respectively.[42] While elimination of the press hastened the retirement of middleweight Russ Knipp, one of the world's best pressers, in 1972, mid-heavyweight Phil Grippaldi, also known for his huge presses, placed generally higher, at seventh, than the average of his American contemporaries, at 8.6 in international competition over the next four years. The belief that Americans suffered unduly from the loss of the press when it had never been their strongest lift cannot be sustained.[43] Furthermore, as shown in Part One of this series, it was not so much that Americans were getting better in the quick lifts as that other countries were improving more.

What else then, aside from the general malaise that set in, can explain the sudden and lasting differential between America and the rest of the world after 1972? For one thing, continuous revelations of superior training environments in socialist countries played no small part in lowering American morale. Cuba, now seventh in the world, had also leaped to the forefront of Pan-American nations. In 1974 Soviet correspondent Yur Salomakhim explained there were:

> *84 weightlifting clubs in Cuba. In each club there are 10 barbells. 13 thousand Cubans go in for weightlifting. Soviet trainers have stood by the baby cradle of Cuban weightlifting. In 1966, 37 trainers were ready for duty. Before that there were none at all. Now there are 119. Young chaps in Cuba go in for barbells at the age of 14."*[44]

On a visit to Russia, Pete Talluto, an American lifter stationed with the Army in Europe, observed that "everyone talks about weightlifting in the streets and shops. One can listen daily to discussions on his favorite's success and world lifts." The first thing one notices upon entering a training hall "is the tense atmosphere. Here the business is the training of world champions. Each one gives 100% in his training. No unnecessary conversation is permitted." Particularly important was the training of those muscles specific to Olympic lifting. "The entire back is strongly developed." Novices, starting at age 14 or 15, used lighter weights to perfect style but "remarkably heavy weights in assistance exercises. They also employed a variety of general conditioning movements, including short dashes, jumping exercises, acrobatics, and practice on parallel bars. Finally, "Russian lifters have unlimited time for training" with all expenses and modern conveniences paid by the government. It was, Talluto concluded, a "paradise of lifters."[45] Such conditions were in sharp contrast to the latitude permitted American lifters, some of whom, according to Rader, "are completely lacking in the necessary discipline, not only in their training habits, but in their personal living habits. This is something that is strictly enforced in other countries and is one of the secrets of their superiority. In America this situation is not confined to weight lifting, of course, but is a part of our total permissive society in which discipline seems to be a misunderstood word."[46] To become a world champion, Rader believed, a lifter must "channel all his efforts and his whole life in this one direction."[47] Yet America's free-wheeling capitalist system could not easily accommodate such a regimented lifestyle without government intervention or the lure of big money.

It was not so much that money alone could solve the nation's weightlifting ills; it was more a matter of how the money was raised and spent. In his monthly New England newsletter in March 1973, Denis Reno announced that matching funds from a lifting booster would be available for donations up to $500, but by the following month he received just $15.00[48] Sensing the national coaching program was in jeopardy, Clarence Bass lamented that Carl Miller continued to conduct camps and clinics unpaid. Although the USOC was

making "rumbling sounds" of possible support, Bass argued that "what has been done so far has been on a 'poor boy' basis to say the least. American weightlifting deserves better."[49] Though sympathetic with the appeal for voluntary funding, one prospective donor noted that it was "being made when we are on the bottom of the heap, so to speak. It is always difficult to gain support for something that might be viewed as a lost cause."[50] To the fund-raisers, however, it was hardly a lost cause. George Nagy reminded *Strength & Health* readers that the United States still ranked second to the Soviet Union in Olympic gold medals won, 20 to 14, since 1936 but that five other Soviet bloc nations ranked ahead of America in distribution of worldwide power in weightlifting. To stem this decline, Nagy believed it was imperative to "act now!"[51]

Undaunted by continued American setbacks at the 1974 and 1975 world championships, Carl Miller, at his own expense, continued an exhausting pace of clinics nationwide. More importantly, he attempted to establish the components for a national coaching system. First, he attempted to tap some training precepts of the Bulgarians, who were often outperforming the Soviets. To this end he visited Ivan Abadjiev, the Bulgarian National Coach, who was known for implementing a system renowned for its brutal intensity. These methods, Miller observed, were "based on the theory of adaptation. Man can undergo great stresses if he is allowed to adapt to them slowly." Abadjiev also initiated an intensive recruiting program for young boys who showed promise and worked with medical authorities to establish an appropriate level of intensity without resorting to drugs. Abadjiev's athletes "train with great intensity and they know that they have made one great effort of which to be proud. They say, 'What is four years to give for the honor of your country?'"[52] Abadjiev later revealed to Talluto that

> *Our lifters develop best by training with weights which are close to their best contest weights and perform their contest lifts and movements which are like contest lifts with these top weights. . . . A known fact is that the training load and intensity represents the physiological stimulation which produces the desired reaction in the muscular system. A large training load and high intensity produces a large stimulation and causes a strong reaction in the system which results in more deep seated physiological, morphological and psychological changes.*[53]

Even protégés enforced the rigid disciplinary measures invoked by Abadjiev in Sofia, as world champion Valentin Hristov reveals of his training under Viktor Dimchev at a state-sponsored center in Pernik. At age 15 he was hoisting as much as 1200 tons per month. "My muscles would begin to feel more or less normal only on those days when, totally exhausted, I would swear off the weights and wait for Dimchev to come to the house to take me back to the gym." A carefully regulated drug regimen enabled further intensification. According to Hristov, prior to the 1976 Olympics Abadjiev was giving him, per week, 180 five-milligram Dianabol tablets as well as a weekly injection of Deca-Durabolin.[54]

In order to determine what level of intensity might be appropriate for American lifters Miller urged adoption of the "K Value," a formula he learned from Mexican and other European coaches that enabled a lifter to adjust his poundages and repetitions to reach an optimal total that he might realistically expect to achieve in competition. "I can't stress enough the importance of planning around the K value," he advised lifters. "It is a basic tool."[55] First and foremost, however, was the need to establish a national training center. "Stationed at a University, we would have many lifters actually going to the school and others who would come in and out all year long. It would be a place where top-quality training and learning would take place." To support such an enterprise, he even elicited the interest of the president of a leading life insurance firm, thereby imparting movement to weightlifting's stalled fund-raising efforts.[56] Thus it was somewhat of a surprise that Miller, after all his efforts over four years, should resign his post at the 1976 AAU national meeting in Phoenix. His decision likely stemmed from the selection, by a seven to six vote, of Tommy Kono to the prestigious position of Olympic coach by the national weightlifting committee.[57]

Miller's loss along with his socialization initiatives, however, seemed less significant than the silver medal won at the 1976 Olympics in Montreal by mid-heavyweight Lee James, a "home alone" lifter from

Albany, Georgia. Celebrations ensued. "As Lee mounted the second place position on the podium to receive his medal," reported Bruce Klemens, "a great tumult greeted him, even louder than the winner, David Rigert, received. This great jubilation was accompanied by tears of Joy from many old-time lifting diehards, as well as from Lee himself."[58] "Hip, hip, hooray!" exclaimed Fritz Mahoney of Erie, Pennsylvania, who noted that three other Americans—Phil Grippaldi, Mark Cameron, and Bruce Wilhelm—also came close to winning medals, adding "I really feel that we are back on the right track." J. L. Hewitt of Fort Lauderdale also believed James' success would inspire others and maintained that "we will win a gold medal in Moscow" in 1980, adding that "Nothing breeds confidence like success."[59]

What was hidden by this euphoria was the less pleasant fact that the American team finished just eighth, lifted as a team 60 kilos less than they had at the national championships in Philadelphia, and had two of its members, Grippaldi and Cameron, test positive for steroids.[60] Furthermore, despite strenuous efforts to provide ideal living and training conditions, including precompetition camps at York and Plattsburgh, New York, "to establish team spirit," reported Kono, "personality clashes among several team members made this virtually impossible."[61] Denis Reno, Miller's successor, was quick to recognize "the personality problem" that persisted as a standoff between lifters and administrators since the athletes' report of 1973. He urged both sides to redirect their energies to support fund raising, better coaching, and the implementation of a national plan. "We do not have the resources to waste on building up individual athlete's or administrator's egos. We do not have the time to spend blaming each other for every failure we encounter. And we cannot waste our emotions on jumping on the negative 'we'll never make it' bandwagon." A lengthy letter arguing the lifters' point of view for the sake of "democracy and freedom," submitted by Athletes' Representative Arthur Drechsler to the national committee in December 1976, only added fuel to the fire.[62] A final constraint to American development was the under-utilization of the medium of television which was broadcasting an increasing number and variety of sports in the 1970s. The cameras showed up in Montreal, but lifting fans were disappointed, according to Bill Penner, by ABC's coverage. "Most of the lighter bodyweight classes received only a minute or two of coverage. Then the superheavyweights were given more than

Weightlifting coach Carl Miller, shown here working with York team member, Kim Goss, spent hundreds of hours in the 1970s working for the betterment of American weightlifting. Miller wanted a national coaching program but could never garner the economic support to make it a reality. Through 1976 he gave clinics around the country, generally at his own expense, in which he introduced American lifters to the training techniques then being used in the Soviet bloc.

their share of coverage, along with a sensational story about the absurd quantities of food that these 300-plus pounders eat."[63] In striking contrast to the coverage given to Russian gymnast Olga Korbut at the 1972 Olympics, who became America's sweetheart and helped gymnastics become a popular sport, viewers got to watch Vasily Alexeev's belly, which reinforced many of the stereotypes about weightlifters, discouraged parents of prospective lifters, and projected the worst possible image of the sport to average Americans. It was a punch in the gut to United States weightlifting.[64]

By this time a new regime was in place in the US, the result of a restructuring which separated AAU powerlifting and physique from weightlifting, now headed by Murray Levin, a retired New York City stockbroker.[65] Levin recalled that when he took over "we had

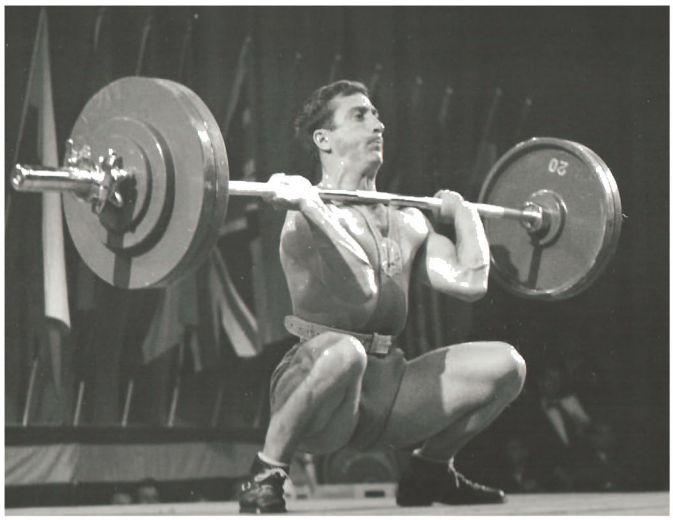
$300 in the bank. . . . The USOC had no real monies to give us. We had no sponsors, the athletes went overseas in ripped up dirty sweatsuits" and "coaches and managers paid their own way."[66] Utilizing his Wall Street experience, and connections inherited from Crist and Miller, Levin picked up the fund-raising pace, first by tapping lifting loyalists at meets for money to send athletes on trips. He also held income-generating events. The Europe vs. The Americas contest held near his home in Gettysburg in December 1975 enabled him, with $1,000 from the USOC, to send a nine-man team to the Junior World Championships the following June at a cost of $9,000.[67] A corporate break-through occurred in early 1977 when Sears & Roebuck agreed to sponsor the Junior Olympic program to prepare weightlifters for international competition. Sears President Dean Swift wanted to provide young American athletes the same opportunities as state-run programs in Eastern Europe. His company's goal was to "help get the Gold at the 1980 Olympics."[68] Perhaps Levin's boldest move was his staging of the Record Makers Invitational at the Aladdin Hotel in Las Vegas in December 1977. Although no records were set, no Americans excelled, two Russians failed to make weight, and the Cubans and Bulgarians withdrew, the meet was a dazzling success. "Everyone came to enjoy themselves in this center of capitalist decadence," reported Bruce Klemens.

> *Imagine, if you will, a huge wheel of chance in the plush Aladdin casino. Surrounding the betting table, wagering silver dollars on the spin of the wheel are Vopronin, Nassiri, Vardanyan, and Rakhmanov. And who do you think is spinning the wheel, but Alexeev himself? Not content merely to give the wheel a gentle spin, Alexeev would rear back and yank it with all his might, revving it up to about 500 RPMs and threatening to send it into orbit. After spinning for what seemed an eternity, the wheel would finally stop, invariably not on any number the lifters had bet on. This happened numerous times until their supply of dollars was exhausted. Every time the croupier cleared the money from the table, Rakhmanov would give him a glare guaranteed to scare Godzilla.*[69]

Owing to an injured right wrist, Alexeev was unable to even attempt any world records, but his one-hand snatch with his other arm of 220 pounds pleased the audience in the auditorium and viewers on television who tuned in to see the world's strongest man.[70]

In essence it was a victory for American weightlifting. Levin was delighted with the image presented to the world. Television ratings were high, national committee members and athletes were properly dressed and "behaving like Americans should," and he was receiving requests from other countries for more matches in the United States and invitations to meets abroad. Levin was especially pleased with the income generated by Record Makers which, along with increased USOC funding, added about $70,000 to weightlifting coffers. "This means we are no longer a pauper sport having to run auctions, passing hats around during meets, selling old magazines, or running raffles." Levin did not believe American lifters could overtake the Soviet Union by 1980, "with its vast number of lifters" (about 500,000 to "our 5,000"), but he did believe this meet would be "the final clincher to make us a power in World Weightlifting."[71]

A by-product of these successes was an immediate improvement in morale and relations between athletes and administrators. "The National Committee has never been better organized or more active and with less friction than it is at the present time," observed Peary Rader. "Olympic Lifting is really booming and growing rapidly in this country." Adding to this boom was the ability of Levin to secure the 1978 world championships in Gettysburg and the sponsorship of Mack Truck for American weightlifting. As he explained ten years later to Bud Charniga, he had approached the trucking concern in 1976, "but after our men were caught on drugs I lost two years in getting them to come in. . . . Upon running the world championships in Gettysburg in 1978 Mack committed to sponsorship and has been with us ever since."[72] Furthermore the USOC, consequent to the break-up of the AAU that resulted in a streamlining of weightlifting, was playing a greater role in the preparation of athletes, not only by increased funding but by setting up Olympic training facilities, including a major center in Colorado Springs. A week-long sports festival there in July 1978 was a premonition of more centralizing tendencies to come.[73] These kinds of governmental



Ivan Abadjiev, shown here with a 286.5 pound (130 kilo) clean and jerk, was the first Bulgarian weightlifter to win a medal in the World Weightlifting Championships. In 1957, in Tehran, he took the silver in the 67.5 kilo (148 pound) class. After retiring, Abadjiev turned his attention to coaching and was the guiding force behind Bulgaria's rise to the heights of weightlifting.

and corporate efforts led Rader to speculate on whether it was possible to mimic the "pattern followed by the Soviets" to achieve maximum success, the most noteworthy example being Alexeev. It would enable dedicated American athletes to devote their full time to weightlifting and, according to Rader, "attain the highest potential possible. . . . We are moving in the direction of implementing these things," However, no mention was made of the fact that the highly regimented Soviet sports machine was merely a small but highly visible part of its totalitarian society. Could the United States create a totalitarian sports regime without risking the freedoms it enjoyed within its free enterprise system?[74]

It was obvious that there were no easy answers to these questions, and frequent interaction with Eastern Europeans never seemed to simplify the matter. To Ken Leistner of New York City it was "not as simple as saying that we ought to train eight hours per day because the Bulgarians do. . . . The key is, and has always been, to learn how to do the two lifts. After that, just get stronger than any of your opponents." From watching the Europe vs. Americas match in 1975, Doug Cooney concluded "the Europeans are just stronger than our lifters," and better conditioned, but they were also "similar to ourselves. Stronger yes, perhaps more drive but still humans."[75] Slow motion movies revealed that many European lifters had serious flaws in technique, according to Rader. "What these champions do have is unbelievable, superhuman power." He recognized that "better conditioning methods, more intense training systems, 'living for lifting only' systems as used in some European countries are major factors in their superior lifting ability." It was especially puzzling to him to see that some "very small countries with very low lifting populations lifting well above what our men do." Despite the recent optimism in American lifting, "it looks like an impossible task for us to reach the top again."[76] Most revealing were the comments of three American lifters and their coach that appeared in *Sovietskii Sport* just after the Friendship Cup match in Moscow in 1978. When asked whether there were journalists who were popularizing Olympic lifting in the United States, one of them replied:

> *The best popularizer of weightlifting in the U.S. is Vassilii Alexeev. As poorly as weightlifting is known in America, everybody knows Alexeev. He is now the weightlifting 'ambassador' to all the world.*
>
> *When can the level of weightlifting in the U.S. be expected to rise? Under the existing circumstances, never! answered someone.*
>
> *Why? retorted another. If we find people who love sport, and not the money in sport, then a rise is possible.*[77]

What remained unclear, however, was how, in a capitalist-driven society such as the United States, could any young lifters at the beginning of their working lives be expected to make such sacrifices simply out of love for the sport and not money.

Any dreams of rising to the top again remained especially dim after the dismal performance of American lifters at the 1977 and 1978 world championships. Even the Russians adopted a pitying tone, stating that *they* did not look good beating the United States in its current state. According to Levin, they suggested "some of our best Junior and developing lifters come to Russia to learn the sport."[78] Since money alone seemed to be having little impact on the nation's weightlifting ills, some of the best minds in the sport addressed the issue in a

more systematic way, first by a massive survey drawn up by Dr. Fred Hatfield, a physical education professor at the University of Wisconsin, to determine coaching, recruitment, and training practices in the United States, and secondarily by a proposal to establish a national research committee for weightlifting by national heavyweight champion Mark Cameron and University of California at Long Beach professor John Garhammer.[79] Lee James, however, America's only medalist since 1970, poured cold water on such ideas, contending that studies of physiological or technical aspects of lifting were a waste of the funds recently acquired from the USOC and Mack Truck.

> *Gentlemen, the problem facing American weightlifting is the lifters themselves. . . . I also maintain that our lifters are subpar only psychologically. . . . The Russians approach the bar with fight and determination, ready to make the supreme effort, to succeed at any cost, because they realize that they are not participating in a game; they are soldiers in a war. God only knows what is going through the minds of our lifters, if anything. But, one can easily tell their attention is not focused on the bar. . . . All I ever hear from our lifters is how tough we have it or how we don't stand a chance of beating the Russians. Well, I am sick and tired of hearing so much whining, griping, and complaining from a bunch of wimps.*[80]

Peary Rader too was disappointed that weightlifting's improved financial base was not producing results, but he believed the problem was more systemic. He believed it would take a "miracle" to create world champions under the present system and that only "government sponsorship" would allow lifters to dedicate their whole time and energy to weightlifting. Rader maintained that "It is almost impossible to develop world champions in the type of society in which we live. Our society seems to place great emphasis on doing your thing, and ends in living with lack of discipline, lawlessness and richer comforts at any price."[81] By this measure, whatever psychological problems American lifters had might be attributed to the lack of regimentation of thought endemic in their society.

A vivid illustration of totalitarian-style training was provided by Hungarian weightlifting coach Andras Orvos at the 1979 National Sports Festival in Colorado Springs. In Hungary, Orvos explained, selected athletes would go on a four-year plan, beginning at 11 years of age with general conditioning and exposure to lifting technique. Thereafter the emphasis was on strength, stamina, and performance with most lifters peaking in nine or ten years. A classification system provided an incentive for athletes to set goals and climb to a higher level. When asked for his evaluation of American lifters, Orvos, according to American national coordinator Dick Smith, "felt our men overemphasize technique and would profit more with extra conditioning and strength work."[82] It was obvious that the Eastern Europeans, almost in lock step, trained harder and longer than the Americans. After another lackluster performance at the 1979 world championships in Thessalonika, Smith observed that the Americans only train heavy up to a contest and that "the Bulgarian approach is even more physically demanding than the Russian system." At a Junior Cup tournament held in Silver Springs, Maryland, he witnessed the ultimate in base conditioning.

> *Antonio Krastev, an 18-year-old Bulgarian superheavy took an extensive backstage warmup to 374¾ in the snatch but went out and opened with 352 ½ for a nice success. He then jumped to 396¾—which was a Junior World record—and lost it overhead. Undaunted, he went to 418¾ and lost it behind him. Moving back down to 407¾ on a fourth attempt, he was again successful.*
>
> *He went through another rigorous warmup for the clean and jerk and still had enough steam to give a good account of himself in this lift, ultimately trying a Junior World mark of 490½ but missed it because it was not in the groove. A fine performance indeed. However, the most unbelievable thing concerning Krastev's performance was the fact that he took a fairly heavy workout the day before the meet and trained*

again the morning of the meet.[83]

Smith could not gainsay the effectiveness of Bulgarian measures, but it was obvious that "our current lifestyle in this country" would never allow it.[84] American super-heavy Tom Stock and Peary Rader agreed that the Eastern Europeans had an enormous edge in strength which was the "main ingredient" to Olympic success. "Technique is extremely important, but without power, technique has very little value." Rader argued that Alexeyev did not have the best technique, but he was the greatest superheavyweight of all time because of his "enormous power." Likewise, David Rigert's lifting style was hardly flawless, Rader continued, "yet he was the greatest lifter of all simply because he had an enormous amount of power and knew how to use it to his greatest advantage."[85] On the other hand, Ken Patera, America's strongest weightlifter of the 1970s, deserted the sport for professional wrestling, noting that in lifting he was "broke" but in wrestling was making $100,000 a year.[86]

How to obtain greater strength and translate it into power movements without selling one's soul to the state remained a critical question for all who wanted to restore winning ways to American weightlifting. Michael Yessis, editor of *Soviet Sports Review*, advised that "the key to development of the high levels of strength that we are today witnessing is due mostly to adaptations in the nerve-muscle relationships. It is a well-established fact that the nervous system is the key to all learning and development." Keith Connelly confirmed this connection in an experiment in which he determined that "a systematic program of isokinetic exercise will significantly increase muscular power." In less than two months his subject, a female high school athlete, "increased her vertical jump by 25%, reflecting an increase not in static strength, but in functional explosive speed and power," exactly the qualities needed in Olympic weightlifting.[87] This was a program later stressed by Harvey Newton, a lifting coach from Florida who was being groomed for a full-time position as national coach at the rapidly developing Olympic Training Center in Colorado Springs.[88] A handful of weightlifters, including light-heavy Pete Cline, mid-heavy Kevin Winter, and super-heavy Jerry Hannan made their way there to sample the facilities. Levin predicted competition lifts of 400 and 500 pounds from Hannan shortly. Several of the athletes expressed their willingness to move there to attend school and train year-round. All of them requested Newton as their coach, and he was formally appointed on 1 January 1981. "This is one of our hopes for the future" observed Denis Reno.[89]

In the meantime, hopelessness seemed more evident at the 1980 Senior Nationals in Philadelphia, which featured several lifters who came out of retirement to compete in this Olympic year. Fred Lowe, Joe Puleo, and Mike Karchut, who first won national championships over a decade earlier, came in second, first, and second respectively against the current crop of lifters. And Joe Dube, America's last world champion in 1969, placed a respectable third as a super-heavyweight. A further indication of stagnation was the fact that many American records existed since the 1960s, and only one was broken in Philadelphia. In contrast to world record totals in 1980, they were an average of 43.38 kilos (95.44 pounds) less for each of the ten weight classes.[90] No team could compete at the 1980 Olympics in Moscow as a result of the Carter administration's boycott, but 18 world records were set by lifters from those countries that did. Discouraged by prospects for any success against state-controlled programs, Rader believed it was "fortunate for this country that we did not get into the Olympics" and argued that weightlifting's woes were merely part of a "national problem. It is one we must tackle from a national angle." Indeed Rader's concerns, much like those of other elders of his cold war generation were rooted in greater fears of America's industrial and cultural decline relative to godless socialist powers.[91]

Most leaders, however, with a national training center in place and more money than ever in weightlifting coffers, seemed oblivious to structural realities, which seemed insurmountable, and tended to focus on more practical needs of American lifters. One of the easier, and now affordable, obstacles that could be overcome was more exposure for top lifters to international competition. To substitute for the 1980 Olympics, an alternative meet was arranged for boycotting nations in Shanghai, China, where the United States placed second to China but ahead of Japan and ten other nations. To Herb Glossbrenner it was indicative of "U.S. Prestige Regained," a verdict seemingly confirmed a week later at an America Cup competition in Honolulu with another second place finish in a field of 19 countries. America's showing reminded a Chinese official of the

era dominated by such greats as George, Kono, Sheppard, Davis, Vinci, and Schemansky. "I believe your men will become strong once again in the world."[92] At the 1981 America Cup in Fort Lauderdale, the United States easily won over Canada, Australia, and Mexico, and took the team title against 14 nations mainly of the Pacific rim in the New Zealand Games. But at the Friendship Cup in Lvov, Soviet Union, attended by most of the best lifting countries, Americans could place no higher than fourth. Coach Dick Smith was overwhelmed by the Russians' "seemingly bottomless bag of talent, most of whom were 'terrifically built.'" Smith was especially impressed with the startling number of guest lifters, one of whom, Vladimir Marchuk, broke Alexeev's world clean and jerk record of 567½ pounds. Smith observed, "They are d-e-e-p in talent, to say the least!"[93] The Russians and Bulgarians were no less impressive at the 1982 Record Makers Invitational at the Playboy Hotel and Casino in Atlantic City, but the Americans were the stars of the show, setting ten American records. "We may finally have turned the corner onto the road that will once again put U.S. lifting on top," exclaimed Bruce Klemens. But no American placed higher than a foreigner. Arguably the greatest athletic feat, however, was veteran Fred Lowe's 180 kilo (396 pound) clean and jerk at the 1981 Senior National Championships in San Francisco which he followed up with a 3:30 marathon in Port Huron, Michigan.[94] It is unlikely that any Russian or Bulgarian could match this achievement, but the increasingly prevalent idea during this period—that the United States was on its way back to greatness—was an illusion. *[Editors' note: Any elite Russian or Bulgarian lifter who would have even tried such a thing would have been dismissed from the national team.]*

Nor was the national training center providing any magical solution to America's weightlifting ills. Results from the 1982 Senior Nationals indicated that lifters from the USOC Training Center fared little better than non-residents with only four of the 11 placing higher than fourth and three failing to make a total. Referring individually to nine of his USOC Training Center charges, Coach Harvey Newton said such things as, "Just did not put it together," "did not make any progress," "his generally lazy attitude," "could have done better," "did not perform well," "has breakdowns in his technique," "did poorly," "does not understand the game," and "goes through the motions, but has problems with communication between himself and me." Baffled by their lack of progress, Newton concluded that "constant time in camp seems to have taken some of the fight out of some of the lifters." A better plan might be to bring leading lifters into the center "for preparation prior to major meets, rather than spending four years here doing the same routines."[95] Roger Sadecki, observed that the lifters showed insufficient "cooperation, initiative, and enthusiasm." Later, as manager at the 1982 world championships in Ljubljana, Yugoslavia, he reported some team members "were obviously not in best shape. Some seemed to have a primary purpose of trading with the Soviet and other teams. Most did not show much in training previous to competition."[96] Even a decade later Murray Levin reflected that lifters who spent extensive time at the center "became weightlifting bums and chased women at night. Not one of them has panned out."[97] It became evident to the sport's leaders that simply providing a central training facility with experienced coaches for elite athletes would not guarantee the same results as Soviet-style training halls.

What was missing was the authority and discipline that was implicit in a collectivist system and could be enforced at will. Westerners, products of a free-market economy, were individualist by acculturation and, especially after the cultural revolution of the late 1960s, were more inclined than ever to "do your own thing." It was evident at first in the rebellion and lingering resentments against the York establishment. By the early 1980s the latest generation of leaders had to cope with lifters who demanded a piece of the action. Their protest culminated in a heated exchange of letters between USWF President Murray Levin and Artie Drechsler, athletes' representative on the national committee. While insisting that he just wanted to bring change "*within* the system," the latter explained that "there are plenty of athletes who'd rather destroy it," and that the "battle lines were drawn." He argued that the athletes should choose half the board members.

> *This country was founded on the principle that all people have a right to elect those who "administer" the nation. Our government is for the people and by the people. What I'm proposing for weightlifting is nothing more and nothing less than the governing philosophy of this country! All citizens have the*

> *right to vote for those who will administer the country.*[98]

In keeping with his "democratic" approach, Drechsler sent cards with his proposal (pre-addressed to Levin) to 75 of the top lifters, 60 of whom signed and mailed them. When the proposal came up before the Board, however, only two members, Bob Hise and Frank Bates, voted in favor. "The athletes want a say in governing our sport—they tell me that all the time," Drechsler explained. "They'd tell you that if they thought they safely could and that you'd listen." At the 1981 National Sports Festival in Syracuse 40 athletes, called by Dreschler "the best we have," demanded representation.

> *All of the athletes signed a petition supporting what they wanted and they were ready to boycott the Nationals to get it. I suggested that we could improve our representation peacefully and I've been working for that ever since. If the athletes don't see some improvement soon I think you'll have some real conflict on your hands. This may be the best of times from a money standpoint [but] it isn't from a morale one.*[99]

Little did Drechsler realize that what made the Soviet and East European programs so successful was highly authoritarian structure, in which lifters had virtually no voice and did not expect any.[100]

Arguably Drechsler's protest movement merely made matters worse. Neither he nor Levin were able to rise above their power struggles to understand the greater struggle for power in international weightlifting that America was losing. The result was continued infighting, a general atmosphere of dissension, and a consequent lowering of morale. Taking a larger view was pundit T. G. Thompson, who believed the roots of America's dilemma was cultural. "The Soviet standard of living is lower than ours and state-supported athletic programs offer a means of escape from a hard, laborious existence," he contended. "Rigert, Alexeev and Vardanyan are on the payroll and live as luxuriously as many of our pro athletes." To counter this socialist system Thompson recommended a purely capitalist solution—professionalizing the sport.

> *We should hire a sharp promoter to popularize the sport and make the public think they need to see weightlifting. Some of the angles to be exploited are:*
>
> *Encourage the extroverts to brag, gesture, make predictions and even show off for the audience. (Muhammed Ali did all these things!) Remember, charisma can be manufactured. Think how much Ilie Nastase & Mean Joe Green were helped by T.V. exposure.*
>
> *Convince the public that they 'want' to see weightlifting televised. You could use mottos like 'The Macho Sport' or 'The Ultimate Athletes.'*
>
> *Appeal to the value systems as well as the senses. Today's rock bands put on visual shows with flashing lights and absurd costumes. They use sex to get people interested—through lyrics, gestures, even newspaper ads. Gimmicks and trademarks attract viewers. I'd like to see a top lifter wear a lifting suit with the Superman emblem emblazoned across the front, or see him flex his biceps before every lift.*
>
> *The last and most important thing is to see that the top lifters get paid! I realize it may be years before the national champs are getting $40,000 a year, but even $1,000 would be an improvement over nothing.*[101]

What Thompson was proposing to do was sever all amateur ties, including those to the USOC, and to sensationalize the sport, much in the manner of Vince MacMahon's highly popular World Wrestling Federation. To accomplish such a radical transformation, however, would require a dictator with far more powers than Levin possessed, and the result would likely be a spectacle rather than a sport. In the meantime the talented athletes so badly needed in weightlifting were being drawn away to powerlifting, which was much easier to do, and professional sports, which were far more

lucrative.[102]

In 1983 the drug problem exacerbated American weightlifting woes when Jeff Michels, the 110 kilo national champion, and five foreign lifters tested positive for testosterone at the Pan Am Games in Caracas. Although Michaels denied ever taking the banned substance, he was suspended for a year from international competition, and there was much negative publicity in the press. In an interview with the Springfield *Daily News* of Massachusetts, former world record holder Bob Bednarski not only admitted using steroids in the 1960s when he was "breaking world records like crazy," but he insisted that "95 percent of all the athletes in this world that are of international caliber are using it." That there were 23 world records set at the 1983 world championships in Moscow suggested that international lifters were getting an extra boost.[103] What Americans could not understand was how the Soviets and other lifting powers setting those records were escaping detection. Jim DeCoste believed:

> *the Soviet Union has a special institute that devotes all of its resources to developing drugs for sportsmen. This is not hard to believe. Anyone remember the last Russian lifter to get busted for steroid use? Even as far back as the 1976 Olympics, when steroid testing began, the Russians not only came out clean but also accounted for most of the world records set on that occasion. We can see how much propaganda mileage they got out of the Pan Am incident when one of their official newspapers commented that America's drug problem has now spread into athletics.*[104]

"The Image Remains a Problem For Lifters" was the title for Peter Alfano's *New York Times* report of the 1984 Olympic Trials in Las Vegas. Alfano reported that there was a conviction among American weightlifters that "the East Europeans have made better use of science to enhance the performance of their athletes and have, for the most part, successfully avoided detection." There were some who even believed that the Soviet refusal to participate in the 1984 Olympics was not so much retaliation for the US boycott in 1980 as concerns that some of their lifters would test positive.[105]

The impact of testing on the Soviets' "secret program" cannot be determined, but the publicity stemming from the Michels incident weighed heavily on the public image and morale of America's lifting program. None of America's three lifters at the 1983 world championships registered a total, and the United States ranked twenty-first of 23 nations. As the 1984 Olympics approached there was much "unneeded publicity" in leading magazines about the sport's drug problem. "If you just scan these national publications," noted Denis Reno, "you'd be led to believe that Jeff is king of athletic drugs."[106] Furthermore "we lost our television sponsor" which Murray Levin reckoned at $45,000 per year.

> *I believe this was primarily because of the fact that our men were caught on drugs at the Pan Am games in 1983 in Caracas and afterward the fiasco at the world championship when it appeared that many bombed deliberately. I had to hide under the desk when the calls came from Mack Truck…[our] television sponsor, the USOC and many others. … I also lost 2 large potential sponsors I was working on from the investment field.*[107]

In the absence of the world's best weightlifting countries, the United States finally won two medals in Los Angeles, but there were no world records. By way of contrast, 30 world records fell at an alternative meet held by the boycotting nations in Varna, Bulgaria.[108]

Remarkably the United States, primarily because of the 41 medals won during its golden age, was in total medal count still second to the Soviet Union's 54 after the 1984 Games, with Bulgaria (21) and Poland (21) a distant third.[109] Fond memories remained of a heroic past, but it seemed ironic that Artie Drechsler should initiate a series called "Heroes of Weightlifting" in *Weightlifting USA* to honor current American lifters who exhibited "great strength and courage" to see "their dreams become reality." He first featured super-heavyweight Mario Martinez, whom he dubbed "the strongest man in the free world."[110] *[Editors' note: Bruce Wilhelm used this line earlier when comparing himself to Vasily Alexeyev.]* To have Martinez—who was only a silver medalist in the talent-poor weightlifting competition in Los Angeles—and other Americans subsequently por-

trayed as "heroes" must have seemed an accolade of dubious distinction. Likewise Drechsler's *bête noir*, Murray Levin, would have hardly regarded that period as heroic. On the one hand, Levin was reelected president, and the USWF, with less than 2,000 lifters, received a windfall share of profits from the Los Angeles Games that amounted to $1.1 million over the next two years, the same as wrestling (with an estimated 100,000 athletes) and track and field with many more.[111] But there was little prospect that American weightlifters were getting any better, and maverick promoter Bob Hise II was re-forming the AWLA. Levin was disappointed that American lifters finished behind Brazil and Canada in the Pan American Games in 1985 and sensed a want of dedication. "It seems like some of our international lifters feel no shame when they bomb out or perform poorly in front of foreign competitors." No less than quality of commitment, greater numbers were necessary, and Levin maintained that "Having less than 2,000 lifters in a nation of 225 million people is disgraceful."[112] Bill Starr was even more blunt in his assessment of American lifting.

> *Olympic weightlifting has been at a standstill since the late sixties. In fact, it has regressed. Totals that placed in the nationals in 1968 would still be placing now, and there are but two lifts, rather than three to work on. In 1969 we produced two World Champions: Joe Dube and Bob Bednarski. The late sixties also witnessed Bednarski, Dube and Ernie Pickett setting World Records. No one has even considered one since, let alone loaded up the barbell to attempt one. There have been a smattering of what I would consider world class lifters since: Ken Patera, Mark Cameron, Lee James, but again, these guys began lifting in the pre-drug era, they worked for their numbers. . . . No one lately has stepped forward to challenge any European lifter and I see no one on the horizon.*[113]

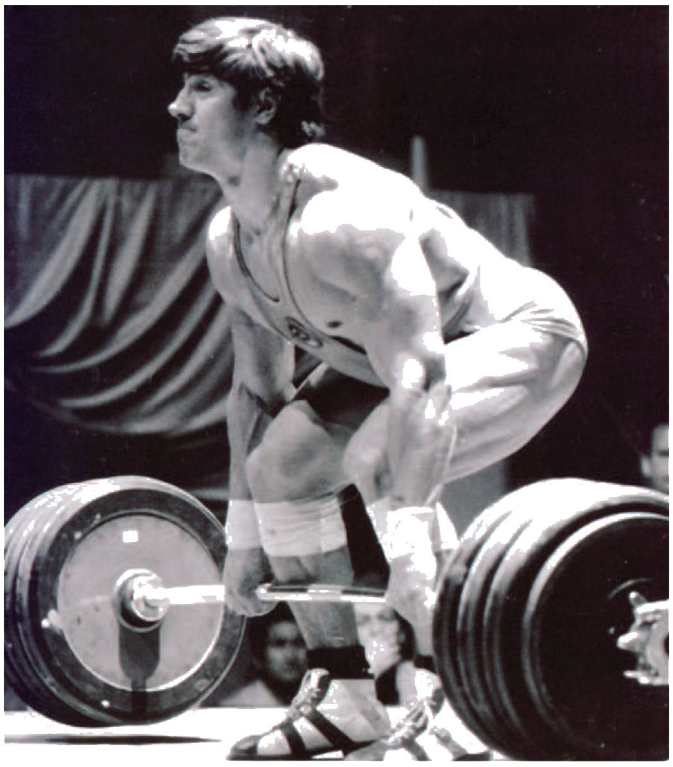
The current crop of American lifters, according to Starr, were too awestruck by the Europeans to compete effectively with them and too reliant on performance-enhancing drugs. "The real reason that they are kicking us around is that they work harder and are therefore stronger. Period."[114]

Over the next several years two encouraging developments appeared on the horizon. In contrast to American placements of fourteenth, fourteenth, seventh, and eighth at the 1985 world championships for men in Sodertalje, Sweden, American women took two first places and a second at an international tournament in Budapest in March 1986. Then, at the first women's world championships in Daytona Beach in 1987, the women came in second to China with placements of third, second, third, fourth, sixth, second, sixth, first, and second. Levin was delighted. "If I am smiling as I write this," he exclaimed, "it is because the rest of the world who laughed at us have now come to respect us as the innovator of the best thing in weightlifting since discs were used instead of solid barbells." It was "the first time in 18 years that the United States has had any gold medal winners."[115] *[Editors' Note: The primary reason for the early successes of the U.S. women weightlifters was the unstinting support provided to them by Georgia's John Coffee—through his coaching, personal attention, and especially his extensive financial contributions.]* Almost as encouraging was the defection to the United States of Cuban star Roberto "Tony" Urrutia who had won three world championships and set numerous world records as a lightweight and a middleweight in the seventies. Although Urrutia easily set a string of American records and won national championships, he placed only third at the 1987 Pan American championships in Indianapolis, eighth at the 1987 world championships in Ostrava, Czechoslovakia, and eighth at the 1988 Olympics in Seoul. Yet Urrutia did better than all but one lifter on the American team.[116]

By the late 1980s United States Weightlifting was transformed by the replacement of Harvey Newton as executive director of the Colorado Springs training center by George Greenway, and Levin's replacement as federation president by Gene Baker. In talking with lifters and officials throughout the country, Baker quickly perceived the negative impact of the "we" and "they" atmosphere that existed under his predecessor. "I heard complaints about our organization that had references to a 'THEY' group which controls the sport. This perception may be one of our real problems. What has happened is that we have lost our ability to work together and trust one another." By professing openness to new

ideas and complaints, Baker hoped to "get American lifting moving again" by replacing the adversarial "THEY" with a "WE" can do it attitude. His democratic approach might reduce dissension, but it hardly coincided with former national coordinator Carl Miller's diagnosis of what made the Eastern Europeans so successful. "My experience in coaching individuals in individual and team sports and my observations through close contacts strongly makes me believe that it is lack of discipline that prevents good talent from achieving its potential."[117] The most serious blow to American hopes for improvement through its existing free enterprise system was the loss of two major publicity mediums in 1986—*Strength & Health,* soon after the death of Bob Hoffman, and *Iron Man*, which became a bodybuilding magazine after its sale to John Balik. Although hardly noticed by current lifters or officials, both publications for the previous half century had been critical sources of inspiration and recruitment, two qualities most lacking in American weightlifting.

Soon after the 1988 Olympics, Naim Suleymanoglu, who had clean and jerked 419 pounds at a 130-pound bodyweight to set a world record and win a gold medal at Seoul, visited Colorado Springs where he was treated like a celebrity. "If we could just develop someone of his caliber, weightlifting in the U.S. would skyrocket," USWF Coach Bob Morris observed. Suleymanoglu explained how it could be done. His secret to success was not so much superior technique but discipline and his love for the sport. "I train six days a week, six hours a day," he revealed. Although he lifted for Turkey, he credited his former Bulgarian coach for instilling in him this training regimen. It never seemed possible, however, for American lifters to replicate the kinds of training regimens used by the Bulgarians. In July 1990 at Gettysburg College, Leo Totten organized a training camp called "hammer time," where athletes were exposed to high intensity workouts. His assistant, Chris Polakowski, noted that "the highlight of the week was Wednesday's Bulgarianized workout, which consisted of six half-hour sessions of very high intensity. . . . Throughout the day, several records were established by athletes, a few in multiple lifts. The feeling from the group was that Americans can incorporate this method of lifting in the right dose."[118] Exactly what was meant by "right dose" is uncertain, but the intense program Totten administered to his lifters was still a far cry from the "six days a week, six hours a day" regimen of Suleymanoglu.



The dense muscularity Russian weightlifter David Rigert built through training is readily evident in this photo by Bruce Klemens. Rigert won six world championships and a gold medal at the 1976 Olympic Games. He was—except for Vasily Alexeyev—the most succesful weightlifter in Soviet history, setting 68 world records.

A more sustained effort to imitate the Bulgarian system was put in place in 1991 by Dragomir Cioroslan, coach of the new national resident training program at Colorado Springs. Here America's elite athletes would have the opportunity to train five or six hours a day with high quality coaching at every workout, excellent nutrition, access to the latest in sports science, and no worries about rent or transportation. Significantly, two-thirds of the training time in Cioroslan's high intensity plan was devoted to strength-building.[119] Former Bulgarian Coach Angel Spassov, who had moved to the United States, was skeptical whether it would work on Americans. He told reporter Stephen Grabe that "we have some very good athletes in our ranks," but he found it "shocking that in a country such as ours, with our heritage in WL, we have set fairly modest goals."[120]

After so many decades of relative decline, however, there seemed to be no stone unturned to achieve higher goals. Still the stagnation continued. In the 1989, 1990, and 1991 world championships the United States finished fifteenth, ninth, and eleventh respectively, while

the women, not yet allowed in the Olympics, ranked second (1988), third (1989), fourth (1990), third (1991), and sixth (1992) in their world championships. While the greatest emphasis was always placed on recruiting, the number of registered weightlifters grew slowly each year from 1,687 in 1985 to 2,389 in 1991, likely the result of more women entering the sport. It was "one of the greatest mysteries" to USWF President Jim Schmitz that Olympic lifting was not popular in the United States.

> *I began Olympic-style weightlifting in 1960 when the population of the United States was about 180,000,000 and I think there were about 1,000 Olympic lifters, 1000 power lifters or odd lifters as they were called then, 1,000 bodybuilders and about 10,000 weight trainers. In those days anyone who lifted or trained with weights was quite rare. However, now in 1991 with the population at about 250,000,000 and weight training an accepted activity for both men and women, there are about 2,500 Olympic lifters, 30,000 power lifters, 2,000,000 bodybuilders and 75,000,000 weight trainers.*[121]

Untoward trends notwithstanding, Schmitz was upbeat about American prospects as the 1992 Olympics approached, speculating that 20 or more lifters would equal or exceed IWF qualifying totals. At Barcelona, however, where 247 athletes from 69 countries competed in weightlifting, the team did just "alright." No American lifter placed higher than eigth, and the United States men's team finished thirteenth.[122]

For the previous two decades the sole intent had been to raise American lifting to world standards, but in the early 1990s an unexpected windfall occurred with the collapse of totalitarian regimes in the Soviet Union and Eastern Europe, and it seemed possible that the world might be moving closer to the United States in performance. In a perceptive, 1991 article entitled "Weightlifting after the Cold War," Jim DeCoste correctly pointed out that weightlifting superiority in the eastern bloc was made possible by massive government support that enabled athletes to train full time. "Not even moderately subsidized programs in free world countries could train lifters in this manner." Hence communist athletes in the seventies "began to make rapid strides past the rest of the world. . . . Now things are on the verge of major change," DeCoste predicted. With economic deterioration, environmental crises, housing shortages, industrial decline, and the emergence of capitalist democracies in former Communist countries, the newly enfranchised masses would no longer tolerate the charade of expensive sports programs designed to showcase the superiority of socialism. He believed that "Russia and all of its former satellites will be dealt a weaker hand" while "the western democracies and their allies will . . . clearly be gainers. . . . Along with Australia, Turkey, Japan, Canada and Germany we could be a moving force in the nineties."[123] The iron curtain had fallen, the Soviet Union had self-destructed, and millions of newly liberated people were able to practice free market capitalism, but would these seismic changes result in a dismantling of the authoritarian structure that had always given the formerly Communist programs such an edge in weightlifting?

What happened over the next several years was the development of a new balance of power in which the Soviets (now the Russians) and the Bulgarians, deprived of their stranglehold in the lifting elite, were forced to relinquish some of their medal harvest to other aspiring nations, including former USSR republics. At the 1993 world championships in Melbourne, Ukraine—once a fertile recruiting ground for Soviet lifting talent—ranked first in team standings with three medalists and several world records. While Bulgaria and Russia still placed second and sixth in the team standings, it is notable that newly liberated Belarus and Armenia ranked eighth and ninth respectively, and that the recently reunited Germany was fifth. Of the non-former Eastern bloc nations, Turkey, benefitting from Bulgarian defector Naim Suleymonoglu, placed third, while newly naturalized Stefan Botev, trained in Bulgaria by Ivan Abadjiev, enabled Australia to claim seventh. Communist China, at fourth, would eventually become the world's foremost weightlifting power, and the former Soviet republic of Kazakhstan would soon be a force to be reckoned with. Within this new mix of weightlifting celebrity nations, there seemed to be no room for the United States, which dropped from thirteenth of 50 nations in 1993 to twenty-second of 52 in 1994, to thirty-first of 63 in 1995. What was particularly galling in the latter instance was that the thirtieth position was held by Nauru, a tiny island in the middle of the Pacific Ocean with barely 8,000 people,

the second least populated nation in the world.[124] Nor did matters improve in the next decade, during which United States men, at the 2002 Warsaw world championships, descended to thirty-second, just behind Ecuador and Croatia, and even the women could fare no better than tenth.[125]

What DeCoste failed to reckon in his optimistic rendering at the end of the Cold War was not only the greater impact of former Soviet republics and satellites over the next two decades but the increased number of other nations who were seeking international recognition through weightlifting. The number of athletes increased from 160 from 55 nations at the 1968 Mexico City Olympics to 247 from 69 nations at Barcelona in 1992. But the real squeeze started with a 1994 IWF ruling that allowed only those nations that placed in the top eight in the 1995 world championships to send a full ten-man team to the 1996 Olympics.[126] With even more restrictive quotas in succeeding years, an increasing number of the 155 eligible nations wanting to be represented in weightlifting, and a reduction of weight classes in 1998 from nine to five, the United States was relegated to a position of standing room only for some of its best lifters. (The 1994 ruling to restrict full teams from future Olympic Games was instituted because of mandates from the International Olympic Committee to reduce the number of weightlifters.)

Of the 260 weightlifters who competed in the 2012 Olympics, American participation was limited to two heavyweight women, who finished seventh and tenth out of 14, and one man, who was admitted on a contingency basis but finished well out of the medal range. The United States men finished in a three-way tie for thirty-fifth out of 70 nations, while the women were seventeenth of 57 countries.[127] What's more, despite the demise of Communist rule, nine of the 19 countries that medaled in weightlifting were former members of the Eastern bloc, and four others were still under socialist or authoritarian rule, indicating that despite the end of totalitarian rule, the methods and mentality it fostered over several decades were alive and well. The cruel irony that emerges from the worsening performances by American weightlifters on the world level for nearly a half century is that United States men remained second historically in total Olympic medals after the 2012 games in London, trailing Russia by 21 and leading Bulgaria by five.[128]

Such retrospectives offered little consolation, but they continued to foster false hopes, nurtured since the 1960s, that the United States would experience a new golden age in weightlifting, much in the manner that Bob Hoffman had achieved in a bygone era. It was accompanied, however, by a growing awareness that Hoffman's brand of corporate socialization was no longer possible and that the leading weightlifting powers were merely applying his principles on a comprehensive level, tapping the resources of entire nations, justified by a rival ideology. Hence American leaders for ensuing decades borrowed what they deemed as Russian and Eastern European strategies for success—training techniques, a national coach, a national training center, greater funding, and more international competitions—continuously hoping against hope that things would get better. And when all else failed, embracing the chimera that the collapse of the communist empire would bring salvation. What Americans did not understand was that piecemeal changes were insufficient, and that the highly regulated Russian and Eastern European programs were an outgrowth of the totalitarian societies that embraced them. As historian Gordon S. Wood famously observed, "context is everything in history."[129] Not only was this influence pervasive within the cultural context of the times, but it persisted even after the critical changes that took place in the 1970s and 1980s. Notwithstanding the advent of free market economies and more democratic political systems, the sports mentality framework of Eastern bloc countries remained more tightly wound than those in the more democratic West. While most of the world rejected Marxian socialism and was won over to the more appealing lifestyle and culture of America, the highly authoritarian and disciplined approach that permeated Soviet and Bulgarian training halls between 1970 and 1992 remained a robust legacy. That Communist China soon emerged as the world's foremost weightlifting power became the most enduring evidence of its efficacy.

NOTES:

1. Arnold Schwarzenegger, *Total Recall: My Unbelievably True Life Story* (New York: Simon and Schuster, 2012), 244.
2. Louis Simmons, "How to Regain Top Form," *Milo, Journal for Serious Strength Athletes* 2 (October 1994): 28; and Louis Simmons, "What If?" *Milo, Journal for Serious Strength Athletes* 4 (April 1996): 26.
3. Carl Miller, "Conditioning For All," *International Olympic Lifter* 12, no. 2 (1985): 23.
4. Michael Stone et al., "Relationship of Maximum Strength to Weightlifting Performance," *Medicine & Science in Sports & Exercise*

37 (June 2005): 1037. "Simply defined, strength is the ability of a muscle or muscle group to exert force to overcome resistance and to measure the amount of weight lifted without regard to time, while power, or speed-strength, is the amount of work performed per unit of time and is normally used as a measure athletic performance."
5. Lyle McDonald, "Why the US Sucks at Olympic Lifting," Part 1, viewed at: www.bodyrecomposition.com.
6. Andrew Charniga, Jr., "There Is No System," Part 1, p. 3. viewed at: www.sportivnypress.com, Notwithstanding its human losses, material devastation, and ruined economy, Soviet Union was able to match the United States at the 1946 world championships in Paris. "The entry of a fine team of Soviet lifters was the highlight of these championships," according to David Webster. "Over the first five places, as was common at that time, they had a convincing win over America in second place. . . . On medals alone USA did best." Likewise at the 1947 European championships in Helsinki, the Soviet Union far outdistanced all other nations by winning 12 of the 18 medals. David Webster, *The Iron Game* (Irvine, Scotland, 1976), 87. As for the impact of functional isometric contraction and the commercialization of the sport, Charniga obviously overlooked my assertion in *Muscletown USA* that by 1963 "Hoffman had concluded that his wonder system had not lived up to expectations. Not only had it not catapulted America back to the front rank of lifting powers, but it had proved unprofitable." Supporting evidence from Hoffman's correspondence includes a January 1962 letter to Dr. Francis Drury that "we do not sell many racks in proportion to the courses that have gone out," and a June 1963 letter from Drury noting that he was "sorry to hear that the spread of Isometric Contraction exercise programs have weakened the financial structure of the York Barbell and Associated Companies to such an extent that the Bob Hoffman Foundation cannot fulfill its commitments." On a personal note, when I trained at the York gym during the summer of 1967, I can recall none of the champions using the power rack for isometrics, nor have I seen this training mode employed in any of the scores of gyms I've trained in since that time. It was a fad that vanished quickly. Finally, and no less egregious is Charniga's statement that I "coined the term 'The Golden Age of Weightlifting' in reference to the dominance of the national weightlifting teams of USA and Soviet Union during the 1950s." My phrase, referring to the decade or so after 1945 (not just the 1950s) was "The 'Golden Age' of American Weightlifting," a huge difference. Such ignorance and misappropriation of my work calls into serious question the authenticity of Charniga's claim to "misinformation engineering." See Charniga, "There Is No System, Part 3, p. 15; and John Fair, *Muscletown USA* (University Park: Pennsylvania State University Press, 1999), 103, 207-8, and 400.
7. McDonald, "Why the US Sucks," Part 6, pp. 1-2.
8. Charniga, "There Is No System, Part 2, p. 20.
9. *Strength & Health, Iron Man, Denis Reno's Weightlifters Newsletter, Weightlifting USA,* and *World Weightlifting.*
10. Bill Starr, "Columbus, An Appraisal," *Strength & Health* 39 (January 1971): 26-27, 75-76.
11. Bill Starr, "Involvement," *Strength & Health* 39 (March 1971): 44.
12. Peary Rader, "Grunt & Groan," *Iron Man* 30 (February 1971): 49.
13. John Weyland, "Russian Sports Program," *Strength & Health* 39 (March 1971): 55.
14. Carl Miller, "Modern Weightlifting Programs," *Iron Man* 30 (May 1971): 44.
15. Morris Weissbrot, "National AAU Weightlifting Minutes," *Strength & Health* 39 (October 1971): 59.
16. Peary Rader, "Grunt & Groan," *Iron Man* 31 (March 1972): 40.
17. Gil Layman, "Where Lies the Potential of American Weightlifting?" *Strength & Health* 39 (December 1971): 14-15.
18. Ray Yeager, "Organizing a Junior Olympic Weightlifting Program," *Strength & Health* 40 (March 1972): 14.
19. Bill Penner, "The World of Weights," *Iron Man* 31 (May 1972): 45.
20. *Ibid.*
21. Peary Rader, "Grunt & Groan," *Iron Man* 31 (September 1972): 51.
22. "National Weightlifting Coaching Program Approved in Munich," *New England Association AAU – Weightlifters' Newsletter*, no. 14 (14 November 1972): 3.
23. Carl Miller, "1972 Teen-Age Weightlifting Camp," *Strength & Health* 41 (January 1973): 27.
24. Peary Rader, "A National Coach," *Iron Man* 32 (November 1972): 40.
25. See U.S. State Department, *Countries of the World and Their Leaders* (Detroit: Gale Research Co., 1977), 242, 979; and Bill Penner, "The World of Weights," *Iron Man* 32 (January 1973): 44.
26. Herb Glossbrenner, "Cheers for our Olympians," *Strength & Health* 41 (January 1973): 9.
27. Peary Rader, "Olympic Report," *Iron Man* 32 (November 1972):
34. A coaching center of the type envisioned by weightlifting leaders for weightlifters to train, receive instruction, and become enthusiastic was provided by a Christian businessman in Tulsa for Athletes in Action in 1972. Hopes that it would become the national coaching center, however, failed to materialize. Bill Starr, "The Daisy Chain," *The Weightlifting Journal* 1 (January 1973): 28; and Peary Rader "Grunt & Groan," *Iron Man* 32 (May 1974): 62.
28. Clair Bollinger interview with author, 18 September 1992, York, Pennsylvania; Hoffman to C. Carson Conrad, n.d., Hoffman Papers in author's possession; and Bob Hoffman, "York, PA, - Physical Fitness City," *Strength & Health* 40 (May 1972): 5.
29. "General Comments," *New England Association AAU Weightlifters' Newsletter*, no. 14 (14 November 1972): 8.
30. Bob Crist interview with author, 3 May 1987, Hampton, Virginia.
31. Bill Starr, "Anabolic and Amphetamine[s]," *Strength & Health* 39 (February 1971): 54.
32. Tom Holbrook, "The Times, They Are A Changin'," *Strength & Health* 41 (October 1973): 32.
33. *Ibid.*, 35.
34. Bob Hoffman, "1973 World Championships Report," *Strength & Health* 42 (February 1974): 41-42.
35. See "1973 World Weightlifting Championships Report by the United States Team," *New England Association AAU Weightlifters' Newsletter*, no. 22 (24 December 1973): 1, 4-6; and a more detailed "Athletes' Report of the 1973 World Weightlifting Championships" in the *International Olympic Lifter* 1 (February 1974): 20-22. In his rebuttal to the athletes' report John Terpak strongly defended his actions as coach and explained how their grievances were without merit. "Athletes' Report," *Strength & Health* 42 (August-September 1974): 8-9.
36. Clarence Bass, "Notes from the National Convention Weight Lifting Committee," *Iron Man* 33 (January 1974): 51, 65.
37. John Sopensky, "The American Weight Lifting Association," *New England Association AAU – Weightlifters' Newsletter*, no. 26 (29 July 1974): 13. The AWLA later supported Senate Bill S 3500 to break up

the AAU, hoping to make a bid for control of weightlifting. Paul Sopensky, "Veritas," *New England Association AAU – Weightlifters' Newsletter*, no. 32 (26 April 1975): 4.

38. See: Athletes of the 1973 World Weightlifting Team, "Concerning the Problems Confronting Our Sport and Possible Solutions," *International Olympic Lifter* 1 (January 1974): 4-6.

39. Tom Holbrook, "The Press is Out," *Strength & Health* 41 (February 1973): 38; and Bill Penner, "The World of Weights," *Iron Man* 32 (May 1973): 51.

40. See "Training Without the Press" series in *Strength & Health*: Phil Grippaldi and Frank Capsouras, 41 (June 1973): 10, 14; Mike Karchut, 41 (July 1973): 16; Dan Cantore and Bob Bednarski, 41 (August 1973): 10, 14; Russ Knipp and Alan Ball, 41 (September 1973): 50, 54; Fred Lowe and Arkady Vorobiev, 41 (December 1973): 18, 20; and "Problems in Physical Culture," *Bulgarian Journal* 41 (March 1974): 10.

41. Charniga, "There Is No System," Part 2.

42. See: Herb Glossbrenner, "The Strongest Pressers of All Time," *Strength & Health* 41 (February 1973): 50-55; Herb Glossbrenner, "The Strongest Snatchers of All Time," *Strength & Health* (March 1973): 40-45; and Herb Glossbrenner, "The Strongest Jerkers of All Time," *Strength & Health* (April 1973): 36-42.

43. Jim De Coste makes the interesting point that with the elimination of the press "we began to hear more about pulling techniques such as the double knee bend as we entered an era where skills were emphasized over strength. These new trends undoubtedly made Olympic lifting a rather forboding [sic] activity to those outside the sport." Jim DeCoste, "From a Grass Roots Perspective," *Weightlifters Newsletter*, no. 90 (13 February 1982): 14.

44. Bill Penner, "World Olympic Championships," *Iron Man* 33 (January 1974): 41.

45. Pete Talluto, "Impressions from Russia," *Strength & Health* 41 (July 1973): 29, 71. Bill Penner, who was also fluent in Russian, informed Peary Rader that "the Russians are unbelievably scientific in their research and development of all sports." They also "have a lot of state funding which goes into these projects." "Readers' Round-Up," *Iron Man* 34 (November 1974): 41. When David Webster visited Arcady Vorobyev at the Moscow Institute of Physical Culture in 1974 he also found the laboratories: "very impressive with all sorts of mechanical and electronic items. BUT I MUST IN FAIRNESS SAY THAT I DID NOT SEE ANY PHARMACEUTICAL EVIDENCE AT ALL, ALTHOUGH I HAD MY EYES OPEN ALL THE TIME." Dave Webster, "Soviet Secret Weapons," *International Olympic Lifter* 2 (January 1975): 24-26.

46. Peary Rader, "Grunt & Groan," *Iron Man* 32 (September 1973): 55.

47. *Ibid.*

48. Denis Reno, "Campaign Kick-Off $$$$$$$$$$: The American Weight Lifting Association," *New England Association AAU – Weightlifters' Newsletter*, no. 16 (1 March 1973): 10; and "Thanks to the Contributors for the National Weightlifting Fund," *New England Association AAU – Weightlifters' Newsletter*, no. 17 (11 April 1973): 4.

49. Clarence Bass, "A National Coaching Plan—Now or Never," *Iron Man* 32 (July 1973): 73.

50. Fritz Markham, "Aid Your Sport," *Strength & Health* 42 (February 1974): 9.

51. George Nagy, "Weightlifting Fund," *Strength & Health* 41 (December 1973): 44.

52. Carl Miller, "My Trip to the European Coaches' Clinic," *Strength & Health* 43 (April-May 1975): 15, 60. See also "Five Lessons from Ivan Abadjiev," 15 March 2011, viewed at: www.haskestrength.com; Hannah Karp, "Heavy Lifting, No Rest, Candy: the Bulgarian Method," *The Wall Street Journal*, 21 June 2011, viewed at: www.wsj.com; and Jim Moser, "The Bulgarian Method of Training Olympic Lifters," *Starting Strength*, 22 April 2011, viewed at: www.startingstrength.com.

53. Ivan Abadjiev, "Basic Training Principles for Bulgarian Elite," *International Olympic Lifter* 3 (March 1976): 12-13.

54. Valentin Hristov, *Champion on a Cross* (Sofia, Bulgaria: Guteranov & Son, 1997/1998), 22, 169. Cited in Michael Cayton, "Reflections on Valentin Hristov's *Champion on a Cross*," *Iron Game History* 12 (August 2013): 29, 32.

55. Carl Miller, "Important–Up To Date–Olympic Lifting Training Hints," *New England Association AAU – Weightlifters' Newsletter*, no. 27 (1 September 1974): 190; and Carl Miller, "K Value Revisited," *New England Association AAU – Weightlifters' Newsletter*, no. 28 (1 November 1974): 9. Miller also outlined a plan, based on the Bulgarian model: "How to Find Champion Weightlifters," *Strength & Health* 43 (June-July 1975): 10-12, 67.

56. Carl Miller, "Carl Miller Reports," *International Olympic Lifter* 3 (March 1976): 4.

57. "Miller to United States Coaches, December 19, 1975," *New England & Region 1–Weightlifter's Newsletter*, no. 39 (24 January 1976): 17; and Peary Rader, "Groan & Groan," *Iron Man* 36 (January 1977): 57.

58. Bruce Klemens, "Many Records at Olympic Lifting," *Iron Man* 36 (November 1976): 46.

59. "Weightlifters in Montreal," *Strength & Health* 44 (October-November 1976): 8.

60. "Decision on Steroids," *Strength & Health* 45 (April-May 1977): 10.

61. Tommy Kono memo to Members, U.S. Olympic Weightlifting Committee, 1 October 1976, Hoffman Papers.

62. Denis Reno, "Let's Continue Solving Our Problems to Improve Weightlifting in the United States," *New England & Region 1–Weightlifter's Newsletter,* no. 45 (18 September 1976): 3; and Arthur Drechsler, "A Report to the National AAU Weightlifting Committee at the 1976 AAU National Convention," *New England & Region 1–Weightlifter's Newsletter,* no. 48 (14 January 1977): 8-9. Typical of the "We'll never make it" bandwagon were the realistic views of lightheavyweight national champion Joe Puleo. "It is unfortunate in a country such as ours, which is the richest in the world, that there is so much frustration on the part of our best weightlifters. Many of us know how difficult it is to train for and compete in international weightlifting. There is a great deal of sacrifice and energy required. It is distressing to watch idealistic and youthful weightlifters dedicate their lives to the sport, to watch them exert themselves to the limit, time after time dreaming of winning a title which is certain to go to a Bulgarian, Russian, or other professional. Joe Puleo, "A Former Champion Expresses His Views," *Strength & Health* 43 (August-September 1975): 67.

63. Bill Penner, "The International Scene," *Iron Man* 36 (November 1976): 56.

64. The same kind of impression was conveyed by a 1973 television movie inspired by Alexeev's 1970 record entitled "The 500 Pound Jerk," starring former Detroit Lions tackle Alex Karras. "Once again the public's opinion of a big, dumb clod being the only one capable

of lifting weights has been reinforced," was the opinion of one viewer. George Ludwine, "The 500 Pound Jerk," *Strength & Health* 41 (May 1973): 8.

65. "Some New AAU Rules," *Strength & Health* 44 (April-May 1976): 37.

66. Murray Levin letter to Bud Charniga, 15 September 1988, Hoffman Papers.

67. "The 1977 Push is on for Junior Olympic Weightlifting," *New England & Region 1–Weightlifter's Newsletter,"* no. 49 (28 February 1977): 9; and "Behind the Scenes Our National Chairman Keeps Promoting," *New England & Region 1–Weightlifter's Newsletter,"* no. 42 (16 May 1976): 3.

68. "The Iron Grapevine," *Strength & Health* 45 (April-May 1977): 29; and Bob Hise, "The State of USA Weightlifting," *International Olympic Lifter* 5 (1979): 3.

69. *Bruce Klemens,* "The Las Vegas Record Makers' Invitational," *Iron Man* 37 (March 1978): 53-54.

70. Terry Todd, "I Remember Vasily Alexeyev," *Iron Game History* 11 (January 2012): 1-4.

71. "AAU Notice #78-20," *AA You Weightlifting Newsletter,* 1 February 1978: 22; and "AAU Notice #78-42," *AA You Weightlifting Newsletter,* 8 March 1978: 38.

72. Peary Rader, "Grunt & Groan," *Iron Man* 37 (May 1978): 51; and Levin letter to Charniga, 15 September 1988, Hoffman Papers.

73. "Fans–Contact Dick Giller and Put Weightlifting Into Your Scout Program," *New England and Region 1 Weightlifter's Newsletter,* no. 63 (14 October 1978): 38.

74. Peary Rader, "Grunt & Groan," *Iron Man* 36 (September 1977): 36; and *Iron Man* 37 (July 1978): 55.

75. See Leistner to Reno, *New England Association AAU–Weightlifters' Newsletter*, no. 33 (20 May 1975): 5; and Cooney to Reno, 16 December 1975, *New England Association AAU–Weightlifters' Newsletter,* no. 39 (24 January 1976): 5.

76. Peary Rader, "Grunt & Groan," *Iron Man* 36 (January 1977): 57; and *Iron Man* 37 (November 1977): 57. The most recent example was the emergence of East Germany, a nation of 17 million, as a weightlifting power at the 1976 Olympics. Its success could be attributed to easy access to sports clubs and specialized schools and an aggressive recruitment of athletes as young as age six. Frank Shuman, "The East German Olympic Training System," *Strength & Health* 45 (June-July 1977): 8-9.

77. Bill Penner, "Strongmen Here and There," *Iron Man* 38 (November 1978): 52.

78. Murray Levin, "AAU Notice #79-49," 26 April 1979, *New England & Region I–Weightlifter's Newsletter*, no. 68 (9 June 1979): 31.

79. Hatfield to Reno, 21 December 1978, *New England & Region I–Weightlifter's Newsletter*, no. 65 (13 January 1979): 5-12; and Cameron to Levin, n.d.; and Garhammer to Levin, 21 July 1978, *New England & Region I–Weightlifter's Newsletter,* no. 64 (29 November 1978): 33, 34.

80. James to Dick Smith, November 24, 1978, *New England & Region I–Weightlifter's Newsletter,* no. 65 (13 January 1979): 20.

81. Peary Rader, "Grunt & Groan," *Iron Man* 39 (November 1979): 52.

82. "Hungarian Training Program–Part 1," *New England & Region 1 Weightlifter's Newsletter*, no. 70 (8 September 1979): 20; and Dick Smith, "Moscow, A Look Ahead," *Strength & Health* 47 (November 1979): 62.

83. Dick Smith, "Moscow, A Look Ahead," *Strength & Health* 48 (March 1980): 49-50.

84. *Ibid.*

85. Peary Rader, "Grunt & Groan," *Iron Man* 39 (July 1980): 54.

86. Jeff Shorter, "Money Reason Patera Chose Pro Wrestling," *Bluefield Daily Telegraph*, 30 June 1979, cited in *New England & Region 1–Weightlifter's Newsletter*, no. 69 (2 August 1979): 23.

87. Michael Yessis, "Recent Trends in the Development of Strength," *Soviet Sports Review*, cited in *New England & Region 1–Weightlifter's Newsletter*, no. 80 (6 December 1980): 18; and Keith Gonnelly, "Using Isokinetic Exercise to Increase Power and Vertical Jump," cited in *New England & Region 1–Weightlifter's Newsletter*, no. 72 (15 December 1979): 5.

88. Harvey Newton, *Explosive Lifting for Sports* (Champaign, IL: Human Kinetics, 2010). It should also be noted that these concepts were by no means absent in the thinking of previous American world champions. Pete George often emphasized the importance of strong mind to muscle commands to activate as many fibers as possible for maximal performance, and Tommy Kono employs explosive concepts, synoptically termed "acceleration" and "mental conditioning," in Tommy Kono, *Weightlifting Olympic Style* (Honolulu, Hawaii: Kono Company, 2001) and Tommy Kono, *Championship Weightlifting* (Honolulu, Hawaii: Kono Company, 2010).

89. Dick Smith, "Moscow, A Look Ahead," *Strength & Health* 48 (March 1980): 50; Murray Levin, "AAU Notice #80-47," *Weightlifter's Newsletter*, no. 78 (13 September 1980): 22; and "Results–American Weightlifting Championships," *Weightlifter's Newsletter*, no. 80 (6 December 1980): 29.

90. Bob Hoffman, "The 1980 Senior National Weightlifting Championships," *Strength & Health* 48 (September 1980): 10-11; and "American and World Records," *Strength & Health* 49 (January 1981): 50-51.

91. George Kirkley, "Sensational Lifting at the Olympics," *Iron Man* 40 (November 1980): 43; and Peary Rader, "Grunt & Groan," *Iron Man* 39 (September 1980): 57.

92. Herb Glossbrenner, "U.S. Prestige Regained at Shanghai Invitational," *Iron Man* 40 (July 1981): 48; and "Letters to the Editor," *Strength & Health* 49 (May 1981): 9.

93. Karl Faeth, "America Cup II," *Strength & Health* 49 (July 1981): 10-11; Marty Cypher, "Weightlifting at the New Zealand Games," *Strength & Health* 49 (July 1981): 36-37; and Dick Smith, "Friendship Cup Weightlifting Championships," *Strength & Health* 49 (July 1981): 60-62.

94. Bruce Klemens, "The Record Makers Lives Up To Its Name," *Iron Man* 41 (July 1982): 48n; and "Yanko Rusev Can You Top This?" *Strength & Health* 50 (March 1982): 24.

95. Harvey Newton, "OTC Monthly Report-June, 1982" and Harvey Newton letter to John Terpak, 20 October 1982, Hoffman Papers.

96. Roger Sadecki, "Report of Attendance at Olympic Training Center, August 23-September 10, 1982," and "Managers Report, 1982 World Weightlifting Championship, Ljubljana, Yugoslavia," Hoffman Papers.

97. Murray Levin interview with the author, 7 July 1992, York, Pennsylvania.

98. Artie Drechsler letter to Murray Levin, 8 February 1982, Hoffman Papers.

99. *Ibid.*

100. In a similar debate in 1975 over athletes' rights, Levin reminded Drechsler that he had earlier proposed to the conduct and ethics committee a resolution empowering the coach to overrule any lifter

who chooses an "unreasonable poundage" in an international meet. "This was not directed at guys that bomb out a lot," he explained, "but because the best lifting countries in the world use this method and it is a sensible one." Murray Levin letter to Artie Drechsler, June 1975, Rader Papers, Stark Center, University of Texas, Austin.

101. D. G. Thompson, "Afterthoughts on the 1981 Senior Nationals," *Weightlifter's Newsletter*, no. 85 (13 July 1981): 19.

102. Bruce Apotheker, "More Interesting Food for Thought on Science," *Weightlifter's Newsletter* no. 83 (18 April 1981): 3.

103. Dick Baker, "They Like Muscles," *Daily News,* 30 August 1983, cited in "Pan Ams, Bob Bednarski Comments," *Weightlifters Newsletter*, no. 105 (13 October 1983): 26; and Bruce Klemens, "World Weightlifting Champs," *Iron Man* 43 (May 1984): 72.

104. Jim DeCoste, "Comments on the Recent 'Drug' Tests/Problems," *Weightlifters Newsletter*, no. 107 (7 January 1984): 5.

105. Peter Alfano, "The Image Remains a Problem For Lifters," *New York Times*, 13 May 1984, cited in *Weightlifters Newsletter*, no. 111 (16 June 1984): 26.

106. Bruce Klemens, "World Olympic Championships," *Iron Man* 43 (March 1984): 72; and Denis Reno, "National Coverage of Weightlifting," *Weightlifters Newsletter*, no. 112 (16 July 1984): 3.

107. Murray Levin letter to Bud Charniga, 16 September 1988, Hoffman Papers.

108. "Alternate Olympics," *Strength & Health* 53 (January 1985): 45.

109. Herb Glossbrenner, "World Weightlifting Review," *Iron Man* 44 (January 1985): 66.

110. Artie Drechsler, "Heroes of Weightlifting," *Weightlifting USA* 3 (1985): 9.

111. "National Governing Bodies Will Receive $1,131,579 Each," *The Olympian* (February 1985): 22-23; Levin to Finance Committee, 28 February 1985; USWF 1985 Quarterly Financial Reports; United States Amateur Weightlifting Foundation, 1985, Financial Reports; and Digest of Minutes, USWF National Convention, Board of Governors Meeting, 6 May 1985, Hoffman Papers; and Levin to Bud Charniga, 16 September 1988, Hoffman Papers.

112. Murray Levin, "Challenge Put to U.S. Lifters," *Weightlifting USA* 3 (1985): 1; and Murray Levin, "Message from the USWF President," *Weightlifter's Newsletter*, no. 124 (21 December 1985): 6. By 1985 the official number of registered lifters was only 1,537, generating a yearly income of $7,685. "1985 Local Weightlifting Committee Development Funds," Foundation Box, USA Weightlifting Papers, USA Weightlifting Office, Colorado Springs.

113. Bill Starr, "The State of Olympic Lifting in America," *Iron Man* 45 (January 1986): 11.

114. *Ibid.*

115. "U.S. Women Capture Medals in International Competition," *Weightlifting USA* 4 (1986): 1; "Karyn Marshall Wins World Title for U.S.," *Weightlifting USA* 5 (1987): 1; and "Murray Levin to All USWF Members," *Weightlifting USA* 5 (1987): separate insert.

116. In 1986, six years after his defection from Cuba, Urrutia recalled in Cuba "everything an athlete does is used politically. Everything is for Fidel. If you do good one day, your coaches treat you well. If you have a bad day, they treat you bad. Too much pressure. I was always training, training, training. Never any rest." "Carrying the Weight of the World," Boca Raton *Sun-Sentinel*, 23 December 1986. In 1992, Urrutia finished 17th at the Olympics.

117. Gene Baker, "We and They," *Weightlifting USA* 6 (1988): 1; and Carl Miller, "First USA Weightlifting Coordinator Suggests Improvements in Weightlifting Programs," no. 134 (28 February 1987): 11.

118. Mary Ann Rinehart, "Suleymanoglu Demonstrates Technique in Colorado Springs," *Weightlifting USA* 6, no. 6: 1; and Chris Polakowski, "Eastern Lifters Sustain 'Hammer Time' at Camp," *Weightlifting USA* 8, no. 5 (1990): 5.

119. Bobbie Lee, "Lifters Commit to Year-Round Training," *Weightlifting USA* 9, no.1 (1991): 14; and "Cioroslan Diagnoses Resident Athlete Abilities," *Weightlifting USA* 10, no. 1 (1992): 22-23.

1120. Stephen Grabe, "Coaching—Angel Spassov—Coaching," *Weightlifter's Newsletter,* no. 157 (16 September 1989): 4.

121. Jim Schmitz, "President's Message," *Weightlifting USA* 9, no. 4 (1991): 2.

122. Jim Schmitz, "President's Message," *Weightlifting USA* 9, no.6 (December 1991): 2; and *Weightlifting USA* 10, no. 4 (September 1992): 2.

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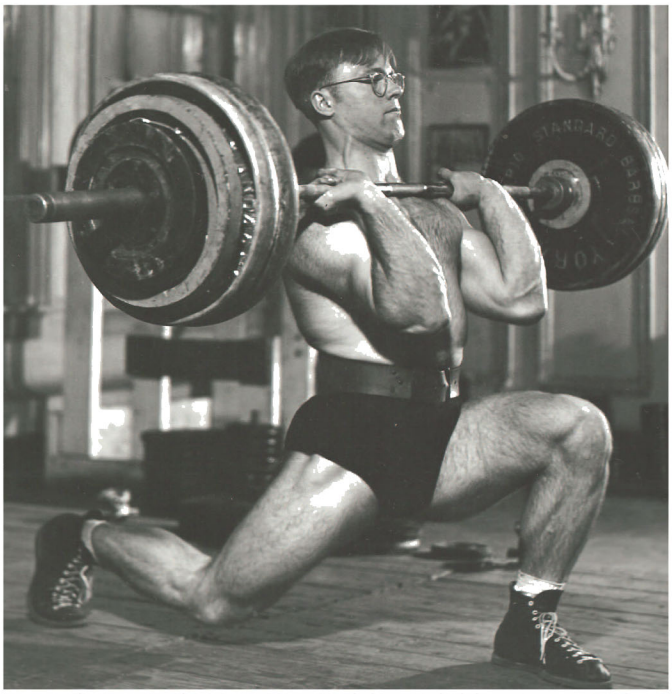

One of America's most successful weightlifters was Norbert Schemansky, who earned medals in four Olympic Games, including a gold in Helsinki in 1952. Schemansky's career was directly impacted by the rise of the Soviet system of state support for weightlifting. *Photo by Douglas of Detroit*

Mike Jenkins (1982-2013)

The Life and Death of a Strongman

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The morning of Thanksgiving, 28 November 2013, Keri Sue Jenkins posted the following message on Facebook about her 31-year-old husband Mike Jenkins, winner of the 2012 Arnold Strongman Classic and one of the elites participating in the 2013 World's Strongest Man (WSM) contest: "It's with a heavy, heavy heart and great sadness that I want to let you all know that my best friend, my husband, my everything, Mike Jenkins, went to heaven this morning. Please keep us all in your prayers. I will update as I know more." Many of the first responses were incredulous. How could a strength athlete at the top of his game possibly die so prematurely? Rumors flew that it must have been a car accident that took his life. Some posts asked about the possible influence of steroids or other drugs. Many expressed the belief that Jenkins's young, well-developed body could not have failed him. Keri responded by informing Facebook friends that he died in his sleep with little warning of trouble the night before. She told me later that her husband was not aware of major cardiac problems and in fact was given "a clean bill of health" after a cardio workup a few months before. The cardiologist, upon referral from a primary care physician after Mike's return in late August 2013 from the World's Strongest Man contest in China, noted from the results of an echocardiogram that Mike's heart was enlarged, but not enough to be of concern, considering his hefty size and athletic profession. He reported Mike's blood pressure at 122 over 80, numbers within a reasonable range.[1]

Mike Jenkins' ready smile and quick wit helped make the winner of the 2012 Arnold Strongman Classic a beloved figure in the sport of Strongman. *Photo by Jan Todd*

Keri did not treat as unusual Mike's expressions of fatigue and soreness the week before Thanksgiving. After all, he had begun training for the 2014 Arnold Strongman Classic and followed a tough regimen characteristic of Strongman workouts, in addition to getting up in pre-dawn hours to oversee his gym, CrossFit Gamma, in Hershey, Pennsylvania. The fact that he "was only deadlifting 700 pounds because of the way he felt," according to Keri, did not send up red flags because of the presumption that he was working his way up to his goal of 900-pound deadlifts.[2] His family hoped that more restful sleep would alleviate his fatigue. (They knew that he had been diagnosed with sleep apnea and that his CPAP [continuous positive airway pressure] appliance had not arrived before Thanksgiving.) It was also not unusual for him to complain of lung congestion, which can also be caused by cardiac problems. The attending coroner later commented, however, that the appliance "would not have made a difference" in preventing his death.[3]

Between 3:30 a.m and 4 a.m. on Thanksgiving morning, Mike's snoring, attributable to his constricted airways, woke Keri and then a short time later she heard a loud thump on the floor. She arose from the bed and turned on the bathroom light. She found Mike lying face down on the floor next to the bed, still snoring. Alarmed, she yelled his name but he did not respond. At that point she called 911 for help and the responder instructed her to roll Mike onto his back and start cardiopulmonary

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resuscitation (CPR). She applied this procedure until Emergency Medical Service (EMS) arrived. Medics found Mike in ventricular fibrillation, a condition in which there is uncoordinated contraction of the cardiac muscle of the ventricles in the heart, making them quiver rather than contract properly. The medics defibrillated him twice and gave him six epinephrine doses, a standard of care in cardiac arrest cases, before reaching the hospital.[4] When the ambulance arrived at Hershey Medical Center, a few minutes' drive from their home, Mike was asystole, more popularly known as flat-lined, a state of lacking any cardiac output or blood flow. He was pronounced dead at 4:35 a.m.

Because of the unusual nature of the case the Dauphin County Coroner, Graham Hetrick, decided to conduct extra laboratory tests and make an assessment of the circumstances of Jenkins' death. Seven months passed, during which the public rumor mill increased in intensity. At the end of that period Hetrick publicly discussed the postmortem report at a press conference on 6 June 2014.[5] Hetrick explained that completion of the report was delayed by the wait for specialized testing by external laboratories of the anabolic steroids in Jenkins' body (Vials collected from his bathroom were sent to the U.S. Department of Agriculture.) as well as to the Dauphin County District Attorney's Office regarding legal implications.

Hetrick listed the cause of death as "complications of cardiomyopathy," popularly known as an enlarged heart, and the manner of death as accidental. He determined the mechanism of death to be a combination of cardiac dysrhythmia and heart failure.[6] In most cases of cardiomyopathy, the heart muscle thickens or stiffens and impedes the flow of blood out of the heart. The forensic analysis of Jenkins' body showed that his heart muscles had abnormal contraction bands and wavy fibers accompanied by small-vessel disease. An average-sized male heart weighs, according to Hetrick, between 280 and 400 grams; Jenkins' was 844 grams. According to the coroner, Mike's cardiomyopathy induced pulmonary edema and congestion in his lungs along with liver congestion and autolysis (also known as self-digestion, in which cells are destroyed through the action of the organ's own enzymes).

Other organs in Jenkins' body showed signs of damage besides the heart. Jenkins' enlarged liver weighed 3972 grams, more than twice the average weight of men considered healthy.[7] The spleen, which acts as a blood filter, was also enlarged, at 680 grams, with marked congestive changes suggesting a response to hypertension. To be sure, spleen weight is correlated to height and bodyweight, but even at Jenkins' relatively large size, his spleen might have been expected to be between 300 and 400 grams—not 680 grams.[8] An average kidney weighs between 120 and 140 grams; the coroner measured Jenkins' kidneys as 372 and 388 grams, respectively.[9]

In light of Jenkins' case of multiple significantly enlarged organs, Coroner Hetrick introduced the possible relationship of an enlarged heart as a result of steroid use to the problem of a swollen, fatty liver often seen among massive strength athletes.[10] Many strength athletes have enlarged hearts, the coroner acknowledged, but his opinion was that lifting alone did not explain Mike's cardiomyopathy. His report flatly stated that "the cardiomyopathy is due to anabolic steroid abuse" and pointed out that this abuse was "longstanding in keeping with the heart abnormalities."[11] Keri Jenkins was aware of her husband's steroid use but she reported that Mike had told her that his regimen was less than that of other competitors (She described his steroid use to the deputy coroner as "a little.") and Mike, in my interview with him in September 2013, also maintained that to be the case, especially considering his expressed concern about having to compete against other top-tier strongmen.

Even before the coroner's report blaming Jenkins' death on steroid use had been released, some politicians had begun to call for screening at Strongman contests. In March 2014, the Pennsylvania House of Representatives passed House Resolution 626, originally introduced by Joe Hackett (R-Delaware) and later backed by 28 co-sponsors, citing Jenkins' death. Hackett, formerly director of the Swarthmorewood Athletic Association, condemned the use of performance-enhancing drugs by athletes and rebuked organizations that he said encouraged strength athletes to use these drugs. Specifically, the resolution claimed that "doping" is "rampant among some professional athletes, especially those participating in strongman competitions such as 'World's Strongest Man,' 'The Arnold,' and 'America's Strongest Man.'"[12] To be sure, the resolution was a non-binding piece of legislation that did not prohibit the conduct of World's Strongest Man events, but the story was picked up in major outlets such as *Forbes* and caused a buzz on the Internet in regard to the legitimacy of Strongman as a sport.[13]

Keri Jenkins provided the EMS team several vials of medicine from Mike's bathroom, and she told the team that they were substances he used. According to laboratory tests, the vials contained testosterone propionate (an injectable, fast-acting steroid producing rapid gains in size and strength), testosterone cypionate (an injectable, long-acting steroid for gaining muscle mass and strength), boldenone undelcylenate (also known by the brand name Equipoise, a veterinary injectable steroid with strong anabolic and moderately androgenic properties), and Pentosan (also known by the brand name Elmiron used to relieve bladder pain in humans related to interstitial cystitis, a bladder disorder of which the coroner found no evidence). The first three are known as anabolic steroids; testosterone is the parent hormone which is modified by adding an ester (organic compounds formed by the condensation of an alcohol and an acid). The fourth medication is classed as a heparin used principally in medicine to induce anticoagulation and prevent fat buildup within blood vessels. The Pentosan (liquid) that Mike had was designed for use in horses rather than humans. One of the vials had inscribed on it, "For Animal Treatment Only" and the other was labeled, "HorsePreRace." In animals, it is used as a structure-modifying osteoarthritic drug. That is, it not only treats joint pain but halts the progression of arthritis by replacing lost proteoglycans from the cartilage matrix that weakens the joint's structure. There is also mention in the report of three injection sites on the buttocks, where the liquid steroids would commonly be inserted via needles. Forensic tests showed that Mike suffered hemorrhage in all three sites.[14] Although the coroner did not specifically test for amounts of steroids in the body, he reported that "we did find evidence of steroid abuse at the scene [Jenkins' residence] and confirmed them [the drugs]to be steroids."[15]

Mike poses with his wife, Keri Jenkins, after winning the 2012 Arnold Srongman Classic. *Photo by Simon Bronner*

The toxicology analysis for levels of compounds in Jenkins's body revealed that Mike had in his blood Theobromine, probably used as a blood vessel widener and diuretic, and Lidocaine, applied as a local anesthetic and antiarrhythmic drug. Of particular concern to the coroner, however, was 64 nanograms per milliliter of DMAA (1,3-dimethylpentylamine or 1,3-dimethylamylamine), or Methylhexaneamine (also rendered in medical literature as methylhexanamine), described by Hetrick as a "workout energy supplement" that "was contributory to his overall condition at death."[16] The U.S. Food and Drug Administration (FDA) noted as late as 16 July 2013, that DMAA is an ingredient found "illegally in some dietary supplements and often touted as a 'natural' stimulant." The claim to naturalness comes from the listing of geranium oil or extract as a source of methylhexanamine on dietary supplement packages, although the FDA and Health Canada disputed that assertion and reported that DMAA appears in these supplements in the form of synthetic material.[17] The FDA warned that especially in combination with other ingredients such as caffeine DMAA "can be a health risk to consumers." In fact, caffeine was found in Jenkins' system, probably in response to his reported feelings of fatigue.[18] The FDA cautioned that "ingestion of DMAA can elevate blood pressure and lead to cardiovascular problems ranging from shortness of breath and tightening in the chest to heart attack."[19] Toxicologist Edward J. Barbieri, who reviewed Jenkins' case for National Medical Services, stopped short of linking DMAA to Jenkins' death but cautiously concluded that "although DMAA has been found to be involved in a few deaths…there is not sufficient data to associate blood or tissue concentrations with drug ranges in fatalities."[20] Although acknowledging that DMAA "can be involved in a death," the toxicologist pronounced that he could not "be certain that this was the situation in Mr. Jenkins' case."[21] Coroner Hetrick's view was that DMAA in combination with caffeine "probably" caused cardiac dysrhythmia that led to cardiac failure in a heart already weakened by longstanding steroid use. With the intentionality of Jenkins' steroid use in mind, Hetrick noted that his staff "went back and forth" on whether Jenkins'

death should be categorized as "accidental," but went with it because of the evidence that *the addition* of DMAA contributed to his death. Another consideration for the judgment of an "accidental death," according to Hetrick, was that Jenkins probably did not know the extent of the damage being done to his body by steroids.[22]

In 2012, the FDA issued warning letters to companies notifying them that products with DMAA should be taken off the market or reformulated to remove the substance, and many complied, but the drug marketed for burning fat and building muscle is still known to be available on the Internet as a "workout drug" popular with athletes.[23] The FDA, however, did not formally recall supplements with the substance, although Health Canada banned it from all products and the U.S. Department of Defense removed it from all military exchanges worldwide.[24] Also in 2012, runner Claire Squires collapsed and died at the London Marathon and the coroner at the inquest stated that DMAA "on the balance of probabilities, in combination with extreme physical exertion caused acute cardiac failure."[25] In 2013, the stimulant was listed in the World Anti-Doping Agency as a substance prohibited in competition.[26] Accordingly, American weightlifter Brian Wilhelm accepted a nine-month suspension after testing positive for the substance in a urine sample from December 2012 at the American Open Championships.[27] The dietary supplement also received publicity when three athletes tested positive for DMAA at the 2014 Winter Olympics in Sochi.[28] According to Coroner Hetrick, the supplement has an amphetamine-like effect although it is not a derivative of amphetamines.[29] Marketed originally by drug manufacturer Eli Lilly and Company as an inhaled decongestant pharmaceutical drug under the brand name Forthane from 1944 until 1983, when Lilly voluntarily withdrew it from the market, DMAA is classified as an indirect sympathomimetic drug, which means that it mimics sympathetic nervous system action and stimulates the heart. Athletes are therefore drawn to it to boost energy (or as a replacement for the banned substance ephedra in supplements, but in a widely reported statement in the *Archives of Internal Medicine* in 2012, Professor Pieter Cohen of the Harvard Medical School called for its total ban with the dire warning that it causes health problems by increasing heart rate and narrowing blood vessels which can increase blood pressure and lead to shortness of breath, tightening in the chest, and possible cardiac arrest.[30] Implying that the pronouncement of a direct link of DMAA to cardiac arrest was premature or unsubstantiated, spokespersons for the supplement industry responded that the "jury is still out" on the safety of the substance.[31]

Even as a young child, Mike was abnormally large and thickly-built. He weighed 225 pounds by the time he was 12 years old and was able to squat with more than 400 pounds while he was still in the sixth grade.

Photo courtesy Kristin Poundstone

After the news circulated of Jenkins' death, Jan and Terry Todd announced that the 2014 Arnold Strongman Classic would be dedicated to his memory. Testimonials poured in, and I was struck by the oft-repeated observation of Mike's kindness as well as athletic talent. His wife described him as "a gentle giant with a heart of gold" and postings by athletes and students echoed this sentiment. For example, fellow competitor Brian Shaw wrote on Keri's Facebook page the day Jenkins died, "The Strongman community and the whole strength world lost an extremely amazing man today. I had the upmost respect for Mike not only as a competitor but also as a man. He was a truly great guy and I know he touched and inspired a countless number of people." Tony Doherty, who interacted with many athletes in his position as president of the Australian International Federation of Bodybuilding and Fitness posted this comment about Mike that many viewers liked, "The nicest guy I ever met in any sport." No wonder that the memorial shirt created for Mike Jenkins by CrossFit Gamma featured the phrase "Strongman, Warm Heart" and a visage of a smiling Jenkins bedecked with a striped, bright green bandana. His friendly manner, amazing accomplishments, devotion to charity, and gracious personality have been loudly touted in various gatherings. However, the central issue for the Iron Game is whether Jenkins' "sudden cardiac death" was a tragic anomaly or a

warning sign. With the bodyweights of the top Strongman competitors becoming progressively heavier are there additional risks in the sport because of the supposed widespread use of strength- and muscle-building drugs as well as the absence of testing for such drugs?

On the blogosphere after Jenkins's death, followers of strength athletics remembered 6'5", 300 pound Jesse Marunde (1979-2007) who qualified at the young age of 22 for the 2002 World's Strongest Man competition in Malaysia after winning the title of Strongest Man in the West and later placed second in the 2005 World's Strongest Man competition in China. Despite his youthfulness and general fitness, Marunde collapsed and died immediately following a workout in 2007. Doctors attributed his death to hypertrophic cardiomyopathy which, unlike other forms of the ailment, is a genetic heart defect. That led to speculation as to whether Marunde's death might have been hastened by his strength training, possible use of anabolic drugs, heredity, or some combination of those factors.[32] Adding to this conjecture was the tragic early deaths of many superheavyweight strength athletes over the previous two decades, including that of Marunde's fellow Strongman competitor, 6' 5", 390 pound Johnny Wade Perry, Jr. (1972-2002), from Zebulon, North Carolina, who died abruptly at the age of 30 on November 21, 2002. An autopsy found that he, too, had an enlarged heart that might have contributed to his death, but the immediate cause was a cocaine overdose.[33] His heart, which weighed 620 grams, raised speculation about a linkage to long-term steroid use. The Chief State Medical Examiner Dr. John Butts commented that "even though he's a big fellow, that's [his heart size] too big."[34] (Mike Jenkins' heart weighed 844 grams.)

Public health officials referred at the time of Marunde's death to the growing problem of "sudden cardiac death" among young athletes, young being defined as under-35 years of age, usually caused by ventricular arrhythmias.[35] In contrast to the classic "heart attack" in older adults signaled by chest pain and shortness of breath, many young athletes in the pattern of sudden cardiac death or ventricular fibrillation do not complain of acute pain or pronounced symptoms. In cases of sudden cardiac death, unlike classic heart attacks, patients do not respond normally to portable defibrillators. Although some trainers call for regular electrocardiography to screen for problems, the American Heart Association discouraged such tests because of a high false positive result. Indeed medical researchers Jonathan Drezner and Karim Khan wrote in the *British Medical Journal* that "no study monitoring pre-participation evaluation based on history and physical exam can prevent or detect athletes at risk for sudden death."[36]

To be sure, sudden cardiac death among young athletes is still considered a rare occurrence when compared to the number of victims of cardiac arrest, especially the kind due to coronary artery atheroma and ventricular hypertrophy. Premature death in the sports world, however, especially the deaths of young adults who appear to the public to be highly developed, healthy athletes, draws media attention. Mike Jenkins's sudden death triggered a public response to Strongman that was even greater than it was for the passing of Marunde and Perry. The global, instantaneous communication of social media certainly was a factor, but so was Jenkins' 2012 victory in the well-known Arnold Strongman Classic, and the charisma that Jenkins exuded in the sport. *Musclemag* editorialized, for example, that "Perhaps no other strongman champion has done as much as Jenkins to positively promote the sport, give back to the fans and use his fame and influence to help others."[37] When the press moved beyond memorials in Jenkins' case to find research on scientific studies of cardiac issues by strongmen, however, little came to light.

Even so, one scientific treatise included Strongman contestants, by a team of six researchers led by Tomas Venckunas of the Lithuanian Academy of Physical Education found that strength athletes had thicker heart walls and left ventricular diameters than marathoners and a control group of exercising individuals in sedentary occupations. The study concluded that "athletes who are seriously engaged in Strongman sports may demand greater attention as an extreme group of athletic individuals with regard to cardiovascular disease risk."[38] The researchers recommended inclusion of endurance training to complement strength training. One factor in the finding of the deterioration of cardiovascular fitness and health, according to the researchers, was the body mass index of the Strongman competitors compared to marathoners and sedentary athletes. Strongmen are usually classified as obese and as having lower aerobic capacity. Thus, the study concluded, "Strongmen are individuals to which consideration of primary prevention from chronic diseases such as coronary heart disease, type-2 diabetes, and stroke is important."[39] But the researchers stopped short of making a correlation of

strength athletics with sudden cardiac death. Many previous studies had focused on the muscular-skeletal injuries of Strongman competitors and not the effect of training on internal organs.

Two years later, research conducted with a larger sample of individuals than in Venckunas' study—this one by lead author Harrison Pope of the Harvard Medical School—reported medical problems with young weight trainers stemming from "performance-enhancing drugs" (PEDs), defined as promyogenic (anabolic) drugs that increase muscle mass or reduce fat mass. According to Pope's team, the most prevalent drugs in this category are anabolic-androgenic steroids, which they linked to severe effects of cardiomyopathy and dyslipidemia (an abnormal amount of lipids in the blood). The team suggested that public health problems are most pronounced among "nonathlete weightlifters" (sometimes referred to as "recreational bodybuilders"), who tend to focus on personal appearance rather than professional contests of strength or muscular development.[40] These weight trainers had histories of sustained, addictive use of PEDs over a longer period than the competitive athletes and they were prone to adverse effects of combining PEDs with non-steroid anti-inflammatory drugs and opiates. The research team suggested that elite athletes sometimes mitigated adverse effects by withdrawing from PED use in intervals between contests and avoided counter-indications with other drugs. The researchers could not claim, however, that systematic studies of the medical consequences of illicit PED use either had been done or would be done in the future. Although the lack of such studies seems confusing, it is because the medical ethics committees overseeing research studies of this sort will not allow studies which could themselves be harmful to the research subjects or involve illegal substances. Although noting the pervasiveness of PEDs in the strength world and the evolving patterns of PED use in the general adult population that they correlated with cardiovascular and metabolic problems, the researchers regretted that without systematic studies, "The mechanisms by which PEDs exert their adverse health effects remain poorly understood."[41] These mechanisms include the kinds of bodily compositions of individuals who might be more prone to sudden cardiac death. Coroner Hetrick also commented that even if Jenkins had stopped lifting and using steroids, he would have already suffered non-reversible heart damage. This does not mean, however, that he would not have been able to extend his life had he significantly reduced his bodyweight, stopped using the many performance-enhancing drugs he was using, and adopted an exercise program which included cardiovascular training.

The recommendations of studies from research teams led by Vaenckunas and Pope echo the warnings of Terry Todd, Director of the H.J. Lutcher Stark Center for Physical Culture and Sports, who in 1994 bemoaned the premature deaths from "natural causes," which indeed might have included cardiomyopathy, of superheavyweight powerlifter Matt Dimel at the age of 33 and Strongman competitor Jon Pall Sigmarsson at 32. Todd editorialized that the popular combination of overeating and steroid use put strength athletes at higher risk of premature death than other athletes. A reason for concern is that strongmen—convinced of their fitness, or "being in shape"—can succumb without warning. However, reports of sudden cardiac death are much more pronounced among men than women. Reports from medical authorities indicate that like Jenkins, the cohort of strength athletes who have died prematurely from "natural causes" often passed physical exams with flying colors, only to collapse suddenly later. The report in the *British Medical Journal,* for example, noted that strength athletes typically experienced their first signs of cardiovascular problems at the moment of death.[42]

Then again, athletes might confuse feelings of exhaustion or light-headedness that indicate problems of cardiac relaxation with the after-effects of weight training. Jim Murphy had won three straight Massachusetts State Strongman championships by the age of 25 when he checked himself into a hospital after feeling dizzy while helping a friend carry a small television set, which was much lighter than anything he lifted in the gym. Murphy became worried since he had reportedly once pulled a 65,000-pound dump truck and completed an 895-pound deadlift. Doctors offered a diagnosis of cardiomyopathy that probably led to the formation of a blood clot in his heart. He should have died, they told him, because his heart was only pumping eight percent of his blood. Perhaps his relatively slight size of standing 5 feet 11 inches and weighing 215 pounds—compared to other Strongman giants such as Brian Shaw (6 feet 8 inches and 440 pounds)—was a factor in his survival. In any case, Murphy received a heart transplant, and despite warnings against strength training, resumed lifting three months later and placed fifth in the New Hampshire Strongest Man contest three months after

Mike excelled at the timber carry event at the Arnold Classic and placed second in 2011—his first year in the contest—with a time of 10.6 seconds. The timber frame weighed approximely 1030 pounds that year but the athletes were allowed to wear straps. In 2012, the timber frame weighed "only" 880 pounds but the men were not able to wear straps. The lack of straps was no trouble for Mike, who won the event that year, carrying the cumbersome timber frame up the ramp in an astonishing 7.42 seconds. *Photo by Simon Bronner*

that.[43]

Jenkins was not so lucky. His biggest physical worries, so he said, had been muscular-skeletal injuries to his back, knee, and shoulder. He also had an unusual tendency to perspire heavily and he sometimes even wore shorts and sandals in winter, but he did not connect these characteristics to heart problems. As for his training, he espoused loaded movements such as the farmer's walk for cardio fitness and taking days off between workouts for recovery. Like many strength athletes, he gave particular attention to his food intake. When he began training on Strongman events, he weighed around 370 pounds and had bulked up to 400 pounds before the 2013 World's Strongest Man contest in Sanya, China. He then dropped to 360 pounds after getting flu-like symptoms. With the encouragement of his wife Keri, who had competed in fitness and bikini contests, Jenkins ate carefully and described his nutrition as "clean."[44] He ate between five and seven meals during the day, which were relatively low in carbohydrates. He also used protein powder and downed protein shakes with peanut butter and lean protein meals (At the last workout I attended with him, he offered me elk meat, touted as being naturally low in fat, low in cholesterol, and high in protein.)[45]

Mike turned professional in 2011, and his star rose quickly before being extinguished. Physical educator Kristin Poundstone, long-time observer of Strongman contests including those involving her competitor-husband Derek Poundstone, commented to me after Jenkins' death, "With the little time he was here he made one of the biggest breakthroughs in strength history." *Milo*, a magazine devoted to strength athletics, called him the competitor who took "strongman by storm."[46] Even if he did not have a lengthy career in Strongman, Jenkins managed, Alex Zakrzewski of *Musclemag* reflected, to leave an "indelible mark . . . on both the sport of strongman competition and physical culture."[47]

Jenkins was born 3 November 1982, in Taylorsville, Carroll County, near Westminster, Maryland. He described the location as "being out in the country," roughly equidistant from Baltimore to the southeast and York, "Muscletown, USA," to the northeast. He emphasized that living where he did exposed him to a variety of physical activities. He recalled "growing up on a dirt road," and listed his favorite activities as fishing, riding bicycles, and playing sports. Jenkins remembered always being bigger than his fellow students, and certainly larger than his parents, through his schooldays. Remarkably, he hit the 225 pound mark before he turned twelve years old, which puts him in the same rare category as 6'3", 400 pound WWE wrestler Mark Henry, who won the inaugural Arnold Strongman Classic in 2002, and weighed 220 when he was only ten. As a high school freshman, Mike weighed over 300 pounds and grew to 6'3". He began weight training in middle school and turned heads by bench pressing 315 pounds and back squatting over 400 pounds as a sixth grader. He wanted to play pee-wee football but he could not

because he exceeded its size limits. He turned to soccer, basketball, and lacrosse and played football at South Carroll High School, from which he graduated in 2000. After attending Kent State University in Ohio for a year on a football scholarship, he transferred to James Madison University (JMU) in Harrisonburg, Virginia, a Division I (Football Championship Subdivision) school. He was a starting offensive lineman weighing in at 290 pounds on JMU's national championship team in 2004. Deeply involved in athletics, he stayed on campus at JMU to receive his M.A. in Athletic Administration in 2005. An early influence on his weight training was JMU's strength coach Jim Durning, who moved on in 2012 to the University of North Carolina-Charlotte. Jenkins credits Durning for giving him an appreciation of bodily development and strength training. Although the entire team did weight training, Jenkins recalls that he was among a handful of players who, in his words, "were really into it." He attributed this training to his athletic development. In his words, "I went into JMU weighing about 275 pounds, super lean, I left about 300 and still around 8% bodyfat, I looked awesome! I still use a lot of the same methods we did at JMU in my training today, tailored to my Strongman needs obviously…I would go get in extra workouts away from the team facility."[48]

Jenkins had a brief stint in professional arena football, playing for the Georgia Force (Arena Football League) in suburban Atlanta. After his release, he returned to Maryland to work as athletics director for Silver Oak Academy, a high school for youth offenders in Keymar. He continued his weight training, but he recalls that without sports competition in his life, he felt aimless. He needed a goal to drive him to keep up his regimen, he said. Remembering watching World's Strongest Man competitions on television, he took his mother on Mother's Day in 2007 to a local Strongman contest to see the competition up close and consider it as a new direction to get back into competition. Training at home was challenging, as Jenkins recalled: "Mom and dad weren't too keen on having 1000 pound tires in the driveway and neighbors always asked me if I needed help pushing and pulling trucks up and down the road, always driving away shaking their heads wondering why the hell I am pushing a perfectly good truck."[49]

A relative unknown in the strength community of powerlifting and Strongman, Mike entered the Maryland's Strongest Man contest in August of 2007 and—at 325-pounds—the ex-football player in the bright yellow shorts turned heads by winning. The victory qualified him for Nationals in Las Vegas. Up against seasoned men who had trained longer than he had, Mike placed sixth out of approximately 100 competitors and, as he said, "has been hooked ever since."

He improved with more focused Strongman preparation to take second place at the 2009 North American Strongman National Championships in New Orleans. He especially excelled at the farmer's walk and yoke carry, but realized that he needed to build up his deadlift numbers. He applied his background in soccer and football, he said, to farmer's walk and yoke carry, which he categorized as Strongman "moving events." His weekly routine consisted of overhead pressing on the first day, followed by deadlifts and accessory movements on the second day. After a day of recovery that could involve massage and chiropractic care, he devoted himself to squats on the fourth day. He gave himself another day of recovery following that and concentrated on event work such as the Atlas stones and the farmer's walk on the sixth day. He gave himself at least one day a week away from training.

In 2010, he entered the first Arnold Amateur Strongman contest in a crowded field and took first, placing ahead of former professional baseball player Mike Caruso and winning the Press Medley. The victory earned him a pro card and an invitation to the following year's Arnold Strongman Classic. By the time the 2011 Arnold rolled around, Jenkins had made a move to Harrisburg, Pennsylvania, to be with Keri, who taught at Lower Dauphin High School. He worked at an alternative school, again guiding at-risk youth, and trained in local gyms, including Gold's Gym in Hershey.

When Jenkins walked out on the Arnold stage, the announcer commented that as the first winner of the Arnold Amateur Strongman contest he would have to prove himself against more senior contestants such as Brian Shaw, Žydrūnas Savickas, Mark Felix, Terry Hollands, Nick Best, and Mikhail Koklyaev. Jenkins certainly did that with his performance on the timber carry, which pushed him up the rankings among the leaders. The event involves lifting a frame of barn timbers weighing approximately 1000 pounds and carrying it up a ramp in the best time. Jenkins stood out not only because of triumphing over former winners of the Arnold Strongman Classic but also because of his neon-colored sneakers and the bright bandana he wrapped

around his shaven head. They became his signature fashion statements, which with his characteristic humor were intended, in his words, to "have some fun out there." He sped up the ramp with the timber frame in 10.6 seconds, only .42 seconds behind leader Brian Shaw. He also finished just below Shaw in the Manhood Stones by hoisting a 535-pound stone over a 48-inch bar twice in 48.19 seconds, to Shaw's four reps in 53.13 seconds. He rejoined the frontrunners, however, when he stepped on the Veterans' Auditorium stage to a full house on the final evening of the Strongman Classic. The culminating event was the classic strength test of lifting the "Circus Dumbbell." The objective was to lift the 242-pound weight with its daunting three-inch-thick handle with one hand straight up above the head the most times within 90 seconds. (Lifters use two hands to get the dumbbell to the shoulder on each repetition, but then must release one hand for the overhead portion of the lift.) Its visual appeal was not only its demonstration of arm and shoulder strength but also the quick lifting thrusts signifying power, much as one would drive a clenched fist into the air. In a remarkable display, Jenkins bested leader Brian Shaw with eight lifts and to the amazement of the crowd the newcomer took second place overall in the Arnold Strongman Classic, ahead of six-time Arnold champion Žydrūnas Savickas. Jenkins was delighted by his finish, and referred to the experience as living out a dream. Mike mentioned to me that "I think I not only shocked the audience but I also shocked myself." The achievement motivated him to push harder to reach the top the following year. He told Phil Burgess, host of World Wide Strength Radio, "In five years I would like to have a few more Arnold titles and some World's Strongest Man titles as well. I want to be remembered as one of the best ever, that's what drives me to train."[50]

Jenkins had caused a stir in the strength world with his finish at the 2011 Arnold Strongman Classic but still needed to show that he was not a flash in the pan. In early August he flew to Poland for Giants Live to qualify for the World's Strongest Man competition. There, Jenkins placed just behind home-grown Polish Strongman Krzysztof Radzikowski, who went on to win the World Strongman Federation's World Strongman Championships in 2012. Jenkins' qualification for the 2011 World's Strongest Man contest in Wingate, North Carolina, broadcast by ESPN television and held six months after the Arnold, added drama to the event with a matchup again with Brian Shaw and Žydrūnas Savickas, neither of whom had been at the Giants Live contest. It also marked the return of Derek Poundstone, who had been a late scratch from the previous Arnold because of a back injury. After qualifying for the final by coming in second to Savickas in his heat, Jenkins demonstrated that he was a force to be reckoned with by winning the first two events—steel frame carry and giant tire walk. He had to withdraw, however, after suffering debilitating back spasms and so placed eighth overall out of ten finalists. The apparently indefatigable Shaw and Savickas placed first and second, respectively.

Jenkins suffered a setback with his back injury, but vowed to return in top form by the time of the next Arnold Strongman Classic on March 2-3, 2012. Previous champions Shaw, Savickas, and Poundstone would be back along with formidable competitors Travis Ortmeyer, Mikhail Koklyaev, Mike Burke, Laurence Shahlaei, Terry Hollands, and Hafþór Júlíus Björnsson. Savickas jumped out to an early lead by lifting a record-setting four repetitions with Apollon's Wheels loaded to 459 pounds. Jenkins managed two repetitions, tying him with Derek Poundstone and Mikhail Koklyaev in third place. Jenkins kept pace with the leaders by being the only Strongman able to lift the massive Austrian Oak—a log weighing 456 pounds (207 kilos)—above his head twice and winning the Circus Dumbbell event with seven repetitions (The weight had been increased to 255 pounds for the 2012 event.). Savickas appeared intent on separating himself from the pack going into the final event after setting a new Arnold record of 1117 (507 kilos) pounds in the Hummer tire deadlift. But Jenkins ultimately caught Savickas and everyone else in the final event—the timber carry—and triumphed on the Veterans Auditorium stage with a world's record time of 7.42 seconds, beating out Derek Poundstone by .14 seconds and one point overall (Savickas and Shaw came in third and fourth with scores of 36 seconds and 36.5 seconds, respectively).

Jenkins followed his victory two weeks later with a trip to Australia to compete in the Giants Live Strongman contest at the FitX Sport and Fitness Expo. He continued his dominance with victories in the Viking Press by amassing 18 repetitions of the 331-pound (150 kilos) apparatus. He also set a world record with a 2500 pound hip lift (1134 kilos) putting him ahead of fellow Americans Nick Best and Mike Burke and qualifying him for the World's Strongest Man contest. With his travels to attend Strongman events around the world,

Jenkins was forced to quit his job in an alternative school, but he stayed involved with youth by establishing Catalyst Athletics to coach aspiring athletes.

After his victory at the Arnold, Jenkins was gaining notice from the international press. He was featured in spreads in muscle magazines, did interviews for radio and television shows, picked up the sponsorship of Maximum Human Performance (MHP) supplements, and his image lifting the massive Austrian Oak was emblazoned on Rogue Fitness t-shirts. Journalists often focused on his meteoric rise in the strength world and his impressive size; Phil Burgess referred to him as a "Runaway Juggernaut" and weightlifting journalist Thom Van Vleck called him a "modern day giant."[51] Often there was surprise by some interviewers that he had as much rest in his routine as he claimed, because they expected his ascendancy to be a result of long, intensive training. His large body did not display the well chiseled muscular profile of a bodybuilder but he obviously possessed a great deal of muscle mass and the strength that usually goes with it. He liked to underscore his foot speed and agility, born of his childhood back in the country and his exploits on the football field. Brandishing a wry smile, Mohawk haircut, and exercise outfits with outlandish colors, he was a photogenic, memorable character.

Jenkins rounded out a busy March 2012 by marrying his sweetheart, Keri Sue Ricker, in Hershey, Pennsylvania, on the 24th of the month and laying down plans to live their dream of opening a CrossFit gym where he could train and conduct workshops for aspiring strongmen. He also became an athletic instructor and volunteer coach for the Milton Hershey School, a boarding school established by Milton Hershey for disadvantaged youth. Professionally, he had his sights set on the World's Strongest Man competition in September. He was, in the words of Brian Shaw, "the man to watch" in 2012 and he went into the World's Strongest Man in Los Angeles as one of the favorites. After placing second in his heat behind Björnsson, in the finals he again faced Savickas and Shaw as well as Radzikowski, who had bested him in Giants Live Poland. Edging closer to the super-weight barrier of 500 pounds in the log lift, Savickas set the pace with a 485-pound (220 kilos) record lift. Jenkins barely missed at the same weight, and felt dejected after having lost his footing with time running out. Savickas' countryman Vytautas Lalas made news by leading after the first day with strong finishes in the bus pull and yoke race. Lalas held his lead with a record number of repetitions on the squat lift of 700 pounds (318 kilos). Jenkins kept pace in second but his knee was visibly bothering him, perhaps from his log lift, or lingering consequences from playing football and suffering medial collateral ligament tears on his knee. The Lithuanians Savickas and Lalas placed first and second, respectively. Jenkins end-

Jenkins had terrific overhead pressing strength and won the Circus Dumbell event at the Arnold Classic in 2012 by raising the 255-pound, thick-handled implement seven times, more than anyone else in the contest that year. *Photo by Jan Todd*

ed up fifth overall, a point and a half behind Brian Shaw and six points ahead of Radzikowski. Björnsson, who had been ahead of Jenkins in his heat, placed third.

Even so, Jenkins was upbeat after the WSM and looking ahead to defending his Arnold title. Sixteen days after the 2012 WSM was over, he posted the message, "Road to the 2013 Arnold Classic has begun" with his first heavy lifting since returning from Los Angeles (17 October 2012). His knee continued to bother him, however, and he went in for arthroscopic surgery in December, forcing him out of the Arnold competition for 2013. Still, he attended the event and added color commentary to the proceedings from the stage, in addition to writing Strongman articles for *Muscle Magazine*.[52]

Farewell from a Champion. Mike was a great showman on-stage and always waved to the crowd after finishing an event.

Photo by Jan Todd

Looking to return to competition, Jenkins prepared for the 2013 World's Strongest Man contest in Sanya, China, scheduled for August. In the finals, he opened strong by winning the frame carry but felt the effects of a stomach and respiratory bug exacerbated by dehydration from the extreme heat and humidity. He fell back to fifth in his normally favored events of the truck pull and yoke. He mustered his strength, however, to climb into third place behind the familiar names of Shaw and Savickas with respectable showings in the deadlift and overhead medley. After an impressive win with a time of 23.31 seconds in the Atlas Stones, Björnsson moved ahead of Jenkins, who then took the fourth spot overall. When I interviewed Jenkins in September back in Hershey, he was still feeling what he believed to be the effects of the illness contracted in China more than a month before. He sounded congested and had dropped forty pounds. He reflected that, considering his condition at the WSM, he was happy with his finish, but he was looking forward to a comeback at the Arnold in 2014 and he held high hopes for a World's Strongest Man title in his future. Mike understood his limitations and the possibility of injury as he aged, and he predicted no more than five more years of participation in professional Strongman competition. "What do you want to do then?" I asked. His thoughtful answer indicated that he wanted to make his gym a success, continue to mentor youth and, most of all, it seemed to me, devote himself to his family. Recognizing the toll that Strongman was taking on his body, he did not want to be on the road chasing titles in his forties. He knew that his giant frame and feats of strength drew expectations of prolonged competition but he said that, ultimately, he wanted "to be seen just like anyone else—with a family, interests, and life."

A special event in Mike Jenkins's life was the grand opening of his gym CrossFit Gamma on 7 September 2013. He sponsored a fitness contest that day and devoted funds raised there to benefit a local young mother combating ovarian cancer. T-shirts were made up that featured an image of Mike with kettlebells above the words "smashing cancer." On the back was a pair of angel wings with a ribbon imprint representing the battle against cancer. The highlight of the event was his pulling of a fire truck loaned by the Hershey Fire Department. Tears filled many eyes as he presented the woman with a check for $8,000. It would not be Mike's last expression of selfless devotion to the welfare of others. For example, he pulled a bus for a fundraiser, "Barbells for Boobs," that paid for breast cancer detection services, and he participated in a "Hero WOD" for fallen fire-

fighters who battled blazes in Arizona earlier during the summer. His wife Keri commented, "I'm proud to know that he used his achievements to create awareness for causes he felt passionate about and always helping the 'underdog.'"

I attended subsequent workouts on the Strongman Wednesdays Mike held in the gym together with Keri. He worked participants through tire flips, keg carries, and Atlas stones, always with a touch of humor, often decked out in neon green print bandana and pink and purple Converse sneakers to go with his iconoclastic haircut. A memorable line of his after hearing someone claim that Strongman was too hard was, "if it didn't hurt, it would be Zumba!" He wanted participants to know he was behind them. His refrains of "don't quit" and "you can do it!" urged on the athletes. His charisma was evident; the sight of 20 persons coming out at 6 a.m. for Strongman work was due largely to the pull of his personality. On October 26, he held a clinic for aspiring Strongman contest competitors and announced he was ready to ramp up his workouts for the Arnold. No mention, of course, was made of steroids or supplements. On the eve of Thanksgiving—his last—Mike posted a picture of the "workout of the day" with kegs and stones.

When Mike Jenkins' face came on the giant screen at the Arnold Strongman Classic stage and the announcement was made that the event was dedicated to his memory, I could tell that he had earned admiration and emotion from fellow strongmen as well as fans. A buzz could be heard onstage and in the wings that Mike was too generous, too kind, too talented to have left this world so soon. Indeed, he passed away prematurely, and the circumstances of his sudden departure raised still unanswered questions about the limitations of the body and the risks that competitors take to triumph at the ultimate levels of strength athletics.

Two days after CBS Sports again televised the WSM contest from China, featuring Mike Jenkins, Coroner Hetrick at his press conference reflected that Jenkins' death should be a signal to begin screening athletes in Strongman contests. He observed that gym members across the country have a lively, secretive, and often inaccurate oral tradition on the pharmacology of muscle mass and energy, and he hoped that bringing research-based information more out into the open would help the sport as well as the health of its participants.[53]

As Mike Jenkins's image continues to appear on shirts, posters, and the Internet, the message—conveyed in a burst of bright color—is about the value of strength and determination, and an inspired outlook on life. Keri Jenkins captured this sentiment when, in sharing the spirit of her late husband, she posted a picture of him competing in a Strongman contest wearing a neon green t-shirt featuring his uplifting words, "This is what it looks like when we realize all of our hard work, strength, and determination are paying off! I'm so fortunate to get to see the joy on each of your faces when you have this moment!" The question for many Strongman competitors and fans in light of Mike's death at 31 is this: What can be done to make such moments safer?

NOTES:

1. *Editors' note: We asked Dr. Reginald Baptiste, an Austin cardiothoracic surgeon and Adjunct Professor at the University of Texas to comment on several aspects of this article, and Dr. Baptiste said that it would have been inappropriate to give Mike a "clean bill of health" since the subsequent autopsy and coroner's report revealed that he suffered from significant cardiomyopathy—with a heart from two to three times larger than average—and that he also had sleep apnea, which is often seen in obese people with cardiac disease.*
2. Wayne K. Ross, [*Michael Jenkins'*] *Postmortem Report* (Harrisburg: Dauphin County Coroner's Office, 2014), 2.
3. Graham Hetrick, Email correspondence with Simon J. Bronner, 12 June 2014. *Editors' note: Dr. Baptiste's opinion is that a CPAP appliance could have made a difference. He also pointed out that what sleep apnea does is to cause a person to temporarily stop breathing, which then forces the person to wake up and start breathing again, which means that such sleep is seldom restful.*
4. Ross, *Postmortem Report,* 2.
5. Matt Miller, "Long-Time Steroid Use Helped Kill Famed Strongman Mike Jenkins, Prompts Coroner's Warning," *Patriot-News* (Harrisburg, Pennsylvania), 6 June 2014.
6. Ross, *Postmortem Report,* 10.
7. L. Garby et al, "Weights of Brain, Heart, Liver, Kidneys, and Spleen in Healthy and Apparently Healthy Adult Danish Subjects," *American Journal of Human Biology* 5 (1993): 293.
8. See: Susan Sprogøe-Jakobsen and Ulrik Sprogøe-Jakobsen, "The Weight of the Normal Spleen," *Forensic Science International* 88 (1997): 215-23.
9. J.R. Nyengaard and T. F. Bendtsen, "Glomerular Number and Size in Relation to Age, Kidney Weight, and Body Surface in Normal Man," *Anatomical Record* 232 (1992): 194-201.
10. See: Miia Pärssinen and Timo Seppälä, "Steroid Use and Long-Term Health Risks in Former Athletes," *Sports Medicine* 32, (2002): 84.

11. Ross, *Postmortem Report,* 10.
12. Joseph Hackett, "House Co-Sponsorship Memoranda: Resolution Condemning the Use of Performance Enhancing Drugs (PEDs)," *Pennsylvania House of Representatives*, 12 December 2013; viewed at: http://www.legis.state.pa.us/cfdocs/Legis/CSM/showMemoPublic.cfm?chamber=H&SPick=20130&cosponId=13792.
13. Mike Ozanian, "Business-SportsMoney: Pennsylvania Lawmaker Hoping to Rebuke IMG's World's Strongest Man Competition," *Forbes, 17* December 2013; viewed at: http://www.forbes.com/sites/mikeozanian/2013/12/17/pennsylvania-lawmaker-hoping-to-rebuke-imgs-worlds-strongest-man-competition/.
14. Ross, *Postmortem Report,* 7.
15. Hetrick, Email correspondence.
16. *Ibid.*
17. See: Pieter A. Cohen, "DMAA as a Dietary Supplement Ingredient," *Archives of Internal Medicine* 172 (2012): 1038-39.
18. Ross, *Postmortem Report,* 9.
19. U.S. Food and Drug Administration, "DMAA in Dietary Supplements," 16 July 2013; viewed at: http://www.fda.gov/food/dietarysupplements/qadietarysupplements/ucm346576.htm.
20. Ross, *Postmortem Report,* 9.
21. *Ibid.*
22. Miller, "Long Time Steroid Use."
23. U.S. Food and Drug Administration.
24. Cohen, "DMAA," 38-39.
25. British Broadcasting Corporation, "Claire Squires Inquest: DMAA Was Factor in Marathon Runner's Death," *BBC News London,* 30 January 2013; viewed at: http://www.bbc.com/news/uk-england-london-21262717.
26. World Anti-Doping Agency, "The World Anti-Doping Code—The 2014 Prohibited List: International Standard," 8; viewed at: http://list.wada-ama.org/wp-content/uploads/2013/11/2014-Prohibited-List-ENGLISH-FINAL.pdf.
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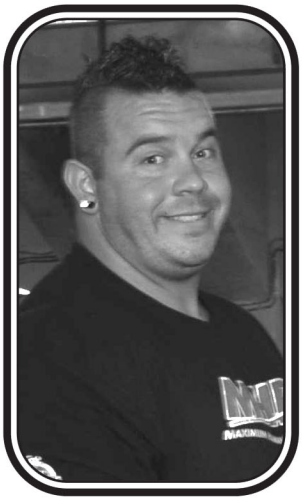
28. "Disqualified Olympic Athletes Testing Positive for DMAA Point to Supplements," *Natural Products Insider*, 25 February 2014: viewed at: http://www.naturalproductsinsider.com /news/2014/02/disqualified-olympic-athletes-testing-positive-fo.aspx.
29. See Joseph V. Rodricks and Michael H. Lumpkin, "DMAA as a Dietary Ingredient," *JAMA Internal Medicine* 173, (2013): 594.
30. Cohen, "DMAA," 38-39.
31. Denise Mann, "Researcher Calls on FDA to Ban Speed-Like Ingredient DMAA," *WebMD Health News,* 7 May 2012; viewed at: http://www2.fourstateshomepage.com/webmd/vitamins/story/Is-Workout-Supplement-Ingredient-DMAA-Safe/vR_OJ8Kj3EG4XMDfN-hCgZQ.cspx. See also, Rodricks and Lumpkin, "DMAA as Dietary Agent."
32. Gare Joyce, "Jesse Marunde, 1979-2007," *ESPN Page 2,* 28 December 2007; viewed at: http://sports.espn.go.com/espn/page2/story?page=obits/marunde/071227.
33. Allen G. Breed, "Johnny Perry's Goal Proved the Death of Him," *Los Angeles Times,* 30 March 2003.
34. Oren Dorell, "Autopsy: Cocaine Overdose Killed Perry," *News and Observer* (Raleigh, NC), 12 April 2003.
35. See R. Hausmann, S. Hammer, and P. Betz, "Performance Enhancing Drugs (Doping Agents) and Sudden Death—A Case Report and Review of the Literature," *International Journal of Legal Medicine* 111, (1998): 261-64.
36. Jonathan A. Drezner and Karim Khan, "Sudden Cardiac Death in Young Athletes," *British Medical Journal 337,* no. 7661 (2008): 61.
37. Alex Zakrzewski, "Strongman Champion Mike Jenkins Dead at 31," *Musclemag Feed,* 2014; viewed at: http://www.musclemag.com/strongman-champion-mike-jenkins-dead-31/.
38. Tomas Venckunas, et al, "Strongmen Sport is Associated with Larger Absolute Heart Size and Impaired Cardiac Relaxation," *Journal of Strength and Conditioning Research* 25, no. 10 (October 2011): 2924.
39. *Ibid.*
40. Harrison G. Pope, Jr., et. al., "Adverse Health Consequences of Performance-Enhancing Drugs: An Endocrine Society Scientific Statement," *Endocrine Reviews* 35, (June 2014): 341-343.
41. Ibid, 343.
42. Terry Todd, "Another Big Man Gone," *Iron Game History: The Journal of Physical Culture*, 3, no. 3 (April 1994): 1-2. See also: Drezner and Khan, "Sudden Cardiac Death," 61.
43. Collin Orcutt, "Success Story: Cardiac Kid," *Men's Fitness* 26, no. 4, (May 2010): 136.
44. Adam Farrah, "Paleo Strongman Interview—Mike Jenkins," *Evolved Eating, Evolved Training, Evolved Living: Adam Farrah's Blog*, 30 August 2012; viewed at: http://practicalpaleolithic.com/paleolithic-diet-blog/paleo-strongman-interview-mike-jenkins.
45. Mike Jenkins, "Only the Strongest: Mike Jenkins' World's Strongest Man Workout," *Bodybuilding.com*, 16 December 2011; viewed at: http://www.bodybuilding.com/fun/only-the-strongest-mike-jenkins-workout.html.
46. Thom Van Vleck, "Mike Jenkins: Made for Strongman," *Milo* 20, no. 2 (September 2012): 47.
47. Zakrzewski, "Strongman Champion."
48. Bryan Hildebrand, "Mike Jenkins: They Call Me 'M'," RxMuscle.com, 25 February 2011; viewed at: http://www.rxmuscle.com/strength-articles/2611-mike-jenkins-they-call-me-m.html.
49. *Ibid.*
50. Phil Burgess, "Mike 'Juggernaut' Jenkins—Strongman and 2012 Arnold Strength Classic Winner," *Viking Strength*, 5 April 2012; viewed at: http://vikingstrength.com/2012/04/05/mike-juggernaut-jenkins-strongman-and-2012-arnold-strength-classic-winner/.
51. Burgess, "Mike 'Juggernaut' Jenkins"; and Thomas Van Vleck, "Mike Jenkins a Real Giant," United States All-Round Weightlifting Association; viewed at: http://www.usawa.com/mike-jenkins-a-real-giant/.
52. Mike Jenkins, "The Longest Yards," *Muscle Magazine*, April 2013: 196-97.
53. *Editors' note: Dr. Baptiste strongly supports Coroner Hetrick's recommendations and adds that a circuit of events should be established around the world so these huge men could be regularly drug-tested. Baptiste argues that until Olympic-level drug-testing is done the leading Strongman athletes will feel pressured to use performance enhancing drugs and risk their health and even their lives in order to be on a level playing field with their competitors. He also recommends counseling and education for all athletes whose bodyweights would place them in the "morbidly obese" category. We are deeply grateful to him for his review of this article and his thoughtful assistance.*

A Final Note



Our belief is that everyone who is involved in any aspect of the Strongman world, including fans, should reflect on the life and the death of Mike Jenkins, an unusually admirable young man. We should also all reflect on where we go from here, given the autopsy that revealed the factors—including PEDs—which probably contributed to Mike's death. As for Dr. Baptiste's recommendation of creating an annual series of elite, drug-tested Strongman competitions that would qualify the top men for a final competition open only to those who had taken part in the series, most of the people who have studied Strongman closely realize that the sport is currently so international, yet so small and unorganized, that rigorous drug testing would be "a bridge too far." Imagine how difficult it would be to find the will, the diplomatic skill, and the money to create a series of good-paying, international, fairly-judged, and drug-tested Strongman contests that would over time earn the trust of the strongmen and the interest of the fan base. Even so, even so, we hold the opinion that such a circuit is a worthwhile long-term goal. Such a circuit would indeed make the sport significantly safer at the elite level because the top men who use the most potent of the strength- and muscle-building substances to increase their muscle size would need to limit their intake during certain periods of the year—or even stop it altogether—in order to pass the qualifying drug tests in the satellite events. What's more, we have thought for a long time that—as a group—the colossal men who dominate Strongman would be among the easiest converts to drug-free training and competing. Men like 42-year old, lifetime drug-free Mark Henry and Mike Jenkins—who weighed as much as most college linebackers when he was twelve—were always the biggest and strongest boys in their grade and, as such, didn't develop the deep psychological need of many boys and young men for a magic pill or injection which would provide them with size and the implied power such size confers. We need to remember that most of the attributes which make us look up in wonderment at the shadow-casting mass and brute strength of Strongman's titans is natural—God-given. These men are anything but "scared little boys in gorilla suits." They *are* the gorillas. For this reason, most of them would probably be comfortable switching to "clean" training and drug-tested competition—so long as they believed the testing process was fair and strict enough so they wouldn't have the feeling that they were taking a BB gun to a bazooka fight. Also, there's a related reason; these gargantuan men realize they're risking their health—and even their lives—by taking the very substances which have been implicated in the deaths of so many of their friends and colleagues. Many of them, in fact, consider the use of such substances to be an occupational hazard. This is not simply an opinion, by the way. This is what many of these men have told us over the years.

But even though effective drug testing may be well down the Strongman road, it should not be forgotten. In the meantime, perhaps those of us who administer these events could find other ways to address these concerns. Perhaps we should take a close look at the suggestions from Coroner Hetrick and Cardiothoracic Surgeon Baptiste that we pre-screen the Strongmen prior to major competitions and then provide individual, professional medical counseling based on the results of that screening process. Although such a process would need to be thoroughly discussed prior to implementation, it would allow the Strongman competitors to know whether they—in the opinion of specialists in the related fields—would be placing themselves at a significant risk by competing. Perhaps such a pre-screening in the fall of 2013—prior to the World's Strongest Man contest in China—would have revealed some of Mike Jenkins' underlying health problems, and perhaps those revelations would have kept him from competing. And perhaps today Mike would still loom large as a living townsman of Harrisburg and not, in A.E. Houseman's words, a "townsman of a stiller town." Perhaps Mike would be 32 now, only 32, running his gym, wearing his colorful gear, making people laugh, and, in his own words, being a man "just like everyone else—with a family, interests, and life." —**Terry and Jan Todd**

Science from Strength:

Thomas L. DeLorme and the Medical Acceptance of Progressive Resistance Exercise

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On 26 February 1944, Dr. Thomas Lanier DeLorme reported for duty at Gardiner General Army Hospital in Chicago. DeLorme, a newly commissioned lieutenant in the Army's Medical Corps, was assigned to the Orthopedic Section at Gardiner, a hastily-created military hospital in what had been the Chicago Beach Hotel before the Army commandeered it.[1] Gardiner, filled to overflowing with wounded servicemen, was DeLorme's first posting as a full-fledged physician following his early graduation in April 1943 from New York University's College of Medicine (NYU) after the school decided his class could skip their last two months of medical training because of the war effort.[2] DeLorme received the Valentine Mott Award at graduation that spring, then served a short internship in New York before joining the Army Medical Corps on 1 January 1944. According to his wife, Eleanor Pearson DeLorme, whom he married in 1941, DeLorme had hoped to be assigned to a tank regiment overseas but was ordered to Chicago instead. However, in a perfect example of Merton's "Law of Unintended Consequences," that military directive would change the course of modern rehabilitation and help to create the science of strength training.[3]

Thomas L. DeLorme, in 1975, then a professor of orthopedic surgery at Harvard University's medical school.

After DeLorme began working at Gardiner in February he quickly realized that it was not a shortage of physicians that was primarily responsible for the enormous backlog of orthopedic patients at the hospital. Instead, according to DeLorme, the "urgent need" was to find a faster method to rehabilitate the patients so that their beds could be made available to other soldiers who had also been injured in the war.[4] It was common during this era for rehabilitation patients to sometimes spend six to nine months in post-operative therapy, which meant that Gardiner and other military hospitals were filled to overflowing with long-term patients.[5]

Not long after he arrived in Chicago, DeLorme met Sergeant Thaddeus Kawalek of the Army Specialized Training Program, an elite unit being prepared to help Europe recover after the war. Kawalek, who was studying Russian at the Army's request, had suffered a non-combat knee injury and come to Gardiner Hospital where he subsequently had surgery. Although DeLorme was not originally assigned as his surgeon, Kawalek had noticed DeLorme's "solid, well developed" physique and was not surprised to learn, when they met post-operatively, that DeLorme was a regular weight trainer, just as he was. Kawalek had become a convert to lifting because of his love of sports; lifting, he said, had allowed him, despite his relatively small stature, to throw the shot in college, to participate in wrestling, and to be a sprinter on his college track team.[6]

As they shared stories about lifting, DeLorme told Kawalek of an idea he'd had. He'd been wondering, he explained, whether weight training could be used to rehabilitate injuries. According to Kawalek, DeLorme said he knew the idea went against all conventional therapeutic methods. Even so, DeLorme told Kawalek, he kept thinking that lack of strength was a major factor in slowing many men's recovery from injury.[7] After talking about it at length, Kawalek volunteered to allow

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DeLorme to experiment on him. He later claimed, "I think it was because I had experience with weight training before I had my injury that he agreed to let me do it even though neither of us was certain it would work."[8]

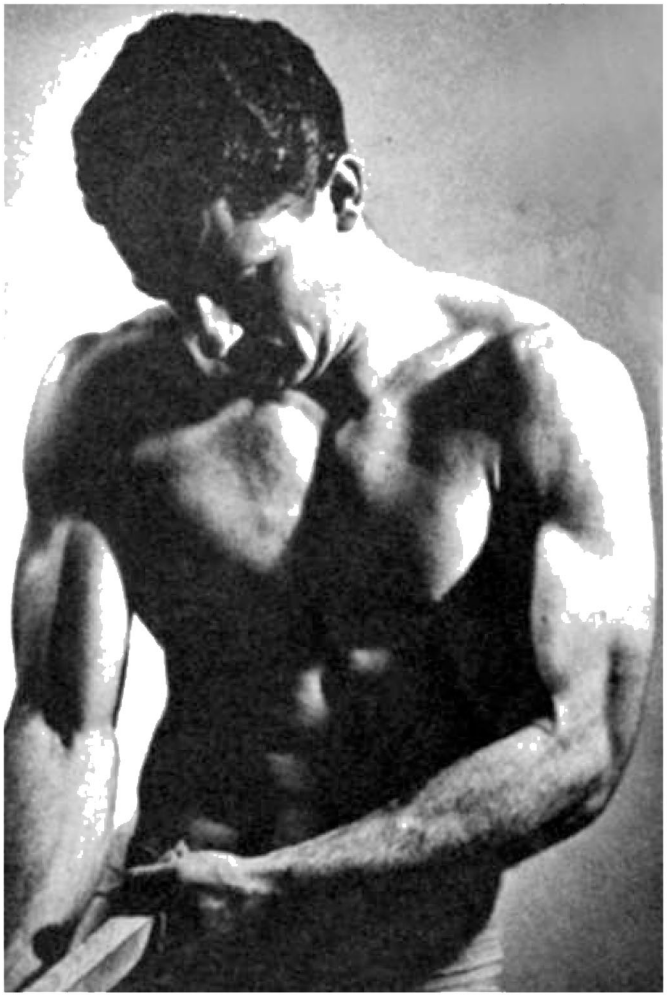
The program DeLorme designed to strengthen Kawalek's knee primarily consisted of leg extensions using "iron boots"—a device sold by the York Barbell Company that resembled a thick iron shoe sole through which a small bar could be inserted and loaded with plates to increase resistance. Kawalek used the boots by sitting on the end of an examining table and extending his leg until it was parallel to the floor—and he also did some light work with pulleys. The results exceeded both their expectations. Kawalek recuperated much more quickly than normal patients at Gardiner who had similar knee surgeries; he not only regained full use of the leg, he could even run again. Kawalek, who later became president of the Chicago College of Osteopathic Medicine, reported that DeLorme's superiors at Gardiner were very impressed by the rapid results and encouraged DeLorme to experiment with weighted exercises on other patients.[9]

While many American servicemen were introduced to weight training as part of their physical conditioning during World War II, the fact that DeLorme had been active in weightlifting was unusual in medical circles.[10] Most physicians in that era shared the views of widely-syndicated newspaper columnist Dr. William Brady, who advised that weightlifting should be shunned because "extreme effort is not desirable in any kind of physical training nor is it good for the heart."[11]

DeLorme, however, knew from first-hand experience that weight training could be curative. Born in 1917, DeLorme attended high school in Birmingham, Alabama, where he was stricken with rheumatic fever and ordered to bed by his doctors.[12] Rheumatic fever, now relatively rare because of the advent of antibiotics, is an inflammatory disease brought on by strep throat or other streptococcus bacterial disease. In the 1930s and 1940s, there was an epidemic of rheumatic fever in the United States, and it was not uncommon for children to die, or at the least, suffer lasting cardiac damage because of the disease's impact on heart function.[13]

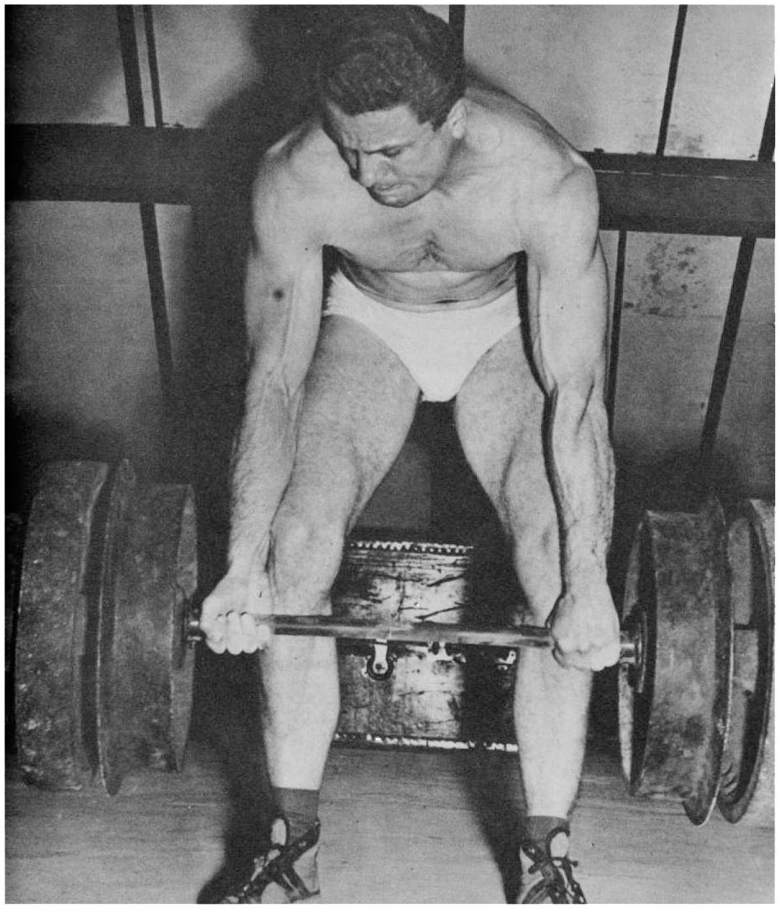
For four months DeLorme was confined to bed rest, during which he dropped to less than 140 pounds, wasted by illness and lack of exercise.[14] However, as he lay in bed, following the best advice his doctors knew to give him, DeLorme began reading about medicine and resolved to go to medical school so he could help others once he was well again. He also spent time during his enforced bed rest reading *Strength & Health* magazine, and in those pages he found inspiration to fight the doctors' pronouncement that his "weakened heart" would never permit him to do anything strenuous again.[15] "I was determined to prove the medicos wrong," DeLorme later claimed, "and immediately upon leaving my sick bed I started a comeback campaign."[16]

Like many young men in the Great Depression, DeLorme lacked the funds to purchase one of the York barbell sets he'd admired in the pages of *Strength & Health*. However, he proved to be a good junkyard scrounger and created his own weights out of small train



In 1940 the *Collegiate Digest*, a nationally syndicated weekly newspaper supplement, dedicated half a page to the exploits of the man they dubbed the "'Bama Hercules." This interesting physique study from that photo shoot reveals just how strongly built DeLorme was at this time.

wheels and other mechanical parts.[17] By the end of 1936, not only was DeLorme engaged in regular and strenuous exercise against his doctor's advice, he was also competing in sanctioned weightlifting competitions, and registered a personal best of 250 pounds in the clean and jerk.[18] He was also credited with a 240-pound bent press, a 160-pound curl, and alternate dumbbell presses with 125 pounds in each hand.[19] As he continued training, DeLorme became increasingly serious about his workouts and told a reporter in 1939, "I have reached a mark of lifting 503 pounds of deadweight from the floor, which exceeds the Birmingham Y.M.C.A. record by 43 pounds. . . . I hope to win the Southern A.A.U. Championships and attain a raise of 700 pounds and then possibly go on to compete in the International Olympic Games."[20] While World War II would end his Olympic dreams, DeLorme enjoyed modest fame as a lifter within the state of Alabama. A front-page article in *The Birmingham Post*, in July of 1939, detailed DeLorme's use of weight training to recover from rheumatic fever, and according to the author, Bob Collins, "Today he is a picture of near-perfect in masculine build. . . . There isn't a sick tissue or organ in his body and instead of lying in bed and staring into a hopeless 'to be,' he now stands firmly on the foundation of a strong body, and looks toward a bright future."[21]



DeLorme was built well for the deadlift with relatively long arms and legs as seen in this photograph from the *Collegiate Digest*. However, the fact that he could deadlift over 500 pounds on this non-revolving, short-handled, barbell made from old narrow-guage train wheels and other scrounged parts is nothing short of remarkable.

DeLorme's bright future began with his admission in the fall of 1939 to the University of Alabama's Medical School in Tuscaloosa. As he worked for his tuition money by waiting tables and helping with janitorial duties, DeLorme continued his heavy workouts and became so well-known for his strength that he was invited to give a lifting demonstration at halftime during one of the University of Alabama football games. In front of the crowded stands, he lifted the front end of a truck off the ground, using the same strong back muscles that had allowed him to deadlift more than 500 pounds.[22] One local newspaper dubbed him the "Bama Hercules," and claimed he "lacks only a leopard skin sarong to go to work as a circus strongman, for he can really tote a bale."[23]

By this time, DeLorme not only *was* strong, he *looked* strong. At just over six feet in height, he tipped the scales at 185 pounds, and photos from this era reveal that he had built a remarkably lean, symmetrical physique along the lines of Tony Sansone. One newspaper account claimed, in fact, that he worked his way through his undergraduate years at Howard University by "modeling his perfect physique," and that he hoped to go to New York City during the summer of 1940 to see if he could find work modeling.[24]

At the end of his first year in Tuscaloosa, DeLorme transferred to NYU's Medical School where he excelled academically. Eleanor, his wife, reported that he could also have gone to Harvard, but chose NYU because he wanted to experience life in New York. There, he continued lifting weights, she claimed, because "He always worried about being too thin."[25]

DeLorme's second test of weight training as a rehabilitation technique began when Sergeant Walter Easley of Lake Charles, Louisiana, appeared in his door-

way one day to discuss the knee he had injured in a parachute jump. The impact upon landing had ruptured both Easley's anterior cruciate and medial collateral ligaments. Easley had been at Gardiner for more than six months when he met DeLorme, and while there he had followed the standard rehabilitation protocols then in use.[26] Before DeLorme arrived at Gardiner, physical therapy protocols generally consisted of rest, heat, and various exercises using a high number of repetitions with little to no resistance. Pennsylvania University professor R. Tait McKenzie, the first professor of physical therapy in the United States, advised, for example, in his 1923 book: "Exercises . . . should never be continued beyond the point of moderate fatigue, and some of them should be given with resistance."[27] McKenzie's idea of proper resistance clearly was to use very light weights. When free-weight or pulley exercises were utilized, patients were instructed to focus on the rhythm of the movement; the goal was a pumping effect of blood through the muscle, not hypertrophy. Similarly, another early volume on physical therapy, *Physical Therapeutic Technic*, warned, "in all treatment, care should be taken not to overtire the weakened muscles."[28] In order to avoid such "overtiring," clinicians were advised that there should be "a short rest" between repetitions and that "the exercises should be stopped at once on any sign of muscular tire."[29] The modern strength training practitioner can appreciate that, while better than complete rest, these rehabilitation protocols produced only minimal strength gains and, in all likelihood, did little to shorten periods of disability. Consequently, rehabilitation progressed much more slowly than in our modern era, and during World War II, veterans' hospitals were overwhelmed with hundreds of slowly-recovering orthopedic patients.

Easley was one of those patients. Although he'd participated religiously in the exercises recommended by his therapists, he told DeLorme that his doctors held out no hope of him ever returning to normal, and that he would have to wear a brace for the rest of his life. A farmer by profession, Easley knew the difficulties he would face working in a knee brace, and so he asked DeLorme if there was anything else he could try to improve the condition of his knee.[30] After examining Easley and noticing how atrophied the quadriceps muscle was on the injured leg, DeLorme told him about his theory that exercise with heavier resistance might be able to strengthen the muscles surrounding the knee to such an extent that the knee would be more stable. Easley, facing life in a leg brace, knew he had nothing to lose, and so asked to try it. Accordingly, DeLorme set up an exercise room in the hospital and personally supervised Easley's training sessions. There were, of course, no weights or resistance machines at Gardiner, so DeLorme brought in his iron boots from home and pulled together some other odds and ends of equipment to create apparatus suitable for Easley's training therapy.[31]

Although it involved weight training, the routine DeLorme prescribed for Easley did not resemble a competitive weightlifting sets and reps protocol. DeLorme kept the number of repetitions relatively high, but Easley was instructed to lift the maximum amount of weight he could handle for seven sets of ten repetitions in each exercise and then to increase the resistance as he mastered the weight for the seven sets of ten.[32] With iron boots attached to his feet, Easley did leg extensions, and with primitive pulleys to let him exercise the knee through other ranges of motion, which included leg curls, he also did 70 repetitions on those exercises.Within a month, Easley saw significant improvement in the size of his quadriceps, and all the swelling and pain completely disappeared. At that point, Easley put aside his brace, DeLorme wrote, because "for all activities, even 'jitterbugging,' the knee was normal."[33]

As news spread about Easley's seemingly miraculous cure, other Gardiner patients who, like Easley, had lost hope that they would ever again regain normal function were eager to try DeLorme's new weight training program. And so, after gaining the permission of his commanding officer, Colonel John Hall, DeLorme began using what he was then calling "Heavy-Resistance Exercises" on other patients, and set up a true clinical trial of his new method. He took twenty men who had completed the conventional physical therapy program at Gardiner yet had not been returned to normal function. DeLorme put these men on a progressive resistance regimen and found that all twenty made significant gains in muscular strength and improved the functional use of their joints after following the heavy-resistance program. In his discussion of this early experimental work in the prestigious *Journal of Bone and Joint Surgery*, DeLorme pointed out that the key weakness of existing rehabilitation protocols was the narrow focus on restoring muscular endurance. The conceptual breakthrough driving his work, he explained, was that, "Rather than attempt to develop endurance in an atrophied, weakened muscle, it

seems more logical to restore muscle strength to normal, and then to build endurance."[34] This observation would be borne out by later research and is now the standard order of progression in modern rehabilitation protocols.[35]

As the number of patients interested in his methods grew, DeLorme began training several assistants to help with the weight training treatments, one of whom was Private Easley. DeLorme later wrote that Easley had demonstrated "a rare degree of conscientiousness and faithfulness of purpose not only in overcoming his personal handicap, but also in helping other patients who later were to be entrusted to his care when he became an instructor in progressive resistance exercises in the physical therapy department of the Gardiner General Hospital."[36] Another man enlisted to help with the training sessions was bodybuilder John Farbotnik, also at Gardiner to rehabilitate a combat injury. Farbotnik, who later won the 1950 Mr. America title, proved to be a terrific asset to the program at Gardiner and, according to *Strength & Health* magazine author Owen Lake, helped DeLorme with building equipment, implementing his training ideas, and running many of the exercise sessions.[37]

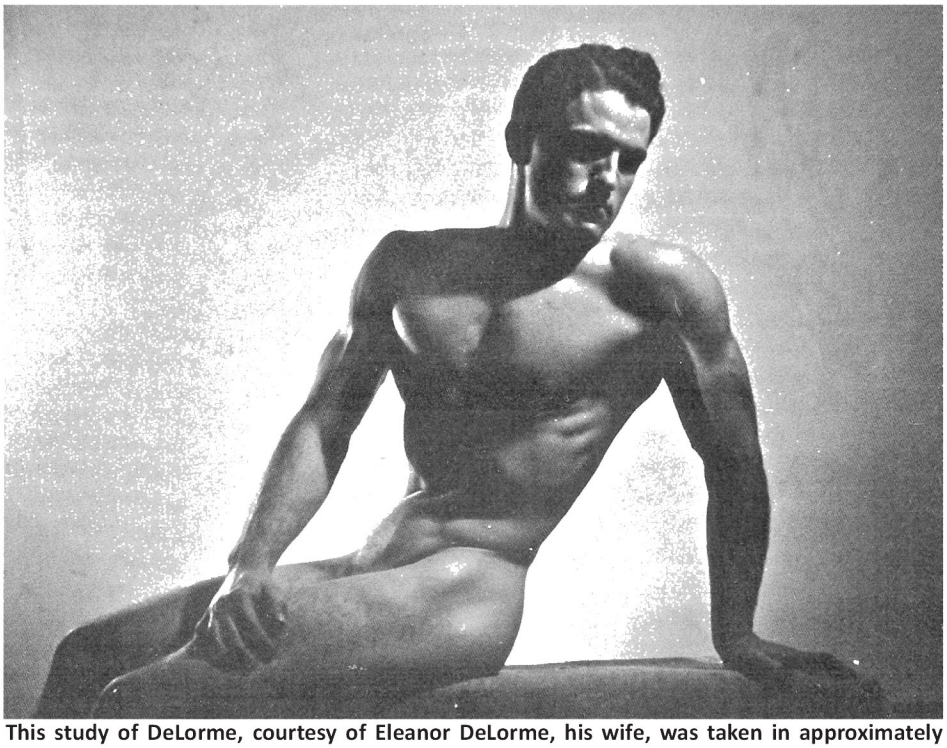
During 1945, DeLorme was promoted to captain and talked his superiors at Gardiner into allowing him to build a much larger physical therapy facility at the hospital, half of which was set aside for DeLorme's heavy weight training methods. To outfit this new space, DeLorme took on the task of building much of the equipment for the room personally, and one of the first ideas he began experimenting with was for a multi-station exercise "table" equipped with pulleys. This device, still in use today, became known as the DeLorme Table and subsequently the "Elgin Table," when a commercial concern began mass manufacturing them in the late 1940s for other physical therapy clinics.[38]

Well before Universal or Nautilus, DeLorme's vision was to create an exercise machine that could work the entire body. The DeLorme Table had pulleys for leg extensions and leg curls, could function as a leg press, and was even fitted with pulleys for a variety of chest and shoulder exercises. DeLorme also began developing a series of "counterweight" machines that worked on the same principle as our modern assisted dip and pull-up machines, because he realized that some injuries left the muscles so weak that they couldn't handle the weight of the limb to which they were attached. The new physical therapy facility at Gardiner, in fact, rivaled many gyms of the modern era as it had dumbbells, barbells, and a free-standing leg press machine that could be loaded to 300 pounds.[39] Colonel John Hall wrote of DeLorme's efforts in this period: "After many months of trying work, Captain DeLorme developed the section to maximum operating efficiency. A great number of patients are now handled. It is the opinion of the staff of this hospital and of the many visiting consultants that Captain DeLorme has placed in the hands of the Orthopedic Surgeon a new and valuable agent in promoting full recovery and restoration of function."[40]

In May of 1945, DeLorme travelled to Battle Creek, Michigan, and gave a presentation on the work he was doing on heavy resistance exercise at Gardiner. The doctors and physical therapists attending the small conference at Percy Jones Military Hospital, all also members of the Armed Forces, were so impressed by what they heard that day that as soon as the conference finished, the entire group made their way to Chicago so they could see DeLorme's methods for themselves. This would be the first of many visits by American, British, Canadian, and even Australian, medical personnel who came to Gardiner to learn DeLorme's new methods of rehabilitation as the war began to wind down.[41]

In October of 1946, in *Archives of Physical Medicine*, DeLorme published his second scientific paper, the simply titled, "Heavy Resistance Exercises." In it, DeLorme describes how to determine a patient's one repetition max (1RM) and 10 repetition max (10RM), and he also discusses the effect of his heavy weight exercise program on the more than 300 patients he'd treated over the past 18 months. Explaining the basic concept of the methodology, DeLorme wrote, "Most injuries of the trunk and extremities result in atrophy of varying degree. When the local injury has healed, redevelopment of muscle power is the most important factor in restoring normal function to the extremity." Continuing, DeLorme explained that the principle of heavy resistance and low repetition exercise was better for developing muscular power than such exercises as stationary bicycling and stair climbing, which primarily build endurance. "Rather than to attempt to develop endurance in an atrophied, weakened muscle," he explained, "it seems more logical to restore muscle strength to normal and then to build endurance by means of low resistance, high repetition exercises."[42] As to those doubters who worried that he was asking too much

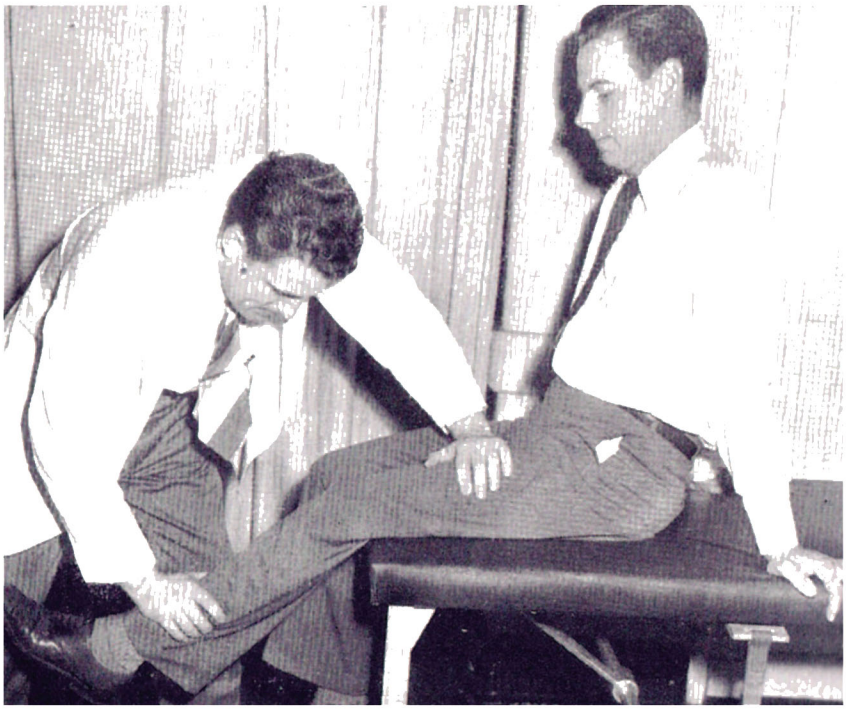
of weakened muscles, DeLorme unequivocally wrote, "even extremely atrophied muscles should exert their maximum effort at regular intervals."[43] DeLorme also addressed the idea of the specificity of exercise in the article and argued that exercises should be classified according to the "quality developed in the exercised muscle—namely power, endurance, speed and coordination." Noting that there was some crossover, and that exclusively using power exercises also results in some improvement in coordination and endurance, DeLorme nonetheless warned of the need for educated professionals who can understand and discriminate between the different kinds of exercise and the effects they will create. And he prophetically speculated in his conclusion, "Although this program of exercise was developed primarily to expedite the recovery of injured soldiers in the war, there is a definite civilian need for a similar program."[44]



This study of DeLorme, courtesy of Eleanor DeLorme, his wife, was taken in approximately 1939. As can be seen, DeLorme had a lean, elegant physique with an exceptionally small waist.

DeLorme left Gardiner Hospital on 28 August 1945, following a visit from representatives of the Surgeon's General Office who subsequently issued an order to all Army therapists to begin using DeLorme's Heavy Resistance protocol with their orthopedic patients. At roughly this same time, Colonel Hall, the commanding officer at Gardiner General Hospital, recommended him for the Legion of Merit, citing DeLorme's courage and innovation, the long hours of personal time he had spent creating the Elgin Table and other equipment, his training of other men to be technicians who could assist with the training sessions, and the fact that his work was revolutionizing military rehabilitation. Hall concluded his letter by stating, "Captain DeLorme's interest and his untiring effort in applying his ideas and in developing his program have proven to be of great benefit to the Army Reconstruction program, in lessening the period of convalescence and in permitting many cases to return to duty more quickly, and others to receive maximum hospital benefits over and above those previously expected."[45] In awarding the medal to DeLorme on 4 December 1945, President Truman cited the fact that "Captain DeLorme's efforts and achievements reflect highest credit upon himself and the Medical Corps."[46]

Although World War II officially ended in September of 1945, interest in DeLorme's system continued to spread throughout the medical and military communities. On 21 June 1946, for example, Army Lieutenant Dorothy Hoag gave a talk on the DeLorme system at the 23rd Annual Conference of the American Physio-Therapy Association. Hoag, a registered physical therapist, was filled with praise for the DeLorme method, which she argued would not only strengthen the afflicted muscle groups but would also break down scar tissue and increase flexibility in the joint.[47] That same year, Sara Jane Houtz, Annie M. Parrish, and F.A. Hellebrandt published the results of their research with the Delorme method in *The Physiotherapy Review* using as their subjects 16 healthy women, aged 25 to 48. These "normal" women followed DeLorme's procedure to the letter, exercising for five days straight and then taking two days off. The women did approximately 70 repetitions in the biceps curl and leg extension during four of the training sessions and on one day a week tested themselves to determine their limit for ten repetitions to decide what



This photograph of DeLorme testing a patient's knee was used as an illustration of how NOT to test knees in his groundbreaking book titled *Progressive Resistance Exercise: Technic and Medical Application*, published in 1951.

weight to use in the following week. At the end of the study the researchers concluded, "Strength may more than double in four weeks of systematic training," and speculated that—in addition to increasing muscular strength—that strength training seemed to also help the women with their non-sedentary jobs. Although they were not sure of the physiologic mechanisms at work, they discussed the possibility that lifting must impact motor learning and, further, that it seemed to create a "significant extension of the psychological end-point of fatigue."[48] What's more, the Navy began using the system at its hospital in Jacksonville, Florida, in late 1945, and a report on that work appeared in *The Physiotherapy Review* in 1947.[49] And in the popular bodybuilding magazine *Muscle Power*, exercise physiologist Phillip Rasch wrote a lengthy report on DeLorme's work and its impact on the scientific community entitled, "In Praise of Weight Training: The Medical Profession is Waking Up!"[50]

After leaving Gardiner and the Army in the fall of 1945, DeLorme moved to Boston where he was appointed as Baruch Fellow in Physical Medicine at Massachusetts Institute of Technology. He also began an affiliation with Massachusetts General Hospital, the teaching and research hospital affiliated with Harvard University's Medical School, which would last for more than 40 years.[51] For the next several years, the majority of the subjects DeLorme worked with, however, were not injured servicemen but victims of poliomyelitis, the crippling illness that became an epidemic in the 1940s and 1950s. DeLorme's interest in polio had begun at Gardiner when several servicemen were admitted with the disease. DeLorme reasoned that since not every muscle fiber in an individual muscle was generally affected when the disease struck, strengthening the few unaffected fibers might enable polio patients to regain some degree of function. DeLorme's hunch again proved correct, and the impressive results created by resistance training for his polio patients brought DeLorme to the attention of Henry Pope Sr., who founded the Pope Foundation in 1934 to promote research on polio after his own daughter developed the disease.[52] With financial support from the Pope Foundation, DeLorme set up a study to test his heavy weight exercises on 30 polio patients while still at Gardiner. The successful results of that work brought him to the attention of Dr. Arthur Watkins, head of the newly formed Department of Physical Medicine at Massachusetts General Hospital, who invited him to move to Boston so they could conduct research together.[53]

Once in Boston, DeLorme and Watkins, with additional funding from the Pope Foundation and the March of Dimes, opened the Pope Memorial Exercise Clinic and continued exploring the use of resistance exercise in polio patients.[54] By this time, polio had become an international epidemic and the popular press was eager to report news of any possible therapies. In January of 1947, the *Daily Boston Globe* ran a lengthy feature article detailing the amazing results DeLorme had achieved by using resistance exercise with 40 polio patients. DeLorme is described in the piece as a "powerful 212-pounder" who had developed a series of machines so that muscles could be stressed individually, resulting in a therapeutic facility that looked, the author claimed, "like a well-equipped gymnasium."[55]

On 17 June 1947, DeLorme and his new col-

leagues presented a paper to the American Neurological Association in Atlantic City that resulted in another extensive report, this one in the New York *Herald Tribune*.[56] And then, in September, DeLorme and resistance training made the news again, following the presentation of a paper delivered to the American College of Surgeons in New York. DeLorme told the assembled physicians that his new method was "based upon centuries-old maxims of weight-lifting and is in direct contrast to principles previously used." He then went on to explain that although his study was not yet complete, he felt comfortable asserting that the evidence collected to date indicated "that normally innervated muscle fibers can be hypertrophied and strengthened."[57] In 1948, DeLorme and his colleagues spoke at the first international conference on poliomyelitis and made national headlines once more when they demonstrated to the assembled experts the resistance training techniques they had been using with their patients in Boston. At the conference, held at the Waldorf Astoria Hotel in New York, DeLorme and Watkins showed a new version of the counter-weighted pulley machine that DeLorme had first invented at Gardiner, and told the audience that "as long as there are healthy muscle fibers left," it was possible "to double their power in a few weeks by a few minutes of this method of exercise." What this meant for polio patients, the reporter optimistically explained, was that some of them might be able to discard their crutches or braces even if they'd been afflicted years earlier.[58]

By this time, DeLorme had substantially changed his ideas about the most efficacious method of training. In an article for the *Archives of Physical Medicine and Rehabilitation* entitled, "Technics of Progressive Resistance Exercise," DeLorme explained that he would no longer be referring to his method as "heavy resistance exercise," because the term "bears false implications" and suggests that "only great poundages are used." From this point forward, DeLorme announced, he would refer to his system as "Progressive Resistance Exercise," a statement that marks the first time weight training activities were described by that title in any scientific journal. Surprisingly, the term was coined not by Thomas DeLorme, but by his wife, Eleanor, who suggested it when DeLorme expressed concern that so many physicians seemed uncomfortable recommending "heavy weightlifting" to their patients.[59]

DeLorme's "Technics of Progressive Resistance Exercise" also heralded another significant change for the field of strength training. Instead of continuing to recommend seven sets of ten repetitions in each exercise, DeLorme explained that he and Watkins had been experimenting with fewer sets. "Fewer repetitions," DeLorme noted, "permit exercise with heavier muscle loads, thereby yielding greater and more rapid muscle hypertrophy."[60] The new model they recommended was three sets of ten. One set was to be done at 50% of the patient's 10RM, one at 75%, and finally one at 100% of 10RM. Once a patient could perform more than ten repetitions on the final set, the weights were "progressed" accordingly. DeLorme further explained that this method allowed the muscle to be properly "warmed up" before being asked to exert maximum power for ten repetitions. Although this article was written to help health practitioners use strength training techniques in the fight against polio, the new three sets of ten model quickly moved beyond rehabilitation and became a "norm" for fitness and sport training as well. In fact, one recent online article describing the overwhelming prevalence of the model of three sets of ten aptly described DeLorme's protocol as "permanently etched into the collective subconscious of the fitness community."[61]

In the years that followed, DeLorme and his colleagues at Massachusetts General Hospital published several additional studies that helped promote the scientific acceptability of progressive resistance exercise. In 1948, "The Response of the Quadriceps Femoris to Progressive Resistance Exercises in Poliomyletic Patients," reported that training with iron boots using three sets of ten had resulted in more than half of their polio patients doubling their strength in less than a month.[62] In 1949, "The Use of the Technique of Progressive-Resistance Exercise in Adolescence" appeared, in which DeLorme and his colleague, Roswell Gallagher, lent support to the idea of using weight training to prepare for sport. "It is obvious to most of us who deal with adolescents," they wrote, "that strength needs to be developed as well as endurance, coordination, flexibility, and skill; and that if injuries are to be avoided, some games demand considerable strength about the joints." Continuing, they argued that, "most activities will be performed more successfully and with less fatigue when greater strength and endurance are present."[63] In 1950, DeLorme released a report based on his earlier work at Gardiner on 201 patients suffering from both knee injuries and leg fractures in which, again, progressive resistance exercise provided more therapeutic effectiveness than less stren-

uous methods.[64]

DeLorme and Watkins then released, in 1951, one of the most important books in the history of strength training: *Progressive Resistance Exercise, Technic and Medical Application.* Published by the well-regarded academic publisher Appleton-Century-Crofts in New York, the book introduced thousands of American doctors, therapists, and physical educators to the idea that weight training had a solid, scientific basis and, further, that it had the blessing of some of the most prestigious medical physicians in America.[65] Exercise physiologist Phil Rasch, however, rightfully points out that what DeLorme and Watkins were recommending was precisely what some in the weightlifting community had been trying to tell the medical establishment for the previous quarter century. "We do not begrudge Dr. DeLorme the credit which he so richly deserves," Rasch wrote, but it does seem that somewhere there might have been found space for mention of such names as Liederman, Calvert, Berry, Jowett, Hoffman and perhaps other pioneers who so long preached the exact dogma for which Dr. DeLorme is now praised. Now at long last the medical profession has caught up with the weight trainers."[66]

Even so, DeLorme had done more than just "catch up" with the likes of Bob Hoffman and other pioneers. His understanding of muscle function coupled with his practical knowledge of weight training allowed him to go further than Hoffman and others had at this point, and to create an exercise system that would enhance muscle growth and strength in nearly everyone who tried it. In comparison, the same year that *Progressive Resistance Exercise* appeared, Hoffman encapsulated his advice on proper training in a course entitled, *York Advanced Methods of Weight Training.* In his course, Hoffman includes no discussion of warming up, no testing to determine 1RM, and the advice he gave regarding the organization of training was, ". . .the bodybuilder usually begins with 6 repetitions of a weight he can correctly handle, rest[s] the next day, then increase[s] the repetitions to 7, then 8, rest[s] a day, then 9, etc. When the maximum number of repetitions is reached, usually 12 to 15, add 5 pounds for upper body movements, 10 pounds for lower body movements, reduce the repetitions to 6 and start the single progressive system again."[67] There is no discussion of how many sets to do per exercise.

One of the most significant articles to come out of this phase of his work at Massachusetts General Hospital was his 1952 article in *Archives of Physical Medicine* entitled, "Effect of Progressive Resistance Exercise on Muscle Contraction Time." DeLorme undertook the study, he explained, because Progressive Resistance Exercise was being widely used in physical therapy programs at this time yet almost no one had undertaken studies of its true physiologic impact. Except for exercise physiologist Peter Karpovich at Springfield College and masters student Edward Chui at the University of Iowa, almost no one in exercise science circles was paying attention to the physiology of strength in this era even though— as DeLorme noted in his introduction— knowing whether heavy exercise "slows [athletes] down," "throws [their] timing off," and makes them "muscle bound" should be of great interest to trainers and to coaches of athletes as well as to athletes themselves, dancers, and anyone else "whose efficient performance is dependent upon rapid movement."[68] In findings that will hardly surprise contemporary readers, DeLorme and his colleagues found no evidence after four months of training that progressive resistance exercise adversely affected contraction time, even though the trained muscles significantly hypertrophied.[69]

Following this article, DeLorme appears to have shifted his research focus away from resistance exercise. He first looked at fatigue in two studies that appeared in the early 1950s, and then he participated as part of a team investigating wrist injuries in the military.[70] Later, he also published "Ergograms, Electronic and Voluntary in Various Neurological Disorders," in 1955.[71] During these years, according to his wife, Eleanor, DeLorme began working more as an orthopedic surgeon in private practice, and in 1958 he decided to become the Medical Director of the Liberty Mutual Insurance Company's research laboratory.[72] Liberty Mutual Insurance was one of the primary providers of workmen's compensation insurance in the United States at that time, and the company decided that it should invest in research designed to help employees get back to work following injuries.[73] According to Dr. Melvin Glimscher, one of DeLorme's colleagues at Massachusetts General, the Liberty Mutual Research Center in Boston set new standards in rehabilitation care and research. While working there and continuing his medical practice, DeLorme became particularly interested in patients whose limbs had been accidentally amputated, and he began working on the question of whether such limbs could be reattached. The

first step in this process was to find a way to keep the limb viable, and so DeLorme began a series of experiments to find the best method of keeping limbs alive through blood perfusion and other means.[74] According to Eleanor, the police in Boston had standing orders to bring to DeLorme any limbs they recovered from accidents, and he often used his own blood for the experiments.[75] Glimscher wrote of this work, "To explore this, and to have the strength and dedication to spend so many hours, at all hours of the day and night . . . was unbelievable. I often went to the lab to see him and see how he developed the techniques which, in time, the general surgeons eventually came to utilize to sew back entire upper extremities."[76] Again, DeLorme's research transformed the world of medicine. In 1962, because of his work, doctors at Massachusetts General Hospital performed the first successful limb reattachment in history when they reattached the arm of a 12-year-old boy that had been run over by a train.[77] Several years later, DeLorme assisted Melvin Glimscher and other scientists from Massachusetts Institute of Technology and Harvard's Medical School in developing what became known as the Boston Elbow, the first prosthetic device able to read electromyographic signals from the skin's surface and use that data to control the speed and direction of the artificial limb.[78]

This photo, from the June 1959 issue of *Strength & Health*, shows DeLorme sitting on one of the tables he designed to assist in the rehabilitation of soldiers during World War II. The tables, later manufactured under the brand name "Elgin Tables," were actually multi-station resistance training machines with a variety of pulleys attached to them.

Although DeLorme's primary research interests gradually shifted to more medical matters, he agreed to collaborate in 1962 with Frank Sills and Laurence Morehouse on the editing of *Weight Training in Sports and Physical Education*, a textbook for physical educators and coaches published by the American Association for Health, Physical Education, and Recreation (AAHPER). The book contained 14 chapters and included an article on the history of weight training by Phillip Rasch, Laurence Morehouse's "Principles of Weight Training," F.A. Hellebrandt's "Scientific Basis of Weight Training," and additional chapters on training for women and girls, training for adolescents, training in high schools, training and safety issues, and so on. In addition to editing the volume, DeLorme contributed the chapter entitled "Measurement and Evaluation of Weight Training," which describes how to conduct a 1RM strength test, and how to use other metrics needed by coaches and trainers. AAHPER's involvement in the publication of this textbook marked a new level of academic acceptance for strength training, and one of the most interesting sections of the book is the discussion of how strength training programs were then being employed at five prominent American universities.[79]

After moving to Boston in 1946, DeLorme made up for some of the medical training he had been denied by the war effort and took advantage of Massachusetts

General's relationship with Harvard Medical School. He studied neurology and surgery there, and he also did residencies at Children's Hospital in Boston and the West Roxbury Veteran's Hospital.[80] Orthopedic surgery became DeLorme's medical specialty in the later years of his career, and he is credited in that field with several innovations in spinal surgery for ruptured discs, as well as for having participated in the development of an artificial hip.[81] According to Eleanor, DeLorme developed an immense practice as an orthopedic surgeon, working from both Massachusetts General Hospital and, later, from Milton Hospital in Milton, Massachusetts, where he and Eleanor raised their three sons, Tom, Charles, and Stuart. DeLorme became head of the staff at Milton Hospital in 1975 and in the newspaper story describing his election as president, it notes that by this time he was also a professor of orthopedic surgery at Harvard Medical School.[82]

According to DeLorme's second son, Charles, who began training with his father at age 11, DeLorme remained a serious lifter throughout his life. In the basement of their home in Milton, they had a gym with more than 3000 pounds of weights, flat and incline benches, squat racks, dumbbells ranging from 20 to 85 pounds in weight, and one of the first Elgin Tables ever manufactured. They also, Charles reported, had an old desk turned on its end that they used as a dipping station, and he remembers seeing his father do dips with 150 pounds attached to his body on several occasions. Dips, according to Charles, were one of DeLorme's favorite exercises and he continued doing them as part of an overall program of weight training well into his seventies.[83]

Eleanor DeLorme also went on to have a distinguished career in academic circles. After remaining at home during her children's early lives, she enrolled at Wellesley at age 52 and then did graduate work at Harvard in Art History. She subsequently taught at Wellesley for more than 25 years, and is widely recognized as an authority on Napoleonic France.[84] After 1960, the DeLormes frequently travelled to France to allow Eleanor time for her own research, and they eventually owned a second home there. Together they collected antiques from the French Empire period that were shipped home to Massachusetts, and they visited the sites where Napoleon and his court lived two centuries ago. These travels resulted in Eleanor's first book, *Garden Pavilions and the Eighteenth-Century French Court,* for which their son, Tom DeLorme, took most of the pictures. Her travels throughout France inspired her to continue working on this historical era, and in the years since that first trip, she has published two additional books and many papers on Napoleonic France.[85]

It is interesting to speculate where the field of strength training might be today had Thomas DeLorme not been sent to Gardiner General Hospital during World War II. Thomas Kuhn's seminal work, *The Structure of Scientific Revolutions*, argues that paradigm shifts in science generally take about a generation to be fully embraced by a discipline because when a new theory emerges, such as DeLorme's idea of using weight training in rehabilitation, there is normally a lengthy period of resistance and counter-argument by scientists adhering to older models.[86] However, in 1945, the military—driven by the exigencies of war—dramatically accelerated the process of scientific acceptance by mandating that all military rehabilitation units immediately begin using DeLorme's new system of Progressive Resistance Exercise. Then, with the onset of the polio epidemic in the late 1940s, DeLorme demonstrated the seemingly miraculous power of progressive resistance exercise to strengthen weakened muscle again, and because of the extraordinary circumstances of the epidemic, his methods found rapid acceptance within the broader medical community. Melvin Glimscher, a friend and colleague, wrote of DeLorme's work on progressive resistance exercise: "It was like a miracle. Patients who could not walk developed enough muscles to stand and walk and kept increasing their ability to get around, take care of themselves, feed themselves, [to] use their hands and feet, to write, to paint, to use tools, and so forth. . . . Eventually an entire system of equipment and exercises and the proper way to deal with this was developed, which became a *worldwide standard,* referred to simply as Progressive Resistance Exercises . . . it was the application of his technique that has returned millions of patients back to their family and friends. . ."[87]

Eleanor DeLorme observed, following her husband's death in 2003 at age 86, that "Tom was like a meteor that flashed across the sky. In everything he did there was brilliance."[88] We would argue that a significant aspect of DeLorme's brilliance was not just the idea of "doing lifting," but his ability to provide strength training with a solid, scientific foundation. One of DeLorme's most important contributions is, of course, his insight into the potential of resistance exercise to substantially—and often dramatically—improve physi-

cal function. Just consider how many millions of men and women have regained more function in their injured limbs, and had their rehabilitation time considerably shortened, because of DeLorme's introduction of progressive resistance exercise to the field of rehabilitation. But not to be overlooked is his major contribution to the field of strength coaching: his introducing the academic and medical worlds to the idea that strength training is itself a science that can, and should, be researched and reported in scientific journals and not solely in popular muscle magazines. This is what he did before anyone—before Peter Karpovich, before Edward Chui, before anyone else—and this fact, coupled with the imprimatur of authority vested in him by his medical degree as well as by the ways in which he used that degree to "strengthen" the work on resistance exercise, ultimately did more than we will ever fully understand to encourage coaches and physical educators around the world to discard the myth of the muscle-bound lifter and embrace the use of strength training in sports.[89]

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A Snatch for the Ages

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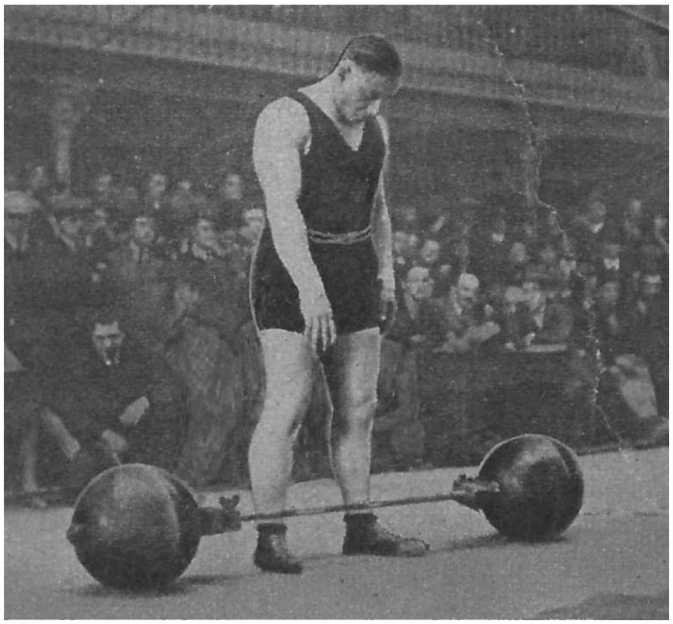
Three years or so ago, on the cover of Denis Reno's indispensable *Weightlifter's Newsletter*, I saw a photo of Russia's Tatiana Kashirina.[1] Inside the newsletter I saw, and was amazed by, a set of sequence photos of her making a new world record in the snatch with 145 kilos (319.7 pounds). Kashirina weighed, as I recall, 212 pounds, and I was struck by the solidity and power the photos revealed. Films or a sequence of stills of a world record in the snatch or the clean and jerk sometimes give the impression that the lift resulted more from the flexibility, speed, and technical skill of the lifter than from the explosive power required to elevate a bar to the height required by the rules governing the sport. Kashirina's 319 pound snatch, on the other hand, absolutely shouted power—extraordinary power.

One of the reasons the lift made such a profound impression on me is that I began my limited weightlifting career back in the late fifties, when the world record in the snatch was approximately 150 kilos (330.7 pounds). *For men*. But when I saw the photos of Kashirina making her 319 snatch I thought to myself—perhaps, in part, in defense of my gender—that it was unlikely she'd be able to add another 11 pounds to her astounding new record. My reasoning was triggered by something written 50 years or so ago by one of my greatest heroes, David P. Willoughby, something I've never forgotten. What Willoughby wrote, in his masterpiece, *The Super Athletes*, was that although the remarkable Frenchman Charles Rigoulot's best official snatch was 315 pounds (143 kilos), he was good for more. To be precise, Willoughby wrote that by 1930 Rigoulot "was evidently capable of at least 150 kilos (330.69 pounds)" in that lift. Willoughby always had evidence framing the support of his reasoned claims, and his evidence in this case was based on the fact that although Rigoulot's best official clean and jerk was 402 pounds (182.3 kilos), he had also: 1) cleaned 409 pounds (185.5 kilos) and jerked it twice, and 2) cleaned 422 pounds (191.4 kilos). Because these lifts, both of which depend heavily on pulling strength, clearly indicate that 402 pounds was not his limit in the clean and jerk, Willoughby reasoned that a man who had the "pull" to clean 20 pounds more than his best clean and jerk would also have had the pull to snatch 15 pounds more than 315, his best public performance.[2] It's also possible that Willoughby, with his extensive contacts in Europe, had been told by one or more reputable sources that Rigoulot had snatched 330.7 in training on at least one occasion. (It should be noted that Rigoulot, by then a professional, used his own custom-made lifting bar, which was over eight feet long, springy, and apparently thinner than a standard "Olympic" bar.)[3]



Although Rigoulot was extremely quick going under the bar in the two-hand snatch, his technique in the one-hand snatch—in which he dropped into a full squat—was considerably more proficient. See: https://www.youtube.com/watch?v=h5YHYlZkh0Q.

In any case, for the sake of an argument I'd like to make in this essay, I ask that you go along with Willoughby's assertion that, in 1930, Charles Rigoulot was capable of approximately 330.7 pounds in the snatch. So, that being our agreed-upon starting point, I'd now ask you to consider the fact that over the next three decades—30 years—no other weightlifter managed to snatch anything much heavier than 330.7.

As I considered this fact for myself, I decided that for Kashirina to add 11 pounds to her record during her career was unlikely. However, Kashirina was anything but done with us menfolk, or with breaking

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records, and in no less a theater than the 2012 Olympic Games in London this phenomenon snatched, in full view of the sporting public around the world, no less than 334 pounds (151.5 kilos), a weight which 30 years ago, or even 15, would have been almost unthinkable.

To drill a little deeper, let's consider more carefully the history of men's performances in this singular, thrilling lift. To do this we should perhaps start with the now-controversial Hermann Goerner, the legendary German who, as an amateur, snatched 120 kilos (264.6 pounds), which was not nearly as much as the 135 kilos (297.6 pounds) claimed for him only by his longtime friend and publicist Edgar Mueller, who had no documentation other than his memory.[4] From there we take a large leap to the smaller, but more brilliant Frenchman, Charles Rigoulot, who won a gold medal in the Olympic Games in 1924 in what was then called the Lightheavyweight Class (82.5 kilos/181.75 pounds) and then became able, by 1930—if you accept Willoughby's hypothesis—to snatch 330.7.[5]

To be sure, this was far more than anyone up to that time had ever snatched, and only the long lens of history allows us to fully appreciate the fact that Rigoulot exemplified the qualities that Malcolm Gladwell referred to in the definition of an "Outlier" in his popular book, *Outliers: The Story of Success,* which provided examples from many fields of people whose abilities lay so far outside the norm that they accomplished things well beyond the reach of their contemporaries.[6] Had Rigoulot publicly snatched 330.7 pounds in 1930—which we've agreed he could do, it would have arguably been—up to 2014—*the greatest heavyweight snatch made by a man in the annals of the iron game relative to the date of the lift.* How can this be the greatest, one might ask, since as of 2014 the heaviest snatch ever made is Antonio Krastev's 476-pound (215.9 kilo) lift done way back in 1987?[7] (Many experts in weightlifting believe that neither Krastev's record snatch nor Leonid Taranenko's all-time best of 586 pounds (265.8 kilos) in the clean and jerk have been exceeded in over a quarter century because of the collapse of almost all state-supported sports programs and somewhat stricter drug control.)[8] In support of the argument that a 330 snatch in 1930 would take pride of place over all others, including Krastev's 476, consider the following lifts, when those lifts were made, and who made them.[9]

John Davis, USA	149.5 kilos/329.6 pounds	Buenos Aires, 1951
Norbert Schemansky, USA	150 kilos/330.7 pounds	Vienna, 1954
Paul Anderson, USA *(did not qualify as a world record)*	152.5 kilos/336.2 pounds	Philadelphia, 1956
Dave Ashman, USA	150.5 kilos/331.8 pounds	Stockholm, 1958
Alexander Medveyev, USSR	151 kilos/332.9 pounds	Moscow, 1959
Yuri Vlasov, USSR	153 kilos/337.3 pounds	Warsaw, 1959

As can be seen, what happened in the snatch between 1930 and 1959—almost 30 years—is that no one, not even the almost certainly drug-strengthened Yuri Vlasov—was able to surpass 330.7 in the snatch by more than seven pounds. It should be added that Alexander Medveyev, the other Russian on the list, was probably also using testosterone injections when he made his listed lift. (The use of testosterone by some Russian weightlifters began at least as early as the 1950s, according to several reliable sources.[10] As for the other lifters on the list—Davis, Schemansky, Anderson, and Ashman—the likelihood is that most of them did not use any type of anabolic/androgenic steroid before 1960, although it is also likely that some of them did use such substances after 1960, once these hormones were introduced to the sport more broadly outside the Soviet bloc. As these potent substances wormed their way into the marrow of weightlifting, however, it was open season and the world record increased approximately 140 pounds (!) over the next 27 years instead of six pounds—thanks to dozens of records—ending with Krastev's prodigious effort. If one needs more proof—this late in the drug wars of modern sport—that anabolic/androgenic hormones increase strength and muscle mass, a comparison of the gains in the heavyweight snatch record between 1960 and 1987 to the gains made between 1930 and 1960 in the same lift should be proof positive.

What makes this astonishing difference doubly remarkable, of course, is that Kahshirina—a woman weighing, at 225 pounds, very little if any more than the first three of the four men who could snatch approximately as much as she did—made her 334 without the unquestionable advantages of the heavier bone-structure and hormonal advantages nature confers on the "stronger sex." That Kashirina's drug screen in London tested negative for an anabolic/androgenic agent does not, of course, mean that she had not used or even *was* not using

Tatiana Kashirina's raw power is readily apparent in these photographs of her 334-pound world record snatch, taken by Denis Reno, at the 2012 Olympic Games. To subscribe to Reno's excellent *Weightlifter's Newsletter,* go to: http://newenglandlwc.com/renos-newsletter/.

these banned substances. This was made famously clear by the career of Austin's own Lance Armstrong, as well as by the tasty fact that during the heyday of the East German sports machine only three athletes from that country officially tested positive for banned drugs in the Olympics. Only three, even though the "secret documents" discovered by Dr. Werner Franke and his wife Birgitte Berendonk after the falling of the Berlin Wall and the collapse of the state support of elite sport in that country revealed in hair-raising detail that the use of anabolic agents by East German athletes—women as well as men, girls as well as boys—was for all practical purposes essentially universal for the people who had been selected by the state to serve their country's political philosophy.[11]

I will never forget an interview I did for the CBS Olympic coverage team, in 1991, with the director of the infamous lab in Kreisha, where the urine of the East German athletes was commonly screened before they were cleared to travel out of the country to compete in tested events. The interview took place shortly after "Regime Change" had swept through most of the Eastern Bloc countries, and the large, state-of-the-art Kreisha lab was eerily quiet and dimly-lit—like an abandoned, haunted house. Even so, the director, holder of a Ph.D. in Endocrinology, nervously told me with as straight a face as he could muster that he and his fellow scientists believed their job was to provide the substances to East German athletes which would improve their performances without causing them to test positive. When he was asked about the ancient Healers' Pledge—*primum non nocere* (first do no harm)—he looked down and said, "that was not our job."

But even if Kashirina—as a result of the ministrations of clever lab workers—had more circulating testosterone in her body than Rigoulot, Davis, and Schemansky put together had in theirs—her performance on the platform was nonetheless an outlier—a breath-taking, paradigm-shifting moment in the strength sports. What's more, it suggests in yet another way that the task facing a drug-free strength athlete is like the Labors of Hercules . . . on steroids.

As to whether we should view Kashirina's mega-human accomplishment as a step forward for women or a step back, each man—and certainly each woman—should decide that for themselves.

NOTES:

1. *Weightlifter's Newsletter, No. 339 (*30 November 2010): 1.
2. David P. Willoughby, *The Super Athletes* (New York: A.S. Barnes and Co., 1970), 98, 107.
3. *Ibid.*, 107.
4. Gherardo Bonini, Mark Kodya and Joe Roark, "Was Hermann Goerner Truly Mighty?" *Iron Game History* 9, No, 4 (May 2007): 21-32. See also: Edgar Mueller, *Goerner the Mighty* (Leeds, England: Vulcan Publishing, 1951), 53.
5. Willoughby, Super Athletes, 97.
6. Malcolm Gladwell, *Outliers: The Story of Success* (Boston: Little, Brown & Company, 2008).
7 "World Records Since 1919; Lift Up: History of Olympic Weightlifting" viewed at: http://www.chidlovski.net/liftup/l_recResult_athletes.asp?a_id=458.
8. *Ibid.*
9. Records included in the table are derived from: "Lift Up: History of Olympic Weightlifting," viewed at: http://www.chidlovski.net/liftup/default.asp.
10. Terry Todd, "Anabolic Steroids: The Gremlins of Sport," *Journal of Sport History* 14, No. 1 (Spring, 1987): 93-94.
11. For information on the East German doping program see: Brigitte Berendonk, *Doping Dokumente: Von der Forschung zum Betrug* (Berlin: Springer, 1991); and, Michael Janofsky, "Image-Conscious East Germany Ran Drug Tests Before Trips," *New York Times*, 15 December, 1989.

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