Boxing Simulation All-Time Heavyweight Championship of the World

About a computer simulation ran in 1967 to determine the all-time heavyweight championship boxer of the world.

One night in 1967, 3 men locked themselves into a small room over a savings and loan office in Miami, and proceeded to record on tape one of the most unusual boxing matches in the history of the sport. By the time the evening had ended, 2 prizefighting immortals had fought 13 bloody rounds for the All-Time Heavyweight Championship of the World.

The fight was the climax of 15 elimination bouts among the greats of heavyweight boxing, from John L. Sullivan through Joe Louis to Muhammad Ali, and it had been created entirely in the flickering innards of a National Cash Register Model 315 computer.

The human brains behind this electronic diversion belonged to Murry Woroner, a Miami promoter and radio-TV producer, and Henry Meyer II, head of a computer firm. Broadcast nationwide to some 380 radio stations, their tournament became a roaring success. On the evening of December 18, more than 16 million Americans abandoned television and leaned into radio sets for the final match. The real Dempsey and Marciano listened to their epic battle at a radio station in Los Angeles, where a large room had been converted to a simulated gymnasium, complete with ring and punching bags.

Radio advertising receipts for the tournament were estimated at more than $3 million.

Ring experts questioned whether a computer, fed a set of human variables, could predict a fair outcome to a fight between men of different eras, styles, and abilities. If so, they reasoned, why go to the trouble of staging sporting events at all?

But Murry Woroner, a fight fan himself, saw infinite possibilities in the idea. He felt that modern electronics could resolve any sporting argument, including the one over which fighter was the all-time best.

Woroner began by gathering a small group of boxing experts, including Nat Fleischer, editor of The Ring magazine, and Hank Kaplan, past president of the World Boxing Historians Association, who owned one of the most complete libraries of information on the subject. With their help, Woroner created a rating sheet that broke the skill of boxing down into 58 "factors." These factors included such things as speed, hardness of punch, accuracy, prior injuries, susceptibility to cuts, courage, ability to defend, and killer instinct. He sent the sheet to 250 boxing experts and writers and asked them to rate the fighters. Using this information, he reduced the field to 16 contenders:

- Jack Dempsey v. Jim Corbett
- John L. Sullivan v. Jim Braddock
- Bob Fitzsimmons v. Jack Sharkey
- Jim Jeffries v. Joe Walcott
- Joe Louis v. Jess Willard
- Max Baer v. Jack Johnson
- Rocky Marciano v. Gene Tunney
- Muhammad Ali v. Max Schmeling

Next Woroner and Guy LeBow, the veteran ring announcer hired to recreate the bouts, began to do some original research of their own. They dug through yellowed newspapers and magazines. They dredged up ancient round-by-round accounts of fights long forgotten. They sought out motion picture films of every bout that had ever had a lens opened upon it, including one classic that was shot by Thomas A. Edison. They interviewed each man that still lived except Gene Tunney, who refused them. They asked every question they could devise:

What pattern of punches did the fighter prefer? At what pace and rhythm did he like to move? What hurt him the most? Where did he cut most easily?

Out of this chaos they distilled a punch-by-punch story of each fighter's bouts for his 5 best years. This information was to be put into the computer along with each man's reactions in varying situations, so that the machine could predict a most probable response to any given event.

Finally, Woroner and LeBow deposited their mountain of data at the feet of their computer man, Henry Meyer. He isolated himself in a Miami hotel room and began to design a program. Using frequent conferences with expert Hank Kaplan and periodic trips to NCR headquarters in Dayton, Meyer slowly condensed thousands of random facts into the kind of tiny magnetic impulses that turn a computer on.

The NCR-315, which held some 160,000 "memory" positions, used more than 2,000 variables on each boxer to make 60 million calculations over 18 months. Realizing the impossibility of programming a fighter's personal feelings, attitudes, or frame of mind, Meyer worked out probability formulae based on the opinions of ring experts that were their best guesses about how a boxer would fight in top shape in his prime. The final program had some surprising subtleties. Meyer even built in a deterioration factor so that the fighters lost a tiny bit of energy on each punch. Certain other factors, such as speed, were modified depending on the corresponding factor of the opposing fighter. Of all the variables listed, Meyer found that the most important was raw courage.

Next the program was tested on the computer. Meyer began to play games with it, running hundreds of simulated bouts through the circuits and producing rooms full of printout sheets covered with the round-by-round details and the final result of each fight: KO, TKO, or decision.

Ready for broadcast, Woroner, LeBow, and sound engineer Frank Linale got together in Woroner's tiny studio in Miami under conditions of tight security. These 3 men were to be the only ones who knew the outcome until it was announced on the air.

Now LeBow's considerable talent came into play. The computer program lacked one vital element: It listed the punches thrown in each round but it did not list them in sequence. In their final script, Woroner and LeBow could rearrange and dramatize the punches, throwing in a clinch here and a missed haymaker there if they desired.

Linale's contribution was the realistic ring sound he laid onto the track behind LeBow's voice. He had taped actual fight crowds in Miami, capturing the grunts and moans, pops and whistles, boos and roars--even the shuffle and creak of leather on leather, the thunk when a fighter was hit. What came out was exciting enough to raise a sweat on the in-the-flesh fighters, who cheered themselves on along with millions of other listeners. The finished tapes were to be shipped to bank vaults or security safes at Western Union for delivery to participating stations shortly before air time.

Thus the elimination bouts began. The 1st-round eliminations saw the following results:

Dempsey over Corbett (KO, 7)

Sullivan over Braddock (D)

Louis over Willard (KO, 15)

Fitzsimmons over Sharkey (D)

Baer over Johnson (D)

Marciano over Tunney (D)

Jeffries over Walcott (KO, 10)

Ali over Schmeling (D)

Boxing aficionados had frowned at the Marciano-Tunney pairing. Matching 2 potential all-time winners in the 1st round seemed premature and unfair. Experts suspected a bug in the program when the masterful boxer Tunney was awarded only one round and lost the decision to the unpolished slugger from Massachusetts. Nevertheless, Tunney, who had defeated Dempsey twice to take and hold the crown, was out in the 1st round.

Others, including Nat Fleischer, had rated Jack Johnson as the greatest heavyweight of all time. But the 1st black to hold the crown was outpointed by underdog Max Baer, whose computer program had him flooring Johnson 3 times. It was the biggest upset of the tournament.

Dempsey pounded James Corbett into submission in 7. It was a quick curtain for "Gentleman Jim," the boxer who linked bare knuckles to the glove era. In the days when a round was ended only by a knockdown or dragdown, Corbett 1st gained prominence by going 61 rounds with the great black heavyweight Pete Jackson and had astonished the elite by giving a sparring exhibition in full dress--white tie and tails--with John L. Sullivan. A scientific boxer and ring strategist, Corbett cut Sullivan to shreds when they met for the championship.

Quarter Finals

Dempsey over Sullivan (KO, 7)

Louis over Fitzsimmons (TKO, 10)

Marciano over Baer (TKO, 13)

Jeffries over Ali (D)

The Great John L. had made it through the 1st elimination with a decision over James J. Braddock, but fell to the meat grinder, Jack Dempsey, in the quarter finals. The computer allowed the old bare-knuckle champ to get in a couple of good licks in the 3rd and 6th rounds, but Dempsey's windmill fists ended it in round 7.

Muhammad Ali, the most contemporary of the group, also fell in the 2nd go-round. He was outpointed by Jim Jeffries, an attacker and a hitter with a good defense, who had KO'd Jersey Joe Walcott in the 1st round pairings. A strong, well-proportioned fighter, Jeffries fought at around 220 lbs. He had got his early training as a sparring partner for Jim Corbett. Utilizing the much imitated "Jeffries Crouch," he KO'd Bob Fitzsimmons for the title in 1899, retired for awhile, then tried a comeback and was decked by Jack Johnson in 1910. A man of fierce determination, it may have been Jeffries' staying power and strong finishes that convinced the computer he could catch the darting Ali. Muhammad received severe punishment to the body in the 9th and took a count.

Semifinals

Dempsey v. Louis

Marciano v. Jeffries

In the "Dream Match" of the mythical tournament, Jack Dempsey weighed in at 191 and Joe Louis, the Brown Bomber, at 200. Both fighters had come up from hard times: Dempsey as a brawling, street-fighting kid who rode the rods looking for matches, and Louis as the 7th child of pickers in the cotton fields of Alabama. At 23, Joe became the youngest man ever to win the crown and defended his title successfully 25 times.

Dempsey had announced his retirement after failing in his attempt to regain the title from Tunney in 1927. The Colorado slugger stalked his opponent like a tiger, with dark-jowled scowls and leaping, slashing attacks. Tunney had beaten him with strong legs and superior boxing skill. But in Louis, Dempsey faced a paralyzing puncher whose killer instinct matched his own. Louis could be hit, however. That had been proved even by such minor lights as Two-Ton Tony Galento, the garrulous barrel, who brought out a winging left hook that stunned Joe in the 1st round of their title fight and dropped him with another in the 3rd. Buddy Baer had knocked Louis out of the ring and even Tami Mauriello had bounced him off the ropes with a right to the chin. Both of these surprises caught Joe in round one and he went on to wipe the canvas with his unfortunate attacker. Perhaps it was the data that Dempsey was a master at following up when he had an opponent hurt that swung the computer in Jack's favor.

In a bloody, free-swinging affair, Dempsey was down twice but had Louis on the canvas 4 times to win a unanimous decision. The NCR-315 gave Jack 9 rounds, Joe 4, and called 2 even. Dempsey carried the fight to Louis in the early going and weathered a late rally by the Bomber.

When Rocky Marciano TKO'd Jim Jeffries in the 14th round of their semifinal, the climactic program was plugged in. It would be Dempsey v. Marciano and forget about boxing skill. This was a meeting of 2 sluggers, 2 drivers, 2 steel-knuckled killers who moved in only one direction in a ring: straight ahead. And they seemed evenly matched.

But Rocco Francis Marchegiano must have had at least one small edge in the blinking eye of the computer: He had never lost a professional fight. Beginning in 1947, Rocky fought 49 times and won every bout, 43 by knockouts. Eleven of those knockouts came in the 1st round. He had cooled the great Joe Louis in the 8th round of their match in 1951 and had KO'd Jersey Joe Walcott in the 13th to take the title in 1952. He defended the crown 6 times and retired from boxing undefeated. Dempsey had lost twice to Tunney and had been knocked out of the ring by Luis Angel Firpo in one of the bloodiest battles in ring history. But Firpo did not know how to

take advantage of Dempsey's momentary blur and was floored 9 times in the 1st 2 rounds before Jack's right hand finally took him out.

That was the match-up as Woroner and LeBow rolled the tape in the small Miami recording studio. Woroner, doing color and interviews, stated that the winner would receive a gold and diamond championship belt, valued at $10,000. LeBow characterized the final conflict as the meeting of an undefeated fighter with an indomitable will to win against a steel-jawed slasher of animal cunning and ferocity. Referee Ruby Goldstein was announced, the fighters were introduced, and the bell rang for Round 1.

Round 1: Dempsey took the 1st stanza on crowding body shots and quick counters that brought some blood to Rocky's mouth as the round ended. (Round: Dempsey)

Round 2: Dempsey continued to work on Marciano's body with hooking rights under the heart. Rocky got in a rip to the mid-section but took a hard left-right combination that had him grabbing for a clinch. A straight right to the head by Dempsey and Marciano was bleeding again, this time from the nose. Rocky ignored it and the 2 fighters got into a toe-to-toe street brawl, connecting furiously with little attempt at defense. A right to the head made Dempsey stumble but Jack landed more and Rocky was bleeding badly as the round ended. (Round: Dempsey)

Round 3: Marciano opened up on Dempsey's head with combinations and floored the Mauler with an explosive right. After the mandatory 8 count, Dempsey moved in close to nullify Marciano's brutal attack and scored with a solid left as they parted. Again, they squared up and traded head shots, neither man willing to give an inch. (Round: Marciano)

Round 4: The fighters took turns snapping necks in this round, demonstrating their ability to take punishment. (Round: even)

Round 5: The pace began to tell. Marciano shook Dempsey with hooks to the head and the Mauler countered with a right under the heart that got to Rocky. Marciano demonstrated his nonstop punching technique, flailing away with both hands at Dempsey's chest and head. Dempsey concentrated on Marciano's body in the exchange. (Round: even)

Round 6: Dempsey mounted a fierce attack scoring with a left to the body and right to the head, but received a hard left to the mouth and a jolting uppercut by Marciano. Rocky went into a deep crouch, bobbing and weaving, and Dempsey followed suit. Jack whipped both fists to the body and was straightened up by Rocky's right. Dempsey's weaving, jerking motion made Rocky miss and Jack got in a good left before the round ended. (Round: even)

Round 7: Dempsey dominated the 7th with quick, explosive combinations fired from his weaving crouch. A left to the mouth slowed Rocky and a series of lefts and rights to the head jolted him. (Round: Dempsey)

Round 8: Marciano came back strong making Dempsey miss and shocking him with body smashes. Rocky tied Jack up and scored with both hands after the break. Then Jack missed a left over the head and Rocky leaped in with a left and right to the jaw and Dempsey went down. He took a 9 count sitting in the middle of the ring then leaped up and challenged the Brockton Blockbuster toe-to-toe, both men pumping hooks at each other as fast as their arms would move. (Round: Marciano)

Round 9: Rocky dominated the tiring Dempsey almost completely in this round. Dempsey, trying to rush in after a break, received jolting hooks under the heart and a left to the head that drove him back. A left hook to the mouth, a straight right smash, and another vicious left, and Dempsey went down for the 3rd time. Up at 9, he was checked by Referee Goldstein, then flew back at Marciano, giving as much as he received as the round concluded. (Round: Marciano)

Round 10: Rocky landed good combinations to the head and received straight lefts to chin and body. The fighters' faces were lumped and pulpy from the punishment received. Marciano whipped an explosive right to the body and followed with a left to the chin and a brutal right uppercut that put Dempsey down a 4th time. Jack got up more slowly this time and weathered Rocky's attack until the bell. (Round: Marciano)

Round 11: Dempsey found his 2nd wind and took the fight to Marciano, sidestepping Rock's attack and shooting lefts that brought a flow of blood from Marciano's nose. Dempsey ripped another left hook and Marciano went into a bob and weave, blood streaming from his face. The fighters exchanged good body shots and Dempsey landed a slashing left and right at the bell. (Round: even)

Round 12: After having absorbed brutal punishment all through the fight, Dempsey seemed to take charge of the battered Marciano in this round. Marciano, always bulling forward, was staggered with 2 exploding shots to the mouth. A Dempsey hook to the head had Rocky hanging on. Dempsey rushed to the kill, scoring with a left, but Rocky managed to tie him up. Jack broke and swung a left-right-left to Rock's jaw. But the Brockton Blockbuster would not go down. He took everything Jack could throw and survived the round. (Round: Dempsey)

Round 13: Dempsey charged in for the kill but Rocky had revived and met him with a left hook to the head. Dempsey was stunned and on the defensive as Rocky whipped a flashing left and right to the mouth. Dempsey threw a left hook but Marciano countered with a head-rattling right to the point of the chin and Dempsey went down again. After a mandatory 8 count, Jack rose to his feet and tried to fight back but Marciano was too strong, too determined. The Rock charged like a wild animal, smashing body blows and straightening Dempsey up with rights. Dempsey had to fight furiously to ward off the charging Rocky's flurry of rights and lefts to the head. Rocky continued to batter through Dempsey's defenses. Another buzz saw of brutal combinations to the head and jaw put the Manassa Mauler down and out.

Winner: Marciano, by a KO at 2:28 of the 13th round. Dempsey had been floored 6 times, Marciano none.

Aftermath: As the real Marciano accepted the $10,000 belt in Los Angeles, he paid tribute to his transistorized rival. "He was always my idol. I copied everything from him," said Rocky. Dempsey just shrugged and said "It's only a computer."

"All we've really done is start more arguments," Murry Woroner admitted.

--M.H.

The Super Fight: Muhammad Ali v. Rocky Marciano

Rocky Marciano accepted the title of All-Time Computerized Heavyweight Champion of the World with modesty. But Muhammad Ali, eliminated in the quarterfinals of the make-believe

tournament, did not greet the outcome with aplomb. He filed suit against promoter Murry Woroner for $1 million, claiming his electronic defeat by Jim Jeffries had defamed him.

The suit eventually was settled in court for $1. And it gave Woroner another idea. If 16 million people would listen to a computerized bout staged for radio, how many would pay to watch one on television? The Miami producer queried Marciano and Ali: How would they like to act out a bout for the camera, based on a computer-written script, and show the world who might win a Super Fight between 2 living undefeated ex-champions? They would like it very much, they said, especially when Woroner explained that he planned to beam the fight into more than 1,000 theaters worldwide, via closed-circuit television, and that the gate could top $5 million. Marciano announced he would take a flat fee for his stint; Ali asked for a cut of the profits.

Once again the NCR-315 computer was fed 129 variables on each boxer; once again it began to whir, blink and spew out round-by-round results of an imaginary conflict. Before the computer had reached its decision, the fighters were ready to do their thing for the cameras.

In the summer of 1969, Woroner sealed off a television studio in an out-of-the-way district of North Miami Beach and put 4 camera crews to work filming Rocky and Muhammad throwing leather.

Rocky had lost 50 lbs. and donned a toupee for the match. Ali was in good shape, despite a layoff. Under Woroner's direction, they sparred for the equivalent of 70 rounds, acting out every possible situation for the film editors to use when matching scenes to the computer's script. So that no one would know the outcome prior to the televised bout, Woroner filmed 7 different endings for the fight: each boxer winning by a KO, a TKO, or a decision, plus a draw.

As the fighters simulated reality, the few privileged onlookers speculated about which man might have won a real fight, if they could have met in their primes. Both were undefeated in professional boxing: Marciano's record was 49-0-0 with 43 KOs, Ali's was 29-0-0 with 24 KOs. Marciano gave up height and weight to the Louisville Hummingbird. The 5'10 1/2" Marciano fought at 184 lbs., the 6'3" Ali at 211. And Ali had the reach on Rocky by more than a foot. Muhammad's arms stretched 82" and the Brockton Blockbuster's only 68".

The styles of the 2 men couldn't have been more disparate. Rocky described his: "I'd get low, making myself a smaller target, a tougher man to hit on the chin. My game was to always bob and weave and never let myself be maneuvered out in the middle of the ring."

Rocky was always on the attack, always driving forward with short, brutal chops to the arms, body, and head of his opponent. He would try for the quick kill--opening fast and attempting to hurt his man as early as he could.

"I think if I could corner [Ali]," Rocky said, "I would knock him out."

But a butterfly is difficult to corner. "My main motive when I enter the ring is to hit and not be hit," Muhammad said, commenting on his philosophy of fisticuffs. He claimed that his left jab had been timed at 400ths of a second and that his dancing feet had kept him far from harm's way. "In all my fights, pro and amateur, I never remember being cut, scratched or marked," he said.

Everyone agreed that if it went to a decision, the winner would have to be Ali. But Rocky could very well take it with a KO.

And so the 2 heavyweights began prancing about the ring, as the cameras hummed. Even though they were supposed to pull their punches, some blood flowed.

"I think it was Marciano who threw the 1st real punch," Woroner said later. They had been fooling around when Marciano suddenly let one go to the midsection. Ali followed with a shot to the head. But the fighters respected each other and apologized for these slips. Afterward, Ali commented that Marciano had surprised him. At 45, the Blockbuster was herding the agile younger man into the corners, as he had in the days of his prime.

Marciano called Ali "the fastest man on wheels," after the filming.

In January, 1970, the fight was televised. An estimated million fans paid $5 each for the privilege of watching it in America and some 15 million more queued up in England, Australia, and Mexico.

THE FIGHT

In the opening rounds, Ali had it all his way. While the Rock plowed stolidly in, missing hooks, the Butterfly flitted and flirted, snapping jabs that brought blood to Marciano's face. Ali also threw a lot of body punches, unusual for him.

But in the 10th round, Rocky's patience paid off. He finally cornered Ali and cut him down. The Louisville Lightfoot was up immediately and darting quickly. He continued to pepper the stalking Rocky and was winning on points when Marciano rallied. With blood streaming from simulated cuts, Rocky put the big finish on the film by knocking Ali out at 57 seconds into the 13th round. It was the same round in which he had bounced Jersey Joe Walcott to take the heavyweight title in another come-from-behind finish, and the same round in which he had KO'd Jack Dempsey to win the mythical All-Time Computerized Heavyweight Championship.

Muhammad, who had watched the bout in a theater, said, "That computer must have been made in Alabama."

"That was no Ali, I knew," said his trainer.

Rocky Marciano never learned that he had won the Super Fight. Three weeks after filming was completed, he was killed in a plane crash.