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## 111 YEARS FOR 1 SECOND

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### SUMMARY

The most attractive of all athletic disciplines is the 100m sprint for men. This discipline has its long development, while the world record has been recorded by International Amateur Athletic Federation only just for 111 years. During this period, the World Record was broken 67 times, and Donald Lippincott's record from 1912 (10.6s) was improved by "only" one second and now stands at 9.58s (Usaine Bolt, 2009). This article analyzes the progression of the World Record at 100m, from the moment when records were officially kept, until today, but also gives a prediction about its further development and importance. For easier interpretation of the results, the progression of the 100m world record for men was considered in three time periods: The first period - from 1912 to 1945, the second period - from 1946 to 1983, and the third period - from 1983 to 2023. Effect of recording of the world's best 100m sprint times for men is significant and multifaceted, while including all segments of athletics in a multifaceted connection, it also has mutually opposing prognostic qualities. In the near future, due to sports expert analysis, it is not expected to break the world record in the discipline of 100m sprint for men. On the contrary, a deeper philosophical analysis provides a projection of rule changes, multiple mitigations, as well as aggressive changes to the human body in order to enable new records and indirectly, propagandistically extend the age of modern society and hide the twilight of civilization that is ahead of us.

**Key words:** athletics, sprint, 100m, world record, World Championships, Olympic Games

## INTRODUCTION

The word athletics is of ancient Greek origin and means to compete, fight in strength, speed, etc. It includes natural forms of movement: walking, running, throwing, jumping and their combinations in the form of heptathlon and decathlon. Athletic disciplines can be performed everywhere, on each, or on specially arranged arenas and halls. Athletics is also the main part of the program at the Olympic Games (Jotov, et al., 2022), but also an important part of the physical education program at all levels of education (Stefanović, 1992a). Of the aforementioned movements, walking and running represent the simplest and most natural forms of movement (Despot, 1951).

Already in the tribal community 3100 years before Christ, tribal competitions were known in Kyrgyzstan and Turkmenistan, while a large number of evidences of the initial forms of athletics were left by the Phoenicians. (Stefanović, 1992a). After the Egyptians, who left traces of athletics on the pyramids, the ancient Greeks left a specific mark through numerous individual competitions, but also at several types of games (at the Homeric, Pythian, Isthmian, Nemean and Olympic Games) dedicated to fallen heroes or gods. At the First Olympic Games, held in 776 BC, the only sprinting discipline on the program was a one-stadium race 192.27m (Ćirić, 1996). The military origin of sprinting disciplines, but also their application, can be linked to the actions of archers during warfare, where a short assault of infantry was applied after a platoon of arrows from the opposing army, in order to open the battle and disable the enemy's action at a distance. The next development leap of sprinting disciplines takes place in England with the movement of modern sports and the formation of the International Amateur Athletic Federation (IAAF) (Ilić, Mijatović, 2006).

The simplest translation of the English word "record" would mean note or inscription (Grujić, 1972). A somewhat deeper interpretation includes a thing that is evidence of the past, especially a record kept in writing or some other permanent form (Grujić, 1972). Something closer to the sports interpretation is the definition that makes up the sum of the past achievements or performance of a person, organization or thing (Vujaklija, 1980). A world record is usually the best global and most important performance ever recorded and officially verified in a particular skill, sport or other type of activity.

The goal of the research is to analyze the progression of the men's 100m world record, from the moment when records were officially kept, until today, but also to prognosticate its further development and importance.

## METHODS

The article used the method of theoretical analysis of the content of scientific and professional literature, and the causal method, with the systematization of the author's professional experience in the field of physical education, sports and recreation, with the application of logical inductive and deductive reasoning.

## RESULTS

At the beginning of the 19th century, the measurement of time in athletics begins, where the victory of a certain Berkeley in 1803 on the 440-yard track is recorded in a time of 56.0 seconds (Stefanović, 1992a). Timing in athletics was made possible by the invention of George Graham, who in 1721 added a third needle so that they could count the seconds (Britten, 1894). The first measured races, however, were not athletic events, but horse races in England in 1731 (Larrosa, 2016). Human races first began to be timed at Oxford University in 1850, taking times with a resolution of a  $\frac{1}{2}$  second, using the chronometer model invented by Abraham-Louis Breguet (<https://www.breguet.com/>). Races would not be timed with resolutions as high as  $\frac{1}{5}$  of a second until 1862 (Larrosa, 2016). The first electronic timekeeping models that counted hundredths of a second appeared in 1902. It was Heuer in 1916 that patented a chronometer with an accuracy of  $\frac{1}{50}$  of a second (<https://www.tagheuer.com>). Heuer's hegemony over race timing at the Olympic Games ended in 1928, when Longines manufactured a pocket stopwatch that could measure with a precision of  $\frac{1}{100}$  of a second. In several disciplines a little later, the same time was recorded for both first and second place. At this point photographic cameras (photo finish) placed at the finish line began being used to record race results (<https://timingsense.com/en/>).

Thus, the parallel development of sports and technology enables a new asset of modern society, such as timing in various sports, as well as setting world records. The world record (WR) fascinates both the competitors and the audience. It represents the limit of human possibilities to which elite athletes strive the most. Throughout the history of athletics there has always been something unique and magical about setting a world record. Measuring results and "breaking through" the limits of human capabilities are of great importance for the development of athletics (Perišić, et al., 2022).

The 100m race is the most popular and prestigious sprint race in outdoor athletics. The 100m sprint is often an indicator of speed of movement, and the world record holder is labeled as the fastest man in the world (Stefanović, 1992b). In sprint running for men, at the World Championships in Berlin in 2009, Usain Bolt, breaking two world records, moved the "dream limit", which is still unattainable, at 100 and 200m. After those two fantastic world records (9.58s on 100m and 19.19s on 200m) many asked the question of human limits in sports. Based on an analysis of thousands of sprint races between 1920 and 2007, biologist Mark Denn, from Stanford University in California, found that the result 9.48s, final limit in men's 100m sprint (Perišić, 2011).

After the race in Beijing, Glenn Mills, Bolt's coach, stated that Bolt could achieve a time of 9.52s that he didn't start rejoicing before crossing the finish line and thus slowed down the speed of movement he achieved until the 60th meter of the race (Perišić, 2011). Bolt told the Belgian media that his goal is to lower the world record in the 100m from the current one 9.58 to 9.40 seconds. He believed that it was the ultimate limit, which could no longer be broken (Perišić, 2011). Fourteen years have passed since this statement by Bolt, which is the longest time since the installation of an WR. Have we already reached the limit in this hard-to-beat

athletic discipline? French biomechanics and sports researchers who studied human psychophysical abilities believe that athletes in most athletic disciplines have "used up" as much as 99% of human potential, and in some, even 99.7% (Perišić, 2011).

In a period of 111 years (1912-2023), 67 WRs were achieved, and Donald Lippincott's record from 1912 (10.6s) it was improved by "only" one second (table 1) and now it is 9.58s (Usain Bolt). There are also unofficial world record records as far back as 1891 to 1912 with 19 record holders from 8 countries moving the record from 10.8s to 10.5s. This article analyzes the progression of the men's 100m WR, from the moment when the IAAF officially keeps records, until today with the intention of "tearing out of oblivion" the fastest people in the world. For easier interpretation of the results, the progression of the 100m WR for men was considered in three time periods: The first period - from 1912 to 1945, the second period - from 1946 to 1983, and the third period - from 1983 to 2023 (Perišić, 2011). The first period lasts from the creation of the IAAF, i.e. from when world records were officially kept until the end of the Second World War, (with a break in the organization of competitions in a large part of the world) also with a turning point in the development of technology, training, and sports results. The second period is marked by the expansion of athletics in the world with the organized Olympic Games and continental championships and ends with the year of organization of the first World Championship in Athletics. The third period was marked by the significant influence of the organization of the World Championships in Athletics, which is very important for the development of results because, in addition to the Olympic Games, it represents the most important sports competition for athletic disciplines.

### **First period – from 1912 to 1945**

It is the period since the creation of the IAAF, i.e. from when world records were officially kept until the end of World War II (a period that lasted 33 years).

The first WR in the 100m in men's competition, which was recognized by the IAAF, was achieved by Donald Lippincott (USA) at the Olympic Games (OG) in Stockholm in 1912 by time 10.6s. The first record was followed by a period of eight years without WR (due to war events during the First World War), so that Jackson Scholz (USA) equaled it at the international meeting in Stockholm in 1920, and in 1921 Charley Paddock (USA) improved WR for 0.2s (10.4s). A new period of eight years without WR followed, until 1929, when Eddie Tolan (USA), on August 8th in Stockholm and August 25th in Copenhagen, equaled WR (10.4s). Amsterdam Olympic winner Percy Williams (CAN) set the WR in 1930 by time 10.3s. It is interesting to note that at the 1932 Los Angeles Olympics, Eddie Tolan and Ralph Metcalfe (USA) achieved the same time in the 100 m final race (10.3s) and equaled Percy Williams' record, but only Eddie Tolan WR was ratified. In the following years, this score was equaled six more times: Ralph Metcalfe in 1933, Eulace Peacock (USA), Christiaan Berger (HOL), Ralph Metcalfe (twice) in 1934 and Takayoshi Yoshioka (JAP) in 1935. Jesse Owens (USA) achieved the time 10.2s in 1936 equaled by Harold Davis (USA) in 1941. In the observed period (until World War II), 15 WRs were broken, 12 of which were achieved by American sprinters, and one each by Canadian, Dutch and Japanese sprinters. In the period 1912-1945, WR was improved for 0.4s,

from 10.6s to 10.2s. The most valuable results in this period were achieved by Ralph Metcalfe (USA) and Eddie Tolan (USA), who each set 3 WRs in the 100m running discipline, and Jesse Owens (USA), who in 1936 achieved 6 WRs in one day (Hymans, 2020). The most important sprinters of this period were:

Percy Williams the Canadian WR holder, who surprised everyone by winning the 100m and 200m races at the Amsterdam Olympics, at only 20 years old. Although he tied WR in the 100m race, after the Games, the American public believed that Williams had accidentally won the medals and invited their best runners to compete against him in exhibition competitions. In a series of 21 races, Williams won as many as 19 races and confirmed that he is by far the fastest sprinter in the world. After serious hamstring injuries, he participated in the Los Angeles Games in 1932, and was eliminated in the quarterfinals, after which his career ended ([www.britannica.com/biography/Percy-Williams](http://www.britannica.com/biography/Percy-Williams)).

Thomas Edward Tolan, was the first African-American sprinter to win gold medals at the 1932 Los Angeles Olympics in the 100m and 200m events. In March 1935, Tolan won the 75, 100 and 220-yard races at the World Professional Championships in Melbourne, becoming the first man to be the fastest sprinter in both competitions (amateur and professional). During his sprinting career, Tolan won 300 races and lost only 7 (<https://michigansportshof.org/inductee/eddie-tolan/>).

Ralph Metcalfe Harold was the fastest athlete in the world from 1932 to 1934. He became the first man to win the NCAA 200m title three times in a row. At the 1932 Los Angeles Olympics, after viewing the photo-finish in the 100m final, Metcalfe received a silver medal and Tolan a gold medal (both with WR 10.3s). In the final race at 200m, he won a bronze medal. At the next Olympics in Berlin in 1936, Metcalfe again competed in the 100m and was second behind Jesse Owens, and won the gold medal as part of the winning relay team in the event 4x100m (<https://www.britannica.com/biography/Ralph-Metcalfe>).

James Cleveland "Jesse" Owens is an American athlete, who is remembered for his quadruple triumph at the Olympic Games in Berlin in 1936. He won on August 3th in the 100m race, on August 4th in the long jump, on August 5th in the 200m race, and on August 9th, 1936, as a member of the relay team (Jesse Owens, Ralph Metcalf, Foy Draper and Frank Wyckoff) he triumphed in the race, 4x100m. That feat remained unsurpassed for 48 years, until 1984 and the Olympics in Los Angeles, where his feat was repeated by Carl Lewis. A feat that entered the history of athletics was performed by Jesse Owens on May 25th, 1935, at a track and field meet in Ann Arbor, Michigan. Then he broke 6 world records in 45 minutes: 15:15h – 100 yards; 15:25h – long jump; 15:45h – 220 yards and 200 m; 16:00h – 220 yard hurdles and 200m hurdles ([www.history.com/this-day-in-history/owens-wins-4th-gold-medal](http://www.history.com/this-day-in-history/owens-wins-4th-gold-medal)).

### **Second period – from 1946 to 1983**

It is a time period of 37 years, from the end of the Second World War to the holding of the First World Championships in Athletics. The WR set by Jesse Owens in 1936 with a time of 10.2s was tied 11 times between 1936 and 1956. Records were achieved by: Harold Davis (USA)

1941, Lioyd LaBeach (PAN) and Norwood Ewell (USA) 1948, McDonald Bailey (GBR) 1951, Heinz Futerrer (FRG) 1954 and 1956, Bobby Morrow (USA) three times and Ira Murchison (USA) twice. In 1956, 20 years after Owens' WR (10.2s), Willie Williams (USA) managed to beat it by 0.1 seconds. The WR achieved by Williams (10.1s) was equaled by: Ira Murchison and Leamon King twice in 1956 and Ray Norton (USA) in 1959. It is an interesting fact that in 1956 as many as 9 WRs were achieved, of which Ira Murchison (USA) and Bobby Morrow (USA) scored 3 each, Leamon King (USA) 2 and Willie Williams (USA) 1. Armin Hary (FRG) achieved a 10.0s WR in 1960, which was tied by 1968: Harry Jerome (CAN) 1960, Horacio Esteves (VEN) 1964, Bob Hayes (USA) on OG in Tokyo 1964, Jim Hines (USA) 1967, Enrique Figuerola (CUB) 1967, Paul Nash (RSA), Oliver Ford (USA), Charles Greene (USA) and Roger Bambuck (FRA) 1968. Another year that is similar to 1956 in terms of the number of WRs achieved is 1968, in which 8 records were achieved. What makes this year different from the others is the fact that 5 WRs were achieved in one day. At the US National Team OG qualifier held on June 20, 1968 in Sacramento, Charles Greene and Roger Bambuck posted identical times of 10.0s in the fourth qualifying group, tying the WR. Two hours later, in the first semi-final race, Jim Hines and Ronald Smith improved the record to 9.9s. Just fifteen minutes later, in the second semi-final race, Charlie Green equaled the previous record and achieved his second WR of the same evening. At the 1968 Mexico Olympics, Jim Hines equaled WR 9.9s (electronically measured 9.95s). In subsequent years this time was achieved by Eddie Hart (USA) and Rey Robinson (USA) in 1972, Steve Williams (USA) in 1974, Silvio Leonard (CUB) and Steve Williams - twice in 1975, Steve Williams, Harvey Glance (USA) twice and Donald Querrie (JAM) in 1976. In the 100m, men achieved 38 WRs in the period 1946–1983. The first WR was achieved with a result of 10.2s, to be equaled 8 more times. That WR was beaten by 10.1s, which was tied 4 more times. The record breaking continued with a result of 10.0s (equaled 9 more times) and at the end of this period a WR was achieved with a result of 9.9s (first time under 10 seconds), which was equaled 13 more times. In the men's competition, out of 38 WR, American sprinters achieved 28 WR. Steve Williams scored the most - 4 WRs, 3 WRs each were scored by: Ira Murchison, Bobby Morrow and Jim Hines, and 2 WRs each by Leamon King, Charles Greene and Harvey Glance. In the period 1946–1983, the WR improved by 0.3 seconds from 10.2s to 9.9s (Hymans, 2020). The most important sprinters of this period were:

Steve Williams (USA) was a four-time world record holder at 100 m in the mid-1970s. He achieved his first WR in 1974, followed by two records in 1975 and one record in 1976. Due to injuries, he missed the Olympics in 1972 and 1976. He won the World Cup in 1977. (<https://worldathletics.org/athletes/united-states/steve-williams-14355979>).

Jim Hines is an American athlete, the first man to run 100m under 10 seconds (9.95s), in the final of the OG in Mexico City. At the 1968 Olympics in Mexico City, in addition to the gold medal in the 100m race, Haynes also won the gold medal in the 4x100m relay race (<https://olympics.com/en/athletes/james-ray-hines>).

Valeriy Pilipovich Borzov, athlete of the URS, was an Olympic and European champion and a meritorious master of sports. He participated in the Olympic Games in Munich in 1972 and in Montreal in 1976, where he won medals in the 100m, 200m and 4x100m relay races.

The double victory in the sprint at the Munich Olympics in 1972 is the brightest moment of his career. After the victory in the 100m, it seemed that the disqualification of the two best sprinters from the USA, Ray Robinson and Eddie Hayes, due to the delay in the start, made Borzov's path to the gold easier. However, in the 200m race, Borzov beat both of them in a direct competition, proving that he was the fastest sprinter at that moment. In addition to his Olympic successes, he was the European champion in the 200m race (1971), three-time European champion in the 100m (1969, 1971, and 1974), six-time European indoor champion in the 60m race, once in the 50m race and multiple URS champion. At the Montreal Olympics in 1976, he won bronze medals in the 100m and 200m races. At the end of his career, he was the president of the Olympic Committee of Ukraine from 1991 to 1999, and from 1994 he was a member of the IOC and the Ukrainian Minister of Youth and Sports (Marinković, 1984; <https://www.britannica.com/biography/Valery-Borzov>).

Donald Quarrie is a Jamaican athlete, one of the world's greatest sprinters in the 1970s. Don Quarry competed in five Olympic Games. There is a statue of him at the entrance to the Jamaica National Stadium. His first WR (19.8s) achieved in the 200m event in 1971, and equaled it in 1975. The following year, he also achieved WR on 100m race (9.9s). At the Olympic Games in Montreal in 1976, he won a gold medal in the 200m and a silver medal in the 100m race. At the next Games in Moscow, he won a bronze medal in the 200m race. He won his last Olympic medal – silver, in 1984 in Los Angeles in the 4x100m. At the Pan American Games in 1971, he won gold medals in 100m and 200m, and at the Commonwealth Games from 1970 to 1978, he won 6 gold medals in 100m (1970, 1974 and 1978), 200m (1970 and 1974). ) and 4x100m in 1974 (<https://olympics.com/en/athletes/donald-quarrie>).

### **Third period - from 1983 to 2023**

It is the period from the first world championship (WC) in athletics to October 2023 (a time period of 40 years). Seven years after the record that Donald Quarri achieved, Calvin Smith (USA) achieved a WR in 1983 with a time of 9.93s. Carl Lewis (USA) equaled the WR at WC 1987 in Rome (9.93) and the following year in the final race at OG in Seoul, Lewis scored a WR with 9.92s. Four years later in 1991, Leroy Burrell (USA) achieved a WR of 9.90s, and the same year at the WC in Tokyo, Carl Lewis achieved a WR of 9.86s. At the Lausanne GP meeting in 1994, Leroy Burrell (USA) improved the record by 0.01s (9.85s). The WR (9.84s) was improved by Donovan Bailey (USA) by one hundredth at the 1996 Olympics in Atlanta, and that record remained until 1999, when Maurice Greene achieved a result of 9.79s at the meeting in Athens. Since 2005, when Asafa Powell (JAM) achieved WR with a result of 9.77s (9.767s), the period in which WRs are achieved by Jamaican sprinters begins. Asafa Powell achieved a time of 9.77s twice in 2006, first at the British GP meeting (9.763s) and then at the Golden League meeting in Zurich (9.762s). The trend of improvement of WR in the most attractive athletic discipline continued in the following years. Thus, Asafa Powell achieved a result of 9.74s in 2007, and Usain Bolt (JAM) first achieved a result of 9.72s in 2008, and then at the OG in Beijing 9.69s (9.683s). After a year at the meet in Berlin, Usain Bolt improved the WR on 9.58s (9.578s). Of the 15 WRs scored in the period 1983-2023, 4 WRs were scored by Asafa

Powell, 3 WRs each by Usain Bolt and Carl Lewis, 2 WRs scored by Leroy Burrell, and 1 WR each by Calvin Smith, Donovan Bailey and Maurice Greene. In the period 1983–2023, WR improved by 0.32 seconds from 9.9s to 9.578s (Hymans, 2020). The most important sprinters of this period were:

Carlton Frederik Lewis (USA) was chosen by the IOC as the best athlete of the 20th century. He won nine gold and one silver Olympic medal. He is an eight-time world champion in athletics at the WC, and that was when the world athletics championships were held every four years, not every two, like today. Carl Lewis repeated the feat accomplished before him by Jesse Owens in Berlin, 1936, who won the 100m, 200m, long jump and 4x100m relay. He repeated the feat of his compatriot Al Oerter, who won the Olympics (from 1956 to 1968, in the discus throw), also winning four Olympics, in the long jump. It should be noted that no one, before or after him, won the long jump event twice. Additionally, no sprinter has won the 100m twice at the Olympics and Carl Lewis did so in 1984 and 1988. Carl Lewis also qualified for the 1980 Moscow Olympics (as a 19-year-old) in the 4x100m relay and the long jump, but did not participate due to the American boycott, possibly denying him a relay medal, which would make him the Olympian with the most medals. However, Carl Lewis is the athlete with the most individual Olympic gold medals - 7, if we count current sports disciplines. Rey Ewry (USA) won 8 individual gold medals in 1900, 1904 and 1908, but in disciplines that have long since ceased to be in the program of the Olympic Games: long jump, high jump and triple jump - from standing. At the first WC in Helsinki in 1983, Lewis won 3 gold medals (100m, long jump and 4x100m relay), and the following year at the Los Angeles Olympics he won 4 gold medals (100m, 200m, long jump and 4x100m relay). At the second WC in Rome in 1987, he defended all three medals from the previous championship, while at the 1988 Games he won two gold medals (100m, long jump) and one silver medal (200m). At the WC in Tokyo in 1991, he won gold medals in the 100m and 4x100m, and a silver medal in the long jump. At the third Olympics in which he participated, in Barcelona 1992, he won gold medals in the disciplines of long jump and relay 4x100m. Lewis won his only bronze medal at the WC in Stuttgart in 1993, and his last appearance at the Olympics, in 1996, ended with winning the fourth consecutive gold medal in the long jump ([www.usatf.org/athlete-bios/carl-lewis](http://www.usatf.org/athlete-bios/carl-lewis)).

Asafa Powell (JAM) in 2005 and 2006 he achieved the same result three times in the 100m race: 9.77s, but 2007 improved WR on 9.74s. He was a member of the Jamaican relay team that beat WR in 4x100m in 2008. Although he achieved his best result in 2008 9.72s, it wasn't enough to win WR, as his countryman Usain Bolt had already achieved a better time. He is the only sprinter in history who managed to run the 100m under ten seconds 15 times in one season (2008) (<https://worldathletics.org/athletes/jamaica/asafa-powell-14202176>).

Usain Bolt (JAM) first appeared on the world stage at the WC for juniors in 2002, when he won a gold medal in the 200m and two silver medals as a member of the relay team 4x100m i 4x400m. Bolt won the gold medal as the youngest athlete at the competition. During 2003, Bolt won gold medals in the 200m races, at the World Junior Championships and at the high school national championships. In 2004, he became the first junior sprinter to run the 200m in under 20 seconds, making 0.2s better WR for juniors that was set by Roy Martin. Due

to injuries, Bolt had to miss most of the competition in 2004 and 2005. At the 2006 Louisiana Grand Prix, Bolt ran his new personal best – 19.88s. That year, at international competitions, Bolt broke the national records of Jamaica in the 200m, setting a new record – 19.75s. At the 2007 WC in Osaka, Bolt won the silver medal in the 200m, finishing behind his rival Tyson Gay. In May 2008, he achieved WR in 100m with a result 9.72s, and in Athens a new national record in the 200m, 19.67s. In August 2008, at the Olympic Games in Beijing, he won gold medals and won WR, in 100m and 200m. His time 9.6s made him the first athlete to run 100m under 9,7s without the help of the wind. On August 22nd, he participated in the Jamaican 4x100m relay as the third relay holder. In that race, Jamaica team won the gold by a score 37.10s, thereby overthrowing the WR established in 1993. At the WC in Berlin, August 2009, he improved his WR in 100m from Beijing, on 9.578s. At the same competition, he won the gold medal in the 200m final, setting a new record WR (19.19s). He also won the gold medal in the relay race at 4x100m (<https://usainbolt.com/athlete/>).

Table 1: Progression of the men's 100m world record

| HAND MEASURED |                     |       |                          |                          |
|---------------|---------------------|-------|--------------------------|--------------------------|
| Time          | Athlete             | State | The place of reaching WR | The place of reaching WR |
| 10,6          | Donald Lippincott   | USA   | Stockholm, SWE           | 11.07.1912.              |
|               | Jackson Scholz      | USA   | Stockholm, SWE           | 16.09.1920.              |
| 10,4          | Charley Paddock     | USA   | Redlands, USA            | 23.04.1921.              |
|               | Eddie Tolan         | USA   | Stockholm, SWE           | 08.08.1929.              |
|               | Eddie Tolan         | USA   | Copenhagen, DEN          | 25.08.1929.              |
| 10,3          | Percy Williams      | CAN   | Toronto, CAN             | 09.09.1930.              |
|               | Eddie Tolan         | USA   | Los Angeles, USA         | 01.08.1931.              |
|               | Ralph Metcalfe      | USA   | Budapest, HUN            | 12.08.1933.              |
|               | Eulace Peacock      | USA   | Oslo, NOR                | 06.08.1934.              |
|               | Chris Berger        | NED   | Amsterdam, NED           | 26.08.1934.              |
|               | Ralph Metcalfe      | USA   | Osaka, JAP               | 15.09.1934.              |
|               | Ralph Metcalfe      | USA   | Dairen, JAP              | 23.09.1934.              |
|               | Takayuoshi Yoshioka | JAP   | Tokyo, JAP               | 15.06.1935.              |
|               | Jesse Owens         | USA   | Chicago, USA             | 20.06.1936.              |
|               | Harold Davis        | USA   | Compton, USA             | 06.06.1941.              |
| 10,2          | Lloyd La Beach      | PAN   | Fresno, USA              | 15.05.1948.              |
|               | Norwood Ewell       | USA   | Evanston, USA            | 09.07.1948.              |
|               | Emanuel Mc Donald   | GBR   | Belgrade, YUG            | 25.08.1951.              |
|               | Hajnrih Futterer    | FRG   | Yokohama, JAP            | 31.10.1954.              |
|               | Bobby Morrow        | USA   | Houston, USA             | 19.05.1956.              |
|               | Ira Murchison       | USA   | Compton, USA             | 01.06.1956.              |
|               | Bobby Morrow        | USA   | Bakersfield, USA         | 22.06.1956.              |
|               | Ira Murchison       | USA   | Los Angeles, USA         | 29.06.1956.              |
|               | Bobby Morrow        | USA   | Los Angeles, USA         | 29.06.1956.              |
|               | Willie Williams     | USA   | Berlin, GER              | 03.08.1956.              |
| 10,1          | Ira Murchison       | USA   | Berlin, GER              | 04.08.1956.              |
|               | Leamon King         | USA   | Ontario, CAN             | 20.10.1956.              |
|               | Leamon King         | USA   | Santa Ana, USA           | 27.10.1956.              |
|               | Ray Norton          | USA   | San Jose, USA            | 18.04.1959.              |
|               | Armin Hary          | GER   | Zurich, SUI              | 21.06.1960.              |
| 10,0          | Harry Jerome        | CAN   | Saskatoon, CAN           | 15.07.1960.              |
|               | Horacio Esteves     | VEN   | Caracas, VEN             | 15.08.1964.              |
|               | Robert Hayes        | USA   | Tokyo, JAP               | 15.10.1964.              |

|                              |                   |     |                       |             |
|------------------------------|-------------------|-----|-----------------------|-------------|
|                              | Jim Hines         | USA | Modesto, USA          | 27.05.1967. |
|                              | Enrique Figuerola | CUB | Budapest, HUN         | 17.06.1967. |
|                              | Paul Nash         | JAR | Krugersdorp, JAR      | 02.04.1968. |
|                              | Oliver Ford       | USA | Albuquerque, USA      | 31.05.1968. |
|                              | Charles Greene    | USA | Sacramento, USA       | 20.06.1968. |
|                              | Roger Babmuck     | FRA | Sacramento, USA       | 20.06.1968. |
|                              | Jim Hines         | USA | Sacramento, USA       | 20.06.1968. |
|                              | Ronald Smith      | USA | Sacramento, USA       | 20.06.1968. |
|                              | Charles Green     | USA | Sacramento, USA       | 20.06.1968. |
|                              | Jim Hines         | USA | Mexico city, MEX      | 14.10.1968. |
|                              | Eddie Hart        | USA | Eugene, USA           | 01.07.1972. |
|                              | Rey Robinson      | USA | Eugene, USA           | 01.07.1972. |
| <b>9,9</b>                   | Steve Williams    | USA | Los Angeles, USA      | 21.06.1974. |
|                              | Silvio Leonard    | CUB | Ostrava, CZE          | 05.06.1975. |
|                              | Steve Williams    | USA | Siena, ITA            | 16.06.1975. |
|                              | Steve Williams    | USA | Berlin, GER           | 22.08.1975. |
|                              | Steve Williams    | USA | Gainesville, USA      | 27.03.1976. |
|                              | Harvey Glance     | USA | Columbia, USA         | 03.04.1976. |
|                              | Harvey Glance     | USA | Baton Rouge, USA      | 01.05.1976. |
| <b>9,9</b>                   | Donald Querrie    | JAM | Modesto, USA          | 22.05.1976. |
| <b>ELECTRONICLY MEASURED</b> |                   |     |                       |             |
| <b>9,95</b>                  | Jim Hines         | USA | Mexico city, MEX      | 14.10.1968. |
| <b>9,93</b>                  | Calvin Smith      | USA | Colorado Springs, USA | 03.07.1983. |
| <b>9,92</b>                  | Carl Lewis        | USA | Seoul, PRK            | 24.09.1988. |
| <b>9,90</b>                  | Leroy Burrell     | USA | New York, USA         | 14.06.1991. |
| <b>9,86</b>                  | Carl Lewis        | USA | Tokyo, JAP            | 25.08.1991. |
| <b>9,85</b>                  | Leroy Burrell     | USA | Lausanne, SUI         | 06.07.1994. |
| <b>9,84</b>                  | Donovan Bailey    | CAN | Atlanta, USA          | 27.07.1996. |
| <b>9,79</b>                  | Maurice Greene    | USA | Athens, GRE           | 16.06.1999. |
|                              | Asafa Powell      | JAM | Athens, GRE           | 14.06.2005. |
| <b>9,77</b>                  | Asafa Powell      | JAM | Gateshead, GBR        | 11.06.2006. |
|                              | Asafa Powell      | JAM | Zurich, SUI           | 18.06.2006. |
| <b>9,74</b>                  | Asafa Powell      | JAM | Rieti, ITA            | 09.09.2007. |
| <b>9,72</b>                  | Usain Bolt        | JAM | New York, USA         | 31.05.2008. |
| <b>9,69</b>                  | Usain Bolt        | JAM | Beijing, CHN          | 16.08.2008. |
| <b>9,58</b>                  | Usain Bolt        | JAM | Berlin, GER           | 16.08.2009. |

## DISCUSSION

Analyzing the progression table of the world record at 100m (table 1), it could be concluded that in the period of 111 years (1912-2023) 67 WRs were achieved, and the Donald Lippincott record from 1912 (10.6s) was improved by "only" one second and now amounts 9.58s (Jusein Bolt). Thirty-one sprinters achieved one WR, six sprinters two WRs, four sprinters three WRs, and three sprinters four WRs. The development of the world record in athletics, and sports in general, was influenced by several factors: the enthusiasm of athletic (sports) experts (Bakov, 1961) evolution of technique (Stefanović, 1992b), development of sport venues (Skempler, 2007), improvement of sport equipment (Stefanović, 2006), higher quality training (Dik, 1980), pharmacological means of recovery (Dikić, 2007), financing (Mitrović, et al., 2019), etc.

The assumption is that the limits of records in athletics will still move, but much more slowly than before. The results of the research showed that until now the longest time distance between the defeat of two WRs was 8 years, and the valid WR was achieved in 2009, fourteen years ago, which indicates to us the fact that the WR will be achieved less and less often. Recent events related to the breaking of world records in athletics (broken WR at 400m, shot put, and pole vault) show us that the limit of human capabilities has not yet been reached.

If one hundredth of second is roughly equated with one year of development of the 100m sprint record, then it can be said that the countries of the former Yugoslavia are currently trotting behind world athletics for an average of 77.5 years. Namely, the national records of six countries from the region were also achieved long ago, on average 21 years ago. Slovenia is the least behind the world (10.13s) Matic Osovnikar, 2007. – 55 hundredths/years with record old 16 years), then Croatia (10.20s Darko Horvat, 2013. – 62 hundredths /years with record old 20 years), then Serbia (10.33s Slobodan Branković, 1993. – 75 hundredths /years with record old 30 years), then Bosnia and Herzegovina (10.42s Nedim Čović, 2010. – 84 hundredths /years with record old 23 years), then Macedonia (10.5s Naum Mitrevski, 2003. – 92 hundredths /years with record old 20 years), with Montenegro at the end of this procession (10.55s Luka Rakić, 2007. – 97 hundredths /years, with record old 16 years).

These national records, already decades old, speak less for the glory of the record holders, but rather sound the alarm about the drastic drop in the level of athletics or 100m sprint in the countries of the former Yugoslavia (if this is even important and if this should be competed at all).

Keeping track of times and keeping world records also has significant consequences. In addition to the world record, continental, national, club, personal and season records are recorded. What ultimately remains to society as a legacy is a more detailed methodology, technique, tactics, motivation of young people to actively engage in athletics and sports (Martinović, at al., 2013), as well as technological aspects that, once the period of industrial secrecy has passed, become part of the everyday life of the ordinary citizen who derives a certain benefit from it. The negative aspects of the competition should not be forgotten. (Miletić, at al., 2016) and the desire to always achieve more, which includes psychological disorders, depression, dissatisfaction with oneself, lack of happiness, up to overtraining, injuries, chronic diseases (Vidaković, at al., 2016) and sometimes fatal outcomes (Stojković, 1989; Simonović, 1981, 1995).

If the phenomenon of world records, and especially the 100m sprint record, is viewed from a philosophical point of view, it can be said that it is a child of capitalism that perfectly instructs the masses of viewers and followers through the media to gladly assume the role of a hamster running endlessly and uselessly inside its wheel, not wondering about the end result. Idols created with great and numerous successes (realized by a very specific mode of life) allow the broad masses of the people another chance for fruitless identification, (Tomić, 1995) with the obligatory patience and blindness to failed personal lives deprived of the essential phenomena of love and communion.

In industrial production, for hundreds of years, this phenomenon has been used, through a reward for surpassing the predicted plan, which then becomes the norm for everyone (because it has been proven that it is possible). After all, in both the short and long term, record holders work directly against themselves and their associates and fellow citizens. While, on the one hand, a personal best has to do with giving one's best to a project or event, on the other hand, achieving "peak" results even more often distances human from the balance between work, rest and leisure, or the three eights proclaimed in the 19th century.

Any great success in a certain field of sport implies a marked violation of the aforementioned balance, which is generally bad and ultimately produces "dogs of sport" (analogous to "dogs of war") who, due to extreme specialization, fail to manage in later normal life and therefore suffer enormous, often fatal consequences.

## CONCLUSION

According to the principle of the circular theory of civilizations, it seems that we are at the top of the sinusoid of a time, where many indicators point to an upcoming decline, and strong changes with modifications in social arrangements and political systems. In the past, there are numerous examples when great civilizations, although significantly wounded, collapsed for a long time due to multiple inertia. Here, too, the current well-known question is whether resisting changes or accelerating them will help their realization? The conclusion reached by the sports analysis about the exhaustion of the men's 100m sprint record, when processed at a deeper level, leads to the opposite interpretation, which is reflected in the modification of sports rules or a greater tolerance for mechanical aids, stimulants, aggressive interventions on the human body, and all possible other options that will help to continue breaking the record ie. the projection of a false image of the domination of man over God, and indirectly, propagandistically extended the age of modern society and hide the twilight of civilization that is ahead of us.

It is also time to ask the question about the new system of exercise and human health that comes after major changes or resets of our civilization. The only possible view in this search is a view into tradition. We are of the opinion that the new model will at least for a certain time resemble the Falcony (Gavrilović, 2011), which lost its battle at the beginning of the twentieth century. If we ignore the military aspect of the Falcony organization and the goal of liberating the Slavic nations from the occupiers (which, unfortunately, is still relevant today), it was more important that a large number of people demonstrate a simple gymnastic composition, as opposed to an individual who does gymnastics at the highest level, but is alone in it in to a significant extent.

Since health represents a kind of dynamic homeostasis, the assumption is that the future superior system of exercise and health will neither consider nor seriously encourage the phenomenon of records at any level, except in the sphere of interest.

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