

The Physical Fitness of Leopold Bloom

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Abstract

This paper will explore the physical fitness Leopold Bloom's, the protagonist of the James Joyce novel Ulysses. Was Joyce as careful in his detail of the physical ability of Bloom as he was in recreating the physical Dublin? A person's self-image of his physical attributes will color his perspective on life. How was Bloom's physical characteristics portrayed in Ulysses? Was it an accurate description considering the data that was presented? The author used several modern techniques to determine the physical demands on Bloom on Bloomsday and to estimate his fitness. A GPS unit was used to measure distance traveled. These parameters were measured as the author walked the route in modern day Dublin as described by Joyce nearly a century ago.

Keywords: Ulysses, James Joyce, Leopold Bloom, Physical Fitness

1. Introduction

Leopold Bloom's age on June 16, 1904 of "three years beyond the midpoint of three score and ten" suggests he was a middle-aged man who could be expected to view life from the perspective of a person whose youthful years were behind him. All life's experiences require interpretation to varying degrees. The sensory input taken from our interaction with the world is sorted, integrated, and filtered before it reaches our brains where it is further analyzed for its usefulness in contributing to our survival and our self-actualization. We develop thinking habits to make this a more efficient process to prevent our lives from being one giant cacophony of nervous noise. Our physical bodies play a large role in the creation and maintenance of these filters. We see the world through our bodies and the perceived state of our health and fitness is the front line of this process. A person in chronic pain lives a life that is very much different from one who is never distracted by distress signals from nerves of the periphery. This article will explore Bloom's fitness level as well as his view of his own health and fitness to gain further insight into his motivations and observations. The author used several modern techniques including a GPS unit for measuring distance traveled to determine the physical demands on Bloom that day and to estimate his physical fitness. These parameters were measured as the author walked the route in modern day Dublin as described by Joyce over a century ago.

2. A Late Middle Aged Man

In 1904, Leopold Bloom was 38 years old. In Ireland, at the turn of the century, an Irish male was expected to live to 47.8 years (Kinsella, 1992). While the data is too sparse to estimate a disability-free or healthy life expectancy at the time, in the 1980's a citizen of the United Kingdom was expected to spend 83% of his life in a healthy state (Kinsella, 1992). If a similar percentage held true in the 1900, a man in Ireland could expect to remain in good health to near the age of 40. While Bloom was nearing this age of disability, which probably affected his outlook on his health, he demonstrated no physical limitations in Ulysses aside from a possible lack of aerobic fitness and motor ability.

3. Roly-Poly Poldy

The average height and weight for a 35-40 year old man of the commercial (lower middle) class in 1881 was 68.07 in and 166.6 lb respectively (Galton, 1881). Bloom stood 69.5 in tall (176.5 cm) and weighed 158 pounds (11s4lb or 71.8 kg). While Bloom is referred to as "lardy face", and "lardyface" in the Cyclops episode, he is described as having a "full build" on his wanted poster in the Ithaca episode, and "Uncloaks impressively, revealing obesity, . . ." in Circe, his height and weight however, suggests he was not overweight.

Bloom would have had a Body Mass Index (BMI) of 23.0, which by today's standards would have put him at a healthy weight. He would have had to weigh 171 pounds to have a BMI that would classify him as overweight (BMI=25). Using data reported by Sir Francis Galton, President of the Anthropologic Section of the Anthropometric of the British Association (1883), the average Irish man of 1883 stood 5 ft 7.9 in tall, and an English Professional at 5 ft 9.14 in tall. According to classifications of the Committee Bloom would have been considered Lower Middle Class (Clerks, Shopkeepers, Shopmen, etc.). The average BMI of the middle class was 25.3 (5 ft 8 in and 166.6 lb) indicating that the average middle class Irishman of the 1880's was slightly overweight (a BMI of over 25 is considered today to be over fat). Bloom, on the other hand, had a BMI of 23.0, well within the range of 17-25 considered normal today.

The "reference man" used by the International Commission on Radiological Protection (Pergamon Press, 1975) has a BMI of 24.1 (5 ft 7 in and 154 lb). Behnke (1974) proposed reference standards for studying body composition for men as 5 ft 8.5 in at 154 lbs (BMI 23.1). By both of these standards Bloom would have been considered to be quite normal. One of the limitations of using BMI to estimate body fatness is that it doesn't consider other factors besides excess body fat, such as bone and muscle mass. This is usually only a problem with people with larger than average muscle mass, such as athletes. Since Bloom didn't appear to have any athletic inclinations, this would not be a factor.

Compared to his acquaintances of the Commercial class, Bloom would have been on average, 1 1/2 in taller and 8 lb lighter. His stature would not have been a target of ridicule because of his obesity unless he had exceptionally small bones and muscle mass in combination with a large amount of body fat giving him a rounder appearance than his BMI suggests. The illustrations in Figure 1 below provide a visual clue to Bloom's possible physical appearance. His BMI of 23.1 would fall between the two figures denoted as "21" and "24."

Figure 1: BMI silhouettes (Canadian Dietetic Association (1992))

4. Bloom's Bodily Measurements

Bloom makes references to Eugen Sandow and Bloom's attempts at physical self-improvement through the use of the Sandow-Whiteley pulley exerciser. (Ithaca 721:35). A chart of measurements of Leopold Bloom compiled before, during and after a 2 months consecutive use indicated that he was actually of a slight stature. Bloom improved to a chest circumference of 29.5 in after those two months of exercise. The average chest girth for men of his age was 36 in (Galton, 1881). A chest circumference of 29.5 inches would be small even for a girl. Dr. Dudley Sargent, one of the early pioneers of anthropometry in the U.S. of the late 19th century suggested that the ideal measurements for a girl would be 118 pounds, 61.75 inches tall, with a chest circumference of 31.5 inches and a thigh circumference of 21 inches. Bloom recorded a progression in his chest circumference from 28 to 29.5 in. The values for his biceps (9 to 10 in), his forearm (8.5 to 9 in), and calf (11 to 12 in) are similarly lower than to be expected. According to Sandow (1911), the ideal values for a 69 in tall man should be a 17 in neck (Bloom had a collar size of 16.5 in) (Ithaca 710:18), biceps of 16 in, and calves of 15 in. The values for his thigh (10 to 12 in) seem comically disproportioned compared to his other measurements.

While spot exercises have been shown to be ineffective (Gwinup, et al., 1971), Bloom may have been drawn to Sandow because of his rational cure for obesity. Sandow believed that the deposit of superfluous fat was made chiefly around the abdomen so he devised his exercise movements to focus on that body part (Sandow, 1911). Bloom exhibited abnormally developed abdominal muscles in his youth (Ithaca 681:37) and may have considered himself particularly gifted in his ability to reduce his girth through abdominal work.

Bloom made considerable gains over the course of two months showing increases of 5-20% in muscle size. This would have been unlikely however because of the requirements of muscle hypertrophy. The limited number of exercises, the low resistance provided by the exerciser, and the total volume of exercise would suggest that strength gains could be expected, but not the kinds of hypertrophy reported. Sandow also suggests that the greatest good will come when the movements are made with "mental concentration" (isometric-like contractions). If Bloom had followed this advice his chances for increasing the size of his muscles would have been even lower. The more likely change that would come from his regimen would be a decrease in the measurements as a result of the endurance nature of the exercises, though even then, the total amount of work done would only amount to a few calories burned per session that would ultimately have little effect on his body composition.

5. Bloom's Aerobic Fitness

From research conducted by the author, a self-selected walking pace (SSWP) can predict maximal oxygen consumption (MVO₂) (McClung, Proffitt, & Crockett, 2009). The best account of his typical walking speed could be deduced from his walk from Eccles Street to Sir John Roberson's Quay in which he walked 2305 meters in 35 minutes for a pace of nearly 4 km/hr (3.95 km/hr). His fastest time was estimated at 4.85 km/hr during his walk from the National Library to Merchant's Arch, though the exact route and times of departure and arrival are only estimates. The best estimate of Bloom's self-selected walking pace would be 4.2 km/hr using these two measures. Bloom's MVO₂, the gold standard of aerobic fitness, was predicted to be 37.5 ml/kg/min. This VO₂ would place a modern day 30-39 year old white, college-educated man in the 40th percentile for aerobic fitness (Pollack, Wilmore, & Fox, 1978). If compared to data of men today in the US approaching the age of disability (50-59 yr group) as Bloom was, he would be in the 70-80th percentile, very fit for his age.

Bloom's performance compares favorably to the values the author reported for self-selected walking pace of 101 volunteers. This group had a mean MVO₂ of 45 ml/kg/min and a SSWP of 4.84 km/hr. Since I have estimated Bloom's maxVO₂ at 37 ml/kg/min a 4.2 km/hr SSWP seems appropriate. While walking 9 miles in a day (See Results) is fatiguing for most people, it is a measure of endurance and not a measure of aerobic fitness. Since automobiles were not in use at the time, all Dubliners were accustomed to walking greater distances than modern day people. It is interesting to note that Bramble (2004) predicted that our pre-agrarian ancestors walked 10-15 km in a normal day, the same distance Bloom traversed on his day.

6. Anaerobic Abilities

Bloom's attitude toward physical fitness would suggest that exercise of high intensity was of little interest to him. His primary interest appears to be aesthetic (improving measurements) but he is reminded twice of his lack of functionality. "Must take up the Sandow exercises again. Insure against street accident too." (Ithaca 435:19). This he thought as he narrowly escapes the cyclists and sandstrewer.

7. Method for Measuring Bloom's Travels

The author walked Bloom's routes using a handheld GPS device (Garmin, GPS map 76CSx) to determine distances that Bloom would have walked on June 16, 1904. Where the routes were not declared by Joyce in *Ulysses*, estimations were made with the help of Gunn and Hart (2004). Energy expenditure was estimated using prediction equations from the American College of Sports Medicine (2000).

8. Results

Bloom walked 8.99 miles over the course of the 18 hour day (Table 2).

Table 2: Bloom's Travels

9. Bloom's Estimated Energy Expenditure

We can estimate Bloom's resting caloric energy requirements by multiplying his weight in kg times the typical resting energy requirement for humans (3.5 ml/kg/min). Thus, over the course of a day his basal energy requirement would be 1809 kilocalories (kcal). By adding an estimated 300 kcal for his typical activities, his daily minimal requirement would be 2109 kcal. If this were a typical day, which seems unlikely considering he would be getting less than six hours of sleep each day, he would need roughly an additional 900 kcal to walk the 9 miles. Over the course of the 24 hours of Bloomsday, Leopold would have burned 3009 calories.

10. Caloric Consumption

The estimated total number of calories Bloom consumed was 1200 kcal (Table 3). If he ate the second Banbury cake that he had bought to feed the birds, there would be an additional 200 kcal for 1400 total. Considering the 3009 kilocalories that he would have expended on Bloomsday, he would have created a 1609 caloric deficit on this day. This diet would not have sustained him for long.

Table 3: Bloom's Diet

11. Additional Notes on Leopold Bloom's Travels

11.1 Calypso and Lotus Eaters. Bloom began his pedestrianism with a short walk to the butcher's shop which is 176 m around the corner from 7 Eccles Street. After his breakfast he walked the 2305 m to Sir John Rogerson's Quay, which he completed in 35 minutes. Another 1349 m took him to the Lincoln Street Baths.

11.2 Sirens to Cyclops. The Sirens episode ends with Bloom expelling gas in front of Lionel Marks at 16 Upper Ormand Quay. Bloom makes his appearance in Cyclops when he is seen "prowling up and down outside" Barney Kiernan's pub. He makes a circuitous route between these two addresses telling himself to "Dodge around by Greek Street" after stopping at the "Post office near Reuben J's." A most likely path would have taken him up Chancery Place, to Green Street and Barney Kiernan's on Little Britain Street (828 m). If the citizen is correct, Bloom spends 10 minutes "on point duty" outside Kiernan's before being invited in. Assuming a constable directing traffic moves in and out of the street periodically, standing the rest of the time, a conservative estimate of the distance covered in such activity over 10 minutes would be 134m (0.5 mph). Bloom leaves the bar for a short time to search for Cunningham at the Court House. This round trip would cover 220m. The only other activity he engages in over the next hour is conversation until he makes his hasty escape to the waiting jaunty car with his three acquaintances for their drive to Patty Dignam's house. End of Sirens to end of Cyclops - 1182m walked.

11.3 Sporting proclivities. At the pub Bloom spoke of the harms of strenuous exercise saying "if a fellow had a rower's heart, exercise was bad." He seemed to feel that lawn tennis was a preferred alternative requiring "agility and training of the eye" as well as improving "the circulation of the blood." This gives the indication that Bloom probably didn't move with great haste in his travels around the city that day as a matter of philosophy or habit. Avoiding the "tin" was probably one of his most strenuous acts on Bloomsday. Bloom claimed that competitive weight lifting was beyond his strength and giant swing (full circle gyration) on the horizontal bar was beyond his courage. His claim to fame in the gym was his ability to maintain a half lever on the parallel bars for extended time periods because of his "abnormally developed abdominal muscles." Actually, the half lever is limited more greatly by strength and endurance in the hip flexors than the abdominals. This static exercise requires only the agility required to mount the bars.

11.4 Nausicaa. After spending over two hours with Dignam's kin, Bloom decides to take a walk to Sandymount Strand as darkness approaches (8:27 p.m. being sunset on the 16th) to kill some time so he doesn't have to return to Molly while she is still awake. The direct route from 9 Newbridge to the strand would have been near 352 m, his return walk to Sandymount Road to catch the tram would have added 140 m. We have an indication of Bloom's ball handling ability from having "aimed the ball once or twice and then threw it up the strand." This "practicing" of a routine skill suggests his novice status in this area. He confirms this demonstrated lack of self-confidence with his statement, "Course I could never throw anything straight in school." The episode ends with him taking the tram to Holles Street.

11.5 Circe. Bloom is first seen in Circe under the Talbot Street railbridge having just run the approximately 130 m from the Amiens Street Station in an attempt to catch up with Stephen. He appears flushed, panting, and puffing with a stitch in his side. He reprimands himself for running. A few feet further in front of Rabaiottis' restaurant he "sweated under the bright arclamps." This short run really did him in. He has the ability to "dart to cross the road (Talbot Street) where he is grazed by two cyclists causing to "halt erect stung by a spasm." Ow. He tries to "dart forward suddenly" to clear the road but is stopped again, this time by the sandstrewer. By this time he is physically spent and is left to "blunder stifflegged, out of the track." After a short recovery he "trickleaps to the curbstone and halts again" to regain his composure. The scare of the two unexpected encounters trying to cross the street apparently cured his side stitch. Having escaped physical harm he resolves to "take up his Sandow's exercises again." He appreciates that the added strength and flexibility of these calisthenics will help his agility in maneuvering safely through the streets of Dublin.

12. Conclusion

Bloom was closer to Everyman in his physical stature and fitness. Any indication that he was overweight and out of shape was not supported in his physical description or in the fitness that is required to travel the lengths he did during June 16, 1904. While it requires little aerobic fitness to cover 9 miles in the course of a day, it does require physical stamina that may have not been unusual for a Dubliner of 1904 but is for modern man.

His age was nearing the age of disability for a 1900's Irishman, yet he had no great limitations besides the lack of regular physical intensity which would have developed his heart, lungs, and muscles to optimal levels. He still had an interest in improving his aesthetics through an exercise regimen. He appeared to lack the discipline, however, to make this a lifestyle. It was only the result of resolutions that are almost always broken soon after their birth. His height and weight would suggest that he carried little body fat, particularly in comparison to his compatriots. A BMI of 23 would make it difficult for anyone to see a fat man in his silhouette. Any image of obesity could have been supported by a personality tending towards sloth, which Bloom's was not. Bloom's self-image was less than ideal, "don't show her my profile" suggesting he had a protruding belly, since his chest was small for his size. Bloom had a fitness level that was probably high for a man of his age in 1904 Dublin. While his maxVO₂ would place him in the 40th percentile for men of his chronological age today, his biological age would suggest a man in the 70 to 80th percentile. Though he had little anaerobic endurance, as seen by his sprinting difficulties, he had plenty of stamina to live successfully in early 20th century Ireland. While Joyce gives the impression that Bloom thought little of his fitness there is no evidence from the history that would suggest that Bloom didn't measure up physically to his fellow Dubliners.

13. References

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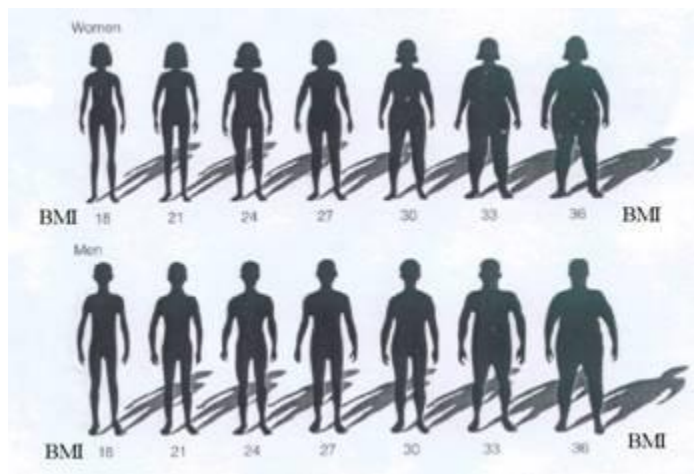


Figure 1: BMI silhouettes. Bloom's BMI of 23.1 would fall between the two figures denoted as "21" and "24." (Canadian Dietetic Association, 1992)

Table 2: Bloom's Travels

Episode	Time of Day	Route	Walked meters	Time min	Pace km/hr	Rode meters
Calypso	8:15	Duglitz and back	352			
	8:55	Left 7 Eccles Street				
	9:30	Reaches Sir John Rogerson's Quay	2305	35	3.95	
Lotus Eaters		Walked to Lincoln Street Baths	1349			
Hades		Walked from Bath to Leinster St tram stop	60			
	10:43	¹ Rode Sandymount line to Newbridge Ave				2415
		Walks to Dignam house from tram stop	95			
		Carriage ride to Glasnevin Cemetery				6175
		Mourners walk to grave site	573			
		Mourners meander back (approximate)	573			
		Carriage ride back to GPO				2900
Aeolus		Walked from GPO @ Prince and Sackville				
		through Freeman's to J. Dillon then return				
		to Mid Abbey St entrance of Freeman's				
		by same route	540	60		
		Walked from Freeman's to Graham Lemon's	90			
Lestrygonians		Walks from Lemon's to Davy Byrnes	720	45	0.96	
		Davy Byrnes to National Museum	500	10	3.01	
		National museum to Library	60			
Wander Rocks		² Walked from Library to Merchant's Arch	1052	13	4.85	
		Merchant's Arch to the Ormand	490	43	0.35	
Sirens/Cyclops		Ormand to Barney Kiernan's	1236			
		Car ride to Dignams				4259
Nausikaa		Dignams to Leahy Terrace	352			
		Back to Sandymount Rd to get tram	140			
		¹ Tram from Sandymount to Holles St				2112
		Walk from Holles St tram stop to Hospital	80			
Oxen		Holles St hospital to Westland Row Station	691			
		Train: Westland to Killester to Amiens St				8410
Circe		Tour of red light district to cabman shelter	1636			
Ithaca		Shelter to 7 Eccles St	1540			
Penelope	2:17	To bed	20			
Totals	18:02		14454		0.83	26271
			8.99 mi			16.33 mi

¹Sandymount tramway line runs from Nassau St, Merrion Sq. N., Mount St. Lower, Northumberland Rd., Haddington Rd., Bath Ave., London Bridge Rd., Tritonville Rd., and Sandymount Rd. to Sandymount Green

²Unknown –assumed walked north on Kildare to Nassau to Grafton to Fleet to Merchant’s Arch

Notes from Gunn and Hart (2004)

Table 3: Bloom's Diet

Meal	Food	Calories	Reference
Breakfast (8:30)	Fried Liver	198	He tossed it off the pan on to a plate. . .
	Gravy	45	. . . and let the scanty brown gravy trickle over it. (Calypso (65:33))
	Tea	0	Cup of tea now.
	Bread	80	He sat down, cut and buttered a slice of the loaf. (Calypso (65:34))
Snack (1:00)	Banbury Cake?	200	. . . bought from the old applemoan two Banbury cakes (Lestrygonians (153:7))
Lunch (1:55)	Burgundy	105	I'll take a glass of burgundy and . . . let me see. (Lestrygonians (171:28))
	Gorgonzola	297	A cheese sandwich, then. Gorgonzola, have you? (Lestrygonians (172:16))
	Bread	160	Yes, sir.
	Mustard	10	Mustard, sir? Thank you.
(4:00)	Cider	200	Let me see. Cider. Yes, bottle of cider. (Sirens (267:30))
(10:50)	Wine	105	Rose booze for the Bloom toff. (Oxen (427:4))
Total		1400	A cheese sandwich, then. Gorgonzola, have you? (Lestrygonians (172:16))