Matthews tops 1 Hour mark

Walking at the Foothill College track on November 14, Jonathan Matthews bettered the U.S. 1 Hour record of 14,016 meters set by Allen James in 1991. The results show him going 34 laps plus 1244 feet on a 440 yard track, which is a poor way to report it—it makes me do some calculation. I find that to be 8 miles 1294 yards (that's costing him two feet, but I think the proper measurement is to the yard or meter), which is 14,058 meters. Jonathan passed 5 Km in 21:26 and 10 In 42:54. Results of the race (I've translated all the reported laps and feet to miles and yards): 1. Jonathan Matthews 8 miles 1294 yds 2. Jim Lenschau 7 mi 1015 (24:36, 49:14) 3. Joe Sheppard 6 mi 1634 (26:34, 53:42) 4. Therese Ikonolan 6 mi 1502 (26:28, 54:11) 5. Kirk DeFord 6 mi 931 6. Bryan Winter 6 mi 399 7. David Dorinson 6 mi 387 8. Jennifer Granucci 6 mi 380 9. Bill Moremen 6 mi 247 (24 finishers)

Other results:
The Ohio Racewalker is published monthly in Columbus, Ohio. Subscription rate is $10.00 per year ($12.00 outside the U.S.). Editor and Publisher: John E. (Jack) Mortland. Address all correspondence regarding both editorial and subscription matters to: Ohio Racewalker, 3184 Summit St., Columbus, Ohio 43202.


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And, from other lands (some quite late, but I just got them):


Winter 4:57:57


PAGE 3
HAPPY RACING NEW YEAR

Sat. Jan. 8
10 Km, Long Branch, N.J., 11:02 am (A)  
1 Mile Women, 2 Mile Men, Hanover, N.H. (I)  
9 Km, New Orleans, 9 am (M)  
Indoor 2 Mile, Arlington, Virginia, 8:30 am (I)
Frostbite 1 Mile, Seattle, 4:25 pm (C)  
Indoor Women’s 1500 meter (C)
1 Mile, Men and Women, Providence, R.I. (I)  
20 Km, Palo Aito, Calif., 8:30 am (D)  
5 and 10 Km, Honolulu, 7 am (K)
Indoor 3 Km, Men and Women, Boston (I)  
5 Mile, Long Branch, N.J., 11:02 am (A)  
5 Km, Coconut Creek, Florida, 8 am (Q)
Marathon, Half-Marathon, and 5 Km, New Orleans, 8 am (M)
Indoor 2 Mile, Arlington, Virginia, 8:30 am (D)
Sat. Jan. 15
5 Km and 1 Mile, Metairie, Louisiana, 9 am (M)  
Indoor 2 Mile, Arlington, Virginia, 8:30 am (M)
Sat. Jan. 29
Indoor 3 Km, Men and Women, Boston (I)  
5 Km, Long Branch, N.J., 11:02 am (Q)  
10 Km, Wilsonville, Oregon, 10 am (I)  
Indoor 3 Km, Men and Women, Boston (I)  
5 and 10 Km, Metairie, Louisiana, 8 am (M)
Sat. Feb. 12
Frostbite 1 Mile, Seattle, 4:35 pm (C)
Sat. Feb. 19
10 Km Run-Walk (run first 6 Km), Long Branch, N.J., 11 am (Q)  
5 and 10 Km, Washington, D.C., 8:30 am (M)  
(The schedule sent to me says Sat., Feb. 21, but there is no such date, so I have made an assumption.)
National 15 Km Championship, New Orleans, 8 am (D)
Sun. Feb. 20
1 Mile and 5 Km, New Orleans, 8 am (M)
Indoor 2 Mile, Arlington, Virginia, 8:30 am (Q)
Sat. Feb. 26
2 Mile and 10 Km, Slidell, Louisiana, 8 am (M)

FROM HEEL TO TOE

Had planned to run the Annual World Rankings in this issue, but with all the comments we have on recent judging proposals, will hold off until January and run the U.S. rankings at the same time. That leaves more assurance that all results are in and gives you something to await with baited breath. . . . Dave McGovern’s first racewalking camp of 1994 will be held as usual at Gary Null’s Healing Springs Ranch in Texas from Wednesday, April 13 through Sunday, April 17. Dave will be assisted by other U.S. National Team members and invites walkers of all ages. These camps utilize Olympic Training Center and Eastern European coaching methods. The camp fee of $585 includes lodging and meals. For further information, contact Dave at 795 Madison Avenue, Charlottesville, VA 22903, Phone 817-437-2204. . . . Mark Fenton will conduct an advanced racewalking weekend in Oglethorpe, Georgia on Jan. 29-30. Contact the Walking Club of Georgia, P.O. Box 645, Stone Mountain, GA 30086 for more information. . . . The Potomac Valley Track Club will
have Winter Racewalk Clinics for six Saturdays (Jan. 8 through Feb. 12) starting at 8 am at Tysons Corner. Contact Valerie Meyer, 2305 S. Buchanan St., Arlington, VA 22206 for more info. . . . Captain Ron Zinn Awards for 1993 were awarded to racewalkers Teresa Vaill, Allen James, and Jonathan Matthews, to Ron Daniel as the year's top contributor to welcome. In 1994, all competitors who qualify will be ranked on the ladders. However, which are mailed to Association Chairs. The convention also approved offering the sport, and to the Potomac Valley USATF Association in Washington, D.C. as the top association. Anyone wishing a copy of the 1993 Regional/National 5 Km ladder, please send $1.00 cash or a check made payable to USATF RW Postal, to Donna Stanton, 18020 Gramercy Place, Torrance, CA 90504. Awards will be sent to winners in places 1 to 3, male and female, in each age division, and certificates to positions 4 to 8. At the Annual Convention in Las Vegas, approval was given to the offering of 10 and 20 Km Postal Regional/National Ladders as well as the successful 5 Km Ladder. More than 500 walkers participated in the 1993 5 Km Ladder. The 1994 Ladders will continue to be published in the June 15, September 15, and December 30 issues of "Racewalking in 4-Regions", which are mailed to Association Chairs. The convention also approved offering subscriptions to "Racewalking in 4-Regions" to individual competitors who would like to receive the Ladders directly at a fee of $7.00. The top of the subscription form explains all the requirements and procedures for the Ladder as well as the Age Group qualifications for participating in the Ladders. Subscriptions will help fund Ladders and are, therefore, very welcome. In 1994, all competitors who qualify will be ranked on the ladders. However, only subscribers to the newsletter will be eligible for awards, raffles, and cash prizes. Subscription forms can be obtained from Donna, from Elaine Ward, 1000 San Pasqual #35, Pasadena, CA 91106, from Association Chairs, and from race directors. Russian Alina Ivanova, 1991 World 10 Km Racewalking Champion, made her marathon debut with and eighth place finish in the Tokyo International Marathon, finishing in 2:35:16. Ivanova was disqualified in the Barcelona Olympic 10 Km. The following letter from Steve Valones, comments on Elliot Denman's comments (Nov. issue) on Steve's comments (Oct. issue) on our Junior walkers "going for it."

Elliott Denman's comments on disqualifications presupposes that all disqualifications are the result of poor technique. I don't believe that is necessarily the case. At the Alongi races, our younger walkers were advancing to new ground, boldly going where few juniors (sub 45:00) and intermediates (sub 1:30:00) have gone before (apologies to Star Trek).

To use a few analogies with several other events: a hammer thrower advances from a three turn to four turn throw. He (or she) may not have the strength or kinesthetic sense developed for this next level of thrower without sector fouls or touching outside the circle. A high jumper with a personal best of 6'9" achieved several times may go from that clearance right to attempts at a 7 foot clearance in their final meet of the season simply by gaining experience at approaching that formidable barrier. His technique may be excellent, but pushing to the limit they may simply not be strong enough yet. An intermediate hurdler moving to a different stride pattern may clobber some hurdles and finish well off the pace but they're looking to feel the change in a real competition.

Another way to look at this is one that was brought up at last summer's training camp in Colorado Springs. Take a walker attempting to break the World "A Standard" of 1:24:00, which is back-to-back 42:00 10K's. The athlete must have a bit of slack between this 42:00 and their PR. For sake of argument, say the walker walks about 10 seconds per mile when going from a 10K PR time to this attempt at 1:24:00, looking at a 10K PR of about 41:00. That in turn is a pace of 20:30's. But the athlete's 5K PR must be better (say 5:30/mile slower). This brings us to a 5K time of under 20:15, and only 6 US athletes have gone broken 20:15 for 5K, under any conditions road or track, and usually that has been with specific

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5K training. That's not been a big pool of walkers even capable of giving 1:24:00 a decent attempt.

At the Alongi race, the fatigue factor at the end was more of a problem than bad basic technique, or they would have been gone a lot earlier than the final kilometer lap. Our young walkers may not be quite ready for 20:15, or even 1:30:00, but at least now they know what the pace feels like, they put their best attempt on the line in their last race of a long season with nothing more at stake than a personal best, and they are now wiser and better athletes for it. Sure, they could have safely brought their best down a second or two, but that doesn't win medals and doesn't qualify for World Juniors, which is what the critical US racewalk community continually complains about. You can't have it both ways, folks.

Carry on, guys!

1994 SCHEDULE OF RACE WALK CHAMPIONSHIPS AND MAJOR INTERNATIONAL RACES

<table>
<thead>
<tr>
<th>DATE</th>
<th>EVENT, LOCATION, DIVISIONS</th>
<th>CONTACT</th>
</tr>
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<tr>
<td>FEB 19</td>
<td>US 12K CHAMPIONSHIPS CITY PARK NEW ORLEANS, LA (JM, SM, M, F)</td>
<td>DOTTIE CLEMMER 830 FOUCHER ST NEW ORLEANS, LA 70115 504-897-8195 504-899-4902</td>
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<td>MAR 5</td>
<td>USA/MOBIL INDOOR CHAMPIONSHIPS GEORGIA DOME ATLANTA, GA SM 5000m, SW 3000m</td>
<td>USA/MOBIL CHAMPIONSHIPS USA TRACK &amp; FIELD P.O. BOX 120 INDIANAPOLIS, IN 46206-0120 317-261-0500</td>
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<tr>
<td>MAR 13</td>
<td>US 50K CHAMPIONSHIP PAN AM CUP TRIAL BAYLANDS PALO ALTO, CA SM</td>
<td>RON DANIEL 1289 BALBOA COURT #149 SUNNYVALE, CA 94086 408-743-7288 B 415-964-3580</td>
</tr>
<tr>
<td>MAR 27-29</td>
<td>NATL INVITATIONAL RACEWALKS WASHINGTON, DC M/W 20/10K 3K</td>
<td>SAL CORRALLO 3466 ROBERTS LANE NORTH ARLINGTON, VA 22207 703-243-1290</td>
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Revised 93
Not surprisingly, we have more comment than there will be room for on the Run-Alarm (see November ORW). The demonstration in Las Vegas came off and Jim Hanley reports he has it on videotape. Anyone wanting a copy can send him $10 at P.O. Box 6744, Thousand Oaks, CA 91359 with their mailing address. In one of the letters below, Jonathan Matthews gives his impressions of the demo. First, here are some of the briefer comments:

Ron Laird: Looks as if we are in for some more contact controversy, but that is good because we need to sort it out before the IAAF does if for us with a swift boot to our butt. Bowman sure blew Dr. Furlong away with his reliability assessment. The thing seems like some sort of Mickey Mouse contraption that would further degrade our unique technique. The heel on training and racing shoes is an old idea the English sort of insisted on way before I came into the game back in 1955. It helps one to stride out, thus achieving the class racewalking technique. Contact will still be lost, but at least the walkers will look more like they are actually walking. I think you must still remember how we were told to put heels on our shoes when you came into the sport. (Ed. I also remember that Adidas actually made a racewalking shoe with a heel added in the mid-60s but it never became a production thing. I had one pair.)

Al Wood: It is understandable that judges such as Bob Bowman are going to be defensive about the Run Alarm. So, we need to lend some objectivity to some of his comments.

1. He says thata lifting doesn’t help a walker “necessarily”: I bow to his superior technical knowledge, but it must do something, such as effortlessly lengthen the stride. Otherwise, why are runners one-third faster than us? He says, “Video studies often show the fastest walker to be the most legal.” This is one of the many biased statistics in this world. The most skilled and experienced walker usually has learned good technique, while the less skilled/experienced walker is more likely to be arratic and scrambling to keep up. The legal walker could go still faster if he lifted. Or did we just imagine it when, at the Mexico City Olympics, Golubnichy, the faster walker into the stadium, had his lead sharply reduced by a blatantly lifting Mexican. (Ed. But Golubnichy was able to respond with an acceleration of his own when he became aware of the threat.)

2. Bowman zealously attacks the Run Alarm from every conceivable technical angle. There’s just one problem with that. If we are to believe early trial reports, it works.
As in other fields of endeavor, traditionalists will deride, deny, deny that an alternative method has any validity.

Bowman does indirectly bring out a point re: security with the Run Alarm. It may be necessary for walkers to jog before the race and activate their alarms to prove that they aren't disengaged or defective. There are always bugs with any new system, but we should at least give it full consideration and a long trial, starting with non-championship races, possibly using eye judging also as a backup/comparison.

Following are a letter from Elaine Ward in response to Bob Bowman's comments last month, and some very perceptive letters from Jonathan Matthews, Dave McGovern, and Martin Smith. Obviously, this is no simply problem and I am sure much more will be said.

Dear Editor:

Thank you for the extensive coverage you gave the Run-Alarm in your November issue of OR.

I would suggest that Bob Bowman's letters to me and to Dennis Furlong need to be read from the perspective that he was not informed as to the nature of the technology involved in the Run-Alarm. He, in effect, set up a straw man to beat down as he simultaneously joined the chorus of radio frequencies and transmitters were involved. In fact, neither are involved.

I refer to page three of his letter to me dated November 22, 1993, which was written after the two letters you published.

"I don't think you understand the impossible situation of 300 such alarms in one race of 150 walkers such as a World Cup requiring 150 separate frequencies that won't interfere with each other!".....

"You don't have to see any demo to judge its usage potential. If you cannot properly analyze its circuitry, which I have done, you haven't seen much. I see no legitimate role for it in our sport."

Again, the Run-Alarm does not use frequencies or transmitters. The Run-Alarm monitors on/off ground contact and communicates this information via the human body so that essentially the shoes "talk to each other" in a very private conversation. If Bob had come to the demonstration in Las Vegas by Dennis Furlong, and/or if he had not considered it "a waste of his time" to speak with Lee Danisch, the developmental engineer of the device, when I offered to bring him to the convention to meet him, he might have better understood the innovation involved.

Finally, I would suggest that Bob has not heard the last of the Run-Alarm.

Sincerely,

II
that the main effect of higher heels would likely be some shine from the stress imposed on them by greater range of motion and force acceleration.

Ian Whatley, who has conducted a preliminary study of the effect of adding additional heel elevation to walking shoes, has told me that the added heel elevation makes it less likely that athletes can quickly change the shoe with negligible change in their stride biomechanics. He has told me that he has investigations yet to develop any evidence of addi-tional heel elevation to the heels makes it easier to detect lifting.

Since slow motion videos have been the source of our public-relations problem, I feel that some teaming of “video-replay judges” working together on the course at each judging official and with “aided human eye” judges should be tried, and its effectiveness evaluated, in addition to the experimental options already mentioned.

But all of these options need to be further investigated, and none should be written into law without proof of their efficacy.

Dear Jack:

Nobody asked me, but... Since the ORW continues to be our only true forum for open debate I thought I’d throw in my two cents on the new “shoe alarm” and the continuing lifting “problem.” Bob Bowman’s excellent response to the device in last month’s issue makes a very strong case against this kind of technological solution on the grounds of impracticality, but I feel that such an approach is flawed philosophically as well. My first concern is that there seems to be a great deal of debate within the ranks of competitive racers about the concept of lifting. The legal concept of standing seems to apply. The athletes don’t seem to be complaining much about the flight phases of their peers, so where’s the problem? As a sometimes Internationalist in the sport, I’m just unbelievably impressed that some of my fellow competitors are able to walk 20 kilometers in 1:18 - 1:20. Flight phase or not, that’s incredible sometimes! In the sprints, I’m just unbelievably impressed that some of my fellow racers in regards to lifting. The legal concept of standing seems to apply. The athletes don’t seem to be complaining much about the flight phases of their peers, so where’s the problem? As a sometimes Internationalist in the sport, I’m just unbelievably impressed that some of my fellow competitors are able to walk 20 kilometers in 1:18 - 1:20. Flight phase or not, that’s incredible. Both of the lifting rules have prompted me to write. Perhaps, this time, I will try to be a little more understandable.

During the triple-cast coverage of the 1992 Olympic walks, Frank Sterletow mocked the sport, calling it “straitlegged running.” Maybe I’m crazy, but the way I see it, racingwalking is a whole lot closer to straightlegged running than it is to fast walking. (Maybe we ought to just change the name to reflect this fact and forget about the rules!) Seriously though, the sport has undergone a dramatic evolution over the years from an awkward “duckwalking” into a beautiful and athletic event. But this evolution has occurred at the expense of an obsolete lifting rule. Perhaps it’s time that we allow the rules catch up with the sport, rather than forcing the sport to regress to fit obsolete rules. If straightening on contact were required, racingwalking would continue to be clearly distinguishable from running as long as the knees were straightened.

Racingwalking does not have a public relations problem because racers are lifting. We have a public relations problem because there is a lifting rule, and racers are lifting. The general public will always have a hard time seeing the difference between walking and running if they’re looking at the wrong things. A horse and a toad both have four legs, but they’re very different animals. Walkers and runners both come off the ground, but they, too, are very different animals. Unfortunately the press and the public still go crazy every time they get a picture of a walker on her knees. If lifting was distinguished by the actual difference between the sports—the straightening of the knee and the resulting differences in motion of the body’s center of gravity—we wouldn’t have to be so paranoid of public perceptions.

In my mind, part of the beauty of racingwalking is its simplicity. All you really need is a decent pair of shoes. If I ever complain from within the ranks of competitive racers about the lifting rule, it’s time that we allow the rules catch up with the sport, rather than forcing the sport to regress to fit obsolete rules. If straightening on contact were required, racingwalking would continue to be clearly distinguishable from running as long as the knees were straightened.

Racingwalking has existed under a cloud of controversy ever since its inclusion in the Olympic Games early in the century. Judging problems eventually forced the removal of the walks from the 1928 games—certainly an over-reaction to the problem, but no wiser than the supposed solutions we’re seeing today in response to the same old problems. The adoption of standardizing rules governing the “progression of steps” undoubtedly saved the event from complete discredibility until the late 1950s. The emergence of new techniques first advanced by the Soviets at the 1956 Melbourne Olympics, and later, refinements by the Mexicans set the stage for the development of the fast, fluid technique that we see today on the international level.

Obviously, the intent of rules 190 and 191 is to create a distinction between racingwalking and running. I believe they do so, despite the fact that 99% of the competitors walking in any given race are off the ground at least part of the time. Aesthetically, however, there is still a huge difference between modern racers and running. Also, because of the straightening rule, the walker’s center of gravity is displaced directly out of phase with what one sees a running gait. (The walker’s c.g. is at its lowest point at the same point of stride.) Also, while a runner springs off the ground by releasing energy stored in the quadriceps muscles, the racers must propel himself forward by driving back with the rear leg using the gluteal and hip musculature—the quadriceps remains relaxed. That point of the stride because of the straightened knee. The powerful drive of the hips may propel the walker forward forcefully enough to cause a momentary loss of contact, but there is still a clear difference between fast racingwalking and running. The straightening rule ensures that this difference exists—rigidly enforced.

Unfortunately, the wording of the straightening rule makes enforcement of its intent somewhat difficult. Since athletes are only required to straighten in the vertical support phase, many walkers, including a good number of Internationalists have adopted a technique of landing with a very bent knee and (maybe) straightening at the vertical—Olympic Champion Daniel Plaza comes to mind. The problem with this technique is that it allows the athlete to take advantage of the stored energy in the quadriceps muscles that the straightening rule intends to eliminate. In my mind, this is not true racingwalking.

At great risk of further complicating the issue I’d be interested to hear what the readers think about a re-wording of the straightening rule to require straightening of the knee from the point of heel contact through the vertical support phase. Is this heresy when one reads so often about the need to eliminate the contact rule? On one hand I agree with this somewhat radical solution as well—if nobody is actually on the ground, then the rule should be reexamined. But I think that elimination of the “lifting” rule without straightening the “creeping” rule is unwise and a threat to the integrity of the sport.

Dear Mr. Mortland:

The articles in your November 1993 issue concerning the new judging device have prompted me to write. Perhaps, this time, I will even send the letter.

I see a somewhat different set of problems with Dr. Furlong’s “Run-Alarm” than those Bob Bowman mentioned. The first point that hits me as totally weird is that after devising a way to generate an electronic signal, the device described gives a visual display, not an audible signal to signal that a competitor is lifting, then provides a visual display, not a signal to signal that a competitor is lifting, then provides a visual display, not an audible signal to signal that a competitor is lifting, then provides a visual display to signal continuously after some number of lifting infractions. The judges or head judge must still observe and manually record this display. The device could easily be modified to send a telemetry signal each time the competitor passed a receiving station inside the course.

Ian McComb may not mind an additional 90 grams on each shoe, but he thinks the device will make him more competitive. I have been surprised if many other walkers agreed to the added weight on the shoe. It would seem sensible to move as much as possible of the device to a waist belt. Certainly the display and signaling components would be more easily observed with accuracy, if mounted just below the number on the walker’s back, and any electronic components that could be placed on the transmitters rather than the foot would find an environment less hostile to reliability.
While I have suggested ways that, in my opinion, could improve the "Run-Alarms" system, I would not automatically be a wholehearted supporter of adopting its use, should these changes be made. Clearly, the changes I suggested address only two or three of Bowman's listed failure modes, and these only from the standpoint of reducing the harshness of the operating conditions.

The cost of the system is not discussed. If, because of cost, the system were used at only a few meets, racewalkers would not have a realistic opportunity to adjust to the different level of scrutiny.

In addition, adopting this device would have a major impact on the role of the judges (or at least the head judge), but this, too, is not mentioned. Could the judges become slaves to the "Run-Alarms?"

Could judges still give warnings for lifting not confirmed by the device? What happens to their current mandate each to use independent judgement? Do the judges become judges of bent knee only? Will judges become the "manual" backup system for the inevitable failures of one or more "Run-Alarms?"

Another striking thing in the articles is that David Powell and McCombie appear to believe that lifting provides a clear speed advantage in a race, while Bowman states that, "It is a myth." Bowman bolsters his claim by stating that video studies often show the fastest walker to be the most legal.

I submit that, if lifting does provide an advantage in a race, then a most likely outcome of the competitive dynamic is that the fastest walker will be the most legal. The fastest legal walker forces other competitors to their limits. In order to not lose contact to the leader, the less able racewalkers are forced to lift, allowing them to keep up. (If the judges fail to intervene, the race becomes a lottery. The fastest legal walker can restore his or her advantage by going still faster (lifting), making the other competitors so obvious that the judges detect them.)

I believe, also, that Bowman's analogy of a racewalker lifting to a hurdler is inappropriate. For a hurdler, the hurdle clearing stride requires the runner to raise the center of gravity higher than the striding leg would normally be. To do so, the hurdler employs an increased vertical force and, consequently, a reduced forward thrust in the hurdle clearing takeoff. For a racewalker, the toe off seems indistinguishable between legal walking and lifting. Par for having greater vertical motion of the center of gravity than when walking legally, I believe that if we examine the motion of racerswalkers who appear to be lifting, we will find the opposite. This can occur, because lifting allows the contact of the advancing foot to be made with the leg more nearly vertical, so that the height of the center of gravity at heel contact is closer to that at vertical leg support than when walking legally. The real myth is that a lifting racewalker has greater vertical motion of the center of gravity than the same racewalker when progressing legally.

Still, if there is an alternate explanation of the video studies and despite a bad analogy, Bowman could yet be right about the central point concerning whether lifting gives an advantage. So what really occurs in competitive racewalking?

It seems to be accepted that most or, even, all top racewalkers lift in some of the time. The races with the longest contact time are being "flying circuses," that is, for lack of judging and much lifting, tend to be among the fastest races. If lifting does not give an advantage in a race, why would this be, and why would so many of the best athletes risk disqualification to employ it? Are we to believe that the best athletes take up racewalking can not be trained in the proper technique?

From Ian Whatley's letter in the January, 1993 ORW, up to 50 milliseconds flight phase might escape detection. That amounts to 15 milliseconds flight phase might escape detection. That amounts to 15 to 20 percent of the time off the ground. By this measure, I would say lifting is hard to detect. This indicates that racewalkers lifting are doing nothing with their muscles that appears different when legal.

I do not question the ability of racewalkers to demonstrate considerable legal style at higher speeds than the pace of even their 5 km bests. But for what distance can they maintain such speed legally? Most racewalking is aerobic, at least in the sense that oxygen uptake rate capacity is a limiting factor in performance in races. If a racewalker can find ways to reduce oxygen uptake rate requirements at racing speed, then that walker will be faster over all racing distances where he or she can employ the more efficient technique. Lifting is precisely the available technique for such efficiency improvement (given a walker with good technique).

I have chosen two of many possible ways to evaluate whether lifting gives an advantage. One simple way is to look at the energy requirements to move the trailing leg from toe off to its next foot contact. A second way is to consider the changes in gravitational potential energy and kinetic energy. These two energy saving mechanisms are independent. Lifting always gives the benefit of "free distance," but the change in the potential energy-kinetic energy oscillation is more technique dependent.

The leg recovery in racewalking is faster than the leg would swing if the pendulum to it requires muscular energy. We can observe the minimum recovery distance in a racewalker that does not lift. The body's center of gravity is equal to the stride length for legal racewalking. If a walker lifts at the same stride length, some of the stride length becomes "free distance." That is, this minimum recovery distance becomes less than the stride length and the recovering leg can move more slowly. With slower recovery leg speed allowing the walker to use smaller muscle contraction forces, the walker, moving at the same speed over the ground, has reduced the power requirement for the lifting leg (with no countervailing power increase requirements). Because the power supply duration is longer, the walker can maintain the speed over a longer distance, improving racing times.

Viewed alternatively, in walking, some of the kinetic energy is used after each foot contact to raise the center of gravity (c.g.) to the point where the support leg is vertical. This gravitational potential energy is returned to kinetic energy as the c.g. falls to the next foot contact. The most efficient possible motion would require the walker to maintain a perfectly constant height of the c.g. over the ground. The "eleven stepping technique" attempts to approach this ideal, by having foot contact occur with the leading leg close enough to vertical that hip motion occurs, a completely offset of the raising of the c.g. (if it occurs, due to the rising hip joint, as the leg moves to vertical.) But perfection being elusive, most or, in fact, all walkers have some vertical oscillation of the c.g.

For such an imperfect walker, lifting allows the leg of the advancing foot to be more nearly vertical with the same stride length, reducing the vertical motion of the c.g. This reduction in vertical motion only requires the walker to not raise the c.g. higher than when walking. If a walker lifting by obeying the straight knee rule, the c.g. may be raised only by extending the ankle earlier than when walking legally. This seems unlikely to occur in competition, because both the heel leaving the ground early and the bounding strides that resulted would be obvious to the judges. (A more powerful ankle extension timed normally does raise the trajectory of the c.g., but it raises an already downward trajectory back toward horizontal.) Because lifting racewalkers must rarely do those things that would make it obvious, their c.g. trajectories are similar to those of legal walkers. I conclude that lifting is advantageous in this sense of "least action."
One ramification of this is quite interesting. The smoothness that we associate with good racewalking is further improved when a good racewalker is lifting!

With regard to the effectiveness of higher heels in discouraging lifting, it may work as Bowman indicates, but perhaps walkers would adjust their toe off and hip motion so as to leave the situation little different from present.

During last winter's discussion of the great contact issue, much moaning appeared about the miserable stature of and lack of respect for racewalking compared to other races. I have two suggestions that might slowly improve this situation: Try to get more information about racewalking in front of track and field coaches. I think it has been years since Track Technique last published an article on racewalking. Also, I do not know if anything about racewalking has been placed in the USATF level 1 coaching school curriculum, as Elaine Ward suggested in January, 1993. If not, this is an area racewalk coaches might address. My second suggestion is for racewalkers to step into more road runs. A sub-hour 10 km will impress nearby runners that racewalkers are really athletes (and keep you in front of the back of most fields), and you even find people who are interested in learning something about racewalking. (And they rarely believe you when you try to tell them how far ahead the really good walkers would be.)

Have a fit and prosperous New Year!

Martin T. Smith

LOOKING BACK

25 Years Ago
(From the December 1968 ORW)--Chuck Newell, unheard of In 6 months, came striding out of Limbo to win the annual New Year's Eve handicap race, held this time on a road loop at Worthington H.S. over 6 miles 536 yards—it was easier to go 4 full laps than to worry about a different finish line, particularly in the dark. Given a 8-minute start from scratch on the cold (8 F), windy (wind-chill well below zero) night, Newell easily held off stalwarts Jack Blackburn and Jack Mortland as he recorded a 55:30. Blackburn took from scratch on the cold (8 F), windy (wind-chill well below zero) night, Newell easily held

15 Years Ago
(From the December 1978 ORW)—In the National 25 Km held in San Antonio in conjunction with the National Convention Neal Pyke blazed a 1:31:02, leaving Canada's Marcel Jobin better than 5 minutes back. Jim Heiring also broke 2 hours and Tom Dooley just missed. Marco Evonik and Bob Henderson rounded out the top six. In San Francisco, Henderson went 30 yards beyond 8 miles in an hour. . .We sadly reported the murder of Olympian Jim Hovey (1956), who was killed while tending a lift bridge in Buffalo. Elliott Denman, a Melbourne teammate of Jim, had written a very poignant column for the Asbury Park Press, which we repeated. . .We also included a couple of articles on training by British National Events Coach Julian Hopkins. The articles had originally appeared in Race Walking Record.

10 Years Ago
(From the December 1983 ORW)—In our 13th Annual World Rankings, Josef Pribilene, Czech., Ernesto Canto, Mex., and Anatolii Solomin, USSR took the top three spots at 20 Km. The 50 saw Ron Weigel, DDR; Jose Marin, Spain; and Raul Gonzalez, Mex. on top. Canada's Guillaume Leblanc was 10th. In the 20 Women were ranked for the sixth time with Olga Yarutkina, USSR; Sil Gustavsson, Sweden; and Sue Cook leading at 5 Km and Yung Ju Xu, China; Natalia Sharpova, USSR; and Cook at 10. Top three In the U.S. rankings were: 20 Km—Jim Heiring, Marco Evonik, and Dan O'Connor; 50 Km—Evonik, Heiring, O'Connor; 5 Km—Maryanee Torrellas, Susan Lien-Westfield, and Sam Miller; and 10 Km—Torrellas, Miller, and Teresa Vaill.

5 Years Ago
(From the Dec. 1988 ORW)—Czech Josef Pribilene, the Olympic winner, led the ORW World 20 Km Rankings, followed by Ronald Weigel (GDR) and Maurizio Damilano (Italy). Leading the women's 10 Km rankings was Svetlana Karbulina of the USSR. Her countrywomen Yelena Nikolayeva and Natalia Spiridonova were second and third. In the 50, the top three were Vyacheslav Ivanenko, USSR; Weigel; and Hartwig Gauder, GDR. In the U.S. rankings, Gary Morgan, Tim Lewis, and Jim Heiring led the way at 20; Carl Schueler, Marco Evonik, and Andy Kaestner at 50; and Debbi Lawrence, Maryanee Torrellas, and Teresa Vaill at 10. . .Mexico won the Pan-Am Cup for men and Canada the women's version, held in Argentina In November. In the women's race, Canada's Ann Peel won in 46:23 and was supported by Janice McCaffrey (46:45) and Alison Baker (47:17) in fourth and fifth. Mexico's Graciela Mercenario won the 50 with Arturo Bravo and Victor Sanchez in second and third. Paul Wick was the first U.S. finisher in fifth (4:21:36).

35 Years Ago
(From The Cincinnati Post)

THEY ALWAYS SAY a fellow has to be a little wacky to take part in a walking race, but I don't think that's quite fair.

Maybe you could say the same thing about a lot of other guys in sport. How about the distance runner who goes until he's ready to drop; the baseball player who labors all afternoon on a hot baseball diamond; the football player who takes a two-hour brushing and calls it fun, or the boxer who gets knocked stiff. Maybe they're a little wacky, too.
I drove out along Route 32 to watch the walking race from Neville, Ohio, to the Cincinnati Gym grounds Sunday. The distance of the race was 30,000 meters or 18.6 miles.

The first three to finish in five hours and 10 minutes, or less, were to be eligible to compete in the Olympic games at London this summer.

It was a weird affair all right, but before it was over I saw one of the most determined and courageous efforts ever made by anyone in any sport.

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The performer was Bill Mihalo, a rather frail looking veteran of the last war from Detroit, who'd been training a whole year to get one of those three Olympic places. He was the pre-race favorite.

Bill didn't win the race. He fought his way to the finish line in what appeared to be a dead heat with John Deni for third place. Then he collapsed completely exhausted on the muddy Gym grounds track and was told he'd been disqualified.

Maybe I'm wacky, too, but I felt sorry for Bill.

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They picked the guy up and tried to stand him on his feet so they could walk him around and cool him out. But his legs buckled and sagged and his head bobbed from side to side.

"I got hit by a car," he mumbled.

Race officials verified this. They said it happened soon after the start. A car swerved and brushed Bill and knocked him down. But with perhaps 25 miles to go he picked himself up and walked on.

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At the Halfway mark Bill and Deni were talking together in the lead. At Coney Island Deni had dropped back and Bill was out in front, alone.

With only four miles to go the hot sun and muggy air made him sick. His stomach began doing flip-flops. Far behind him other entrants were dropping out for the same reason. But Bill gritted his teeth and drove blindly on.

At the Kellogg avenue bridge over the little Miami River Ernie Crosbie of Baltimore, member of the U. S. Olympic team in 1936, moved up and passed Bill.

Bill tried to match Crosbie's pace, but had to give ground. A man with less fighting heart would have gone down in a heap right there, but Bill wouldn't quit.

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At the Gym grounds Sub Linehan, the National Walking Committee chairman in charge of the race, gathered with other officials at the finish line. They stretched a string between two posts and waited.

The route to the finish down Watson street to the river bank around a sharp turn into the grounds and then down along the stretch side of a running track that was covered with flood mud and new sprouted weeds.

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Crosbie showed up first.

He looked reasonably fresh as he broke the tape. He took his victory matter-of-factly, without even a smile.

He merely reached for a bottle of coke, slipped on a jacket and walked away from the small group of spectators.

Two or three minutes later three more walkers came around the turn. In front was Adolph Weinecker, 19-year-old Michigan State College darkhorse. In the later stages of the race Weinecker had sneaked into second place. It was now a battle between Mihalo and Deni for third that trip to London.

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With Weinecker three strides in the lead, the three battled through the last 10 yards for the race.

Mihalo was groggy and staggering. Straining every muscle his face painfully distorted, he tried to gain those few feet that would give him third place and the thing for which he'd been working so long.

In desperation he broke his stride and began to run. Pulling up even with Deni he again went into a walk. He stayed there for the last few yards. As they hit the finish line he reached out and clutched something that wasn't there.

And as he reached he fell in a muddy heap on the ground.