Running Training

Renato Canova indlæg www.letsrun.com

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Kenya

Renato Canova	**RE: 800 meter training** *11/12/2003 10:30AM* - in reply to trackchamp41 — Reply | Return to Index | Report Post
	Every specialism of middle distance is a compromise among the fast and the resistant type of runner, not only 800m. When you have an out of class champion, like Michael Johnson, able to be the best in two or more distances, probably he could be the best also in an hypothetical distance in the middle of the two officials (for ex., 300m). It's clear that, if you are the best in 200 and 400, normally you are the best also in 300m. But, when you are the best in only one distance, may be that you could not be the best in an intermediate distance, like for example 600m or 1000m. So, normally there is a "potential" record holder of 600m that has not the best distance for him, and the compromise is running 800. At the same time, may be that there is a "potential" record holder of 1000m that is not the same of 800, distance that he has to run. In the first case, we say that the runner is a "fast" specialist, not at the top like specific endurance, but very good in speed ; in the second case, we say that the runner is "resistant". The history of 800m always presented specialists of these two different typologies. Already in 1912 Ted Meredith was able running in 1:51.9 (WR) and in 1916 was record holder of 440y with 47.4 (like 47.0 on 400m). Other record holders in both 400-800 were Ben Eastman (46.4y in 1932 and 1:49.8y in 1934), Rudolf Harbig (46.0 and 1:46.6 in 1939), and Alberto Juantorena (44.26 at sea-level and 1:43.44). About Olympic Games, only Juantorena was able to win both, mwanwhile winners in 800/1500 were Edwin Flack in 1896, James Lightbody in 1904, Mel Sheppard in 1908, Albert Hill in 1920, Peter Snell in 1964, and many others were able to conquire a medal of different colour, like Phil Edwards in 1932, Ivo van Damme in 1976, Sebastian Coe in 1980-1984, Steve Ovett in 1980. We can also find some particular champion, like Said Aouita, bronze in 800 in OG '88, after winning gold in 5000 in OG '84. If we see the "all-time" lists of top 30, we don't find any athlete in 400/800 (the first, Alberto Juantorena, is n. 18 in 400 and n. 42 in 800. Instead, in 800/1500 we find Coe (n. 2 in 800, n. 23 in 1500), Cram (n. 16 in 800, n. 11 in 1500), Baala (n. 24 in 800, n. 6 in 1500), and other like Aouita, William Tanui, William Chirchir are in top 50. So, we cannot speak about a system of training good for 800m. TRAINING FOR AN EVENT DOESN'T EXIST. EXIST ONLY TRAINING FOR EVERY ATHLETE, that can run his best event possible. The talent of runners begins from speed. It's very difficult to increase your speed in significant way, but is possible to increase your speed endurance in significant way.

So, SPEED IS NOT A SUBJECTIVE OPINION, IS A FACT.
Who is a fast athlete ?
Of course, Juantorena was a fast athlete. Fast athletes were Billy Konchellah (45.1 the first race in his life), Susanj, Marcello Fiasconaro that I followed in Italy (using schedules from his South African coach, Stewart Banner), that was silver in 400m in European Ch. '71 in 45.49 and in 1973 broke WR with 1:43.7. Fast were Tom Courtney (winning 800 in OG '56 and able running 45.7), the Jamaican Arthur Wint (gold in 400 and silver in 800 in OG '48 and Mal Whitfield (bronze in 400 in OG '48 and gold in 800 in '48 and '52), and Paul Ereng (45.6 and gold in OG '88).
But athletes like Snell, Ovett, Tanui, Rodhal, Schumann, Kipketer, Coe, Bucher, cannot be considered in the "family" of fast runners, also if able running under 46.0 in relay at the top of their career.
I think that there is some confusion about the idea of long run, and of basic work. Many of you look at training in the specific period of a season, and when the career is already well definied. Instead, the problem is to look at the beginning of their activity. Like Kenyans run very much when very young, also Coe and Ovett and Cram ran very much when very young (and what Bazza wrote can confirm this). Some year ago, a normal activity for Britain students (correct me if it's wrong) was to run long run on road or cross during winter (some time also 10 miles) in meetings among colleges.
When they were juniores, they began their activity from longer distances , not from sprint. Sebastian Coe was in European Junior Ch. in 1500m in 1975, and Steve Cram won European Title in 3000 (Bydgoszcz 1979). And, if we go to African runners, Aouita was in cross and 5000m when junior, and the same many others.
The common denominator is TO IMPROVE SPECIFIC ENDURANCE.
But, if Konchellah was able running 2x300 in 34.0 with 8 min of rest at his beginning, for him a good improvement is running 5x300 in 36.0 with 5min, and then 3x300 in 34.0 with 7min., because HE WAS A SPRINTER.
Instead, if you are COE, WITH A GREAT AEROBIC PREPARATION WHEN VERY YOUNG, you can run 6 x 800 in 1:51 with 1:30 recovery, or, if you are CRAM, 10x300 in 39.0/40.0 with 45 secs of recovery. THESE ARE WORKOUTS POSSIBLE NOT BECAUSE YOU HAVE SPEED, BUT BECAUSE YOU HAVE SPECIFIC ENDURANCE. But the problem is : how we can prepare our body for working so hard in that direction ?
Under this point of view, an aerobic base is indispensable.
How is the best way for improving your aerobic base is another type of problem.
We made some experiment with our best runners (Benvenuti 1:43.92, D'Urso 1:43.95, Longo 1:43.74). Nobody was really fast, as their value was about 46.7 (Benvenuti), 47.5 (D'Urso), and 48.0 (Longo).
D'Urso was able running 5k in 14:03 at 2000m of altitude (Sestriere), Benvenuti 8:20 3k, Longo 8:40 at his beginning.
Taking lactate, we could see that Longo, after 6k at 3:20, had a value of 9-10 mmol, so this work was not completely aerobic, and the pace was very far from the speed of the race (20.0 every 100m against 13.0 about, only 66,5 %), so there was no relation under the biomechanical point of view.
But, running 4 sets of 10x150m in 22.0 with 20/25 sec. of recovery, the final level was, after every set, no higher than 6 mmol (so this work was more aerobic than running 6k not very fast). But the most important difference was that, after 6k, cortisol was very high, after one set of 10x150 very low. Cortisol prevents the possibility of producing lactate, so is a limiting factor for lactic activities. I continue later.

Renato Canova

RE: 800 meter training *11/12/2003 1:04PM* - in reply to Joe Rubio

Joe, you explained what every runner has to understand :

a) DOESN'T EXIST ANY TYPE OF TRAINING LIMITING QUALITIES.
You lose some quality, or are not able to increase it, ONLY WHEN YOU DON'T TRAIN THAT QUALITY. It means that you lose speed not because you run long distance, BUT BECAUSE YOU DON'T TRAIN SPEED. At the same time, you become less resistant not because you do speed workouts, BUT BECAUSE YOU FORGET ENDURANCE.

b) The elements of training are always present in a good training-schedule. What must change is their percentage and their frequency. So, during the FUNDAMENTAL PERIOD you must work for increasing your qualities : general resistance, strenght, rapidity, flexibility, cohordination. You must not use SPEED, but you have to prepare your speed. For example, you use circuit with weights or special works uphill, having clear in your mind what the goal is. If I go climbing 400m, making, without interruption, 60m sprint at max. speed + 40m bounding + 60m sprint + 40m skipping + 60m sprint + 40m heels to buttocks very fast + 100m sprint, and at the top 10 times squat-jumps pushing harder is possible, I use a work for increasing strenght endurance, reaching a very high level of lactate, improving "stamina". THIS IS A BASIC TRAINING, but is of very high intensity. When I put speed in my training (f.e., 15x100m with 30/40 sec of recovery), I have more BASIC QUALITIES for improving this specificism.
About running, every speed slower than 80% of the speed of the race is NOT SPECIFIC. So, about 800m training, if we want to refer to 100m speed, these are the parameters :

PURE SPEED (over 110 %)
SPECIFIC SPEED (110 - 90 %)
SPECIAL SPEED (90 - 80 %)
BASIC SPEED (80 - 65 %)
GENERAL SPEED (65 - 50 %)
REGENERATION (under 50 %)

For an athlete able running 1:44 (13.0 every 100m), it means :
Faster then 11.7 = SPEED
11.7 >< 14.3 = SPECIFIC SPEED
14.3 >< 16.3 = SPECIAL SPEED
16.3 >< 20.0 = BASIC SPEED
20.0 >< 26.0 = GENERAL SPEED
Slower than 26.0 = REGENERATION

Of course, for evey speed we can use different distances :
SPEED : 60-200m (global volume 1500/2000m)
SPECIFIC SPEED : 200-1000m (global volume 2000/4000m)
SPECIAL SPEED : 400-2000m (global volume 3000/6000m)
BASIC SPEED : 800-6000m (global volume 5000/10000m)
GENERAL SPEED : 5000-12000m (global volume 7-12 km)
REGENERATION : What you feel better for you.

This fact can happen along all the season. We must modulate speed, lenght of intervals, global volume, duration of recovery, that can change according to different period of preparation.
One good principle is that MORE QUALITY THERE IS (f.e., 3-4 competitions very close), MORE REGENERATION WE NEED.
You must learn running very slow for running very fast.

The system for increasing SPECIFIC ENDURANCE is not only to increase the speed, but essentially to reduce recovery. So, we can adapt the membranes of our cells to increase their permeability, in order to eliminate lactate in shorter time.

I want to remember a type of work of Juantorena, that really never ran many km :
3 times 1200m with 6x150 in 18.5 recovery 50m in 13.0, with final time of 3:09 about (6 min recovery).
This one was a typical example of Anaerobic Work, that was good for increasing Aerobic Capacity, and not speed.
After this type of work, Juantorena was able to improve also in 400m, without never using speed so high like in the past (when he was only a 400m runner).

Renato Canova

RE: 800 meter training *11/13/2003 8:47AM* - in reply to 800 ways

I'm not the coach of Longo, that is called Fabio Scapin. But, as I was responsable of Italian Federation for Methodolgical Research and Experimentation, I know very well what Longo used in his training, beeing connected with all the Italian coaches for discussing training programs and analyzing results of training.
I want also to explain my idea about speed. What is possible to do with 52-53 on 400m ? Of sure, is possible running till about 1:50, depending on personal specific endurance. See the situation of women (and the fact that many used not permitted substances many years ago doesn't change the situation) : in the top position we can find Kratochvilova (1:53.28 and 47.99), Olizarenko (1:53.43 and 52.4, but also 3:56.8), Quirot (1:54.44 and 49.61), Mineyeva (1:54.81 and 51.8), Kazankina (1:54.94 and 53.4, but also 3:52.47 and 8:22.62, and 5th position in 15 km road WCH '87 at 36 years of age), Melinte (1:55.05 and 53.8, but also 3:56.7), Mutola (1:55.19 and 51.53, but also 4:01). Italian record holder Gabriella Dorio, winner in OG '84 in 1500m, has the Italian record with 1:57.66, with a PB of 54.9 on 400.
So, you can understand that, if an athlete like Kemboi (not able running under 50) goes to 800m, of sure can run 1:48 or something less. About Cram, 49.7 is not his PB, but is 48.5, and in any case he never was able running faster than 47.5 in relay.
But not always a big endurance is important for running 800m. We can have athletes very fast in short distances (for ex., 100m in 11.2) and very resistant in long, slow run (able running a marathon in 2:20), that always lose competitions of 800-1500m against athletes less fast (12.0) and less resistant (not longer than 10k in 31:00). So, the difference between the two athletes is their SPECIFIC ENDURANCE. Specific endurance is the percentage of speed that you can use in relation to your max. speed. If you run 12.0 in 100m, and 52.0 in 400m, your specific endurance (for 400m) is : 12 (100 %) : 13 (pace of 400) = 92,3 %. So, if you run 52.0 (13.0) and 1:52 (14.0), your specific endurance (related to 400m) is 92,9 %.
In relation to the distances 400/800, athletes having a coefficient between 95 and 90 % can be considered "resistant", under 90 % "fast" if are really fast, in other case simply weak....
If you have 95% of coefficient, if you run 52.0, you can run under 1:50. Of course, is something possible to strong athletes of long distances.
If you have 90%, if you run 48 you can run 1:45.2 (and there are many specialists in top lists having this typology).
If you are a long sprinter, having 85% of coefficient, running 46 you run only 1:45.8.
So, your absolute speed is not so important. You must individuate which is the quality that you can increase more. It's a nonsense to spend the most part of your time in training for improve a quality of 1%, forgetting the direction where you can improve of 10%.
At the end, I want to reply to hunh.
I'm really tired to find on this site very stupid persons, frustrated idiots, speaking and running down, slanderers of very poor level that think to know every think and talks about situations that never could test before.
One thing is to have an opinion, that can be right or wrong, but is only an opinion. If

	you are intelligent, when someone can explain you what you didn't know, you can change opinion, knowing facts. Another thing is to be unshakable about total stupidities, that have nothing to share with real facts, and that you think because BEFORE KNOWING THE TRUTH you already have your idea. You are an idiot, and like you all people talking about drug without knowing anything.
Renato Canova	**RE: Are the KENYANS AFRAID of the Ethopians?** *2/3/2004 5:18AM* - in reply to NativeSon
	Just arrived from Kenya, I'm reading your discussion about Kenyans and Ethiopians. My opinion (I follow some Ethiopian too) is the following : 1) The first difference is a different level in organization. In Ethiopia, 95% of the athletes come from the area of Arsa, about 120 km far from Addis Ababa (that is the correct English name), and live all together in town : there is a group of National Team, but the best "private" athletes use to join with National Team for the more significative trainings during the week. All the athletes go running twice per week at 3200m of altitude, using military lorries able to transport 30-40 runners. Twice er week all the group is on track, with some difference in training, but very similar programs. So, for the coaches is very easy to control the real shape of best athletes, and only when they are in top shape are allowed to compete in Europe. The control from Ethiopian Federation is very strict, and the collaboration between Federation and managers is precise and follows clear rules, that put the interest of the Country in top events over every other interest. In Kenya, there isn't any type of organization. While the number of Ethiopian runners is about 60-70 (all together, males and females, marathon runners and track runners, old and young), the numbers of Kenyan is more than 1.000. Around the world, already about one thousand runners normally compete in Europe, America and Asia (about 50 runners are based in Japan). Nobody knows new comers, and there is not any type of technical organization in districts and provinces. During the last 3-4 years, in Kenya there are more competitions, and now the calendar has many races (cross and road during winter, track from march) at the different levels of District, Province and Country. Young athletes start running in their village following an athlete already of international level, trying to do the same training (also if very much younger)without coaches or technical advices. Sometime, after District competitions, there is some manager recruiting the best juniors, outside every intervent of Kenyan Federation. So, when the best athletes go running in Provincials, managers already know the best young runners, official national coaches not yet. The same after Provincials. The task of National Coaches begin during Trials : they select the best in the race, that normally never saw before, and from that moment put the athletes together in residential camps, and train athletes without knowing their previous training and their attitudes, all together. So, normally athletes in good shape lose their shape, using non specific and personal training, while athletes in medium shape are able to improve, training more with the other runners. This means that is not possible to know exactly the level of personal condition before a big event, as the control is not from coaches well knowing athletes, but from coaches not connected with the athletes themselves. 2) In Kenya athletes have to pass thru Trials (also the best), while in Ethiopia are selected using a mixed system. So, normally in Kenya never there is the best possible selection, but only the more commod (see Wilfred Bungei and Mutua last year, or Paul Koech in steeple). This is a very big advantage for Ethiopian runners.

	3) For long time, Kenyan coaches (like Mike Kosgei) always spoke about "tactics", like a secret for winning big events. Really, when Kenyans were the top 10 in cross country, it was easy to talk about tactics with one minute of advantage in 10000m ! Now, the real problem is "to train athletes for running faster", not tactics. Tactic is for the strongest, not for who is weaker. In Paris, before 10000m, I was seated with Mike Kosgei in the warm-up area, when Moses Kiptanui arrived, telling to Mike that "John Korir is not in shape, and Talel is very much better than him. So, it's better to use John for pacing for Talel, not the contrary". I asked Mike "and you, what do you think ?", and he answered me "I don't agree, as John, also if only at 80%, always is better than Wilberforce Talel, so I think that in any case is the best of the team". I answered to Mike : "Mike, John is of sure better than Wilberforce (both my athletes), but I want to tell you something about "tactic", as 10 min ago I spoke with Jos Hermens about the race : after 4 km, Gebre himself goes in front running at 2:35 per km. So, the only tactical advice is to try to follow : who is able to follow Ethiopians, can arrive n. 4, as the top 3 in the medals are Ethiopians of sure". And, about Cherono, Kiptanui had a meeting together Reuben Kosgei and Ezekiel Kemboi before the final of steeple, saying "You have to lock Cherono, then you decide who is the winner". Of course, I planned a very fast start, and they were surprised. What is tactic, when you are weaker ? So, many Kenyans don't fear Ethiopians, but are too much presumptuous and don't know the system of running of other athletes. The only way is to improve in humilty and knowledge, and, of course, to train for running faster....

Renato Canova	**RE: Are the KENYANS AFRAID of the Ethopians?** *2/4/2004 9:25AM* - in reply to Hunt
	We prepared from the beginninh of the season the capacity of starting very fast recovering during the race. For example, Stephen used in April-May many times a training with 3 times 2000m alternating the speed every lap (60/72 about), with final times of 5:20/5:25. We wanted to develop this attitude, as Stephen is yet at the beginning of his career, that has the focus of steeple only till 2005 (after he moves to 5000 and also 10000m). As Boulami was disqualified, Stephen had to learn to run in front, ready for every situation. In Athens, for example, he started with 60.3 / 2:04.2 the two first laps, running completely alone after 2 laps. During he last race before WCh (in Zurich), he tried to run under 7:57 for the first two km, but he burn himself, allowing to Ezekiel Kemboi to reach him in the last 200m. In this case, the victory of Shaheen (8:02.48 vs. 8:02.49) was not due to ability, but to fortune. So, speaking with Stephen before the Final in Paris, I told him "Don't risk too much with a short final, because Ezekiel is very fast, expecially because there are the barriers, and he is technically very much better than you. So, with the help of Khamis Saifeldin, you have to start very fast (2:35 the first km), and of sure Ezekiel can be surprised and doesn't follow you. After the first km, only two situations can happen : or the group, having 40-50m of gap, decides to run for silver, and you win on a normal pace, or Ezekiel has to go out of the group, but for reaching you has to run very fast the second km (2:42 for you is 5:17, but Ezekiel has to run the second in 2:35). So, soon when Ezekiel reaches you, increase again your speed, and you can win with 20-30m of gap". But, when Kemboi reached Shaheen, this one let him to go in front, jogging back Ezekiel (1:53 the 600m between 2000 and 2600, so slow that the other athletes were able to close the gap at the bell). Last lap was a sprint of "endurance", not of speed. Ezekiel was better for 350m using every barrier for earning 3-5 meters, but with 50m to run was completely exhausted.

	The first thing that Stephen told me, after winning, was : "I wanted to show you who is the faster in the last 200m". This mentality is, at the same time, the strenght but also the limit of Stephen. His training is not yet very much : I have a lot of other kenyans that train harder than Stephen, and more. But the talent of Cherono is something of incredible. He has the possibility to become the n. 1 in all the distances longer than 3000m, also if at the moment there are athletes like Bekele, Nicholas Kemboi and Kipchoge that have the talent for destroying the current World Record in all the events.

Renato Canova	**RE: Are the KENYANS AFRAID of the Ethopians?** *2/5/2004 3:23PM* - in reply to trackhead
	Shaheen used a very low volume of training when I began to train him at the beginning of 2002. So, his increase in volume is very much gradual, but during 2003 he was able to increase of 30% about. Talking about the current period, his problem is that he's disturbed by too many facts that every day he has to face. Interviews, normal people asking for a lot of helps, and also the need of some nervous recovery after last season. Really, he strated his training in November soon very hard, but after 3 weeks had to reduce, because his concentration was not the best. In any case, he has the focus of track, and soon after World CC will go completely in training for improving all his PB. Regarding Mutua and Bungei, my opinion is that Mutua is more talented (he was able running in 43.9 last stage of 4x400 during World Military Ch. in 2002 !), but Bungei more mature under the point of view of training. Wilfred has a great personality, also during the race ; Joseph is more naif, and often does some mistake in tactic and in distribution of his energies. At the moment, Mutua is already in better shape, because he used more speedworks in training. However, this year he tried to train with more volume, also if the percentage in comparison with Bungei is no more than 60%. Bungei has the goal of World Indoor Ch, like Mutua, but expecially the goal of Olympics. After the indoor season, they will go directly to June (may be only Doha, on 12/5, but not yet in shape), using April and May for the most important basic training (aerobic power, short speed, strenght, general resistance). Regarding Hailu Mack, I personally never went to Asela : were athletes like Moges Taye (marathon runner), Merima Denboba and Meselech Melkamu to explain me that the area was at 120 km from Addis Ababa. Instead, I directly saw with my eyes a group of athletes going with a lorry to the mountains, following Gebre with his own car. So, if for the "official" national team there is a bus, for "private" runners that join with the team there is a lorry (but in any case I think that, during a season, there are different situation and different athletes). The system of training is a training of group, and the 80% of best athletes are involved in the same phylosophy of training. This is not what can happen in Kenya.

Forklaring: Jeg har kopieret bunkevis af indlæg ind i denne tekst. Overskriften refererer til den overskrift trådet har på www.letsrun.com.

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I try to answer to your questions, also if you must think that are only opinions. I can be more precise about Kemboi and Bungei, that are athletes of my group (Kemboi is coached by myself, Bungei by Gianni Ghidini).

1) Nicholas surprised me too in improving so hard. I was his coach from the end of 2000. He already demonstrated to have very good possibilities, reaching 4th place in WCCCh-j in 2001, and was able running in 13:26 5k, but never gave me the idea to be so strong. Also this year, he had a bad winter season due to

an injury, so I preferred to move him to longer races, thinking of a future like marathon runner. He ran in 62:16 his first HM in Portugal, then 60:31 in Lisbon. After a period of recovery, prepared the track season, going to Hengelo in 10000m where ran 28:19. Soon later, he reached me in Switzerland (Davos). I soon realized that he was not well prepared, so I spent 3 weeks in volume and basic training, without using speed works. He went to Sotteville in July for 5k, and ran 13:42 arriving 5th (5 people together during the last lap), then went to Algier running again in 13:42 (Moses Mosop won with 13:39) arriving 4th (5 people together during the last lap). This situation confirmed me that he was not fast in the final, so my idea to move him to Marathon was stronger.
The key happened during a work at the end of July, when I porposed 5 sets of 600/500/400/300/200m alternating speed (sets n. 1-3-5 in 1:30/1:20/58.0/46.0/27.0 with 1:30 recovery, sets n. 2-4 in 1:36/1:12/62.0/41.0/29.0), recovery 5 min between sets. The group was Nicholas, Kwalia, Mosop, David Kilel, Abel Cheruiyot and Nyamu, and the winners in Youth Ch. (Choge, Ronald Kipchumba, Samson Kiplangat and Justus Kiprono) only for 3 sets.
I permitted the last 200m free : Nicholas ran in 23.2.
So, I called him : "Nicholas, how is possible that, when you are 5 athletes in the last lap, you are n. 5 ? You are fast, why you are not able to sprint ?". He told me that was not good in sprinting. I spent 2 hours in speaking with him. After few days, he went to Heusden for pacing 5k till 3000m (7:52), then stayed inside the group and finished 3rd in 13:14.41. On 10th of August he went to S.Sebastian, competing for winning, and was n. 2 with 13:14.33 after beeing in front last lap, but finishing to push last furlong as he took a small distorsion on the border of the track. But at last he had understood. In Zurich he ran last lap in 55.2, almost winning against Kibowen in 13:01.14. So, I decided to train him very hard for two weeks, for preparing 10000 in Bruxelles with the goal of 26:45 that already seemed to hard.

Nicholas can be the new Gebre, more than Bekele, that has different attitude. Like Gebre, Nicholas can go to the Marathon in the future. Like Gebre, he's very light in his body and in his action. Like Gebre, in the future he can run 1500m under 3:35.
Bekele is unbeatable in cross, having a muscle power bigger than other athletes. He has a very high level of Aerobic Power, but I don't think that can move to longest distances like Nicholas.

2) Eliud Kipchoge is a runner that can last. I prefer him to Chebii, because he is more aggressive and doesn't afraid about anyone. Chebii never "made" the race, always awaiting the pace of other runners, beeing confident in his final kick. I think that Chebii has an Anaerobic Threshold lower than Kipchoge, and a mentality less aggressive than Eliud. I think that his personality is not so big as Kipchoge. Chebii has more muscle reactivity than Kipchoge, but also more fright of top runners, and fears fast races from the start. Personally, I think that Eliud can run under 12:45 already next year, but I see this more difficult for Chebii.

3) Ezekiel Kemboi has very big talent, but is not well trained under the aerobic point of view. He had like coach Paul Ereng, very good coach but with mentality of short distances, and steeple are not a short distance. During the last period, Paul Ereng was no more his coach, so Ezekiel now has also to solve the problem of a top coach for improving. In relation to Stephen Cherono, Ezekiel is of sure very less strong in flat distance. He has to improve very much in that direction. He is already good in technique, and has very much elasticity and nervous capacity of changing speed. But, for winning the main races, he needs to be more resistant at high intensity, for long time.
During WCH in Paris, I planned with Stephen (Shaheen) to start very fast for tiring Ezekiel reducing his final kick. Shaheen was trained to fast races. He made many workouts with change of speed alternating speed every lap (2000m in 59/72/59/73/58 = 5:21, for ex., 3 times with 4 min recovery), and was mentally prepared in following every pace (see the victory against El Guerrouj in 5000m). Ezekiel was only prepared in progressive races, with slow start and terrible finish.
For Athens, Shaheen cannot run, but I don't forget Paul Koech, that at the end of the season was able to improve very much. Koech is, at the moment, more consistant of Ezekiel Kemboi. Anyway, both the guys can run under 7:55.

4) Bungei, coached by Italian Gianni Ghidini, is part of a training - group including also Yiampoy and (from next year) Mutua. He's very serious, follows our system also when is in Kenya, and understood that what is possible to do in Italy (for example, lifting weights and using other training facilities, always followed by a top

coach) is not possible to do in Kenya. So, Wilfred (that is cousin of Wilson Kipketer and nephew of Henry Rono : good genes !) lives long time in Italy, from april, and is one of the more professionals runners I know. I don't think that he is inconsistant : he was sick from the end of July, and his last defeats were in a period of big load in training, for preparing World Championships (that could not run, skipping Trials due to the sickness). But, everywhere he had a focus, he was able to reach it. He's now very stronger than two years ago, when was silver in Edmonton. He can be a very good card for Olympics.

5) Edith Masai is a very good runner, but her age probably doesn't permit big improvement in her future. Ethiopian runners are very young, and their improvement is easier. So, I'm disappointed, but about women I think that Kenyan runners have no chances of medal (except for Marathon).

Baldini Training

I came back yesterday from Kenya, where I was from 11 to 25 of February, for assembling the Qatar team, in full agreement with AK. So, I lost two weeks of posts, but this night I try to recover....
About Baldini, in a my book written in Italian, edited by "Correre", italian magazine, I had a special chapter for the exact training of some of the best Italians : Bordin before OG (that you already know) and Stefano Baldini before his first bronze medal in Edmonton, and two ladies, Maria Curatolo (silver in Eu.Ch '94 in Helsinki) and Maura Viceconte (before 2:23:47 in 2000).
Some other info about Stefano : from 8th of March he goes back to Namibia again, where he stays till the end of the month, for coming back to sea-level 18 days before London Marathon. His program (always built by Luciano Gigliotti, also coach of Gelindo Bordin in the past) repeats the same roads, but every time he changes something. This year the main goal is Athens, a very strange marathon for weather conditions and the profile of the course. So, Gigliotti is thinking of something particular in preparing Olympics. But about this we can speak later. Now, I'm concentrated in WCCCh, for having a good global result with the team of Qatar, as really I don't think possible a top result of Shaheen on the mud that, of sure, there will be in Bruxelles.

Did Coe really only run 60 miles a week?
I read with very much attention all the discussions about the mileage of Seb Coe. As in letsrun many times there are questions about the mileage (expecially for marathon), I think that is better to weigh up the real mean of mileage in a global project of training.
When we speak about Coe, we refer the mileage to the final part of his career : IS THE MILEAGE OF A MATURE ATHLETE, AT THE TOP OF HIS CAREER.
But the real problem is : how much was the mileage and, better, what was the system of training when he was very young, in other words, how did he build his "aerobic house" ?
Every man needs from 10 to 12 years for building his "aerobic house". If you are Gebre, your house may be a skyscraper 60 floors high ; if you are a non talented amateur, may be a small house of only 2 floors. But, in any case, you need more than 10 years for changing your attitudes, your physiology, your mind. After this period (I repeat, 10-12 years), also if you don't train more with big volume you don't lose your qualities, that are CONSOLIDATED.
When you arrive at that level, the best road is to reduce the volume of general training (that cannot give you any advantage, but can increase the wear and tear of your body and the risk of some injury) having the focus of improving yet a little in the volume of "specific training".
For example, speaking about a marathon runner, if you want to build your base for a big future race, and you are 18y old, you can increase your weekly mileage (connected with "general training") in this way (attention, is only an example) :
18 years : 60 miles (80% general + 20% specific)
19 years : 70 miles (80% + 20%)
20 years : 80 miles (80% + 20%)
21 years : 100 miles (75% + 25%)
22 years : 120 miles (75% + 25%)
23 years : 140 miles (75% + 25%)
24 years : 140 miles (70% + 30%)
25 years : 150 miles (70% + 30%)
26 years : 150 miles (65% + 35%)
27 years : 150 miles (60% + 40%)

28 years : 160 miles (60% + 40%)
29 years : 150 miles (55% + 45%)
30 years : 140 miles (50% + 50%)
32 years : 120 miles (40% + 60%)
35 years : 80 miles (20% + 80%)

After the period used for consolidating the change in your physiology, you can reduce the general volume, using also other type of training (swimming, cross skiing, cycling ecc.) for keeping your basic aerobic condition.

So, the problem is not to know the mileage of THE LAST COE, but what he did when was young. For example (but English people on this site can know better than me), I know that 30 years ago in the schools, in GBR, there were races of 10 miles on road almost every week during winter (that now are cancelled, and results are under the eyes of everyone), and Seb used run those races.

He began his international career winning 1500m (not 800) in European Junior Ch., like Cram (winner of 3000 in Bydgoszcz '79), Aouita (WCCCh in juniors '78), Bucher (WCCCh in juniors '95, year when he ran 30:40 in 10000 and 9:09 in steeple), because his origin was from long run, also if always he used very much training for strenght and speed. But, remember, running long distance doesn't mean not to train speed and strenght. You don't train speed and strenght when you don't use speed and strenght, not when you run long distance BUT CONTINUE TO TRAIN SPEED AND STRENGHT TOO.

The example of the last period before winning OG in LA '84 is not correct : all the athletes, in every event, during the final period use a "tapering" in training that makes these periods completely different from the normal period of big training out of competitions.

We must look at the period good for putting hay in the farm, not at the period during which you use this hay.

I want only remember two days of Seb in the Italian National Training Centre in Tirrenia in 1989 (together with his friend Wirz, Swiss Record Holder of 1500m) :
the first day, I personally followed both the athletes for 30 km on the road (driving the van of the center), at a pace from 3:40 to 3:20. The second day, they went for a terrific session of gym lasting 2 hours, without any period of rest, using circuits and exercises involving all.

The real problem of Kenyans in WCCCh is that nobody was in shape. You must not look at Ethiopians, but at other athletes. For example, I (now I'm coach of Qatar) was surprised to win silver in short, but this was possible not only for Hassan and Shaheen (4th - 5th), but for the 8th place of Sultan (a 19 years old from Burundi, already in Qatar from 13 years, training with my group in Kenya from January) that has 13:33 of personal best, and also for position 22-23 of the othertwo guys (13:33 / 13:56 PB). So, if Sultan is n. 8, and Chebii 19 - Kibowen 32, the problem are not Ethiopians, but the preparation of Kenyan team.
I want to say my opinion :

1) In Kenya, nobody (from AK) follows the best athletes during the season. So, the best during National Ch. (or trials on track) are in top shape because of their personal coaches, and a good technical management. Nobody knows their type of training, and nobody asks their type of training. When there is the Residential Camp, all the athletes go for 3-5 weeks there, meeting new National coaches. To the personal coaches is forbidden to go into the camp. Training is a training of group, without asking anything about their methodology, and without considering the current shape of the athletes. So, who already was in top shape (as Chebii and Kibowen, n. 1/2 in Nationals) goes down very quickly (they were the worst of the team in WCh), who is not yet in shape can improve. If AK doesn't change this system, they can find big difficulties in winning some medal in the future.

2) Nobody wants to analyze the real reasons of a defeat.
Always the fault is of managers (they burn athleteswith somany competitions) or of personal coaches. But who is able to guide the athletes to be the best during trials ?

Some example : last year, Michael Kipyego was the first kenyan athlete in the history NOT ABLE TO REACH THE FINAL IN 3000 SC. He competed in Europe only once, at the beginning of June, then trained always in Kenya.
AK said that marathon runners were not able to win some medal because of personal coaches, so the new choice was to put together a lot of athletes for long time in a resisdential camp in Kapsabet, to select the best PREPARED IN SPECIFIC WAY FOR WCh. Result : 5 athletes, 4 retired. One woman, 1 retired. The only good were Catherine Ndereba (training in US) and Joyce Chepchumba (training in St. Moritz).
This year, Bekele competed more times than Kipchoge, Chebii, Kibowen and other kenyans. Also with a world indoor record. So, is not this one the reason, but a big confusion in technical management, with the exclusion of the real coaches of the athletes.

3) From 2-3 years, there is too much pressure on the athletes, for facing Ethiopians. Is not possible to continue to say "we are prepared for beating Bekele, we try to train harder for beating Bekele, we are studying a special tactic for beating Bekele". Normal Kenyan people don't know anyhing about athletics, except what journalists write. And journalists write what official say. Is more serious to explain that an athlete like Bekele is unbeatable, because is one of those athletes (like Michael Johnson or Bubka) that born once every 30 years.
So, the athletes were too tight mentally and oppressed for competing well. Only who had not many responsabilities (like Eliud Kirui or Isaac Songok, for example) was able to compete at his real level.

4) The full lack of experience of the National coaches. Think that all the team arrived with nails 7 mm long (and many athletes had 3mm nails on their shoes), as nobody thought that in Belgium a cross could be muddy. In the best team of the world, this fact is unacceptable.

5) The costume of speaking about tactic like it was the most important thing. But tactic is something that the best can choose, not other athletes. So, Bekele can decide his tactic, not Wilberforce Talel. The real problem is to have athletes able to be competitive INDIVIDUALLY, then is possible to build some strategy. But, when the Etiopians are able to run the second 5 km in 12'57" and the best PB of the kenyans in the race is 13'03", what is the tactic ? Running is not cyclism, you must have legs for yourself, and nobody can help you when you are weaker.

6) The calendar, that is not good for the best events. For example, in 2002 John Korir ran 7 times 10000m on track, never 5000 and once 3000m, and 6 of the 7 races of 10000m were for Army or Kenyan Federation. This is the best way for burning an athlete, not the choices of the manager.
If you want to use trials for selecting runners, you have only two possibilities :
a) To do trials 2 MONTHS BEFORE THE EVENT, for selecting a rose of 10/12 runners, then to control them with some short period of stage and some competition in Europe, then to select who is in better shape only 10 days before the Championships
b) To do trials only 2 WEEKS BEFORE WORLD CH:, so, who is in shape is in shape.
Who is the more happy if an athlete is able to win a medal in World Championships : the athlete himself, his manager, his coach, his Federation ? Everyone has the same goal.

Looking at long race, how many Eritreans were in top 10, while Richard Limo was n. 32 ?

So, the real problem of Kenyans are not Ethiopians : are Kenyans (speaking about the technical organization of AK).

Greatest Junior talent

Moses Mosop is a my athlete, and this year probably cannot run well. He had a very bad winter, without real problems, but he married, built a house and lost a lot of time. So, at the moment, he's very back in his shape, and I don't think that has time for recovering for the Kenyan selections. Instead, may be that, going two months in St. Moritz with all the group, can be ready for a good 10000m after Olympics, mey be Bruxelles again.

Is a PB in secondary events always significant for the main event.

I read in another post regarding Bernard Lagat that someone speaks about doping because "1:46 is to slow for running 3:26".

There are many reasons for PB in different event that seem not to have any relation with the best PB.

For example, the PB of Lagat in 800m was at the beginning of the season (also with 13:19 in 5k), when his real value could be about 3:34 in 1500, and he never ran 800 at the top of his shape.

I want to remember some "strange" personal best in big champions of the past.

SYDNEY MAREE had a PB of 1:48.11 (82), when was able running 3:32.12and 13:32.40 (and already there were no relations among 1:48 and 3:32), then in 85 ran 3:29.77 and 13:01.15. Also his PB in 10000 (28:21.46 in '80) is ridicolous if compared with 5000.

HENRY MARSH, the same year that he ran 8:09.17 on steeple (1985), ran 3000 in 7:56.2 : of course, no relation. Also his PB in 5000 (13:45.2 in '84) is something wrong if you think about 8:09 in steeple.

STEVE CRAM ran 49.1 in 400m in 1982. In the same year he ran 1:44.45 and 3:33.66. Doyou think possible running 1:44 if you value is 49 in 400 ?

STEPHEN CHERONO has yet a PB in 3000 of 7:46. Last year, winning against El Guerrouj in 12:48.81 in Ostrava, the split of both the athlete was 7:37, 9.0 better than his PB.

HICHAM EL GUERROUJ himself has an official PB in 800m of 1:47.8, and, before running 5000 last year, had a PB in 5000 of 13:46.79 in 1992 (only 18, before running 1500).
How can you consider these data ?

So, what I want to say, is that the most part of times PB in secondary events are not significant, and is not possible to have precise indications from them.

Expecially if you use these data for speaking about drug.

Is a PB in secondary events always significant for the main event.
When you say that Marsh didn't have many chances of running 3000 flat, you are confirming what I want to demonstrate. In the current athletics, how many times a top runner can have the chance of competing in an event different from his main ? This is the most important reason because PB in secondary event are not significant : because don't represent the real value of an athlete !
For example, if you are a middle distance runner that began his activity in a group of marathon runners, you can have during your first years PB very good in long races, not the same in short distances (may be, 20 years old, 29:00 in 10k, 14:00 in 5k, 3:55 in 1500m because you ran this event only once at the beginning of the season, no PB in 800m), then you move on shorter distances, and when you are 25 your best are yet 29:00 and 14:00 because you never ran again these events, but 3:40 and 1:48. So, what is your real attitude ?
An example : ANDRE BUCHER (winner of WCh 2001 in 800m, PB 1:42.55, in 1993 ran long cross and steeple, with 1:56.40 when was 17. When was 19, he ran already 1:45.71, but also 30:40.5 in 10k and 9:09.73 in steeple.
But, in 2001, I saw him running 10k on track in St. Moritz (1800m of altitude) in 30:08 in training, the day after running 3 times 200m in 21.5/21.7 with 10 min recovery.
So, someone can know exactly what is the potential of Bucher in 1500/3000/5000/10000m when he is in top shape ?
Another example : last year, 10 days before Berlin meeting, Wilfred Bungei ran 400m in Davos (hand timing) in 45.07. His official PB is 47.8. So, if you give some importance to his official PB, of course can only have wrong opinions about his value.
Is a PB in secondary events always significant for the main event.

About Sergey, nor me neither his manager Gianni Demadonna agreed his choice of competing in indoor skipping cross. His idea was to work during winter for improving his speed, but personally I don't think that is possible to work for speed when is very cold (Sergey preferred to stay home for long time in Ukraine), as muscles are not able to recover lactic training in short time.
However, the fact that Sergey is stubborn is his limit, but his strenght too.
His choice was of sure a mistake. I hope that, from this mistake, Sergey can take informations for better following the advices that coach and manager can give him.
Bazza, I'm not asking anything, but my post is for demonstrating to all people looking at ALL PB of an athlete for going to some conclusion that this procedure is not correct NOW (as you very well explain) at the same way of the past.
20 or more years ago, there were athletes running two or three events with the same frequency and the same interest. Coe and Ovett were two clear examples of these behavior : both won Olympic Games in their SECOND event !
But now this behavior is no more possible.
The main reason is the big number of competitions strictly connected one another, that don't permit to have space for running a second event. Think of IAAF ranking, for example : you need to compete the most part of the season in the same event, for going to the GP Final. Every athlete has a value as "specialist" of a specific event, and often cannot find a place for running another distance, ALSO IF REFUSES APPEARANCE !
Personally, I think that this situation is not the best, technically speaking. But in any case this is the today's athletics, and we have to manage this situation in the best possible way.
So, many times I see in my athletes some potentiality that they cannot put in evidence in official competitions, and that are very far from what some people (not knowing the reality AT THE MOMENT) can think. For example, if you think that Nicholas Kemboi in Bruxelles ran 13:17 + 13:13, with the last 3000 in 7:49 (and his PB is 7:54 !), you can understand that one thing is the POSSIBILITY, another thing the OFFICIAL PB.
I'm sure that who well knows the history of athletics is able to give a correct mean to the PB of the athletes. But, in this site, there are many runners that don't have experience, and look at the official results without interpreting them. Our explanations are for these people.
Is a PB in secondary events always significant for the main event.
Bof, is very clear that you don't know how is possible to manage the last period of training before an important championship. If you look at a race of 800m for a specialist of 1500m, 5 days after winning in Stockholm and 5 days before running in Zurich, thinking that can show the real value on the distance of the athlete, you are completely wrong. A good coach USES the 800m race like training, after, for example, having a tough work 3 days after the first race of Stockholm, having again a good training 2 days after the race.
So, my opinion is that Lagat could run under 1:45 with a race prepared for running fast.
I want to remember that Lagat was already able running in 1:46.02 (the same time) in 1998, when his best in 1500m was 3:34.48. Or do you think that is possible to improve of 8.0 in 1500m without improving 1.5 in 800m ?
So, one thing is the statistic, another the capacity of coaching athletes. And really I see that the most part of readers have no idea about the training of top athletes.

Since we are talking about speed.
The first training that every long distance runner can use, good for every period of preparation, is to sprint from 60 to 100m climbing. Speed is a quality depending of nervous capacity and muscle strenght. Nervous capacity is the capacity of high explosive concentration, thet you need for recruiting the higher number of fibres of a muscle. Strenght of a muscle is the capacity of producing tension, and speed of contraction.
Our muscles don't work like the engine of a car. If you have an engine able to do 5000 revolutions reaching 180 km of speed, when you go at 100 km of speed you use only 3000 revolutions, but the engine works in the same way.
Instead, if we have a muscle made with 100 fibres, we use the most part of the fibres during max. speed, and only a part of these reducing the speed. For example, jogging you can use 20% of your fibres, ALWAYS THE SAME.
So, when you have to use speed, you are not able to use the percentage of fibres normally resting. These

fibres are less strong, but also unable to receive in short time the order of the brain.
Running always at slow speed, you de-fuse your nervous system regarding the fibres that you don't use normally.
So, the best way for training not the speed, but the CAPACITY OF NERVOUS SYSTEM, basic for the speed, is to do short efforts at max.intensity, like short sprints uphill. You must interpret this work in explosive way, like a sprinter, not using progressive speed, because the first aim is to develop the capacity of the brain.
Running for a time of 10/15 sec, you cannot do too much lactate. You can use 1min / 1:30 of recovery, so lactic acid can be eliminated almost totally.
But what you have to remember is that THIS IS A TRAINING FOR THE NERVOUS SYSTEM, needing max intensity, so recovery times are not very important.
Too many times, long runners give big importance to recovery times also in type of training not having the goal of improving endurance, but basic nervous and muscular qualities. This is a mistake, when we are speaking about RAPIDITY we are speaking about a quality, when we are speaking about SPEED we are speaking about the USE of that quality. And, for a long runner, we must train the basic quality before the practical expression of this.
So, is not true that long run can reduce speed, and that speed can reduce endurance. Training is what you do, not what you don't do, and you don't improve your speed IF YOU DON'T USE SPEED, at the same way you don't improve your endurance IF YOU DON'T USE ENDURANCE.

Is a PB in secondary events always significant for the main event.
If I have to prepare an athlete for an important race, I prefer to skip some weekly competition. You must think that is not easy to train using only 6 days between two different races. You have no time to train well, because you need some day of recovery AFTER the first race, but also to be FRESH before the second.
Personally, I prefer to assemble 3 races in one week, and then to leave 3 weeks only for training before the main event.
So, my personal advice is this one :

Week 1 :
Training based on endurance (long intervals) for one session, fast run (may be 8 km fast) for another session, short sprints uphill for speed (another session), with easy long run or easy fartlek during the other days (and eventually during the second session of the day).
No competitions at the end of the week.

Week 2 :
One session of speed-endurance (for example, 6 km of medium and short intervals like 5 x 600 in 1:33 rec. 1:30 + 5 x 400 in 60.0 rec. 1 min + 5 x 200 in 27.0 rec. 30 sec) at the middle of the week, and easy long run, easy fartlek during other days (at the end of easy run, short sprints uphill).
Competitions at the end of the week (5000m).

Week 3 :
Block of competitions : 1500m at the middle of the week, 3000m flat at the end (so are 3 competitions in 7-8 days).
In the middle, only easy run.

Week 4 :
Period of big modulation : workouts on track become more fast with longer recovery (ex. : 5 x 1000m in 2:30/2:33 rec. 4/6 min), alternated to one with more volume at low intensity (for ex., 3 x 2000 in 5:50 + 6 x 1000 in 2:50 rec. 1:30). In the middle, always easy run and short sprints uphill.
No competitions

Week 5 :
Period of speed with long recovery, for finding best capacity in speed (ex., 3 sets of 600/500/400/300m alternating speed : 1:35 / 1:12 / 62.0 / 42.0 with 1:30 recovery, the next 1:30 / 1:20 / 57.0 / 46.0, with 5 min among every set and 1:30 among tests) or facility in running (3 x 1000m alernating 200m in 28.0 and 200 in 36.0 for a total of 2:36, with 6 min recovery).

No competitions

Week 6 :
Very easy run, more short sprints uphill.
In the middle of the week, a session for technique of running, using short and fast tests with long recovery (for ex., 2 x 600 in 1:30 easy + 2 x 400 in 56.0 easy + 2 x 200 fast, recovery also 6/8 min. no important).
At the end, the main race.

Remember that is very important not to spend nervous energies. The athlete must be mentally free, and fresh.

Since we are talking about speed.
You can train your speed having two different aims :
1) To train your lactic anaerobic mechanism (enzymatic system, organic and methabolic system) for endurance
2) To train your strenght and nervous system (mechanical engine) for intensity attitudes.

So, I agree with you that the first type of training can be damageous for long runners. For example, to work too much in anerobic lactic level can be a mistake for a marathon runner, because you push your body in producing lactate, but this is possible with more consumption of glycogen, and the physiological goal of a marathon runner is to reduce the consumption of glycogen at the speed of the race. SO, THIS IS A PHYSIOLOGICAL MISTAKE.

But I don't agree when you think that speed is a damage for a long runner. If you have the capacity (mechanical capacity) of running fast (that means that you have more sensibility, more elasticity, more reactivity, and you are more "alive" in running), you have more margin running at your normal speed, and this means to save energies at your speed. You MUST not run fast, but you CAN. So, you have the possibility of choice. When you are limited in your speed, you cannot choose.

So, for example, if we speak about your time in 400m after using 2 months of sprints uphill (not high speed on track), the amount of your improvement depend on your level before (not only level in PB, but level in training).

If you are a sprinter that normally use all the exercises of sprinting, speed, weights, plyo, reactivity, you can improve very little (for ex., from 45.50 to 45.45.... or not !). But, if you are a marathon runner NEVER using any speed in your training before, you can improve very much (for ex., from 58.0 to 55.0) at the beginning of your new type of training. Of course, later your improvement is more reduced, but what you can see is that your decrease is very fast when you stop using this training (so, in 2 months without speed you can come back from 55 to 57).

Is a PB in secondary events always significant for the main event.
I continue to see that some poster has not a rational idea of a discussion. At first, I already explained that Cova used self-transusion when this was allowed (till 1985), like Viren, Vaatainen and many other runners in those years. About Antibo, he used only in 1984, but reached his best in 1990, without using any type of support (neither integrators). At the end, about Panetta he never took anything, and if you could know him, you could understand his mentality (the same of Gelindo Bordin). So, don't speak about what you don't know, because you look a proper fool talking nonsense.
In any case, the fact that Cova had 52.8 in 400m when he ran 3:42 is a fact non depending on self-transfusion : IS A FACT.
When we speak about times, correlations and technical situations (not about training), we speak about FACTS.
So, try to be more pragmatic, and leave your obsession of doping that destroy yourself every minute.

Truth guy, I'm in athletics from 45 years, as I had a big interest and a big passion when I was 14. I always was an "inconvenient" person for all people having power, because my first pleasure and motivation is to say what I know as truth, and to try to remove ignorance and bad informations. Athletics is my world, I appreciate it, and I fight with people trying to destroy the values of this world. Of course, I know that many things are not good, but I live ALWAYS for Athletics, and know also how much Athletics can give under an educational point of view.
So, the first way for stopping slanderers and stupid people is to teach what I know.
I think that a correct knowledge about any type of problem can solve many wrong ideas. In today's world is normal to speak about unknown situations, being the possibility of chating an outlet for the pressures of daily life.
While the most part of people speak about "professionalism", and everybody wants this type of behavior in his own job, the same persons think to be able to talk about any other argument. So, professionalism regarding THEIR PROFESSION, but not respect for OTHER'S PEOPLE PROFESSION.
I knew this site in September, during Bruxelles meeting, where was possible to find a lot of sites about track and fields. I read many stupid things about Bernard Lagat, and, knowing him directly, I decided to join my voice to the voice of other people. After the first days, realizing that the most part of posters had no technical informations, speaking about an amateurial athletics also when the argument was TOP ACTIVITY, I decided to try to explain something about methodology, training system and ambience of top runners. I cannot know if my posts can be accepted by the most part of readers, and can have some utility, but I saw that many good coaches followed me in explaining scientific bases of training in very good way. I received a lot of e-mail from athletes and coaches, and began a good change of experiences with coaches of many Countries. This is my pleasure and my interest. If is possible to do something for improving our world, I try to do it.
And, of course, I continue to read some post about situations completely wrong.
When I read what Todd Williams said, knowing EXACTLY the reality about Panetta (and, believe me, I have no fright of admitting the truth), I can only think that Todd is a cheater trying to put himself in evidence speaking about something that people want to hear, without any basis of truth. And is correct the idea that not only IAAF, but every correct society had to fine him for speaking in bad way without any proof, making up a lot of lies.
So, the reason because I started to post on letsrun is that I hope that many ignorants can improve in their knowledge, becoming "less" ignorant. At the same time, Athletics is something serious, and a correct knowledge about training can help runners of every level in reaching their dreams. At, at the end of every thing, I enjoy in reading comments and writing what I think. SO, EVERY DAY I SPEND 30 MINUTES FOR READING AND WRITING ON THE SITE.

Eldoret, of curse I know that someone can take EPO or other drugs for improving their performances. But, when I say that I don't beleieve that EPO can really change too much your performances if you follow a good and hard training, I say it not because of some scientific investigation, but because of reality of my athletes pushes me in thinking that effects of EPO are overestimated.
When I see Kemboi improving in 2 months till 26:30 only with training (he doesn't use anything else that ugali, chicken, vegetables and drinks only water : no integretars, no vitamins, no any type of medicine) ; when I see what Stephen Cherono eats and drinks ; and the same thing for other my top runners (like Paul Kosgei, John Korir, James Kwalia, Mark Bett, Moses Mosop, Rodgers Rop, the gold medals in Youth Championships, and a lot of Marathon runners under 2:10), how is possible for me to think that EPO can give them the possibility of improvement LIKE PEOPLE SAY ? Can I think that, because someone says that with EPO you can improve of 30.0 in 10000m, Nicholas Kemboi could run in 26 min ? Can I think that Shaheen coul run in 7:50 taking EPO ? I know that he can run very near 7:50, but problem is not EPO, is to improve his technique that is yet primitive.
But I don't want to speak only about Africans.
I have an Italian marathon runner, Nicola Ciavarella, that at 33 years of age was able running in 2:11:23, with a PB of 29:58 in 10000m and 14:33 on 5000m. He is a worker in a school (not teacher, but school-caretacker), with a normal average of 80 miles per week. When he had the opportunity to train in professional way for 3 months, because was at home for the birth of his first daughter, he increased his mileage to more than 150 miles per week, also increasing in specific marathon training. After 3 months, he moved from 2:16:20 to 2:11:23. He is 1.63 tall, not fast, not elastic : only very serious. Can you think that, giving him EPO, he could run 3 min faster (like many think possible), about 2:08 ? If your answer is YES, it

means that Tergat and Gebre could run under 2 hours.
And what about Maura Viceconte, my athlete italian record holder, that has 4:26 of PB in 1500m, and in 2000 was able running marathon in 2:23:47 but expecially 10000 in 31:05.57 ? Do you think that with EPO was possible for her running 30:30 ?
So, that's the reason because I don't believe in the improvement thru EPO. Probably, with a training not very much extended, with EPO is possible to have a short cut, but not to overtake results in any case possible with continuity, extended basic training, patience and correct methodology.
Today, very few people are able to have big self-confidence without using something coming from "outside" their body and their mind. The "doping mentality" is connected with our society : if you have a competitive examination for a job, you try to have some reccomandation. If you have to submit a tender, you try to pay. If you want to be sure about yourself, take cocain or other drugs. And of course if you want to run, try to find something helping you BECAUSE YOU THINK THAT NATURALLY YOU ARE NOT ABLE TO DO ANY RESULT. So, all other people running fast are under doping, because you are the best, and if you take 3 minutes from the first, but you are the best like attitude, training, intelligence, knowledge, tactic, of course the first is under drug.
I want to continue in fighting this bad and weak mentality.
What was possible 30/20 years ago, must be possible today too.
It doesn't exist any doping better than the convinction of your possibilities and a correct knowledge about training and final goals. Not dreaming, but neither thinking that you cannot do what instead are able to do.
MITOCHONDRIA QUESTION for phoenix, tinman and others

Tinman, I want to write an experience that we had in Italy in 1990. At that time, we had a problem with 800m runners, having nobody able running under 1:46. There was a good group of very young athletes, born in '69-70 (Benvenuti, D'Urso, Giocondi, Bonamici, Chiavarini and some other less strong) that we wanted to follow for solving the problem.
In December 1989, we tested all the athletes (using a very simple Conconi-test) for detecting their AnT, after one month of long run, not very fast. Here are the data :
D'Urso 20,2 km/h (2'58" / km)
Benvenuti 19,1 km/h (3'08" / km)
Soffietto 18,8 km/h (3'11" / km)
Giocondi 18,8 km/h (3'11" / km)
Chiavarini 17,7 km/h (3'23" / km)
Bonamici 17,5 km/h (3'26" / km)

The athletes were assembled together in Turin (were we had an indoor track always open) from December for preparing their indoor season.

After some work non yet very fast (for example, 10x200m in 28", or 10x500 in 1'18" rec. 2'/3' depending on the athlete), they went for the first competition (10th of January) with split every 200m. The result was :
1) Benvenuti 1:51.2 (28.8 / 56.8 / 1:24.2 + 27.0)
2) Bonamici 1:51.6 (29.0 / 57.4 / 1:24.6 + 27.0)
3) Chiavarini 1:52.2 (28.5 / 56.2 / 1:23.7 + 28.5)
4) Soffietto 1:52.6 (28.7 / 56.6 / 1.24.0 + 28.6)

D'Urso and Giocondi didn't compete.

The athlete, during the next period, went for a training based on speed and lactic workouts, reducing long run very much (also for the bad conditions of weather, often snowing and under 0Â°).

Particularly Andrea Bonamici was able to improve very much in speed. One his workout, for instead, was 3 sets of 4x200m recovering 45" (5 min among the sets) in about 24"5/24", with the last 200m in 23"7.

They competed some time (2-3 times) in national races, improving only a little, but nobody was able running under 1:51.0.

After 40 days (20th of February) they went for Italian Championships, for qualifying European Championships.
The race was fast, as we had a rabbit pushing the pace in 25.8 / 52.4 / 1:18.8. All the athletes were destroyed, and Benvenuti won in 1:50.9 (last 200m in 31.2, because he was n. 3 after 600m !).

We were not able to understand soon what could have happened during the period of training. Few days later, we went with all the group in Tirrenia for beginning the preparation for the outdoor season. We tested another time the athletes using the same system (Conconi-test), and we found the following values :

D'Urso (non training with the group because he did't compete in any indoor race) 20.6 km/h (2'55" / km)
Giocondi (like D'Urso) 19.4 km/h (3'06" / km)
Benvenuti 18.1 km/h (3'19" / km)
Soffietto 17.7 km/h (3'23" / km)
Chiavarini 16.8 km/h (3'34" / km)
Bonamici 16.3 km/h (3'41" / km)

So, the results regarding AnT for the athletes, after 3 months of training, was the following :

Group A : Athletes NON USING very much LACTIC TRAINING :

D'Urso + 2 % (from 2:58 to 2:55)
Giocondi + 3 % (from 3:11 to 3:06)

Group B : Athletes using mainly ANAEROBIC WORKOUTS :

Benvenuti - 6 % (from 3:08 to 3:19)
Soffietto - 6 % (from 3:11 to 3:23)
Chiavarini - 5 % (from 3:23 to 3:34)
Bonamici - 7 % (from 3:26 to 3:41)

More the athletes used speed endurance at high level, with short recovery, WITHOUT HAVING ANY AEROBIC BASE, more they lost Aerobic Power, going into anaerobic system only for moderate speed.

More the athletes used workouts for increasing their Aerobic Power, more were able to be fast at the end of a very hard work.

Thru this experience we changed our systems, giving more importance to the aerobic basic work (not only long run, but long intervals on track and short intervals not very fast, reducing recovery times).

Thru this system, in 3 years we had Benvenuti 5th in OG '92 able running 1:43.92, and then to win European Ch. '94 ; D'Urso silver medal in WCh '93, able running 1:43.95 ; Giocondi 7th in WCh '95 and able running 1:44.85 ; and also Chiavarini ran 1:45.02, while Soffietto and Bonamici disappeared. The same school was used with Longo.

So, for us, the importance of having a high level of AnT (due to mythocondrial situation) is a fact now well known, and who was in our group at that time (like Gianni Ghidini, coach of Andrea Benvenuti) continues to use these systems also with kenyans like Bungei (1:42.34), Yiampoy (1:42.91), Kimwetich (1:43.03), Mutua (1:43.33) and many others, with different levels of speed.

I want to give some information about what can happen in an athlete of top level. I'm speaking about Stefano Baldini.
We use a test (Faraggiana-Gigliotti) consisting in 6 x 2000 even pace in crescent times, covering every

possibility of marathon pace. For example, for Baldini, 6:15 - 6:10 - 6:05 - 6:00 - 5:55 - 5:50, with recovery time very short (only what we need for taking blood from the ear). After the last, we use 1200m free, at max speed, for controlling the level of lactate that the athlete can reach.
Every 2000m is at even pace, using an "acustic rabbit", able to send a beep every 25m (we have cones every 25m on the track) at the programmed speed.
In this way, using always the same speeds, we can test the improvement of the athlete in his SPECIFIC MARATHON ENDURANCE, that is clear when, for the same speed, the level of lactate is lower.
As Marathon is a problem of fuel, and we have to reduce the consumption of glycogen at marathon pace in order to last longer, when the lactate is lower, the athlete is more RESISTANT AT HIS MARATHON PACE.
We use this type of test about every 4 weeks, normally 4 times during the preparation of the race (last time about 10 days before the race).
Till 5 years ago, we didn't use the last test of 1200m. We added this distance in order to investigate how much glycogen the athlete had yet in his tank. HIGHER IS THE LEVEL OF LACTATE, MORE RESERVES THERE ARE IN THE TANK.
We use this test with all the best marathon runners that we follow.
Very interesting thing is to see, in longitudinal way, what happens with an athlete that, in 5 years, is able to improve his time of 3-5 minutes.

About Baldini, for example, when he ran his first Marathon in 1995 (2:11 in Venice), he had a steady state around 2 mmol/l (where physiologists normally say that there is the Aerobic Threshold). At that time, he did 6x2000 from 6:20 to 6:00, having lactates of :
1.7 (6:20) - 1.9 (6:15) - 2.0 (6:10) - 3.2 (6:05) - 4.4 (6:00).

His average in the race was 3:06 /km, that is around 2 mmol.

In 1996, Baldini won World Half Marathon Championships, after working for about two months for improving his AnT. At that time, he was able running at 2:53 pace having 4.2 mmol (and was his HM pace).

He spent 45 days in preparing NY Marathon, but was not able to individuate to speeds very close, where having a personal steady-state. His values were :
1.7 (6:15) - 2.1 (6:10) - 2.5 (6:05) - 3.4 (6:00) - 4.3 (5:55) - 5.6 (5:50).

In the race, he dropped out after 27 km, nervously empty.

He spent all winter in preparing London Marathon '97, and his last test was very different :
1.6 (6:15) - 1.9 (6:10) - 2.0 (6:05) - 2.1 (6:00) - 3.2 (5:55) - 4.8 (5:50) - 7.3 (3:21 on 1200m)
So, it was possible to identify a special Aerobic Threshold from 3:05 to 3:00, without variations of lactate. He was able running 2:07:57.

During the last period, he became more "marathoner". His best shape was this year, in London, when he was 2nd in 2:07:56 overtaken by Abera only during last 5 meters.
He was able running about 2:06, and only the tactic of the race didn't permit to run so fast. Instead, during World Championships, his shape was not the same.
Before London, the last test had these results :
1.5 (6:15) - 2.0 (6:10) - 2.5 (6:05) - 2.4 (6:00) - 2.6 (5:55) - 4.5 (5:50) - 8.6 (3:15 on 1200m).
In this case, is possible to identify a special Aerobic Threshold from 3:02.5 to 2:57.5, but the level of lactate is no more 2 mmol, but about 2.5.

If the lactate level is higher, is because the athlete is using more glycogen at that speed. But, if his endurance for marathon is OK, and the size of his tank is the same of 4 years before, this is possible only because he is able to use a higher percentage of the lactate that he can produce running, so is clear that there is a "shuttle" effect, only after some year of specific training.

So, we can say that "fibres must learn to use their lactate for improving their aerobic capacity", like a "turbo" for an engine of a car.

I think that this attitude, naturally, is the big difference between african and white runners. The AnT in kenyans is very higher than in a European runner, and they are able to use their lactate for producing energy in a higher percentage than european runners.

Mr. Renato Canova: Can You Comment About Kenenisa Bekele and His New World Records?
How you can see, I'm still in this post, of course, when I'm at home. I was in Ostrava, inside the track, at 200m (while Jos Hermens was on the finish line) for giving his splits to Kenenisa and my athletes. Kenenisa is absolutely a phenomenon out of every rule. Gebre was not a phenomenon, but a top runner with a phenomenal brain. He was the first Ethiopian able to understand the modern athletic, very different from the past, when athletes can prepare and compete only for 2-3 events during a season. The secret of Gebre was his continuity in training. In training, you never have to replace some type of workout, but always to add something. Gebre (his first competition, when was 16 years old, was a full marathon in Addis Abeba, where he finished n. 99 with 3:06) add speed to resistance, and resistance to his speed, using a correct modulation that allowed him to run 3:31 in 1500 and 2:06 in marathon (till now...). He was the best example for young Ethiopians. His presence in Ethiopian athletics is fundamental. He has charisma, and every one follows his example. When, in 2001, he was operated and lost the most part of the season in training, also the other Ethiopian runners were not able to prepare, running very bad. But in that year, the new generation emerged. Bekele, Sihine and Gebremariam (also if this one, officially born in 1984, is 2-3 years older than Bekele...) began to train with the some seriousness and perseverance of Gebre. In Kenya, nobody (except Shaheen and Kipchoge) had the same mentality.
I have the example of Nicholas Kemboi, my athlete that last year was able, in two months with me in St. Moritz, to move from 28:19 to 26:30. Being so young, it's not possible that in two months he could already reach his top. So, what Nicholas has less than Bekele ?
The values that I said before : perseverance, professionalism and seriousness. Nicholas is very serious, but to be serious in your life doesn't mean to be serious in training. Bekele, after winning World Championships, soon had in his mind the focus of beating the World Records of Gebre, didn't lose time, and used the winter for improving in his qualities. Nicholas, after his 26:30, relaxed till one month ago, always running, but NEVER TRAINING. There is a very big difference between TO RUN and TO TRAIN. If you don't stimulate your body, you cannot improve, neither to keep the same conditions. Adaptation is the main enemy of improvement.
So, the big difference is the mentality. Ethiopians are FULLY PROFESSIONAL, building their life for athletics and organizing every thing for improving their results. Kenyans are PROFESSIONAL ONLY DURING THE PERIOD OF THE RACES, losing many months every year for following their business at home, that nothing have to do with athletics and disturb them very much.
About the possibility of Bekele, believe me, he is still very far from his top. In Ostrava was windy, and his first half was normal. I think that in two years is really possible for him running under 26:00.
He has not the change of speed of the young Gebre or of Yifter, but seems to Viren in his final progression. His threshold is the higher all time. He has a natural hematocrite of 49%, while Gebre had 41%. He is technically perfect, and is very strong in his muscles.
But his main quality is his recovery. After a very tough workout, he can have only one day of easy run, then is able to work again two days later.
And who speaks about drugs is ridicolous, because he doesn't know anything about Africans. I repeat, my athletes (Shaheen, Hassan, Paul Kosgei, Nicholas Kemboi, James Kwalia, Moses Mosop, Rodgers Rop, Julius Nyamu, John Korir, Robert Kipchumba, Selina Kosgei, Dorcus Inzikuru and many other) eat only ugali, vegetables and meat, and drink only milk, water and orange. Never one of them asked me something about integrators. They have their power in the self confidence to be strong and to be able to train hard recovering naturally. And Ethiopians are harder than them.....
Anyway, remember one new name for the future : Wilson Busienei, from Uganda, already 27:29 in Hengelo. Look at his career, and can see like not only Kenyans and Ethiopians can reach the top.

: Mr. Renato Canova: Could You Please Answer a Question About Effective Ways to Improve the Lactate Threshold?
It's of sure accettable to put sprints after a workout, but my advice is not to use this system like normal system of training. I prefer to put sprints uphill after long run (after aerobic training, not involving too much

fast fibres) also if some time I put sets of very short sprints (for example, 6 x 60m uphill) between one interval and another, when I go for long intervals (4 x 3000m + 1 x 1000m with 6 x 60m sprints among each one). Anyway, everything is possible. The most important thing is to think that is important what you do, not what you don't do. So, respecting a good balance in training, you can use the biggest percentage of training in aerobic way, because the intensity is lower and you don't need long recovery, and, when intensity is higher, you can reduce the number of workouts. Training is like a pyramid, the big base is aerobic, then, increasing the speed, you go for less time and have to use with less frequency this type of workouts. Different is the situation of short sprints, that, not provoking high lactate, have only a neuromuscolar mean. You can go often for this type of workout, without any problem and without any interference with other type of training. This is the main type of training for the biomechanical system of an athlete, but don't forget that the endurance (specific or general) is something regarding the bioenergetical and enzymatic system.

Mr. Renato Canova: Could You Please Answer a Question About Effective Ways to Improve the Lactate Threshold?

Probably my reply is not fully connected with your question, but I want to try to explain why, training specific endurance, you can improve in your speed. The first question is : what the speed is ? Is your max speed (for example, 11.8 for 100m for Gebre) or is "relative max speed" connected with your event ?

Personally I think that speed is every thing faster of 10% of the event speed. So, if you are a runner of 800m in 1:44, your race speed is 13.0 every 100m. 10% of 13.0 is 1.3, 13.0 - 1.3 = 11.7. When you run in 11.7 you go for SPEED, and the fact that you can run 10.5 or 11.0 is not important, because important is to run at 12.5 speed longer possible. Of course, the same speed has different goals in relation with the distance. 11.7 for 100m is speed, 11.7 x 3 = 35.1 for 300m is speed endurance, 11.7 x 4 = 46.8 for 400m is the BASIC SPEED for the final distance.

For a Marathon runner of 2:06 (3:00 per km), 110% of the speed is 2:42 per km. Of sure Baldini never run faster than 2:42, but about 3:00 he tries to develop his SPECIFIC ENDURANCE. For example, starting with 4 x 5000m in 15:00 rec. 1000m in 3:30, the final workout can be 4 x 5000 always in 15:00, but recovering 1000m in 3:10, eventually adding a final 2000m in 5:45. THIS IS A DEVELOPMENT OF SPECIFIC ENDURANCE.

Now, I want to give an example.

You run 10 times 400m in 60.0, recovering 1 minute, reaching a final level of lactate of 12 mmol.

After a mix of different type of training, 2 months later, you become able to run not 10 times, but 12 times in 60.0, reaching the same level of lactate (12 mmol). Do you think that, when you run 12 times, after 10 times the level of lactate is already 12 mmol ? Of course not, may be about 10. But, if you want to go for ONLY 10 TIMES at a final level of 12 mmol, you can run no more in 60.0, but in 59 or less. SO, TRAINING SPECIFIC ENDURANCE AT A SPEED THAT IS NOT MAXIMAL, YOU CAN IMPROVE YOUR RELATIVE SPEED.

But, if you are able running 1500m (that is a short distance) in 3:43 when you run 10 times in 60.0, you become able running in 3:40 or less when you are able running in 59. AND THIS WITHOUT USING MAX SPEED.

Of course, you must use continuous run at high intensity for 20-30 min, and also short sprints for training your neuromuscolar system (the answer of BONO is very correct).

This is the reason because, in the modern training, long run at low intensity is useless, and max lactic speed also. And this is the reason because I use so much hills of different length at max intensity.

Paul Kosgei shatters 25 km WR and then announces he will bypass the Olympics, WHY?

Just arrived from Berlin, I read the article of IAAF and your comments on Paul. I see that you don't agree the fact that Paul isn't interested in Olympic. I want to explain to the readers that is not important, for a top runner, go to Olympic, but to be competitive in his Olympic event. Paul (that had a lot of problems last year in a knee, stopping completely his training for 4 months) cannot use speedworks and spikes, so his possibility in 10000m is to run about 27 / 27:10, not faster. This fact means that he has no chances of an Olympic medal, as his speed is not enough. That's the reason because we want to move to marathon, possibly winning again World HM Championships. Vipam, forget steeple, is an event of the past, and I moved Paul to longer and flat distances because his type of running was not good for overtaking barriers. If you have the attitude for becoming a number one in some event, you must prepare that event, forgetting the specialisms where you can be only number 5 or 10. This is a correct technical choice that every professional athlete has to do, and every professional coach has to analyze the real prospects of his athletes.

Regarding Kenyans and 10000m, if AK keeps the calendar written two months ago, is easy for me to say that there are no possibilities of medals for Kenyan runners. The most important long runners on track are in Army (Paul Kosgei, John Korir, Sammy Kipketer, John Kibowen, Robert Kipchumba and others). So, while Bekele and the best Ethiopian run a fast 10000 in Europe (Gebre in Hengelo on 31st of May, Bekele in Ostrava on 8th of June), Kenyans cannot run at sea level, but have to run Nationals on 14th of June, and one week later Trials. This is the best way for destroying runners of 10000m. In 2002, John Korir ran 7 times 10000m (4 in Kenya for Militaries), never 5000m or shorter distance. Running so many competitions in altitude is a big mistake, and is not possible to reach the best shape for Olympics. Till when in Kenya there are these rules and these calendars (and for athletes of Army Nationals are a must), they cannot hope to beat Ethiopians. As Gebre himself said, "I have to thank Kenyan Federation for Kenyan trials, that are my first allied".

: Paul Kosgei shatters 25 km WR and then announces he will bypass the Olympics, WHY?

I didn't forget Moses Mosop, but I was speaking about athletes in Army. Moses is a my athlete, lost all the winter for an injury at the left knee, now has only 6 weeks of full training, and already was able running well in Heillecourt (25th of April, 8 km), finishing behind Robert Kipchumba winner, Paul Kosgei second but ahead Sammy Kipketer fourth. Moses can grow very much, and also has a good last lap (better than John Korir, for example), but is not very fast in 1500/3000m. He also has better attitude for HM in short time, and Marathon in the future. Anyway, he isn't interested in World Juniors, but tries to qualify for OG. His future races are on 31st of May in Hengelo (5000), and on 8th of June in Ostrava (10000), then he goes back to Kenya for Trials, before coming to Sankt Moritz with my group.

Regarding what Kenyans have to do for competing with Ethiopians, I fear that is not possible, at the moment, to solve the problem. In Kenya, the main goal for the Federation is to give same opportunities to everybody, cancelling the past. This means that, also if you are the best Kenyan in the last 3 years, you never are sure about your selection, and have to run trials (and if you are in a Military team also Nationals) that there are very tough, already in top shape for qualifying. You cannot be in top shape at the end of June, and then stay again in top shape at the end of August, after residential camps and a lot of different training, without respecting INDIVIDUAL NEEDS.

In Kenya, when an athlete is not good, press and officials of Federation say that are "managers and private coaches to burn athletes with too many competitions". This one is an easy excuse, but normally is not true. Follow my argument : kenyan coaches never follow their top runners, the 90% coached by personal coaches (not kenyans) out of the Federation. They go to trials, and their task is to select top 3 (or top 2 plus another, like this year). But the best during trials, are the best because their coaches, their managers and themselves prepared in the best way the appointment. SO, THE FIRST TO BE INTERESTED IN GOOD PERFORMANCES IN OFFICIAL EVENTS ARE ATHLETES, THEIR COACHES AND THEIR MANAGERS. But official Kenyan coaches don't speak with personal coaches of the athletes, don't know their type of training, don't know their plan, and, after selecting, decide that THEIR TRAINING IS THE BEST AND EVERY ONE HAS TO FOLLOW IT. The most part of times, who was in top shape during trials can be destroyed during residential camp. I personally have many experiences in this field.

In 1999, Christopher Koskei was not in the team till last minute, also if Kenya could put in steeple 4 athletes because Wilson Boit Kipketer had a Wild Card because World Champion 97. So, Christopher trained with me in S. Moritz for two months, without going in Residential Camp. He had also to compete in Military Ch, only one week before World Championships. He went to Seville with a ticket payed by the sponsor Puma, not by Kenyan Federation. He ran 14 races of steeple during last 41 days before WCh, as already he had contracts signed with organizers. So, it was very hard for me to manage his training, but at the end of every thing, HE WAS THE ONLY GOLD MEDAL FOR KENYA.

I can give you a lot of examples : but, if AK doesn't decide that WHO IS THE BEST MUST BE TRANQUIL IN HIS PREPARATION (for example, Bungei and Mutua in 800, Lagat and Paul Korir in 1500, Kipchoge in 5000, one or two in 10000, Ezekiel Kemboi and Paul Koech in steeple, Edith Masai in 5000) following his plan with their coaches (and not with official Kenyan coaches), Kenyan can win step by step always less medals in every big competition.

It's not possible to accept the presumption of some official Kenyan coach, that thinks that ONLY TRAINING WITH HIM (that never trains the athletes before) during residential camps, Kenyans can be competitive. Coaches driving athletes till trials for being the best are not stupid, and normally more prepared than official coaches. Managers driving the athletes in big meetings know international athletics very better than officials

of the Federation. So, the solution is not possible, till when every role in Kenya is not for helping athletics, but for having power.

: Renato Canova, Kim McDonald etc Mileage training

I want to remember that Kenyans have a very high mileage BEFORE BEGINNING THEIR OFFICIAL ACTIVITY. They run (no more so much today, because there are more schools and also in Kenya some car for bringing guys to school...) from when are 4-5 years old a lot of miles, that build their aerobic resistance. For example, speaking about Kwalia, he went to a school (from 6 to 16 years) 8 km far from his house, coming back in the late morning for eating at home. SO, EVERY DAY WERE ABOUT 32 KM !

Therefore, his clear that they don't need more long basic training, but specific workouts. However, they use very long run at slow pace for regenerating their energies and "washing" their muscles from lactate, running in very elastic way, like american sprinters.

An example : when I trained Kenneth Kimwetich (1'43"03 on 800m and 2'13"56 on 1000m, able running in about 46" and probably 3'45" but not faster 1500m), the day after specific workouts (I use 3-4 times a SPECIAL BLOCK during the main season, for preparing specific high intensity endurance : f.e., 6 x 1000m in 2'33" / 2'36" with 4 min recovery in the morning, 500 (1'03") / 400 (49") / 300 (35") / 200 (22"5)with 6-7 min recovery in the afternoon) he used to go running in the forrest disappearing for about 3 hours. When I asked him where he were going, he answering "To run 3 hours", at a pace of 6' per km, that for us is very difficult to use because we become bored.

So, I explained him (and also to the other athletes, like David Lelei (3'31" in 1500m) and Christopher Koskei himself (winner of steeple in Seville and older brother of Cherono) that, following our methodology, could be better to run only 1 hr for regenerating. But, when they went with my suggestions, the day after were not able to run well ; instead, after their 3 hours, they were able to do every type of lactic work. So, I decided that they could use what preferred for recovering hard training.

You must think that running in a wonderful ambience like a forrest is something extremely pleasant, and of sure has nothing to do with running among cars on a road like in Italy, for example. In the forrest, everybody ENJOY RUNNING.

So, it's not a discrepancy to hear Konchellah saying that HE WANTS TO GO FOR LONG RUN (regeneration), BUT DOESN'T LIKE LONG FAST RUN !

Another thing that you must know is that the groups of training are mixed. For ex., in Iten the old group in 1999 was with Kimwetich (1'43"), Lelei (3'31"), Koskei (8'05" in steeple), Moses Kigen (3'32"), Moiben (2:10 in Marathon), Jackson Koech (62' HM) and some other young. During the first period of preparation, they ran together long run (only difference, the duration, from 15 km for Kimwetich to 30 km for Moiben) and fartlek (classic 1 min fast / 1 min slow, where slow is really jogging). This fact is one of the reasons because their preparation never was very good, and only thru the races they were able to reach a high level of shape.

On of the reasons of current improvements of our athletes is that now Bungei, Mutua, Yiampoy, Shaheen, Kwalia, Kemboi, Nyamu, John Korir, Paul Kosgei, Robert Rono and all the young guys winners of medals in Youth Championships (Esho and Kiplangat, Choge, Ronald Kipchumba and Justus Kiprono) learnt to use more individual and targetted training during winter season, so are able to improve their qualities during a period in the past dedicated to rest or jogging without any specific goal.

: Renato Canova, Kim McDonald etc Mileage training

No, I think that without a good coach nobody is able to reach his top. A good coach can build your body and your mind in a correct way, that of sure is not the way of normal people that loves running without specific knowledge. Also the reason because a lot of persons talk about doping is, in my opinion, to be seeked in this mentality of self-made-runner. Everybody thinks that he has very big attitudes, as little people is able to recognize a better talent of other runners. Everybody thinks that his training is the best possible, because he trains hard and has a big motivation. Everybody thinks that his application his maximal, so it's not possible to be more serious in training. So, if somebody else is able running 10 min faster a marathon or 8 sec. faster 800m, is because he is doped.

But this depends on the black of coaches, and, about coaches, on the presumption of many of them, that think to know everything, to be perfects, and refuse any contact with other coaches. So, athletes also cannot develop their talent, remaining with a poor and limited mentality, living in a world that they don't know.

Training is not very difficult for who has humilty and passion, is not possible for who thinks to be the best and supposes that has nothing more to learn.

Renato Canova, Kim McDonald etc Mileage training

The reason because a very slow long run for Kenyans can help their full recovery is that they don't run so slowly using a "marathon technique" searching economy, but use their elastic reaction having more muscular activity. In this case, the elimination of lactate can be helped, and at the end (I never tested, but it's very probable) the level of lactate is lower than with only a more short run. However, I think that there is not a precise reason, but is a personal choice of fun. I don't think that running 2 hr instead 3 hr can change the situation. They like, and they do it.
About the SPECIAL BLOCK, I use with top runners this type of work (that can be done with many combinations : aerobic plus speed, aerobic plus strenght, long intervals for improvement of aerobic capacity plus short sprints for improving strenght, and so and so) approaching the main event, because you must think that, in WCH or OG, there are always more turns in following days, and this is one of the best systems (for me the best) for increasing your capacity of recovery at high intensity levels.
I use many times also for runners of 5000-10000m, but this work is possible only with athletes already in top training from long time. Anyway, also for normal athletes to do two workouts of high personal level very close, preceded by two days of very soft work, and followed by other two days of easy training, can be a type of training able to raise your specific endurance. According to my experiences, after a SPECIAL BLOCK the shape of every athlete can grow consistantly. You can try : every mixture can be good (depending on the period), using the sagacity that I previously told.
: Renato's posts to Malmo
Altitude is a means of training, not a secret. Every type of training must stimulate your body in different directions, in order to provoke a reaction called "overcompensation". So, altitude itself is a stimula for people leaving at sea level, as you go in a situation more difficult than previously for the hypossia that you find (more or less depending not only on altitude, but on other factors).
Working in more difficult conditions, you become able to improve in taking off O2 from the air, and in using it with more attention.
When you go to altitude, you have to reduce a little the intensity of your run, expecially during the first days. In any case, also after a more long period you never can be able to run at the same speed of sea level, having at your disposal less O2.
For athletes born and living at sea level, that one is the normal situation. So, in order to change something because every type of adaptation is a negative thing for your body (reducing stimula), you can improve going to sea level, but of course changing your training method.
Training at sea level is easier, as I have more O2 ?
I change my training, increasing volume, speed and reducing recoveries.
So, we can say that ALTITUDE IS A SUPPORT FOR TRAINING, but TRAINING IS WHAT CAN CHANGE OUR BODY.
Altitude is a means of training, like speed, endurance, volume, long run, recovery.
We must mix all these components, for building TRAINING.
If I want to improve my aerobic base, I can use altitude, running good volume not very fast, with some long interval after one week, but I've to open recovery time reducing speed, because our engine is stimulated very hard by the lack of O2.
If I want to improve my lactic endurance, I cannot use altitude, as the focus in training is to increase speed with short intervals and short recoveries, and in altitude you need longer time for eliminating lactate and for coming back to the level of AnT.
So, talking about Kenyans, I and Gianni Ghidini use very short recovery time only at sea level, while in Kenya we prefer to work for debveloping aerobic power and short speed.
Normally, Kenyans don't give very much importance at the recovery time. This is a mistake, and every time I was able to teach them that recovery was an important part of training (not only the speed of tests), they had very big improvements.
Other differences are when you go from altitude to sea level. For a white athlete living at sea level, is normally a big mistake to compete during the first week after going back to sea level from altitude, because this is the worst period for competing. During the first week (expecially from the 3rd to the 6th day) our body and our nervous system have a phase of rejection that doesn't permit a good performance. Instead, there are very good results competing during the first 2 days after altitude.
About African athletes, instead, there are no problems. They always can compete well, depending this only on their shape and their training, but not on the difference between altitude and sea level.

So, the technical management of training has to change according to the situation, and the answers are individual and of sure different between white and african runners.

Rodgers Rop Training

The gradient of the sprints uphill that I use with all my athletes is about 15%, but is possible to use different hills. Instead, I don't agree that we can use the run on the sand with the same goal. We try to develop the reactivity of feet, because thru this quality is possible to develop the speed. For reacting very well with your feet, you need a HARD GROUND, not able to absorb the elasticity of the feet of the athlete. Instead, if you run on a soft ground, like sand, your feet cannot work in elastic way, and you reduce this quality. You can use run on the beach for increasing the strenght of your quadriceps, but is a mistake for very elastic runners. Always I try to develop the elasticity of my runners. So, I prefer to use hard ground and good gradient climbing.

All my marathon runners and athletes of other events use this type of training.

Selina Kosgei, winner in Paris with 2:24:32 in her first marathon (she has 2:03 in 800m, 15:01 in 5000 and won Commonwealth Games in 2002 with 31:27 on 10000m), started the preparation for her debut on 15th of January, in a camp in Kaptagat. She had to develop 3 qualities at the moment : long endurance, running once a week good pace with faster final (starting from 28 km, arriving to 38 12 days before the race) ; technque, as she runs with the bust to ahead and too low knees ; strenght, as she is very slim and needs more muscles for running fast also uphill.

So, I used 3 different type of training climbing :

for the first goal (long endurance), hilly courses with many hills up and down ;

for the second (technique) sprints of 100m with an easy gradient (about 6/8 %) trying to use a good frequency ;

for the third, sprints of 60/80m with a very big gradient (30%), that are "ramps" and help you to develop strenght.

Rodgers Rop Training

But the type of hill and of work depends also on the different attitude and morphology of the athletes. During the last week end, I had many runners in HM very good. With every one I use sprints uphill, but in different way.

With ROBERT KIPCHUMBA (22 years, winning Stramilano in 60:22) and MARTIN SULLE (22 years also, bronze medal in WHMCh, 2nd in Stramilano in 60:29), that have a technique of agility, using very high frequency, I use sprints of 60/100m with a gradient of 15% about, where they push very hard, trying long steps, for developing strenght. At the end of every session (they use also 3 sessions, in some week, of sprints climbing) they go for a run of 400/500m climbing, at their max. speed (only once). This type of training has the task of using soon your strenght in direction of strenght-endurance.

With ENOCK MITEI (24 years, n. 4 in Stramilano in 60:32) and RICHARD YATICH (24 years, n. 9 in Lisbon in 60:31) I never go under 100m of sprint, but use a hill of about 8/10 % lasting 20/25 sec. They tryi to improve their frequency, seeking more rapidity with a good reaction in their feet, that are not very elastic.

With JOHN KORIR (23 years, n. 5 in Stramilano in 60:47) I use normally very short sprints of about 40m, with a gradient of more than 30% (ramps), only for improving strenght (but too many times he doesn't use because in Military Camp or in Residential Camp before some World Championship nobody goes for short sprint). Before running 26:52 two years ago, John in St. Moritz used this type of sprints twice a week, also for reducing the lenght of his strides.

With SOLOMON BUSHENDICH (20 years, 2nd in Berlin in 60:42 in his first HM) I use only sprints from 200 to 300m, as Solomon is already very strong in his muscles, having short legs very strong. So, with him I try to develop STRENGHT-ENDURANCE, no strenght or rapidity, that already he has at good level. Solomon comes from the mountains, and his capacity in attacking hills is very high.

With DANIEL RONO (26 years, 4th in Berlin in 61:26) instead I want to develop strenght because he's very slim. Daniel uses short sprints climbing (about 15% of gradient) twice a week, going with very high knees and high frequency, as normally he uses too long strides.

So, I think that every type of hilly training can be good or less good depending on the necessities of every athlete.

Sprinting

I want to thank you for correcting my mistakes. I well knew that Italian word FORZA is strength, but after writing once in wrong way, I continued without thinking. Sorry, don't hesitate to correct my English when I write something wrong, is a good way for learning something better. Thank you again, next time you can also write your name, because you have reason.
Regarding the question about the TECHNICAL WAY for running hills, I can say, from my experience, that :

a) If you have an athlete running with very short strides, using high frequency, he needs to increase his strength and must use sprints climbing more for muscles than for nervous system. In this case, he has to push using long strides, also if the speed is a little bit slower than running with more frequency.

b) If instead you have an athlete using long strides (and of course slow motions), is better that sprinting he uses the idea of "skipping", running with very high knees and trying to increase his frequency. For him, RAPIDITY is more important than strength.

At least, short hills have the goal of improving the DEFICIENCIES rather than improving the qualities that you already have. Using hills, and mixing length, gradient and technique of running, you can leave a mark on different qualities, from nervous reactivity to the capacity in recruiting fibres, training all what you need for having and using more strength.
Saif Saaeed Shaheen wins World Military XC Champs Short Course, hope for Brussels?
Of course, I was in Beirut for World Military Championships. The course was completely dry, very tough (there were many hills) on very good grass (golf fields). Shaheen was in front from the beginning, and attacked only during the last km on a hill, taking sme meter of advantage. Only Mucheru could follow him, Chepkurui (Hassan) lost 30 meters. During last 200m, Shaheen didn't push, and Hassan had a good finish overtaking Mucheru.
The quality of the race was not very high, after top 4 there was a big gap. Anyway, Shaheen can run a good race in 4 km only if the course is dry. We tested his adaptation to the mud, and for him is very difficult running in those conditions. He doesn't run long race in Bruxelles, only 4 km.
My personal opinion is that against Bekele nothing is possible. He can run at the same level of Chebii and Kibowen, depending on the course, not better. For seeing Shaheen protagonist in WCCCh, we have to await an edition like Vilamoura 2000, with dry course and spring conditions.
Saif Saaeed Shaheen wins World Military XC Champs Short Course, hope for Brussels?
I think that the best runner not Kenyan or Ethiopian in long run can be Boniface Kiprop, that in any case is of the same tribe of Kenyans around Mont Elgon. Also in this case, there are many differences if the course is dry (but I don't think) or muddy. About Kennedy, he of sure has more chances if the course is muddy. A correct position may be around 12/18, back 5/6 kenyans and other ethiopians, competing with some Spanish (de la Ossa may be the best) and French (from Morocco and Algeria, of course...). But in WCCCh always there are surprises. Last year, for ex, Hicham Chatt was n. 8, and nobody (neither Chatt himself) could suppose so good position before the race.
I want to remember that the mud can be a good opportunity for athletes not very fast. Strong athletes need very hard ground for using their strong and reactive feet, while on the mud is more important to be "strong" in the tighs, and feet have no importance. That was the reason because of the second place of Lebid in 2001. So, if the course is dry, no chance for white runners in top 12. But, if there is mud, may be that 2 runners in top 12 are not from African Countries.
Saif Saaeed Shaheen/Stephen Cherono vs. Kenenisa Bekele NEXT MONTH!!!
Of course Stephen speaks about Qatar team. For WCCCh, Qatar will be present in both the races, with two strong teams. During next days, some other athlete will change citizenship, and also if is not of top level in Kenya, can be in top 30 in both the races during World Cross. So, with Shaheen, Hassan and two other good runners, the team can compete for a position between 3rd and 5th in short. Only after short we can decide if Shaheen can double (of sure Hassan runs both the races), and with him can double two other athletes (their names can become known during the next two weeks). You must remember that, in any case, Qatar has already Khamis Saifeldin (8:11 on steeple) and two other guys of 13:30 last year, more an athlete able running 28:02 last season.
Regarding the race in Nairobi, from long time National Championships in Kenya are an open international race, permitted to athletes of other countries. The choice of 12 km is due to the need of controlling the level of endurance, nothing else.

Regarding Bruxelles, the real problem is the condition of the course. If is dry, Shaheen can also look at a medal, but if is muddy, a position in top ten could already be good.
In any case, before WCCCh Shaheen will test his attitude in short distance during World Military Ch in Lebanon (3rd of March), running short distance of 5 km.

Shaheen running World Cross

I want to confirm that Shaheen will run 4 km in Bruxelles. At the moment, he ran 4 km during the long 12 km race in Districts (24 of Jan), 6 km of 12 in Provincials (31 Jan). He has to run like guest the full 12 km race in Nairobi (13 Feb) during National Ch., for testing his endurance. Later, he will run 4 km in World Military Ch. in Lebanon (3 March), before WCCCh.
At the same time, Hassan (former Albert Chepkurui) will run 4 km in World Military, then both the events (4 and 12) in Bruxelles, where Qatar can go with a good team.
About Sheheen, he doesn't run very much at the moment, because is not easy to concentrate in training when, every two days, there are journalists from every part of the world for interviews and articles on different magazines. So, I peferred to use a schedule with only two days a week for two sessions, using for the other days only one session, of good intensity. For example, on Tuesday, 27 Jan, Shaheen ran 5 couples of 600m (2 min recovery between tests, 4 min between sets) in these times :
1:32.6 / 1:24.4 - 1:37.0 (Kwalia was in front) / 1:24.8 - 1:32.9 / 1:27.2 - 1:32.4 / 1:26.6 - 1:32.2 / 1:23.8 (during the last, he went alone with splits of 25.6 / 53.2 and when killed himself !).
So, I think that he can be in good hape for WCCCh (I will go back to Kenya from 12 to 23 Feb for following the training of Shaheen, Hassan and other runners, as now I'm official responsible of Qatar for middle distances), but I'm not sure about his possibilities in cross. Probably, in Bruxelles the course is very muddy, and Stephen is not good on the mud, having very reactive feet. Personally, I will be very satisfied if he can run in top 5, being his first experience in a European cross.

Some more information about kenyan athletes

I think that is not possible to become athletes of top international class without a big talent, if you are a man. Instead, if you are a woman, is possible to reach the top also with a medium-high talent, not exceptional. This is because of the little number of practisings in the world (about 10 % in relation of men). But the real problem is : "What I have to do for optimizing my talent ?". The first thing is : we must consider every thing of our life, not only "official" training. Training is every thing you do in your life, that is able to modify your body and your mind. If you take two twin brothers, but one is an employer seated to a desk 8 hours per day, and the other is a countryman working 8 hours per day in his country, if we train them in the same way, final results are not the same, but the countryman will run better, because is MORE TRAINED. When I speak about a kenyan 16 years old, I speak about a boy that already has 13 years of aerobic training, not official, but in any case able to build his body, what now is not possible to our boys. For building your aerobic house, you need 10-12 years of time. If you are Gebrselassie, your house is 60 floors high, if you are a medium talent 10 floors, but in any case you need 10-12 years. So, a western boy beginning at 16 years his training can mature after 28-30 years, a Kenyan after 16-18. Many years ago coaches and physiologists believed that SPEED was a quality of young people, because all the best american sprinters were 20-23 years old. Also Italian Livio Berruti, when won OG in 1960 on 200m beating americans, was 21. When, in 1980, Allan Wells (GBR) and Pietro Mennea won OG in 100-200, at the age of 28 years, were considered very old, and many looked at them like exceptions. Later, becoming a Profession with money and advantages, was normal to have sprinters 32-35 years old, BECAUSE THE LIMIT WAS NOT IN PHYSIOLOGY, BUT IN TRAINING. In 1960, Herbert Elliot won OG in 1500m in 3'35"6 beating the world record. He was 22, and that one was the last race in his career, because athletics was an amateurial activity, not a profession, and an Australian 22 years old had to work for living. But already in the past there were "exceptions" that demonstrated possible what became normal only in the last 15 years. What about Mike Larrabee, Olympic Ch. at 32 in Tokyo '64 on 400m ? Or about Mel Pender, member of 4x100 relay in Monaco '72, 37 years old ? This for explaining that is not physiology that can explain what happen, but a correct investigation in the story knowing every thing, and the reasons of every action.
If Arzhanov or Borzakovskiy train using 4 months of indoor track and of gym, is because at home they have 4 month of snow and ice, and they have to find a situation for training. It's not a method, for ex. for kenyans, that have always a good weather and never are under 10-15Â° of temperature. You must use different types of works, not becoming sclaves of them.

Tempo run length vs. speed

Just arrived from NY, with very much interest I read this new argument. I fully agree with tinman. I'm not able to be so deep in the argument because my knowledge of English language isn't so precise while talking about scientific arguments, but I want to confirm what practically happens FOR ALMOST ALL TYPES OF RUNNERS : when you are able to improve in "stamina", meaning the base of specific endurance, ALWAYS YOU IMPROVE IN YOUR PERFORMANCES. When my athletes (not only Kenyans, but also European) go for long EXTENSIVE-INTENSIVE RUN, always some days later they feel an important benefit in other types of workouts too.
Coaching my athletes, normally they are able to reach their best performance IN THE SHORTER EVENT DIRECTLY CONNECTED (for ex., 5000 if runners of 10000, 10000 if runners of HM, HM if runners of Marathon, but also 1500 if runners of 3000 or of steeple) about one month before the main race. At the same time, coming back to more quality after the main race, THEY ARE ABLE TO IMPROVE THEIR BEST IN SHORTER EVENT AGAIN 2-3 weeks after the most important event.
An example : Paula Radcliffe was able running fastest than ever in cross (2002) one month before her Marathon debut in London, but her first race after London was her PB in 3000 with 8'22", never run before.
This happens because the phylosophy of training is not TO REPLACE A TYPE OF TRAINING WITH ANOTHER during different periods of the season (for example, long run during winter season with crosses of 12 km, and speed during summer season without running over 6-7 miles in training), but is TO ADD SOMETHING THAT PREVIOUSLY YOU DIDN'T DO.
If you follow this phylosophy, it's clear that endurance is a basic work for speed, and speed a basic work for endurance. So, these two works must go on at the same time, of course with a correct modulation.
In training, there is a SPECIFIC TRAINING, directly connected with the performance, and a TRAINING FOR SPECIFIC TRAINING, that has the task to improve your basic qualities in order to do MORE and BETTER SPECIFIC TRAINING.
If, for instance, you connect 3 x 600m in 1'20" with 10' recovery with a performance like 1'45" in 800m, is clear that if you are able running 3 x 600 in 1'18"5 with the same recovery, or 3 x 600m in 1'20" with 6' recovery, you can run in 1'43". The problem is : how is it possible running in 1'18"5 instead 1'20", or with a shorter recovery ?
Is possible if we can play with SPEED, RECOVERY, VOLUME.
For ex., running 5x600 in 1'23" with 8' recovery, then 7x600 in 1'25" with 6' rec., till 10 x 600 in 1'28" with 2' rec.
But we can run more volume if we are able running 2 x 1000 in 2'25" with 10', then 4x1000 in 2'30" with 6', then 8x1000 in 2'36" with 3'.
But, for doing this work, we must use 2 x 2000 in 5'15" with 8', then 3x2000 in 5'20" with 6', then 4x2000 in 5'30" with 3'.
For doing this, we must run 5k in 13'45" or less, and for running so fast 5k, we must run 10k in 30' improving till 29'.
At the same time, we can go for improving speed, running 3x400 in 50" with 8', then 2 x 400 in 49" with 8', then 3x300 in 35" with 6', for example.
When we are able to improve in ENDURANCE, of course is easier to run one more interval at the same speed of before, WITH THE SAME RECOVERY. But, if you are able running 4x600 at the same speed that before you used for running 3x600, of course you are able running 3x600 a little bit faster. SO, ENDURANCE IS GOOD FOR INCREASING SPEED.
When we are able to improve in SPEED, of course is easier
to run a little bit faster the same number of intervals with the same recovery. SO, IF YOU USE THE SAME SPEED, YOUR EFFORT IS MINOR, AND YOU CAN RUN ONE MORE TEST.
SO, SPEED IS GOOD FOR INCREASING ENDURANCE.
The connection of these two type of works is the only secret of training.

TRAINING
I received more than 80 e-mail from runners of different events (most part from 800m or marathon runners), interested in discussing training methods and their signification. So, if you agree, I wish to open a discussion about TRAINING, not speaking about doping or other things, but about methodology and practical management of training. I don't want to teach anything, simply to share my experiences, informing who is interested about my systems. When you want to say something different, I will read this with great attention, as nobody knows everything, and always is possible to learn from everywhere. I want to explain our scientific

approach to training, speaking at first about the mean of training regarding physiology. The first thing, that of course many of you already know, is about ENERGY PRODUCTION.

TRAINING

ENERGY PRODUCTION

Muscles, the runner's engine, can be extenden and contracted. The orderly succession of extensions and contractions produces variations of the angles between body segmentes, and allows us to run.

In order to work, muscles need energy, that is possible to consider "very specific fuel" (ATP). Just as some engines run only on petrol, or diesel-oil, our muscles can only use ATP to produce the energy they require.

Our muscles are like ENGINES, in that they turn chemical energy into kinetic energy, producing work.

Muscle not only USE energy, but also PRODUCES energy ; what is more, in the case of the marathon race, nearly all the required ATP is produced during the race itself. This does have some advantages. To cover full marathon, it has been calculated that an athlete burns about 0.7 kg of ATP per kg of bodyweight (so it means that an athlete weighing 70 kg requires about 50 kg of ATP !). If these were to be available before the beginning of the race, his bodyweight would be about 120 kg ! So, muscles need to create ATP during the race ; they can do so because when the ATP is broken down it releases energy and becomes ADP, and a series of chemical reactions allows the muscles to turn the ADP into ATP again, so that the fuel they can use as a source of energy is once more available.

TRAINING

ABOUT ATP and ADP

ATP stands for ADENOSINE TRIPHOSPHATE, molecule composed of four elementary molecules, one of ADENOSINE and three of PHOSPHATE : adenosine---P--*--P--*--P

Usually, only the one further away from the adenosine is broken, and releases the energy that can be used by myscles.

The reaction can be represented as follows :

adenosine---P--*--P--*--P = adenosine---P--*--P+P+energy

The new molecule composed of adenosine and TWO phosphates is called ADENOSINE DIPHOSPHATED or ADP.

Muscles store only a very small amount of ATP, sufficient to cover only the first few meters of a marathon race. So, in order to be able to continue their work, muscvles must produce more ATP, and they do so using what is left over from the previous reactions, in other words muscle produces its fuel from ADP and phosphate (P).

This is possible because complex enzyme system present in the muscle (or better, in each muscle fibre) can use the energy contained in other molecules, for the most part carbohydrates and lipids derived from food.

The re-synthesis of ATP prevalently occurs in one of three ways, that are the three ENERGY SYSTEMS.

The difference between these energy system lies in the source of energy used to favour the binding of ADP and phosphate so as to create a new ATP molecule. The three systems are :

- THE ANAEROBIC ALACTID system
- THE ANAEROBIC LACTIC system
- THE AEROBIC system

TRAINING

THE ANAEROBIC ALACTIC SYSTEM or (ATP-Cr)

Here oxygen is not involved and no lactic acid is produced ; the process of storing energy by forming ATP, is released by another molecule containing an energy-giving bond, PHOSPHOCREATINE, or PCr.

This system is typical for short efforts, for instance the first part of 100m race or a 60y. race. When we start suddenly from a resting position, our muscles begin by using up the small amount of ATP that is stored as such in the fibres, and then the ATP formed thanks to the PHOSPHOCREATINE, which contains one molecule of CREATINE and one of PHOSPHATE bound by an energy-giving bond.

When this bond is broken down, it releases energy that is used for the re-synthesis of ATP starting from ADP and P.

The system is called ANAEROBIC because oxygen is not involved, and ALACTIC because no lactic acid is produced. The amount of ATP that can be produced with this system (equal to about 4 times the ATP stores) is limited, since only a small amount of PCr is stored in the fibres. This system is not particularly relevant for

coaches who deal with long distance runners because the ATP it produces would be sufficient to cover only the very beginning of the race.

TRAINING
THE ANAEROBIC LACTIC SYSTEM or (Glycolytic)
It is also known as the ANAEROBIC GLYCOLYTIC SYSTEMbecause sugar molecules are broken down (glycolysis) without the use of oxygen. Thev sugar molecules, to be exact GLUCOSE molecules, are not completely broken down only up the production of lactic acid. The muscle does not in fact contain lactic acid molecules but a negatively charged lactate ion (LA-) and a positively charged hydrogen ion (H+) as well the energy required to produce ATP from ADP and P.
Both these ions can be considered waste matter that hinders the muscles, and they can also flow out of the muscle into the blood, even while muscle work is in progress, when it is sufficiently long as in the case of a marathon.
General opinion is that muscle resort to the anaerobic lactic system when the intensity of the effort is such that the ATP requirement per minute is higher than the amount produced by the aerobic system. The anaerobic lactic system is important for 400m, 800m and even more so for 1500m races, but also to a certain extent for marathon races. We shall see further on that it usually does not involve the whole muscle but only part of its fibres.

TRAINING
THE AEROBIC SYSTEM
Also in this system the energy used to produce ATP may be derived from glucose molecules, but in this case they are totally broken down by a complex chain of biochemical reactions involving oxygen, to from carbon dioxide and water. These reactions may occur also starting from fatty acids which are burnt down to carbon dioxide and water.
As in other systems, "energy" is intended as the energy used to produce ATP from ADP and P. In this third system, both the reactions on glucose and those on fatty acids require oxygen. The gas must be taken from the atmosphere and conveyed to the working muscle, more exactly to the mitochondria of the muscle fibres.
In marathon races (as in 10000m races, half marathons, walk races and long distance ski races) the athlete's performance greatly depends on the amount of oxygen per minute that is conveyed to the muscles fibres and on the amount the muscles can effectively use.
Note that a small part of the energy produced by the aerobic system derives from the combination of oxygen with aminoacids, the elementary molecules of proteins.

TRAINING
At first, I answer to the poster that asked "where did you copy these information". I copied from the book that I wrote for IAAF, "Marathon Training : A scientific Approach", that you can have writing to IAAF (I think that the cost is 8 ?, but I'm not sure). So, I copied from myself.
About periodization, I want to weigh up the difference of phylosophy between the FUNDAMENTAL PERIOD and the SPECIFIC PERIOD.
During the FUNDAMENTAL (or GENERAL) PERIOD, our goal is to improve all our qualities (general resistance, strenght, rapidity, flexibility, elasticity, ecc.). During this period, is very important THE INTERNAL LOAD. So, if for ex. I have in my program to run 10 x 1000m in 3 min rec. 1'30", but because of the cold or some personal problem due to my job o my family, I'm not able running under 3'08" (not because I'm lazy, but because I'm not able in spite of my commitment), I have to continue training with the same level of effort, AS THE PHYSIOLOGICAL RESULT IS THE SAME, because the Interanl Load is the same. You have to remember that TRAINING IS THE ANSWER TO A PROPOSAL, NOT THE PROPOSAL. So, if 3 athletes do the same work, we can be sure that really are 3 different level of training, because THE INTERNAL LOADS ARE DIFFERENT. Internal Load is subjective, depending on many factors.
During the SPECIFIC PERIOD, our goal is to use our consolidated qualities for preparing our performance. In this case, is essential the EXTERNAL LOAD. In other words, if I want running 10000m in 30' and I need running 10 x 1000m in 2'57" with 1'30" of interval, when I'm able running in 3'05" because I'm tired or I have some problem, I have to stop training, postponing the session to another day, BECAUSE THE SPECIFIC WORKOUT IS MATHEMATIC : 10 times 3 min are 30 min, and if you are not able running 3 times 3 min, you

are not ready for running in 30'. External Load is objective, beeing the same for everyone.
Now, I can continue my explanation quoting myself.

TRAINING
THE INTRODUCTION PERIOD
The I.P. usually last between 6 and 8 weeks, and follow a period of rest and nervous recovery, commonly known as TRANSATION PERIOD, which should always follow a marathon race. During the I.P. the athlete should first reacquire the capacity to work, and then develop the qualities which were neglected for months, during the preparation for the previous marathon race, and are often below the required level.
There are two main physiological targets in this period :
- Recovery and development of muscle efficiency
- Recovery and development of aerobic endurance

These physiological targets correspond the achievement of technical targets which will have a direct influence on the marathon runner's activity.
The development of the athlete's muscles may be achieved with training means other than running : general and specific conditioning exercises, isometric exercises, exercises with overloads, proprioceptive exercises and, expecially, various types of circuit training. These exercises may be combined together and performed in various ways.
It's also useful to work on running technique, using technical paces and short uphill runs, and to lay the foundations of an improvement of running efficiency by developing mobility and muscle elasticity.
We mentioned earlier that the I.P. is principally aimed at restoring aerobic endurance. From a practical point of view this means increasing the athlete's capacity to work. The training means are simple and don't vary greatly :

- SLOW PACED CONTINUOUS RUNS in a state of breathing balance, with an extensive progression, up to one and half hours

- MEDIUM PACED CONTINUOUS RUNS, with an extensive-intensive progression, i.e. the athlete is required to run progressively longer and faster, up to 45'

- CONTINUOUS PROGRESSIVE RUNS, slow paced at the beginning and then medium paced ; here again the progression is extensive-.intensive ; the duration increases up to one hour.

TRAINING

THE FUNDAMENTAL PERIOD
The F.P. lasts between 8 and 10 weeks, and is the crucial phase of the athlete's preparation. During this period the athlete sustains the maximum work load and begins to work on POWER ENDURANCE.
The number of kilometers increases, while muscle efficiency in distance work in enhanced and the preparation, both mental and physical, for long distances begin. The internal load is carefully monitored with medical check-ups and field tests (if you want). The tendency is to "attack" the organism with a mixture of stimuli.
The training means don't vary greatly ; the important features are steadfastness and continuity of the work loads. The athlete often reaches a state of general fatigue which attenuates muscle vigor, but this condition can be considered normal and should not be mistaken for an inadequate physical condition or for over-training.
The physiological targets are listed below in order of importance :
- Develop AERIBIC POWER
- Develop ANAEROBIC ENDURANCE
- Develop AEROBIC ENDURANCE
- Maintain MUSCLE EFFICIENCY

The achievement of these physiological targets implies the improvement of technical features essential to an athlete's running capacity. The choice of training means, in particular the pace set for the exercises,

becomes crucial. In this period, runs at below anaerobic threshold speed are intersected with runs performed at a speed higher than anerobic threshold speed, thus preparing the improvement of SPECIFIC ENDURANCE which is the essence of the preparation for a marathon race.

TRAINING
I cannot follow all the single questions, so i prefer to continue in explaining my phylosophy. Now, for example, because you can understand my training system(not only mine, but is the Italian School of Marathon), I want to show you a table about different speeds, and the connected types of work. (MP is Marathon Pace)

Over 110 % of MP * Short distances with intervals
(ex. 10 x 500m rec. 1'30")

110 - 108% of MP * Intensive specific endurance
(ex. 10/12 km of intervals
long 1000/3000m with rec. 500m)

108 - 105% of MP * Intensive-extensive spec. endurance
(12-16 km with intervals from
2000 to 5000m)
* Progressive fast run (20' - 40')

105 - 103% of MP * Extensive specific endurance
(15-23 km with intervals from 3000
to 7000m)
* Steady fast pace runs (20' - 40')

103 - 97% = MP * Marathon Pace (races 18-25 km)
* Progressive medium-fast run
(from 45' to 1 hr 20')
* SPECIFIC INTENSIVE LONG (28-30 km)

97 - 95% MP * Steady medium-fast pace runs
(from 45' to 1 hr 20')
* SPECIFIC EXTENSIVE RUN (32-36 km)

95 - 92% MP * Progressive medium run
(1 hr - 1 hr 30')
* SPECIFIC EXTENSIVE RUN (36-45 km)

92 - 90% MP * Medium run (1 hr - 1 hr 30')
* SPECIFIC VERY EXTENSIVE RUN
(40 - 52 km)

90 - 85 % MP * Marathon endurance (2 hr - 3 hr)

85 - 80 % MP * Slow runs

Under 80% MP * Regeneration

You can see how very little difference in speed are considered a different medium of training. Training is like a stairs, whith many stairs that have to be run without skipping anything.
From this type of consideration belongs the MODULATION of a marathon runner, different depending on periods and personal situations.

TRAINING
There are many types of FAST PROGRESSIVE RUN, depending on the event and the period.

For ex., during the FUNDAMENTAL PERIOD, for a marathon runner is a run lasting 30-40 min, starting with a speed a little faster then MP (for a runner of 2:06 = 2'59" per km, about 2'57" soon) increasing continuously the speed with a max. speed of about 8% faster than MP (if MP is 3' per km, 18" are 10%, and 14"4 is 8%, so the final speed can be around 2'45"). For example, athletes like Frederick Cherono, winner in Rome with 2:08:47, used running 52 min starting from 3'10" about and finishing about 3' (at 2300m of altitude), while Makori, winner last year in venice with 2:08:49 and preparing at sea-level in Torino, run 12 km in 35'16" with 4 fractions of 3 km run in 9'06" + 8'57" + 8'45" + 8'28".

Also 10000m runners use this system, but with less long distance and faster speed.

Nicholas Kemboi and Moses Mosop, at the end of July, run on the track 10000m in 27'59"6 and 28'06" respectively using this progression per km (Davos, 1600m of altitude) :
2'58" - 2'54"8 (5'52"8) - 2'52"8 (8'45"6) - 2'52" (11'37"6) - 2'50"4 (14'28") - 2'47"2 (17'15"2) - 2'47" (20'02"2) - 2'44"8 (22'47") - 2'40"6 (25'27"6) - 2'32" Kemboi (27'59"6) / 2'38"4 Mosop (28'06")

TRAINING
Regeneration, as the name says, it means an activity that can help your body in quickly recovering the effects of fatigue.

For ex., after a session of SPECIFIC MARATHON ENDURANCE (like 4 x 5000m in 15' for an athlete able running 2:08, with 1000m recovery run in 3'20"), the level of lactate can be about 6 mmol.

The day after, in the early morning, of sure is not lower than 1.5 / 1.8 mmol.

If you go running for 1 hr very slow (is not important if is 6 or 7 min per mile), when you arrive your level of lactate decreased under 1 mmol (may be also 0.6), a value not available naturally.

So, the mean of regeneration IS NOT TO BUILD SOMETHING IN YOUR BODY, but is to permit a more fast recovery in order to prepare in a better way the next workout.
It's not true that running very slow it's not use. Resting a full day is not so good, in order to recover, as running slowly.

The problem is not running at medium pace every day, but modulating intensity and quantity, in order to improve in your endurance at high intensity.

For training high quality, we need complete recovery.

To "crush" the speed of training is always a mistake, because your body cannot develop its SUPERCOMPENSATION.

TRAINING
Marathon is 42 km long also for women, so, if is possible, the volume in training for a woman is the same of a man. It's wrong to consider the quantity of training in relation of the used time.

If we prepare 1 hour race, may be correct to speak about the total time of training, because the event lasts the same time, and the difference is in distance ; on the contrary, if we are speaking about a distance, we have to put in relation the volume in km run during the preparation, as for men like for women.

For ex., I often use a type of training called "SPECIFIC or SPECIAL BLOCK", consisting in one tough training in the morning and in the afternoon, in order to put in crisis your body for exhalting the SUPERCOMPENSATION. If the managment of this training is correct (is very important to recovery well after, and to be fresh before), normally the athletes have a good improvement in their shape, in short time.

An example of this type of training (that can have different typologies, and different targets), made with ORNELLA FERRARA (bronze medal in '95 WCH), is the following (16th of July 1995) :
Morning : 15 min easy run + 24 km at 3'36"6 average per km
Afternoon : 15 min easy run + 24 km at 3'34"2 p/km

In that day, Ornella ran about 54 km, among them 48 about 95-98% of Marathon Pace.

So, there is no difference between training of men and women. An athlete is an athlete, also if there are physiological and psychological differences. Of sure, Paula Radcliffe and Naoko Takahashi run as much as the best male runners.

TRAINING
Of course, we have a lot of tests, because in the period from 1987 to 1996, when I was responsable of Italian Marathon and Luciano Gigliotti (former coach of Bordin and of Baldini now) of Italian Middle-distance, we had the opportunity to work with the italian doctor Pierluigi Fiorella, having in our National Center the possibility to do continuously blood and lactate tests, with our best runners. This happened expecially for marathon runners, and you understand that, when we are speaking about Bordin Olympic Champion, Baldini bronze medal and former World HM Champion, Ornella Ferrara bronze in WCH, Maria Guida European Ch., Maria Curatolo silver in ECh, Maura Viceconte bronze in ECh, we are speaking about top athletes fully investigated during all the periods of preparation. In 1990, 6 spanish coaches came to Tirrenia for meeting me, and I could explain them our methodology in training. They had together also a doctor, Xavier Lebiarte, that, having Spanish Federation money in view of OG in Barcelona, started from our experiences, but later developed our tests and created a new mentality in Spanish marathon runners.
So, Spanish school began from our experiences, and later was able to overtake Italian school, having athletes like Martin Fiz and Abel Anton that won different editions of European and World Championships.

TRAINING
The Spanish have to very different schools regarding short distance and marathon. For short distance, many coaches (for ex. Pascua, coach of 800m runners and 1500m), use plyometric exercises, technique of running, and generally many workouts for increasing strenght.
About marathon, their system is based only on the run. But run means to use very different means. For ex., running very short sprints climbing is a mean for strenght, having the target to recruit the most part of fibres in muscles interested in the action. So, it's a typical WORK OF STRENGHT. But, if you run longer and slower, always climbing (for ex., repetitions of 600m-1000m at 95% of intensity, with 4'/6' min recovery), this is a work for STRENGHT ENDURANCE. In this case, you normally are not able to increase your max. strenght, but are able to use for longer time a good percentage of it. If you run continuously climbing for 6-10 km, of course with a gradient of 5-6% (not 15% like sprinting), you improve at the same time your strenght endurance but, physiologically speaking, you can imrpove the permeability of the membranes, so you can eliminate quickly lactate from fibres. Running at 3' per km, 3'05" or 3'10" is not the same. If you control, for ex., the level of AEROBIC THRESHOLD (using the conventional limit of 2 mmol), and the ANAEROBIC THRESHOLD (using 4 mmol), you can see, in a marathon runner well trained, that the difference is about 5%, that means, if 3' is Aer. T., that 2'51" in An. T.
So, when you run at 3' (that is for some athlete Marathon Pace) you are in a total aerobic area, if you go at 2'50" you run over the threshold, and is no more possible, running in a competition, going down under the threshold itself. THIS IS THE REASON BECAUSE IN THE MARATHON WE MUST USE EVEN PACE, OR NEGATIVE SPLIT.
About the mileage, depends on the age of the athletes. If Martin Fiz and Abel Anton never ran more than 230 km a week, because their background was different (many years in short races, Anton 3'37" in 1500m, and already old), for full marathon runners (for ex., Juzdado) the volume was very high (very close 300 km a week), of course during fundamental period.
Spanish, like Italians, use a very big modulation. The specificity is in extension, not in quality. If you run 4 times 5 km in 15' recovering 1 km at 3'20", you are in better shape for marathon when you run 5 tiems 5 km in 15', not when you run 4 times in 14'40" (if your goal is running 2:07').

TRAINING
Regarding the preparation of Ethiopians and Kenyans, their phylosophy are very different. This happens because their tradition is different.
Etiopians won their first medals in Marathon. Abebe Bikila, winning barefoot in Rome '60, and with shoes in Tokyo '64, was followed by Mamo Wolde winning in Mexico City in '68, by Fatuma Roba winning Atlanta '96, and by Abera winning Sydney 2000. We are speaking about 5 gold medals in Olympics, while never a kenyan won OG.
Also for Gebre, Abebe is yet a myth, and that's the reason because he wants to improve the World Marathon Record. Also if he was able to win everything, without marathon is not (in his own mind) the best ethiopian athlete all time, but yet Abebe is more important.
For Ethiopians (like for Japaneses), Marathon is a religion. For Kenyans, the tradition is for cross, steeple, 5000m, from Keino, Jipcho, Biwott winning steeple in Mexico City, and their natural type of training is good for HM more than for any other event.
BUT THEY HAVE NO A CORRECT MENTALITY FOR MARATHON.
The ridicolous result of Kenyan Team during last edition of World Ch. can confirm this fact. They were all together in a residential camp, trained by a kenyan coach. Final resul is a world record : 5 men and 1 woman in WCH training in the camp, 1 arrived (finishing fuel after 35 km), and 5 retired ! It was not a case that Catherine Ndereba, knowing Marathon in US, and Joyce Chepchumba, already expert, prteferred to prepare respectively in US and in Davos-St. Moritz.
It's not possible to improvise without knowledge.
The fact is that the phylosophy of Marathon is completely different from the phylosophy of other events. From 800 to almost HM, the goal is to inmprove the power of the engin, non existing any problem regarding the quantity of fuel, so you have not to pay attention at the consumption of fuel.
In Marathon, the goal is TO REDUCE THE CONSUMPTION OF FUEL at the same speed, indicated for running the marathon in your goal (for ex, 2:20 for a woman in 3'20" a Km).
Kenyans are not able to think in this way. For them, mileage is running long and slow, and speed is running faster. Putting together this two works, of sure you cannot prepare a good marathon.

TRAINING
The first time that I heard about this system (intensity before quantity, for marathon runners) was in 1972, from Belgian Gaston Roelants, one of the greatest runners of the period. Roelants was record holder of steeple, then moved to marathon. At that time, he was already old (35 years), and, when he explained me his program, I also asked him "why speed before endurance ?". His answer was : "For me, running long and slow is very easy, after many years of activity. What I lose in short time is the capacity of running fast. So, for me it's a mistake running many km slowly before developing speed. When I'm able to run 10 times 1000m in 2'48" recovering 1 min, for me is very easy, in short time, running 20 km at 2'58" and full marathon at 3'10"".
Going on with our experience, we applied this system with all italian runners, from Pizzolato to Poli, from Bordin to Bettiol, from Baldini to Caimmi to Giacomo Leone now.
Currently, long and slow run doesn't exist in a modern training program for marathon. Really, about 40-50% of the global volume is done with slow run (under 80% of Marathon Pace : for example, if you run a Marathon at 3'10" per km, 19" every 100m, 20% is 38", so running at 3'50" isn't a work, but regeneration run), but TRAINING FOR BUILDING YOUR PERFORMANCE BEGINS WHEN YOU RUN OVER 90% OF M.P. (from 3'30" going faster). Specific workouts for marathon are WORKOUTS LASTING MORE THAN 1:30:00 at a pace of 90% or better, and in any case never shorter than 22/24 km.
In our methodology (the same for Spanish runners), at first we try to lift Anaerobic Threshold (about 60-45 days before the marathon, difference between AT and AnT may be about 10%), then, maintaining the same intensity, we try to develop specific endurance.
In the modern concepts for middle distance, WE TRY TO DEVELOP THE POWER OF OUR ENGIN (that is Anaerobic Endurance) in the first 2 months of preparation, then TO DEVELOP SPECIFIC POWER-ENDURANCE GOING TO THE EXTENSION.
This is a system not only for marathon, but for all long distance. Of course, is yet possible to use the other system, but the capacity of intensity cannot stay long time without beeing stimulated, and is a mistake to permit that your quality can go down too much.

: TRAINING

Kenyan marathoners are the greatest power in the world about the distance. However, when I say that Kenyans have not a correct mentality for running marathon, I really want to say that for Kenyans Marathon isn't a specialism in their mind from the beginning of their activity. Kenyans fear marathon, don't love it. Ethiopians love marathon. Also Gebre wants to finish with the world record in marathon, in other case he doesn't feel the greatest. He had a big poster of Abebe Bikila at home, as Abebe was his myth. The first race of Gebre was a full marathon (when he was 16 years old) finishing n. 99 in Addis Abeba in 3:06.
Every year, there is a promotional marathon in Addis Abeba that involves more than 200 new runners, never active before. Instead, Kenyans have fright about the distance. This is the reason because is correct to speak about Wakhiiuri as Japanese Trained. Wakhiiuri went to Japan for training with a Japanese coach in 1985, because in Kenya vwas not possible to train for a Marathon, due to a wrong mentality. For a Kenyan (yet today, if is not in one of the group of Marathon runners), health is shape, and shape is shape for every event. One of the things that I try to teach to Kenyans is that health is important for traininig, training is important for reaching a good general shape, and specific shape is due to specific workouts (so you can be in top shape for 5000 non beeing able to run HM, for example). Many Kenyans, after winning, think that it was possible "because I'm strong". But many are strong, and about strong athletes the best trained wins. Also Wainaina lives and trains in Japan.
About women, is another problem. Really, NOBODY IS ABLE TO TRAIN IN KENYA. Catherine Ndereba trains in USA, Joyce Chepchumba, Tegla Loroupe in Germany with Wagner, Okayo in Italy with Rosa, Barsosio and Kutol in Italy with me, Wanjiru in Japan. In Kenya doesn't exist a right ambience for training marathon (for women), and all the best prefer to train long time abroad.
Another fact is that they are not advanced in their tactical knowledge. Normally, in Kenya they run long distances without drinking, without measured courses, without tarmac, without flat roads. So, are not prepared for knowing exactly marathon. They are strong, but many times their interpretation of the race is casual, and can be good in a normal marathon, not in a Championships.
If you think how many top runners there are in Kenya, you must admit that Italian and Spanish won more medal (in proportion) then Kenyans in the big Championships.

TRAINING

Like in many cases, the solution of this problem is individual. I want to bring two examples :
1) Orlando Pizzolato, was able running 28'22" 10000m on track and yet non able to finish well a full marathon. He reduced his mileage very much during last week, using at the same time the diet without carbohydrates (first 3 days of the last week) and with load of them during the last 3 days. He really finished his fuel about 30-32 km, during all marathon in the period 1982-83. His coach Giampaolo Lenzi decided to try a marathon at the end of a normal week, and results were better. So, from 1984, Orlando ran yet more than 200 km during last week. For him, to reduce too much volume it meant to have too much time for thinking about the race, consumpting all his nervous energies.
The volume was so a mean for facing the race with another tranquillity, because volume was yet high, but intensity decreased very much. With this system, Pizzolato won New York, and was able to be competitive for 4 years (from '84 to '87) also in important championships.
2) Maria Curatolo, the smaller top class athlete in the word (1,44 tall x 38 kg), in 1987, at the end of a week with 256 km, ran for training a HM without any pressure.
The Italian best was of Laura Fogli (1:12'32"). After 15 km, she asked me "how am I going ?", and I replied "If you run last 5 km in 16'15" you beat Italian Record". She told me "In this case, we try", and improved her pace terribly. At the end, her time was 1:12'17", new Italian best.
On the contrary, when she had to compete in a very important Championship, she needed to break completely her training during last 3 days, for recruiting nervous energies. So, is clear that was not a problem of work, but of nervous energies.
In any case, of course it's not possible to training on Speed Endurance in the last week before the race.

TRAINING

Normally, in our method, during last 3 months approaching the race, we use to alternate (about every 10 days) a work of DURATION (improving time, from 2 h to 2 h 45, adding 15 min every time) and a work of DISTANCE, run at Marathon Pace.
In this case, we start from 25 km, then (at the same speed) we go to 28, 32, 35 km.

The pace, for a work of DURATION, is not very fast, and only the last 30 min are more brilliant.
About DISTANCE, the pace is MR pace. Is good running at EVEN PACE till last 2-3 km, then to improve to Marathon Pace in the last 5000m
The pace of DISTANCE is the same of the rhytm that you can p'repare for running marathon. Of course, this one is a more tough work that normal long run, because is more "specific" and needs different preparation.

TRAINING
There's a big difference between athletics of 40 years ago and athletics of today. At the time of Lydiard, activity was very little, lasting only a short part of the season. This fact suggested to use LONG PERIODS OF PREPARATION, during which it was possible to work for blocks (aerobic development before anaerobic workouts). Today, this type of training is no more possible, if you want to compete frequently following the current calendar. When Snell and Elliot won OG, the number of races that they ran in the season was really very little : there was no professionalism in the activity, because athletes had amateur status also if their level was at the top. This fact, that provoked short durations in the career of many athletes (Elliot finished his activity only 22y. old, after winning OG with the new world record...), on the other side permitted a very deep preparation for those athletes that had no problems of money or of job, and wanted to test themselves at their max. level.
For example, in marathon Derek Clayton was already able running in 2:08.37 in 1969, preparing his world best with more than 5 months of training without other competitions.
Now, a top runner wants to compete in the most part of the season, running different distances.
So, the modern system has to take into account the needs of the athletes.
Growing at the same time (if we are talking about a period of 2 months, for example) in endurance and speed is not only possible, but absolutely correct.
If you stay long time in aerobic activity, you can extend your base for next period, but cannot bring your Anaerobic Threshold on a very high level, so you need more long time for building high intensity later. After I continue my discussion.

TRAINING
What is important to understand is that there are TWO DIFFERENT TYPES OF TRAINING :
1) SPECIFIC TRAINING for your SPECIFIC SHAPE for the important races
2) TRAINING for SPECIFIC TRAINING

For example, if you are able running 4 times 400m in 53" recovering 4 min, and with this SPECIFIC WORK you can run 1'46" on 800m, if you want running in 1'45" is clear that you have two different possibilities (about tthe evolution of this workout) :
a) 4 x 400 in 53" using 3 min recovery instead 4'
(improvement in specific endurance reducing recovery time)
b) 4 x 400 in 52"5 always with 4 min recovery
(improvement in specific speed endurance running faster)
c) 5 x 400 in 53" using 4 min recovery
(improvement in endurance running a bigger volume)

The goal in training is clear. The question is : HOW IS IT POSSIBLE TO DO IT ?

Lovers of intensity say : run 4 x 400 trying running faster, going directly to solution b) spending some time

Who believs in aerobic base, says : before try to develop your AEROBIC POWER, for having a higher base for working in anaerobic way.

For example, we can extend the SPECIFIC BASE running a crescent number of 400m in slower time : 10 x 400 in 60" recovery 1 min, that develops in 8 x 400 in 57" rec. 1'30", that can develop in 6 x 400 in 54"5 rec. 2', that can develop in 5 x 400 in 53" rec. 4', that can develop in 5 x 400 in 52" - 52"5 rec. 4', that at the end can develop in 4 x 400 in 51"5 - 52" rec. 3'.

For running 10 x 400 in 60", you NEED MORE AEROBIC BASE.

For running 4 x 400 in 51"5, you NEED MORE SPEED.

So, you can combine at the same time workouts of Aerobic base (1 h progressive run, 40' fast, 20' very hard) with workouts of pure speed and strenght (short sprints uphill, speed drawing a sledge, exercises of explosivity), trying to improve the speed in the first, to last more in the second.

AT THE SAME TIME, WE IMPROVE OUR SPEED IN ENDURANCE (because is also easier running a little bit faster when your speed is better) and our ENDURANCE IN SPEED (as is possible running very close your max. speed for a longer time).

ALL THE DISTANCES ARE OF SPEED, as in any case the winner is the fastest.

ALL TRAINING IS OF ENDURANCE, because you can always to last more long time very close your max. intensity.

SO, TRAINING ENDURANCE WE CAN IMPROVE IN SPEED, and of course is correct also the contrary.

TRAINING
Dear Emily's friend, are you able to explain me why all runners that used very much work of intervals were not able to run fast like best runners of today ? Morceli ran 30 x 400 in 53"/55" with 1 min recovery in Albuquerque, and his best time on 5000m was 13'02" : do you think that his training was correct, when now a lot of people are able running under 13 min without many repetitions ? If you see the records of 20 years ago, in relation of today, you can find these situations :
800m : 1'41"73 (Coe, 81) - 1'41"11 (Kipketer, 97)
1000m : 2'12"18 (Coe, 81) - 2'11"96 (Ngeny, 99)
1500m : 3'30"77 (Ovett, 83) - 3'26"00 (El Guerrouj,98)
2000m : 4'51"52 (Walker, 76) - 4'44"79 (El Guerrouj,99)
3000m : 7'32"1 (H. Rono,78) - 7'20"67 (Komen, 96)
5000m : 13'00"41 (Moorcroft,81)-12'39"36 (Gebre, 98)
10000 : 27'22"47 (H. Rono,78) - 26'22"75 (Gebre, 98)
3000SC: 8'05"4 (H. Rono,78) - 7'55"26 (Boulami, 01)
Mar : 2:08:18 (de Castella,81)-2:04:55 (Tergat, 03)

You can yet find a lot of runners of 20 years ago in top 50 in short distances (800-1500), but almost nobody in long (expecially 10000 and Marathon). How do you can explain this fact ? And about women, why the best runners of 5000 and 10000m of 15-20 years ago were also the best Marathon Runners ? May be because they prepared Marathon using 200 repetitions of 400m, or because they ran MORE LONG RUN FAST ? If the current American System is yet the system of a lot of repetition without a basic STRONG work, I understand the reason because you have no more good runners.
Simply, you don't know what it means to train well.

: TRAINING
Malmo, I had this information directly from athletes that were with him in the stage (Mohammed Driouche and Abderrhamane Daas). They told me that he ran 3 sets of 10x400m in 53"/54" with 1 min recovery and 5 min pf rest among sets. During the last, some 400 became 55". Of course, I'm not sure of what I don't see directly. For example, some training of Lindgren it seems to me an exaggeration, but everything is possible. The only important problem is to do something that can permit your improvement, and also in the case of Lindgren I think that his training was not so good, because in other case he could run under 27 min 10000m very easy.
About the second question, yes, I'm in New York on Friday evening. If you can send me (thru personal e-mail) your mobile number, when I'm in the hotel, on Saturday morning, I try to contact you for meeting during the day, with great pleasure. Have a nice day.

TRAINING
I have no problems in posting the real preparation of my best athletes of every distance, because I love this sport and I'm happy when is possible to have a comparison with other fonds of training. I think that the most important quality for a coach is to look at every type of training, without thinking previously "this is right, this is stupid, this is the secret". From every situation we can learn something, but never we must depend completely on something that we hear or read. An expert coach is able to prepare INDIVIDUAL PROGRAMS, knowing the different attitudes of his athletes. So, nothing is perfect, an nothing is totally wrong. Anyway, there is a well defined phylosophy of training that cannot be deny. IF YOU RUN MARATHON, YOU CANNOT RUN A LOW MILEAGE. IF YOU RUN 800m, YOU CANNOT FORGET INTENSITY.
The phylosophy is very clear for every type of event : you must individuate the speed that you can reasonably develop, and at that speed you must increase your endurance. So, the specific work is always a work of POWER (the speed) ENDURANCE.
For developing your specific speed, you need a good basic work before. But the base is AEROBIC for our organic engine, OF STRENGHT for our muscular engine.
So, during the Fundamental Period (may be from 5 to 2 and half months before the main event) we must develop both the bases, working on VOLUME with high mileage (increasing speed), and on STRENGHT with different systems (from weights to uphills, that personally I prefer).
When I come back from NY (on 5th of November), I can post the works of my best athletes, and also my basic programs for different periods and different events.

TRAINING
Repetitions of 200 and 400m are no more used in modern marathon training. We don't use normally speed faster than 10% of your Marathon Pace (for example, for an athlete able running at 3:00 pace in 2:06:36, 110% in 2:42 in 1000m : this is the max. speed that we use, going till 400m in 64.0-65.0 for 15-20 times, but exalting recovery (f.e. 200m in 45.0). However, running distances under 1 km can have only mechanical reasons, and of sure is not a fundamental work.
If you want to run at 3'10" / 3'12" pace, your main works are around that speed. You must remember that marathon IS A SPECIALISM OF EXTENSION. So, for example, you can develop your SPECIFIC MARATHON ENDURANCE with these workouts (once every two weeks) :
* 8 x 2000m in 6'20" rec. 1000m in 3'40" (23 km in 1:16:20)

* 6 x 3000m in 9'30" rec. 1000m in 3'40" (23 km in 1:15:20)

* 5 x 4000m in 12'40" rec. 1000m in 3'40" (24 km in 1:18:00)

* 4 x 5000m in 15'50" rec. 1000m in 3'40" (23 km in 1:14:20)

* 3 x 7000m in 22'10" rec. 1000m in 3'40" (23 km in 1:13:50)

* 6/5/4/3/2/1 km rec. 1 km improving speed (19'12" at 3'12"-15'50" at 3'10" - 12'32" at 3'08" - 9'18" at 3'06" - 6'08" at 3'04" - last km under 3', rec. 1 km in 3'40") = 26 km

At the same time, you must develop your long run, alternating every 10 days a work having different goals :

* DURATION (moderate speed, becoming from 2 hr, increasing of 15 min every time, arriving at 2:45 at the 5th session)

* DISTANCE (at a 3'20" pace, starting from 25 km, for going to 30 - 34 - 38 in 4 different sessions).

The normal development of your preparation can be done during a period of about 3 months.

TRAINING
I totally agree with you. Performances and results in big events are the product of talent (of the athlete) x goodness of training (that is the product of goodness of methodology x seriousness in application). So, there

are always two different components in athletics success : THE ATHLETE and THE COACH. But, sometime a very talented athlete without a good coach can be able to reach top results (not to last, but sometime a good shape can be a casuality : how many athletes had a good results and then desappeared ?) ; never a good coach without talented athletes can push the same at the top.
Personally, the performance of a my athlete that gave me more satisfacion was a 2:18:23 in a marathon (Venice, '95) of a Swiss guy (was at that time the physiotherapist of Italian Team, working with us in Tirrenia, our national center), without any kind of talent (4:20 in 1500m, no elasticity, very bad running style), working 8 hours per day with our athletes, that had the will to train hard after finishing is job (sometime from 9 to 11 pm during September), that was a totally unthinkable performance.
And, about last year, of course I was satisfied about the victory of Shaheen in World Championships, but it was normal with his qualities. I was very more excited when I saw Nicholas Kemboi growing so fast, when I had the opportunity to discover his talent step by step after training him from 3 years but giving programs and never having the opportunity to stay with him for 75 continuous day for knowing his attitude before never discovered.
But it's also true that you can grow in your experience only having direct contacts with something new. So, during the last 6 years I matured more advanced ideas about human limits, about new types of training, about connections without different type of training and performance, about the importance of resting and/or modulating training. And these new ideas were possible because I had informations that only very talented athletes could give me. No books, no studies, no scientists can give me the same information. It's like a very good engineer, able to design a perfect car for travelling on Kenyan roads, that has in his mind and in his "theorical knowledges" the capacity of designing a "Formula One" like Ferrari or Williams, but cannot do it till when has not the opportunity to work at that level, discovering a lot of different problems that, before, he didn't know could exist.
A coach good for every athlete and for every kind of age and of value doesn't exist. I have problem, now, when I speak about the activity of very young people, and also when I speak about the activity of an amateur, because in my mind the normal level of talent, of training-sessions, of professionalism, and so of intensity in training, are very different from the level of basic activity, and it's not possible to do in miniature the same training of a champion for a normal athlete.
Simply, they are two different things.

TRAINING
I apologyze for this. I was busy with a problem of a my athlete that dropped out for a physical problem (Steve Cheptot), and I lost time till 8 pm on Sunday. I had the wish to meet you and your friends, because I think that we are speaking the same language. I'm sure that in the future we can have other opportunities of meeting.
About other problems, a question : how is it possible for me to send you programs regarding top runners and some information about researches made with them, that I have in floppy disks and I use for seminaries and lessons around the world ? May be in your personal e-mail ? If you agree, I can send you, step by step, different material that you can circulate in your site. Let me know what is possible to do.

TRAINING
All the Ethiopians use short sprints on track (with spikes). Gebre, for example, every week uses repetitions of 60m (may be 10 times), like a true sprinter. Sprint is sprint : you need the max. concentration in explosive strenght, and must use your brain at its max. intensity. Instead, kenyans use SPEED (from 200m to 400m) in progressive way, but never short sprints with the max. acceleration from the start. Of course, this type of work doesn't replace the aerobic training, but is something more. The secret is not to replace, but to add.

TRAINING
I have arrived from Lisbon, happy about the performances of Rodgers Rop and Paul Kosgei. Rodgers, that trains with me from last november, changed completely his type of training, and for me is a good test to win in 59:48 a HM, improving his PB. He's looking at Boston, and I'm curious to see if this type of training, more modulated and with good quality but less long runs, can be OK for a Marathon. He is very intelligent and able to "feel" himself, so what is good for him can be not so good for another. With Paul instead I used the same

type of work that I used before winning WHMCh in Brussels two years ago. He is coming from a long period of stop due to an injury, and I'm very happy about a come back in 59:58 (equalled PB of 2002 in Great North Run). The race was very fast at the end (second 10 km in 27:40), so for Rodgers was a good test about his speed.
If somebody wants to know the training of Rodgers from 16th of February (beginning of the special period lasting 9 weeks for Boston), I can mail his training REALLY DONE, as Rodgers is now in my house in Torino, and I have not only my programs, but what he really did (that is a little bit different). Every comment can be good, as I think that to discuss about training can be important for growing.

TRAINING
In Italy now are 2 p.m, I finished the training with Rop, Makori, Frederick Cherono and Daniel Kirwa Too (4 times 5 km in La Mandria Park on hilly course, recovering 4 min jogging, in 15:06 - 14:37 - 14:45 - 14:50, not for Daniel that ran slower), and, having sent thru e-mail the full training to some friend, I switched on my computer for reading letsrun. So, I saw the poster of the training (probably after your message), that you can see for having more details. But now I want to answer to your questions :

1) This schedule is not only good for a Kenyan, but, you can think it or not, Italian runners train harder. For example, with Italians I use to give big importance to recovery, that preparing marathon is always running, and running fast. My athlete Fabio Rinaldi, winner on 14th of march in Treviso with 2:11:48, ran for example 5 times 5 km recovering 1 km in 15:26 / 3:18 - 15:22 / 3:17 - 15:19 / 3:19 - 15:24 / 3:21 - 15:08 (29 km in 1:29:56). When he trains with my Kenyans in Italy, no Kenyan is able to follow the same training. He kills them DURING RECOVERY. For an African, recovery is recovery. When I gave them my first programs for Kenya, writing for example 4 times 15 min at Marathon Pace recovering 4 min moderate speed, I realized that in 4 min they could run 500m : jogging was jogging. So, Kenyans have always more quality, and training must be different.

2) You can see my answer above. May be that if I find a talented Kenyan able to follow the schedule of an Italian he can run 2:03, not the contrary.

3) In any case, there are many personal differences between one and another athlete, not between a Kenyan and a European athlete. For example, I saw, in December, January and February, during the most important workouts in my different camps, always two athletes in front, in every type of work : Noah Serem and Thomas Kipkosgei. They were the best in 6-8 km tempo run climbing, in 35/38 km, in specific marathon endurance (8 times 8 min. at Mar. Pace recovering 3 min jogging, or 4 times 20 min at MP with the same recovery). So, I told to the manager Gianni Demadonna to find a marathon for them. Serem ran in Vigarano, with another my athlete ALWAYS 4-5 min behind, Pius Maritim. After a split in HM of 68:04, Maritim was able running under 65:00 the second half, winning with 2:13:02, while Serem took 3 min (2:16:06).
The same in Rome with Thomas Kipkosgei. His shape was good for 2:08, and I thought that he could win. Instead, after 33 km his fuel finished, and he run in 2:17:57 (n. 11).
On the contrary, I had athletes never good in training (like the new Joseph Kadon, 34 years old, 2:11:30 in Seville and never fast in training), like already in the past Elijah Korir (2:08:59 at 35 years, with training of poor quality).
What happens ? Some athlete is not sensitive about the energies that he spend in training. Rodgers, for example, is aggressive only some time, when we use a training like test, but normally trains at 90% of his possibilities. He is mentally relaxed, and doesn't use nervous energies in training. He is like Stefano Baldini, never very good in training (never good like Fabio Rinaldi, for example), or Alberico Di Cecco, that are able in training preserving nervous energies. This is an important characteristic, that can bring a good athlete to become a champion.

4) The big difference is in more modulation, with less long run, more recovery and more quality without destroying himself. Of course, before to say that the work of today is better than the work of the past, we must await the results of Boston, that he already won 2 years ago. Last year his problem was of overtraining. This year I want to control the last period, expecially under the nervous point of view. Every comment can be precise after Boston

Training of Saif Saaeed Shaheen(Stephen Cherono) - 12:48 5k, 7:57 3k SC
I came back from some marathon where my athletes ran (I had Selina Kosgei in Paris, Frederick Cherono and others in Turin, Rodgers Rop and Makori in Boston, Benjamin Kiprotich winning Padua in 2:10:43 in his debut, Florence Barsosio coming back after having a baby winning Madrid in 2:34:10, and a lot of runners for shorter distances). They had different fortunes, somebody was very good, some other (like Rodgers Rop in Boston) had big problems due to the weather, completely different from the situation in training in Italy (cold and rainy).
Only now I opened my computer, going to the posts of letsrun. So, I want to be more precise about the training of Stephen Cherono.
In my schedules (what I send by e-mail to some coach that provided to post them later), when you see a training type "5 x 600m in 1:33", this is the PROGRAM THAT I GAVE TO THE ATHLETE. If you see "5 x 600 in 1:31.8 - 1:32.2 - 1:29.5 etc", very precise, THIS IS WHAT THE ATHLETE REALLY DID. So, regarding for example the lack of Stockholm before Zurich, what is posted at the beginning of this post is the PROJECT OF TRAINING. Later, we decided together that could be good to run one more race, and we changed the program, depending on the best choices for reaching the best shape for World Championships.
I wanted to send the real training, but I had it in my computer that a thief pinched me in Nairobi, so now I have to rebuild every thing from my training diary, and I can do it only when I have more time.
Regarding the consideration that the training of Stephen is designed for him, ALL TRAININGS OF TOP RUNNERS MUST BE DESIGNED FOR THEM. Don't think that, following the training of a champion, another athlete can improve very much. This happens also if the other runner is a champion himself. For example, when I train together Stephen, Nicholas Kemboi, James Kwalia (12:54), Mark Bett (12:55), Albert Chepkurui (26:38), really their work has only a part in common, but there is always an individual part.
Example : all together can go for 3 x 2000m in 5:30 rec. 3 min, then the work can change in this way :
Shaheen - Kwalia - Bett : 6 x 500 in 1:12 rec. 1:30 + 10 x 300 in 43.0 rec. 45 sec.
Kemboi - Hassan - John Korir : 6 x 1000 in 2:42 rec. 2 min + 10 times 100m sprint uphill
Mosop - Paul Kosgei : 2 laps of the lake in St. Moritz (8.7 km) at 3:00 pace
At the end of different workouts, athletes going (for example) to Bruxelles, ran 26:30 (Kemboi), 26:38 (Hassan), 27:13 (Mosop), 27:17 (Korir), 27:21 (Kosgei), while Shaheen ran steeple and Kwalia 7:35 in 3000.
So, training together athletes with some similar characteristic, but of course not identical, we can use a part of work together but with different means. In the case of before (that is not true, but hypothetical), 3 x 2000 are endurance at low level for Shaheen, Kwalia and Bett (2:45 pace, when they have to run at 2:30 pace), are endurance at the level of threshold for Kemboi, Hassan and John Korir, and are speed for Kosgei moving to marathon.
After this, the other part of training regards the specific preparation : for Shaheen, Kwalia and Bett moving to speed, for Kemboi, Hassan and Korir to specific pace, for Kosgei and Mosop to more long endurance.
What is possible to see, trying to follow if you want, is THE PHYLOSOPHY of training : modulation, recovery, intensity, mix of strength endurance and specific endurance, basic training ALWAYS and not only during winter, speed ALWAYS and not only during track season.
With this phylosophy, everybody can find his best program. Remember that not always TRAINING HARD is TRAINING WELL.

: VIPAM: What happened to Moses Mosop (KEN)?
I was in Ostrava, and prepared the race of human athletes behind Bekele (he's not human, is a machine). I had many athletes in the group (Hassan, Mosop, Kipchumba, Admassu, Maiyo and Bushendich). I told them that the race was very difficult, because the pace of Bekele at the beginning probably was not too fast, but in any case too fast for them. With Jos Hermens we planned 13:12 + 13:08, as Bekele uses to improve when the rabbits finish their work. So, his pace was about 63.5 per lap, while the supposed pace for Hassan, Mosop and Maiyo (the best of my group) had to be 65 (for beating the World junior record of Chelimo, running under 27:10). But, becauuse 63.5 and 65 at the beginning of the race are very similar paces, the big risk was to stay together (not having rabbits for the second group). This is what happened. Here there are the splits (every km) for my athletes :

HASSAN

2:38.6 - 5:17.8 (2:39.2) - 7:57.6 (2:39.8) - 10:38.5 (2:40.9) - 13:18.4 (2:39.9) - 16:00.6 (2:42.2) - 18:45.8

(2:45.2) - 21:35.6 (2:49.8) - 24:26.6 (2:51.0) - 27:15.03 (2:48.4)

MOSOP

2:38.3 - 5:17.2 (2:38.9) - 7:56.8 (2:39.6) - 10:38.3 (2:41.5) - 13:21.8 (2:43.5) - 16:08.2 (2:46.4) - 18:59.8 (2:51.6) - 21:52.4 (2:52.6) - 24:43.2 (2:50.8) - 27:30.66 (2:47.4)

MAIYO

2:40.2 - 5:21.6 (2:41.4) - 8:02.6 (2:41.0) - 10:45.6 (2:43.0) - 13:31.8 (2:46.2) - 16:18.6 (2:46.8) - 19:05.2 (2:46.6) - 21:53.0 (2:47.8) - 24:43.0 (2:50.0) - 27:30.30 (2:47.0)

So, what happened is very clear : all the athletes ran too fast at the beginning of the race, and their distribution of the energy was very bad. Nobody was able to continue with an even pace, and nobody was able to control his rhytm. Mosop ran in 13:09 in Hengelo, a split of 13:21 is only 12 seconds slower. Hassan at the moment can run in 13:05, the difference was 14.0. Maiyo can run 13:10, the difference was 22.0. Kipchumba (his split was 13:32 with Maiyo) can run about 13:20, so his difference was too little. For Bekele (13:14.4 with 12:37 in Hengelo) the difference was 37 seconds, that permits to improve in the second half.

I was on the track for giving the splits to Kenenisa (Jos was on the finish, I at 200m), and I was impressed by the expression of Bekele: with 200m to go, after 9800m, his face was the same of the start. This guy is incredible: he can destroy all the records, running 12:30 and 26:00 before 2006. He doesn't need rabbits, is mentally very strong. His recovery is incredible : after a very tough workout (for example, 10 x 1000m in 2:35 / 2:37 in Addis Abeba, with 2 min recovery) he needs only one day for recovering his energies, and is able to go for another hard session only two days after the first tough training.
Physiologically speaking, he's stronger than Gebre. His natural value of hematocrite in 49, while Gebre never was able to have more than 42. For the next 6-8 years, nothing to do in 10000m. We must accept the idea that Bekele is one of those athletes that born every 30 years, like Michael Johnson, Bubka, Edwin Moses. When there is an athlete like them, the only possible thing for the others is running for the second place, awaiting that they finish their career.

I want also to do my compliments to Alan Webb. I liked him too much : he was aggressive, with big personality, good in pacing but also in the final sprint. I'm sure that he can run very close 3:30 in a more fast race. I don't know if he has the real possibility of a medal in Olympics, as many runners are not yet in shape, and others are yet to run (like Baala). But, if is able to keep the current condition, Webb can run at the same level of the bests.

VIPAM: What happened to Moses Mosop (KEN)?
Vipam, at the moment there are 6 Ethiopians better than the best Kenyan: Bekele, Gebre, Sihine, Gebremariam, Dehranu and the new of 5000m (13:01) trying 10000m in short time. The problem is that in Kenya there is a very big pressure on the athletes for beating Bekele. Kenyan runners have to try every time, but in their mind well know that is not possible. So, they already are frustrated before starting. Kamathi in Ostrava was not a champion, but a frustrated athlete.
If in Kenya nobody explains to the public opinion that it's not possible to beat Bekele, and that running for the second place is something of honourable in any case, Kenyan runners have close for next 5 years with this distance and also with cross. The only athlete with some chance is Kipchoge in 5000m. When you live in the era of such a Champion, you are unlucky, but cannot do anything. Look at Fredericks against Johnson : 19.68, not winning !
The big difference between Bekele and the most part of Kenyans is in his capacity of concentration. For example, Nicholas Kemboi has nothing less than Bekele. An athlete able to run in 26:30 with 2 full months of work, cannot be at his top. But, after this performance, he relaxed too much, was disturbed by many things, and now is in little shape. He didn't continue his building, starting again from the beginning. Istead Bekele, soon after reaching a record, is concentrated in his improvement. This behavior was typical of Gebre, but is not typical of Kenyans, that never have the same level of professionalism. This is the big difference, not a

problem of physical attitude.
I think that Kipchoge and Shaheen have an "Ethiopic" mentality, different from other Kenyans. In Kenya, with such mentality we had Kiptanui, Tergat, and now Wilfred Bungei. See in 1500m, the current situation of Cornelius Chirchir, Paul Korir and William Chirchir that are very big talents. After having some money, motivation decreases and their stimula are no more enough.
Under this point of view, Ethiopians are very much more professional than Kenyans.

What is Cherono's 7:53 worth?
I think that the table is no more completely right, according to the evolution of long distances. I'm sure that Stephen can run steeple very close 7:50. When I start to train Stephen, I told to an Italian journalist : "May be that with this athlete I, like coach, can win for 10 years, but if he's not able running under 7:50 I, inside my mind, am not satisfied, and, technically speaking, for me is like a failure".
Before coming to me, Stephen ran 8:19, only 17 years old. Training with Kim McDonald, he went to Australia at the beginning of 2001, and in short time, using very high intensity but very little aerobic training, became not able to run fast because exhausted. So, he came back home in Kenya, resting 2 months completely. When he started training again, he used the programs that I had given to his elder brother, Christopher Koskei, when he won WCh of steeple in Seville '99. Stephen trained alone, using these programs, for 2 months, and at the first competition broke the WJ record in 7:58.86. After this, he told to Christopher: "I want to be trained by Renato", and at the end of 2001 we had the first contact. When I saw his incredible talent (also mental), I began to plan his career, for lasting long time and winning on different distances. Believe me, in two years he can run under 7:50.
But, regarding other WR, if you analyze the split, you can understand that, for 5 and 10 km, the possibility of improvement is still very high.
In 5000m, Bekele was able running last 2000m alone under 5:00. For him, El Guerrouj (that in the future wants to move also to 10000m), Kipchoge and Stephen himself, is not difficult to think of a time very close 12:30 before Beijing OG. In 10000m is very easy to improve. This year Bekele ran 13:15 + 13:05. Last year Nicholas Kemboi, with 2 months of correct training with me in St. Moritz, ran 26:30, and nobody can reach his real limit with only 2 months of training. So, what is the real limit of Nicholas if he can become fully professional, being an athlete during all the season (like Bekele, Gebre, Stephen and El Guerrouj) ? May be very close 26 minute. With the current type of training, in which we use high intensity for LONG DISTANCES, and not only short intervals, we can think that the relation between 5 and 10 km can be : time of 5 km x 2 + 6% of the time of 5 km = 10 km.
If this is correct, an athlete running 13 minute but well prepared for 10000m can run 13 x 2 = 26:00 + 46.8 = 26:46.8, and the world record of 5000 can have a value of 12:37.5 x 2 = 25:15 + 45.0 = 26:00.
The WR of shorter events are more difficult. The methodology in training for long distance changed during the last years, because the goal to last more long time at high intensity is more connected with the type of training (I await a 2:03 in marathon and a 58:30 in HM in short time). Instead, regarding short distances, the improvement is more connected with the talent of the athletes. Training didn't change very much during last 20 years. The Sebastian Coe training is very good still today, the training of great long distance runners of the past instead is now old and out of date.
So, my personal idea about the value of performances is the following:
1:41 = 3:25 = 7:20 = 12:33 = 26:08 = 58:20 = 2:03:00 = 7:50 (steeple).

What is Cherono\'s 7:53 worth?
Dear Jzs, the ratio that you say is fruit of a statistical study, and, how all the statistics, is connected with what happened till now. The reality is that the frequency with whom 5000m and 10000m are run is very much different. In any season there are more than 10 opportunities to run 5000m at toplevel, only 1 or 2 for running 10000m. This means that the most part of athletes of 10000m ARE NOT SPECIALISTS OF THIS EVENT, but of 5000m, running 10000m only in Hengelo or in Bruxelles.
In my athletes, for example, that are specialists of 10km better than 5km, we can see these results (like PB) :

JOHN KORIR : 13:09 / 26:52 (34.0 differential)
NICHOLAS KEMBOI : 13:01 / 26:30 (28.0)
HASSAN ABDULLAH : 12:56 / 26:38 (46.0)
ROBERT KIPCHUMBA : 13:19 / 27:25 (47.0)

At the same time, the runners specialists of 5km :

MARK BETT : 12:55 / 27:02 (1:12)
MOSES MOSOP : 13:09 / 27:13 (55.0)

And, about women, the Italian record holder (that is a Marathon runner),
MAURA VICECONTE : 15:18.8 / 31:05.5 (27.9)

So, you understand that speaking about a ratio is almost ridiculous, because the difference depend on the opportunities that the athletes have for competing at top level in 10000m when fully prepared. I want to continue looking at the results of Bruxelles :

CHARLES KAMATHI : 13:03 / 26:51 (45.0)
BONIFACE KIPROP : 13:07 / 27:04 (50.0)
MOSES MASAI : 13:28 / 27:07 (11.0)

During the world record women, the Chinese WANG JUNG-XIA ran 29:31 with the second half in 14:26.

Try to compare the PB of the best athletes of last year in 5km and 10km, then tell me the ratio.

Another thing : many times an athlete is able to improve of a lot of seconds his PB in 10000m, never in 5000m. Why ? Because when you REALLY decide not only to run,but also to prepare 10000m, you can modify very much your parameters of specific endurance, going very far from the statistical ratio. So, no little bag of tricks, but only specific training for an event that is not well prepared for a lot of reasons (the main is the lack of competitions).

What is Cherono's 7:53 worth?
I think that the problem of "ratio" is a false problem. Athletics is something conventional, and training is normally a compromise between the natural attitudes of the athlete and the official event. Are you sure that, if distances like 600m, or 1500m steeple, or 300m HS, were official, the record holder had to be the same of 400 or 800, of 3000 steeple or of 400 HS ? Are you sure that, if also for men the weight of shot (4 kg), discus (1 kg) and javelin (600 gr) was the same of women, the record holder could be the same ?
So,you must remember that, regarding EACH RUNNING EVENT, two different typologies of runners exist : "The fast" and "The resistant". Under this point of view, to speak about a "ratio" is an exercise of phylosophy, very much appreciated by many readers and writers of the post, but that has nothing to do with the real solution of an individual training. If, for example, El Guerrouj in the future will move to 10000m too, I think that his ratio will be about 2.09, because there is no doubt that, for 10000m, he is a "fast" type of runner. But, when you want to exhamin the reality, you cannot forget that the density of hard competitions in 10000m is very much little than in 5000m. Look at the all-time lists, and can see like the most part of the performances are in Bruxelles and Hengelo, the only sites where 10000m are frequently run at top level. Also analyzing the development of the races where the athletes beated WR, we see that Gebre and Bekele were alone for the last 6.5 km, while, for example, Tergat was back Paul Koech till 8800m. Regarding Nicholas Kemboi, Ißm sure that, last year, he could run 5km not in 12:42 but in 12:50. The difference is that he was in a wonderful race of 10000m (how many athletes were able to improve their PB last year ?), never in a fast race of 5000m when was in shape. This is a demonstration of the importance of the pace of the race, and of course, if in 5000m there are more opportunities, the PB in 5000m are closer to the potential of the athletes than the PB in 10000m.
Regarding the fact that I prefer to prepare runners of 10000m for this distance (also if they can run it only 2 times a year) instead for 5km, my answer is clear : I PREPARE FOR 10000m ATHLETES THAT HAVE MORE CHANCES ON THIS EVENT, not who has less chance. For example, I don`t prepare Mark Bett (12:55) or James Kwalia (12:54) for 10km, but John Korir and Hassan Abdullah, that also run HM.
And in any case remember that, if you prepare well 10000m, you can run well also 5000m, while the contrary is not true.
At least, regarding the WR of Wang Jung-xia, I want to remember that the record of 5km, at that time, didn´t

exist. In other case, Wang could be able running under 14:10, may be also 14:00 (with 8:06 is possible). I don´t know if she was doped (personally I don`t think, because among 1.5 billion people, is not so difficult to find one athlete out of the normal), but I was in San Sebastian, during the World Marathon Cup in 1993, when the group of men leaders of the race reached the group of women leaders of their race (started 15 min before) about 30km. Wang went very easy inside the group for a split of 9:07 between 32 and 35 km,with the pacer (Dominique Chevalier) very sorprised to see a woman staying with the leading group.
In 1993, Wang could run under 29minute.

WHAT MAKES KENYAN RUNNERS TICK?
I think that the main difference is not genetic, but depends on the activity. A man needs 10-12 years for building his "aerobic house". If you are Gebre, your house can have 60 floors, if you are a normal athlete only 10, if you are an absolutely non talented person may be 3 floors. In any case, time that you have to spend for building your house is the same.
So, if you start running when are 2 years old, and more seriously when are 6 years old, you have built your "aerobic house" when are 18 years old. After that period, you can consolidate your aerobic level, but not to increase it very much. But you can work more in specific way, having a very big base.
Many times, my athletes rest 2-3 months for some injury or necause, winning some money, their motivation in running decreases. When they come back running, their shape is completely down, and they are worse than the most part of European athletes. But, having already their house, in very short time are able to come back to the same previous level, and from that moment they can improve using specific training.
So, the mistake that western people do is to consider only "official" training, without thinking that the base of Kenyans depends on all their life. In Nairobi, for example, nobody runs, and there are no athletes coming from that area.
The real problem is the difference of natural activity when you are young. If you think that 20 years ago, for example, two Portugueses were able running close 27 min, you understand that the problem is not regarding "current Kenyans", of sure less strong than 20 years ago but more motivated and better trained, but "current western people", that day by day is going far away from every type of physical activity.

WHERE IS MR. RENATO CANOVA?
I read only today your post. My analysis of the race of Rodgers is very simple : he, like Robert Cheruiyot, were destroyed by the weather, too much different from that in Italy, where they trained. The shape of Rodgers was really very good, but his training after Lisbon was always in a temperature of 6/8 degrees, many times with snow and rain. The same happened to Cheruiyot: I had some info from his coaches that he did very important workouts, expecially in long run. So, when they arrived to Boston, the temperature was OK, but during the last 3 days grew up till 30 degrees, with very high humidity.
Rodgers made some mistake, not drinking during some refreshment. This is a big mistake from a top athlete, and can also explain because in the past he won Boston and NY when temperature was very low, and lost when was hot. I didn't know this problem before, as when I followed him in training he drank only a little, due to the cold.
So, I want to say exactly my thought about HM and marathon.
When an athlete is able to improve his personal best in HM, already good because he ran many HM in his life, and is a HM runner (before moving to marathon), this happens because he works too much for speed and not enough for long run at fast pace. Normally, this is a mistake. For example, if Paul Tergat, able runningin 59:17 some year ago, preparing marathon can run the world HM record, I think that his preparation id not complete for a full marathon, or that he is able to run in 2:02 if his preparation regarding long run is very good. But in any case he must be ble running a little under 1 hour for running his marathon very fast, not of sure in 61:00, that in this case can demonstate a lack of training regarding specific speed endurance.
In the case of Rodgers, he ran only one HM per year, and never reached his real potential. So, he was able to improve his PB not because of his training was with too much speed, but because BEFORE never ran at his top level.
The same I think happened for Lel and Cheruiyot. The problem of the "Italian Kenyans" (coached by myself or by Rosa, nothing changes) was the difference of weather, that for example runners in London didn't find.
In Turin, the day before, Frederick Cherono (training last 4 weeks in Italy) ran very easy in 2:08:38, and really he was very much weaker than Rodgers, that in any case is not talented for running in hot conditions.

WHERE IS MR. RENATO CANOVA?
May be, I don't know Cherigat and his training, also if he was in US for preparing during last two or more months. But one thing is very clear : there are marathon runners not able running in hot and humid weather, and other that can better stand that situation. For example, asian runners are very able to stand humidity, african normally not so good. I think that this fact is due to the different adaptation from the beginning of their life. Humidity is a normal situation for Asia (also Japan and Korea, also if they train in middle altitude), while dry weather is a normal situation for Africa (because the altitude). So, if in any case someone can also adapt to humid hot weather, how long has he to work in the same conditions for being sure about it ? Secondly, everybody meets big difficulties in changing so quickly conditions. In this case, the big change was during 3 days. Who came from Kenya had little difference in temperature (also if big difference in humidity), who came from Italy also big difference in humidity. Humidity is the worse factor against marathon, because provokes a big perspiration and a lack of salts. If you are able to increase the quantity of salts in your body before the race, you can also resist to this situation (and it happens when you train in humid weather), but if you don't provide before the race (like happened in Italy) you finish your tank of salts very early and in any case before the finish of the race.
But is clear that, in any case, if I (and Rosa) were not able to provide a correct solution for that situation, we made some mistake. Training is not only the program of workouts, but also the program of pre-integration regarding what you need during the race.

Why is Lebid so dominant in the winter?
I was in Kenya for 12 days, coming back only today. I did'nt go to European Cross Ch., but I had no doubts that Sergey had win the title.
I want to explain something about Sergey, because not knowing anything about his life someone can do some appreciation not corrected.
I became to follow Sergey in 2001, when he already had won two editions of European Ch., after winning silver in European Ch. "Under 23" in 10.000m. Sergey came to Italy, competing for the club COVER of Verbania, and stays about 6 months every year in Italy. Now he's able to speak Italian well, and I give him his training programs in Italian, that he knows better than English.
I changed something in his training, that however was already good. His former coach followed the system of Lydiard, but died 3 years ago. That's was the reason because I began to follow him. The first thing that I saw, was that his training, based on very long run and short intervals, could be good for cross, not so much for track. So, in 2002, for the first time Sergey came to St. Moritz with my Kenyan athletes, training with them sometime, showing a not good mental attitude for track. Particularly, he thought not to be talented enough for track, having like focus the winter season.
I explained him that, with a correct training, could be very strong also on track. After 40 days of work in altitude, he was able to improve national records both in 3000m (7:35.06 in Montecarlo) and 5000m (13:10.78 in Berlin), arriving on the podium in Golden League events.
So, he understood his potential, and decided to prepare Olympics in 5000m this year.
Having great muscle strenght, he is particularly talented for muddy crosses. When he arrived in silver medal in Oostend, the race was very muddy.
Every year, he has to reach the best shape early, for winning European Ch., that is not a top event but can produce good interst for a European runner. So, during the last two years his shape was very good at the end of the season, lasting till the end of January, while the shape of Kenyans is yet very low, as their most important appointment comes later. During last winter, for example, Sergey was able to win 7 following races, but during March was mentally tired (also because was preparing his new house), and in Losanna was not concentrated on the race.
During 2003 he married in May, and we decided that was better for him to skip the most part of the track season, not having any chance in World Ch. He won only Universitary Games, going home for preparing his cross season from September. We tested his first period of long training (basic period) with the Half Marathon in Great North Run on 4th of October, and we were satisfied as he ran 61:49. So, after this, he went home to Ukraina, working at medium altitude (1200m about) for 40 days, then coming to Italy just for the last 10 days before the race.
During this winter, we plan to compete till the end of January, skipping World Cross Ch., for preparing OG in 5000m.
So, please, don't speak about EPO or something else. Sergey is simply the best European in Cross, and his

situation on track depends on a precise choice. But I think that he can be competitive also on track, till 13 min on 5. In any case, against El Guerrouj, Kipchoge, Bekele, Shaheen and some other Kenyan he can win only if the other are out of shape. But for next year I also am curious to see his improvement having a precise goal.
I have, if someone is interested, his program for the last two months, written in Italian.
If someone is interested, I can post it thru e-mail, but you have to translate. And, remember, Sergey is a "cross-man" like mentality, and finds very well when temperature is very cold. So, for him winter is the best season.

Why is Lebid so dominant in the winter
The best quality of Sergey is a final progression, not a short sprint. So, he doesn't have the kick, but is able to finish very fast during last 400-600m.
The worst quality of Sergey is that never was able to start very fast in a race. He needs running increasing his pace, and is not able to answer when some athlete (like africans do) change quickly his speed.
He has a PB of 3:39.5 in 1500, and with a good training can improve to 3:36. But El Guerrouj, Kibowen, Chebii, Kipchoge are all faster than him.
He has PB of 28:12 in 10k (this year) and 61:49 in HM. Are good, but Bekele, Kipchoge and others can run really faster.
So, the only way for beeing competitive is to find a tactical race, like happened during WCh in Edmonton.
The problem is that the new generation of top runners (expecially Bekele and Kipchoge) don't await the race, but "make" the race.
So, really I think that a position in top 6 must be considered like a triumph. Also if are not mathematics, top level competitions follow precise rules, and it's not possible to reverse the reality.
About the question "like short intervals are good for cross and not for track", my answer is very clear :
In cross you cannot use high continuous speed, that depends on the level of your Anaerobic Threshold, expecially when it's muddy. You need muscle strenght (and Sergey is stronger than Kenyans, but not than Bekele), high strenght-endurance, not very high aerobic power. So, a training of volume is very important, as the training of strenght.
Regarding short intervals, they are good for preparing the capacity of changing pace, and of sprinting during the last part of the race.
But this can happen only when the races are slow in the first part, because training long run and very short tests doesn't allow to increase your capacity in running FAST FOR LONG TIME. For doing this, you need LONG INTERVALS AT HIGH SPEED (may be 102-105% of the Race Pace), that he didn't do with his system.
You are always speaking about Lydiard, that was a very great coach, but never prepared an athlete for competing in a cross season. With this system, you cannot be in shape for the winter season, and for winning WCCCh you need running about 27:20 or less (with Bekele under 26:40, in other case you are not competitive). So, you have to use a similar training of the summer, only with some more volume and a little slower speed.
Without long intervals (3000/2000, and 6-10 km very fast continuous running) you cannot win a medal in World CC.

Why is Lebid so dominant in the winter?
I see that very stupid people continue to write on this site. Nice then bad speaks about EPO, showing a mistrusting mentality that is his own limit. You instead are totally moron and lying, speaking about something that doesn't exist. Who his the athlete signed to a drug program right now, please ? Because, if is true, I also want to have the pleasure to know him. Instead hiding back a pseudonym for shooting "cazzate" (italian word for stupid and ridiculous things), it's better to speak clearly about what you know. But your problem is that you don't know anything, and, like the most part of idiots frequenting this site, your fun is to slander other people for justifying your incompetence. Anyway, in every good family there are morons for whom intelligence is an optional.
Regarding Nicholas Kemboi, it's true, he went to Barhain together with James Kwalia, deciding this without asking anybody for advice. They train in Iten, together Stephen Cherono (Shaheen) that is with Qatar. Qatar and Barhain don't have very big relations, beeing rivals in Asia. So, the offers to the guys were consistant, regarding their future. One of the most important opportunities that they can have, is to have complete

support in training, without paying directly expenses when are in Europe.
Anyway, because Nicholas, following the current rules, is not yet elegible for Olympics (he represented Kenya last time during WCCCh 2002, and for Olympics he needs 3 years of time), I didn't agree, but nothing I could do, as people is free to decide about their life.

Why is Lebid so dominant in the winter?
Another thing for your information. I was in Kenya among 5th and 16th of December. During that period, I met O'Sullivan (coach in Villanova) in "Wagon Hotel" in Eldoret.
There was also an official of WADA, that, in different days, had random tests to these athletes (but probably also other were tested) :
Wilfred Bungei
Stephen Cherono (Shaheen)
Paul Kanda (beeing in top 20 in HM last year)
Paul Kosgei (at the moment non running for injury)
Dorcus Inzikuru (my Ugandian athlete, training in Kapsabet camp)
Nicholas Kemboi
James Kwalia

These because many people think that only in US there are tests.
Have a good night.

Why is Lebid so dominant in the winter?
At first, sorry to have speak about Tom Compernolle instead Van Hooste : my first informations were not correct, but nothing changes about my considerations.
Regarding World Cross Ch - Spring Marathon, my opinion is that today is very difficult to prepare both the events with the idea to be in top shape. Among the names that you said, you can find only Lopes really competitive in cross and marathon, but at that time African runners were not so many and so strong. The problem is not RUNNING cross and marathon (like for example did De Castella, Pinto, Roncero), but WINNING cross and marathon. Cross can be a good training for preparing marathon, together with specific workouts (long fast run, and specific marathon endurance) ; but, if you want to prepare marathon in the best way, you don't use all the works of shorter speed endurance that you need for beeing competitive in World Cross Country Ch.
Do you know how much can be the earn of an athlete like Tergat, winner in London ? About 300.000 Euros for starting, 100.000 if winner, other 100.000 or more for the bonus under 2:05:30, and other 50/80.000 from the Company : almost 600.000 ? (more than 700.000 USD). So, that's the reason because nobody (also Paula Radcliffe) can, and want, prepare WCCCh before a marathon.

Why is Lebid so dominant in the winter?
I want to explain the structure and the organization of Italian Federation from 1986 to 1998. In Italy, there was a National Center in Tirrenia (near Pisa), for middle and long distances, where National Coaches had the opportunity to put together all the best Italian runners for 2-3 weeks per month, expecially during winter periods. Every year, the leading group of coaches started to train the athletes from the beginning of November, till the end of May. Some athletes were always in Tirrenia (athletes living in permanent way in the Center), training directly with National Responsibles.
From 1986 to 1990, coaches responsible were Luciano Gigliotti, Giampaolo Lenzi, Giorgio Rondelli, Gaspare Polizzi and myself. We worked together, spending 4 hours a day in analyzing all the workouts of our best athletes, among whom the 90% were directly coached by ourselves.
Together, we discussed training programs and made some experiment in training. If results were good, also some other coach could try to use the same method. When the percentage of success was very high, this type of work could find a correct place in our official methodology. So, we can speak about an "Italian School", expecially for Marathon.
In 1990, Italian runners won a lot of medals in European Championships. At the end of the season, a delegation of 6 spanish coaches plus a doctor (Xavier Lebiarte) came to Tirrenia, spending 10 days with me for taking every type of information about our systems. They had money, approaching to OG '92 in

Barcelona, and were able to organize in better way their Federation for following their top athletes, overtaking Italian movement.
The group of Italian Coaches had many important athletes at that time. Athletes had an OFFICIAL COACH (normally the official national responsible of the discipline : Polizzi was responsible of 5000/10000 with Rondelli, Lenzi of Male Marathon, I was responsible for women, and Gigliotti was the cohordinator), so we can divide best italian runners thru the coaches in this way :
RONDELLI : Cova, Panetta
POLIZZI : Antibo
LENZI : Pizzolato, Bettiol
CANOVA : Fogli, Curatolo, Brunet, Dandolo
GIGLIOTTI : Bordin, Lambruschini (and cohordination).

After '90, the group was reduced. Rondelli was no more in the group, and Polizzi remained till '93. For a period of 6 years (till '96), only Gigliotti and myself were in our National Center. But, from '92, also Gianni Ghidini, coach of Andrea Benvenuti, was in the group, for following short distances (800m).

After '96, we renewed our sector, putting some new name : Massimo Magnani (marathon) and Piero Incalza (long distances), while I changed my role in Responsible for Methodological Research and Experimentation. So, my task was to make programs, following the athletes not directly, but thru their current coaches, for planning their full activity. After 2 years, I became Technical Scientific Director of Italian Federation.

Why is Lebid so dominant in the winter?
Robert, like many other Kenyans, had a bad choice after finishing the 2001 season beating Kamathi in Bruxelles with 27:25 in very difficult conditions (high humidity and hot).
He decided to go military, like Paul Kosgei, John Korir, Kipkirui Misoi, Sammy Kipketer and some other top runner.
The course lasted 6 months, and it was very difficult to train. During the last period (March 2002) all the soldiers spent one month for a surviving course around Turkana Lake, in the desert. This was the reason because all these athletes (also John Korir and Sammy Kipketer) were not able to compete well at the beginning of the season. Robert began to train in April, but, for recovering in short time a good shape, exceeded in speed workouts without base enough. So, at the beginning of May was good in two road races, then had an injury to a leg, losing completely the season. During last winter he married, and his mind was thinking of the new house. Only from last April he was in full training, growing very hard, and now is one of the best runners again.
I want to push him to HM, with the goal to run under 1 hour in April. He's preparing also Kenyan Trials for Cross, and his idea is to try to be selected for OG in 10000. For the future, I think that can be a top marathon runner.
About the stupid idea (like Paula Radcliffe) that he run very fast when is not tested, only a complete idiot can think in this way. Robert won 2 World Championships (of course, beeing always tested), and was tested every time he ran fast (like in Bruxelles, Golden League, when tried to beat the World Junior Record). Paula is tested every time she runs, because always wins or beats a record. I don't understand this continue idea about doping for some of the best runners, supported by very stupid and not thrutful statements. I invite all readers in good mental health to ignore every slander advanced by morons that are the ruin of athletics.

Why is Lebid so dominant in the winter?
I can give my opinion about these two different questions.
1) Personally, I don't think that current Kenyan runners are better than runners of 20 years ago. The talent of Kip Keino, Ben Jipcho, Mike Boit, Henry Rono, John Ngugi was probably bigger than the talent of today's runners. What is different is their professionalism. Now the best runners train twice per day, and rest short time every year. Among young people, also the type of life is changing. Now a good percentage of top kenyan runners are able to use the money that they earn not only building houses or buying cows, but in more modern way. Under this point of view, the best runners of young generation are approaching to a western mentality. In many cases, best runners have european coaches, and the best managers, on the contrary of what many can think, can help them in lasting and living with more professionalism their athletic

life.
At the time of Keino (40-30 years ago), top Kenyan runners trained only 2-3 times per week, and only on track. Their base was very high, but directly depending on their normal daily activity : running for going to school, working in the country, using their body for every natural kind of problem. They were natural talents, able to stay on the top only with little training, already having a very important base due to their life.
Currently, Kenyan life is no more so important for building a base. In Nairobi nobody runs, like in all the big cities in the world. In Rift Valley, there are already a lot of cars, and children don't need to go to school running for many km, as the number of schools increased, and schools are not far from villages and small towns.
But, at difference of 20 years ago, now there is a more organized activity, with many competitions, more meetings and more opportunities. A big number of Kenyans (young but also over 30 years of age) try to run for having the opportunity to compete in Europe or US, for earning money (in the past this was not possible), so the selection is bigger than years ago. With a lot of managers interested in Kenyan runners (someone very good, others not well involved in World Athletics, so not able to develop athletes in a correct way), about 1200 runners can go around the world for competing : many of them are very poor runners (worse than europeans or americans), someone instead has good talent and good training.
So, the reason of their supremacy is not altitude or something genetic, but expecially their type of life, combined with a free mentality and a good training.
But, first reason, is the worsening of western runners. Our Society is no more able to produce young guys naturally prepared with a good aerobic base, having the possibility of improving to top level, using specific training SUPPORTED BY A HIGH AEROBIC BASIC LEVEL.
See what happened in 10000m in European Ch. '78 (Prague) :
7 athletes under 27'38", when now only 4 are able to run so fast in the full season. And also about steeple, in OG '76 3 Europeans were in the medals : 8:08 Garderud, 8:09 Malinowski and 8:10 Baumgartl (27 years ago !).
In Italy we had Fava, Ortis, Cova, Panetta, Antibo, Lambruschini : everyone won some medal. Now, the best Italian runner is 1 min slower in 10000m, and 25.0 slower in steeple.
So, we must not look at African runners for learning something, but at our society for changing our mentality recovering old motivations, if we want to have good runners. In other case, simply, running at top level is no more an activity today appreciated by our people.

2) Paula is a very great runner, having big talent from her beginning. I remember that the first time I saw her, was during WCCCh in Boston '92, when she won running on the snow, beating kenyans and other best Europeans.
She never had serious injuries, and always had continuity in her training. Under this point of view, she was very different from Kenyan runners. See, for example, Lydia Cheromei, one of the most talented runners all-time : able running in 33:20 in altitude only 13 years old, never had two following seasons of training.
So, Paula was able to develop her talent, enhancing long distances to a level previously incredible. But, if we look at Paula not as woman, but as athlete, her results are really normal. Personally, I have an athlete (35 years old) with personal bests like Paula (14:28 and 30:02), able running full marathon in 2:11:23. So, I think that, in her top shape, Paula can run 2:13, and for me is not surprising. What could do Tegla Loroupe with a technical activity, not only due to talent, but also to technical choices ? If you think that, when she improved the World Record in Marathon in Berlin, she competed during all summer in Golden League running short distances (and of course never ran long run), then (only 10 days after the GP Final) ran a HM in 1:09, then one week later improved the WR in Marathon, then the next week won World HM Ch., and next week again ran another HM in about 1:09, you can understand that already Loroupe had the possibility running in 2:16 with more precise choices (also in training).
So, for me performances of Paula are not amazing, but normal. The fact is that today is possible to reach the top, for a woman, having a medium talent, but with a very good training (like men), or having a big talent, also without a very good training. If we can find some athlete able to combine big talent and good training, final result is what Paula is able to do. And remember that, for Paula, now is difficult to win some race in 5000/10000. In Paris, also the best Paula probably could not win 10000, as Berhane Adere gave the impression to have the possibility of running about 29:45 without many problems. So, the big surprise is only in the Marathon, but this is because normally athletes of top talent are not approaching Marathon with a correct methodology.

Why is Lebid so dominant in the winter?
Living and working with top runners, very talented but also serious in training, I confirm that, having real great talent, running so fast is normal. Many years ago, I looked at top performances like something of unattainable. My mental limits about the level of performances and the possibility of training were very big, so I was a spectator of athletics, not an actor. Step by step, the Italian group of coaches grew in knowledge, using not only books written by other coaches, but experimenting something more, both in volume and intensity. My first athlete was Franco Arese, able to improve in the same year (1971) all the Italian records : 1:47.1 (next year 1:46.6), 2:16.9, 3:36.3 (winning also European Ch.), 7:51.2 (4:04 + 3:47), 13:40.0, 28:27.2 and 2:24 in a Marathon (last day of the year).
So, I understood that long run and speed could be trained together.
Now, working with talents like Stephen Cherono, everything is natural. No drug, no mental problems, and not yet maximal training. I think that these athletes (also Nicholas Kemboi, for example), can train harder, bringing WR on different levels.
May be that, when you speak about "huge talent" for American runners, their talent is not so huge. Talent is something of absolute, not relative. If you think of Sydney Maree (good runner, but how many other athletes have more talent tham him ?), you can see like these performances (3:30, 13:00) were his performances.
So, are you sure that the talent of today's american runners is so huge ? If your answer is yes, there is some mistake in training. But don't think that, having talent, some performance is so difficult. And about 2:08 in marathon, don't be ridiculous : it's a very normal performance, as already in 1967 a guy was able running so fast.

Why is Lebid so dominant in the winter?
I think that long run is more important than short, talking about WCCCh. But athletics is a technical problem, and every change in the qualities of an athlete needs long time. So, thinking of OG (5000m), Sergey must prepare his body and his mind for being able to run in 12:55 with a very fast last lap (about 54.0). For improving so much in SPECIFIC POWER ENDURANCE he needs a work 6-7 months long, so we have to start now a special training (using circuits, speed uphill on different distances (from 60 to 500m) but at very high intensity, lactic workouts, etc....) hoping to have time to reach a good shape for Athens. Sergey will train (with my African group) in St. Moritz, from the beginning of June.
This is the reason for competing in indoor season : becoming more able in tactical finish, better knowing himself, and how is possible to use his speed.
Having only 2 weeks from World Indoor Ch. and WCCCh, Sergey has no time to do specific workouts of long endurance (like an athlete that wants to be competitive in long distance has to do). Another reason is that long race is more difficult than short : if Sergey is able running in 13:10 (his value on 5 km) during the period of WCCCh, he can win a medal, but for winning a medal in long an athlete needs to have a value of 27:00 in 10 km (and this for Sergey is not possible at the moment).

Why is Lebid so dominant in the winter?
Also if Sergey can have many justifications (he arrived in Amorebieta only at 2 by night, as a long dilay of the plane, after spending 12 hours in two airports without eating), the result of that cross can explain why is better to compete in short race in WCCCh. Sergey last year was very competitive in January, because all his races were tactic, with a slow first half and a very hard final part. Practically, short races after a long warm-up. Now, the new generation of African runners (Boniface Kiprop is yet junior, but last year was able running 27:15 in Bruxelles ; but also Tanzanian Fabiano Joseph is junior, and ran 27:32 and 60:52 winning silver in WHMCh, and new runners, as Sihine (26:58), Berhanu (27:14) and Kemboi himself) now prefers to go from the start with a very hard pace, being all these athletes front runners without fright. So, the way of running is no more the best for Sergey, that can run when in top shape 27:20/27:30 in 10 km, about 40 sec. slower than the Africans (that are improving very hard, being so young).
In January, Sergey goes running some cross, expecially for training and for earning some money, because in Fabruary, when he wants to go in indoor races, money is very little. So, now he uses crosses for keeping a good aerobic level, already working on speed (but in this way is not possible to increase long specific endurance, and you must think that for a cross 12 km long, the best preparation is for HM, not for 3000m.....).

Anyway, I also am curious to see what can happen with this new strategy. Always remembering that everything is in order to be competitive for 5000m in OG.

Why is Lebid so dominant in the winter?
Sergey doesn't have any idea to move to marathon for the next 3 years. Also if he runs a very big volume, never runs long FAST run, and this type of training is at the moment out of his mentality.
Also moving to 10000m, may be a non intelligent solution for 2005. Who are his opponents ? Are Bekele, Sihine, Kemboi, Hassan, may be Boniface Kiprop, all people able running in 26:40 or less with a very fast final. The chances of a medal are very little, because nobody among these athletes accepts a tactical race, everyone being front runners (see the current victories of Ethiopians in the first Cross in Europe : in front soon, pushing at max. speed without any fright. Their goal is to destroy other runners with the pace, also if they are very strong also in the final sprint...).
Instead, may be that he has more chance in 5000, where is able (if trains well) to run very near 12:50 (that is the European Record, about). I think that Sergey can prepare 12 min of very fast and intense run, not 26 min.
Different is for 2006, when the most important goal is in European Championships. In this case, he can also try to double, as in Europe at the moment there are only 2-3 athletes able to be competitive in both the distances.

Mr. Renato Canova: Could You Please Answer a Question About Effective Ways to Improve the Lactate Threshold?
Hallo, I'm the REAL Renato Canova, not the moron answering at the beginning of the post. I'm now in Zurich, and was around for some meetings (Stockholm, Heusden) where I could also see some american runner. You are improving in your competitivity, to meet the best runners of the world is the correct way for growing overtaking your current limits. Regarding the question of the post, I try to explain the system that I use for increasing the Threshold.
1) If I want to investigate about the Threshold of an athlete, normally I find a level about 7-8% lower than the pace of 5000m PB (if a specialist of this event), or the same level of the pace of HM (if a good specialist of Marathon and HM). So, the level of AnT is different, according to the different attitude and the different type of training that athletes use.
2) If my problem is to INCREASE the AnT, my behavior must be different according the type of athlete that I want to train.

When I speak about 4x5km, for example, I don't speak about AnT, but about AEROBIC THRESHOLD, that is the Threshold most important for a Marathon runner. My goal is, at first, to increase the AnT of about 3-5% during a period of 4-3 months before the competition, but secondly is to increase the Aerobic Threshold (AT) bringing it very close the level of AnT. When the difference between the 2 thresholds is about 5%, the athlete is resistant enough for beeing prepared for running a good Marathon.

Instead, if I have the goal to increase the AnT of an athlete running, for example, 5000m, the system must be different. I have to use a combined work that has different means : short and continue distance at 95-98% of the race pace (4-6 km, that we call "fast short continue run") ; long intervals at a speed of 2-3% faster than the race pace (for ex., 4 x 2000 rec. 3 min, or 3 x 3000 rec. 3 min, for an amount of about 2 times the length of the race); medium intervals at a speed of 3-5 % faster than the race pace, using very short intervals (f.e., 3 sets of 6 x 500m rec. 45 sec. between tests, 4-5 min between tests). The combined action of these workouts provokes an increment in the level of AnT. You must support all this type of work with a very big volume of full Aerobic run (70-85% of the pace of the race, if you are a specialist of 5000m). Without this, the AnT grows in short time, but the athlete cannot preserve his shape for long time.

Still different the situation for a specialist of 800m. In this case, we must understand if the athlete is a sprinter (Konchellah, Juantorena, Mutua), a full 800m runner (Kipketer, Bungei, Sepeng) or a middle-distance runner (Coe, Cram, Yiampoy). In any case, the phylosophy of training is the same : to use short tests (300-600m) for a total amount of 3-4 km, at the pace of 90-95% of the pace of the race (for an athlete running 1:44, 13.0 pace every 100m, 90% is a pace of 14.3 (600m in 1:25.8) and 95% is a pace of 13.65 (300m in 41.0), increasing step by step number of repetitions, cutting recovery time. In these cases, long run has only the

mean of regeneration, and is not important for the final goal.

Good luck to the US runners this night in Zurich (and of course to Shaheen also...)

Mr. Renato Canova: Could You Please Answer a Question About Effective Ways to Improve the Lactate Threshold?
I´m again in St.Moritz, reading Letsrun from the internet of Hotel Laudinella. I apologyze if sometime I am not to much precise, but I write at 2 by night, without reading again what I wrote. I went to read again what I wrote, and I found my mistake : I wrote faster, when I had to write slower. For example, in the case of Gebre (12:39),the time per km is 2:32 (15.2 every 100m), and 98% is 15.5 per 100m (2:35 per km is 7:45 for 3 km). But you must not think of the type of workout (that is clearly over the Threshold, and can reach 11 - 13 mmol for a top runner well trained), but of the EFFECT of this training. The question was : what type of training do you use for improving AnT ? The answer is : a lot of run that we can check between 95 and 105 % of the speed of the race.
I want to describe, for example, one type of training that Gianni Ghidini (the current coach of Bungei, Yiampoy and Kamal) and me use with these guys during the last period, having the goal to IMPROVE SPECIFIC ENDURANCE, developing intensity from the Threshold to Specific Endurance.

1) 6 x 600m (rec. 4 min) in 1:28 (60/28) 1:28 (60/28) 1:27 (60/27) 1:27 (60/27) 1:26 (60/26) 1:26 (60/26)

2) (about 10 days later) 5 x 600 (rec. 5 min) in 1:26 (60/26) 1:25 (59/26) 1:25 (59/26) 1:24 (59/25) 1:24 (59/25)

3) (about 10 days later) 4 x 600 (rec. 6 min) in 1:23 (57/26) 1:22 (57/25) 1:21 (57/24) 1:20 (56/24)

4) (about 10 days later, in the case of Bungei 8 days before Zurich) 3 x 600 (rec. 8 min) in 1:19.3 (54.2/25.1) 1:19.5 (54.6/24.9) 1:17.2 (53.0/24.2)

The next workout (before OG) will be 2 x 600 (rec. 10 min) in 1:16 (52/24).

This type of work starts about 2 months before the main event, having the goal of supporting AnT. After the first two sessions, when we test the speed at a level of lactate of 6 mmol, we can find an improvement of about 5-8 sec, per km. After the first two sessions, the focus of this training is the improvement of SPECIFIC ENDURANCE, joined with the capacity of increasing speed in the final of the race. The 5th workout is very specific,lactate reaches a level of 16-18 mmol, but in any case is an evolution of the first workout.

The normal use of groups of short distances increasing the speed every test, is a good way for increasing the AnT in aspecialist of 800 or 1500m. For example, 4 groups of 3 x 300m in 42/40/38 with 2 min recovery (and 5 min between the sets), or 4 groups of 3 x 600min 1:33/1:30/1:27 rec. 2 min and 5min, for specialists of 800 and 1500/3000m respectively, are workouts very good for increasing the AnT.

But what is important to remember, is that every distance needs a specific Aerobic Support, that is not the real AnT. For example, in the case of 3000 SC/5000, we can create a MAX LASS (Maximum Lactate Steady State) of 6/8 min at a level of 11-13 mmol of lactate, and the AnT that we need is the speed at a level of 8 mmol about. So, don`t pay attention at the CONVENTIONAL THRESHOLD of 4 mmol,because is something for physiologists, but really in many case doesn´t mean anything.

I try to write the level of lactate that you must use like AEROBIC SUPPORT for the specific workouts in different events :

800m 8-12 mmol
1500m 7-10
5000m 6-8
10000m 5-7

HM 4-5
Mar 4

Mr. Renato Canova: Could You Please Answer a Question About Effective Ways to Improve the Lactate Threshold?
Of course, during the basic period we don`t use repetitions very fast. We prefer to work for improving all the types of SPECIAL RESISTANCES, expecially STRENGTH ENDURANCE that has a very big influence on the Specific Endurance.
For example, using circuits lasting about 3/4 min with very long recovery, at the max. intensity, we can increase the periferal endurance imrpoving at the same time strength and capyllarization. An example of circuit can be the following :
- 80m bounding (flat)
- 10 squat jumps on the place
- 300m running very fast on flat ground (finishing where a hill starts)
- 10 exercises for abdominals starting with the back on the ground
- 60m sprinting climbing
- 40m skipping very fast climbing
- 60m sprinting climbing
- 40m bounding climbing
- 60m sprinting climbing
- 10 squat jumps on the place again
- 200m very fast climbing

This circuit uses about 400m flat plus 360m climbing, and is very good for middle and long distance. With athletes of 800m, we can use the same type of work with shorter distances, lasting no more than 2 min.

Because the only way that we use for recruiting the most part of the fibres of one muscle is WORKING AROUND THE MAX INTENSITY, and the capacity of recruiting fibres is very important not only for the speed, but also for the endurance, due to the turn-over of the fibres of the same muscle, every circuit must be done at max intensity. At the end, the level of lactate is very high, and we have to recovery well before going for another circuit (normally, 5/6 min for long runners, 8/10 min for 800m runners).

But, what is important to know, is that, after using repetitions on track at high intensity (for example, 4 x 600m at 1:22 rec. 6/8 min for an athlete able running 1:47) without adequate aerobic support, for a time longer than 3 weeks, you can check that your Threshold decreased. Instead, after using circuits with adequate aerobic support, your Threshold increases. I suppose that this fact is due to the more global involvement of a higher percentage of fibres during the training, having a combined effect with the aerobic work able to push the Threshold, while fast tests on track have an OPPOSITE effect on the Threshold.

I hope that readers can understand my post, because it is for me very difficult to explain without dictionary a scientific concept. So, may be that I wrote some word that does`nt exist. I apologyze, hoping that someone of mother tongue can translate in good English my words.

Now in Italy is midnight, and I had no time to read a lot of pages of posts regarding this argument. So,may be that what I go to write is not an answer about what you asked, but in any case is part of my phylosophy of training.
In my career, I tested a lot of time the lactate of Italian athletes, in many different periods of their preparation, with runners from 800m to Marathon, men and women. The group of Italian coaches (I was the technical-scientific director of Italian Federation) had the opportunity to test athletes like Panetta, Antibo, Benvenuti, D'Urso, Di Napoli, Lambruschini, Bordin, Pizzolato, Bettiol, Baldini, Leone, Berradi, Carosi, and women like Dorio, Possamai, Brunet, Fogli, Curatolo, Ferrara, Viceconte and others.
I tested, instead, few times african athletes (my lactate tests were with Christopher Kosgei, Nicholas Kemboi 26:30, Julius Nyamu 8:07, Mark Bett 12:55, John Korir 26:52 and Paul Kosgei world record holder of 25 km) because of the cost of every test (kenyans don't have someone paying these tests).

However, I saw some clear difference :

a) The normal level of the Threshold of a strong Kenyan is very higher than the level of a strong European runner. We can identify the AnT (Anaerobic Threshold) like the higher level of steady-state. In many kenyans, for example in Paul Kosgei and Nicholas Kemboi, we can find a steady-state about 6 mmol, at a speed of about 2:48 per km, lasting almost 1 hour. We are speaking about the World Champion of this event in 2002, or about the most talented athlete of the specialism (apart from motivation). These are runners able to run under 1 hr HM, at an even level of 5.5 mmol. Instead, the best Europeans (Antibo for example) were able to last about 40 min at 4.5 mmol, at the same speed of 2:48.

b) A very high level of AnT is SPECIFIC for events like 10000m and HM, that are directly influenced by this capacity. Instead, events like 800/1500 or, in another direction, Marathon, need a good level of Threshold, but, after this level, another improvement is not important, sometime having the opposite effect. In other words, I cannot run fast 800m with an AnT of 16 km/h : I need 18 km/h at least. But, if I'm able to run 1:43 having 18 km of AnT, may be that to work for raising the AnT to 19 km/h can inhibit my anaerobic system, reducing my performance.
For example, if I'm able to run at 3:20 (18 km/h) at a steady-state of 4 mmol, and I can run 1:44 (27,7 km/h) making 20 mmol, I use an anaerobic area of 16 mmol for increasing my speed of about 10 km/h. But, if I push my AnT at 3:00 (20 km/h) and I become only able to push my Anaerobic System to a level of 16 mmol, I can distribute my anaerobic work in 12 mmol, and this is good enough only for running at a speed of 27,2 km/h. In this case (this is an example) we can run 800m only more in 1:45.5.
On the other side, if I have a very good AnT (for example, 21 km/h = 2:51 / km) but this is 10% higher than the AT (about 2 mmol = 3:09, 19 km/h), I'm not able to run a good marathon because my consumption of glycogen is too high and I'm not able to phinish at the same speed.

c) Due to these considerations, I think that the problem of the Threshold is a false problem. Not always to work for raising the threshold is important, of course if you have already a good level of threshold. The threshold is the base for the SPECIFICITY of every event, only for 10000 and HM is a specifism itself.

d) So, the real problem of training is : HOW CAN WE REACH THE HIGHER LEVEL OF THRESHOLD USEFUL FOR SUPPORTING THE SPECIFIC TRAINING (That doesn't mean the higher level possible) ?

e) Under a practic point of view, I think that you take too much care about theorical principles, that don't have very much to do with the real technical management of an athlete. Many scientists tried to become coaches, and nobody was able, because are not the athletes that have to follow the official physiology, but the physiology that has to follow the athletes (and normally this is not possible). If you can train many athletes in your career, with different backgrounds, you can see that the physiological variability are too many, and you must use the best way for reaching the top performance possible.

f) This is the reason because normally I don't do any tests with African runners : because I already know what is better for their improvement, without testing every time their Threshold.

g) In any case, for stimulating a quality (in this case the AnT) you need to give stimula to the body, putting the same in crisis, having the goal to stimulate the answer of the body. If you don't do stimula enough, there is no training, and the athletes cannot repeat the same results.’

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Racer, about the level and the duration of MAX LASS, the answer is simple : What type of "Animals" did the scientists investigate ? So, their investigations are right, the "Animal" is wrong !
You cannot really suppose that a World Record Holder has something to do with a group of students that are "guinea-pigs" for scientists in a University. Do you think that, some time, scientists can test the best athletes ? Another thing : many times scientists asked me to organize tests with the best athletes. The problem is that

they want to use their protocols, coming from "official" physiology. I'm not interested in this. Is not interesting to check the athlete when is at the top, but the effects of the training that athletes use for reaching the top. A lot of times I asked to the scientists to investigate the training, not the athletes, but never they were able to do it.
Regarding the Threshold, we must agree about what this term means. Conventionally, Aerobic Threshold (that I call AT) is about 2 mmol, Anaerobic Threshold (that I call AnT) is about 4 mmol. But, if you for example go to test a runner of 100 km (I make programs for the World Champion, the Italian Mario Fattore), and you ask him to run at his max. speed some 400m, HE IS NOT ABLE TO OVERTAKE THE CONVENTIONAL AnT. This is because his training is monodirectional, and aerobic enzymes (expecially SDH) can inhibit COMPLETELY the enzymes like LDH.
In our tests before Marathon, for example, after running 6 times 2000m with acustic rabbit for being sure that the speed is even, increasing speed every time, taking blood for controlling lactate finding the SS (Steady-State), we go for 1 x 1200 at max speed, and the shape is very good when, having a very low lactate in 2000m, the athlete is able to make high lactate during 1200m. This means that he is able to have little consumption of glycogen at the speed of the Marathon, but has yet the capacity to use his glycogen reserves in case of necessity. I name this quality "Glycolitic Recall Capacity" (it's like the capacity of a car to accelerate in very short time from the speed of 120 km/h to a speed of 180, being in 5th gear). For example, BALDINI (that is coached by GIGLIOTTI, not by me) made the last test 5 days before Athens, in Italy, using 6 x 2000m in 6:15 - 6:10 - 6:05 - 6:00 - 5:55 - 5:50, and his lactate didn't change so much (respectively from 1.8 mmol to 2.3 mmol, this one the same for 6:00 - 5:55 - 5:50). If you find the same level of lactate at different speeds, THIS IS YOUR AT. After this, he went for 1200m in 3:12, reaching 9.8 mmol. That's the reason because his finish was incredible : 14:12 between 35-40 km, but expecially 6:06 the last 2.195m (that means 5:30 for the last 2 km !).
Believe me, forget for top runners conventional numbers. But is important to think that a coach MUST BUILD the aerobic house of the athlete, not only using what he was able to have for genetical reasons or for his natural activity when very young.
I'm sure that also American and European people of 40 years ago could have different values, when the normal life was full of physical activity in direction of every type of resistance, when they were children. Today, we are talking about a generation looking at every other type of acitivity, except the resistance and the endurance.

The rest among every test is only the time that you need for taking blood from the ear (normally from 45.0 to 1 min), the same after the last 2000m before 1200m. We need continuity in this type of test, because we have to investigate what can happen running long time at an even pace well precised before, so the ideal test could be running without stopping the action, but in this case is not possible to take blood.

I fully agree with Antonio. In choosing a type of training, I try to analyze the characteristics of every athlete. I\'m not AGAINST plyos and weights, but I\'m not PRO these trainings. Simply, there\'s some athlete that can have advantage using it, and some other not.
Plyo is good for increasing elastic strength and muscle reactivity. So, if you have an athlete already talented under this point of view (for example, Cherono has wonderful feet), what is the reason for using this type of training ? I prefer to use short sprint for increasing explosive strength, and medium hills (till 800m) for increasing the strength endurance. I tried also, with Shaheen, to do short sprints (80m about) uphill with 2 hurdles 91cm high : this is a very difficult exercise, but I think that can produce very high specific strength endurance for steeple.
Another important thing, when you have to choose a type of training, is the relation between ADVANTAGES and RISKS. Personally, I don\'t agree that plyo and weight can give 1% of improvement, but of sure can give 30% of risk. A lot of athletes fall down in some injury due to plyo.
And you must always remember that we are speaking about EVENTS OF ENDURANCE, so the most important problem is ENZYMATIC. About a good balance between strength and endurance, for example, I propose you the following test (only for marathon runners) :

a) The Faraggiana - Gigliotti test for investigating lactate level after 6 x 2000m improving speed every time, with very short recovery, at the beginning of the preparation.

b) The same test developing the special period of training for specific marathon endurance

c) The same test while you train the athletes for increasing their strength.

You can see that, without using strength training, the level of lactate REGARDING MARATHON PACE is going down, meaning the gradual adaptation of fibres in using, for the same speed, a mix of glycogen and fatty acids with, step by step, more fat and less glycogen (that means to be able to last more long time at the same speed).

But you can also see, using strength training, that, while strength is growing (every test can show it), the level of lactate regarding the marathon speed doesn\'t go down, on the contrary often goes up.

So, what is the role of the strength in the marathon ? Of course, if you have too low strength, you cannot run well, but if you are strong but not able to reuce the consumption of your fuel, you cannot finish the race.

Always a good training must look at the best connection between the different types of training, according to the personal individual qualities, in order to prepare the best performance possible.

In events of endurance, the main dish is SPECIFIC ENDURANCE, after a very extended base of GENERAL RESISTANCE and SPECIAL ENDURANCE. All other type of training (plyo, weights, technical exercises, stretching, etc.) are like the dessert. Too many times coaches think that the dessert can be the main dish, disregarding what is really important for building the performances.

am still in St. Moritz for preparing the GP Final in Monaco, so I cannot read every day the posts on letsrun. Now I read the idea of Jzs, talking about Nicholas Kemboi in specific way. A part the stupidity of someone talking about situations that he doesn`t know, I want to explain that too many times you think that an athlete has not a private life and the problems of the most part of people. Nicholas, of sure, was not professional during the last season. He married in May, and spent all the winter in organising his future life, forgetting a good training. Probably, was also a little bit presumptuous, thinking possible for him to reach in short time a shape valid for being competitive in OG. At the beginning of June he started his training, after more than 8 months of jogging, not every day. He skipped all the basic period, going after two weeks in specific training soon, together the other athletes (John Korir, Moses Mosop and Charles Kamathi) that AK selected for Olympics. His first sompetition was Stockholm meeting, where he ran 13:19 with some difficulty, because not prepared in specific endurance. After 40 days was able running in Bruxelles 27:17, that can fully confirm his talent.
The reason because I don´t think that drug can help top athletes (on the contrary of Jzs thinks) is exactly this one : if an athlete is able, with 2 months of specific preparation for 10000m, to run 26:30, it means that this cannot be his limit. I am sure that, with a FULLY PROFESSIONAL APPROACH, Nicholas Kemboi can run very close 26:00, because his margin of improvement is yet very big. Of course,when he was able running 26:30, his potential time on 5000m could be about 12:50 (13:01 was almost one month before, at that time he could not run under 27:00). But forget your "ratio", because in any case athletes run 10000m few times in relation with the opportunities of 5000m. And, in any case, don´t try to justify bad performances with the drug of other runners. With your mentality, the main reason of a bad performance are yourself, that are very damageous for athletics.

have no time, at the moment, to answer to your quote, because we are trying to attack the WR of steeple again in Monaco next Sunday, and after I have to finish the training of Ahmed Hassan Abdullah, Paul Kosgei and John Korir for WHM in New Dehli. But, after 5th of October, I am again in Italy for one month (may be that I go to Kenya and Ethiopia one week, but in any case not after 16th), and I can e-mail to people interested the full season of Shaheen and someother athlete.
About Nicholas, I think that he is able to understand the big mistake that he made this year. I don´t want to speak about 26:00, because may be not possible, or in any case connected with too many favorable

situations. But I can suppose that, with a good training, he can be competitive with Bekele, running under the current WR. Beleive me, I had many talents in many years, but never I had one athlete able to improve so quickly like Nicholas. In my group, the two EXTRA-TALENTED are Shaheen and Nicholas, the other are very strong athletes (may be that someone can also beat a World Record in the future), but not so naturally talented.

Before going to New Dehli together with Ahmed Hassan Abdullah (Albert Chepkurui) and John Korir(that are in Torino for training, we leave next Wednesday, 29), where we meet also Robert Kipchumba and Rita Jeptoo training in Kenya, and the Ugandian team training in Kapcherwa, I read again some of these very interesting posts, that are going to overtake all the other discussions before. I am happy for this, because it means that, when there is a TECHNICAL and METHODOLOGICAL argument, many are really interested in understanding and in explaining their experiences.
I promised that, after WHMCh, I can post the full season of Shaheen (but also of some other athlete, for example Ahmed Hassan, if he wins a medal in his first HM, after winning Bruxelles with 26:59). Of sure, I need some time for writing everything, but I can explain his training and also the reasons of it.
At the beginning of November (5-6-7) I am, together Peter Thompson from GBR, the rapporteur of some methodological type of training for middle and long distances, during the yearly conference of European Association of the Coaches.
I have to prepare expecially a work regarding the differences between the training of a European runner, and an African (under the cultural, social, physiological, psychological and methodological point of view). I can send to someone that can post the work all what I prepare, that is also what European Coaches can have.
Awaiting that moment, I want to explain something about my normal phylosophy of training.

a) I think that the level of aerobic training must be connected with the specific training. The AEROBIC SUPPORT cannot be too much far from the specific speed that athletes have to use normally in their competition. So, we cannot speak about AEROBIC ENDURANCE only in one way.
In my opinion, EVERY SPEED SLOWER OF MORE THAN 80% OF THE SPEED OF THE RACE HAS NO MEAN OF TRAINING, BUT OF REGENERATION BETWEEN THE REAL WORKOUTS.
An example : if I run a Marathon in 2:10 (3:05 per km pace), 18.5 is 100% of the speed every 100m, so 80% of the speed is 3:05 + 37.0 = 3:42. From this speed TRAINING FOR BUILDING RESISTANCE BEGINS, not slower.
But, if I run 10000m in 28:20 (2:50 per km), my 80% is 2:50 + 34.0 = 3:24. If I run slower than this speed, I go for a regenerative work, not for a real training.
This is true in the field of the event DIRECTLY INFLUENCED BY THE THRESHOLD. But, when we speak about LACTIC EVENTS (like already 3000m SC, or 1500, or of course 800m) the aerobic level that we need must be more or less high, in order to support the LACTIC ENDURANCE and/or the LACTIC CAPACITY, that have a specific role in the specific event.
What is for me LACTIC ENDURANCE ? Is the quality connected with the ANAEROBIC THRESHOLD and with the LACTIC CAPACITY at the same time.
What is for me the LACTIC CAPACITY ? Is the quality connected with the LACTIC ENDURANCE and the LACTIC POWER at the same time.
May be that my terminology is different from your, so I try to explain me with an example.
I am able running, at 4 mmol, at a speed of 3:10 per km, and when I try to run 600m at my max speed, I can run 1:20.
With this attitude, my type of training can be :

a) What I want slower than 3:40 (till 2:30) : GENERAL RESISTANCE (not specific, also for Marathon)

b) From 1 hr to 1:30 at 3:30 : AEROBIC RESISTANCE (in part specific for Marathon, not specific but general for the other events)

c) From 40:00 to 1:10 at 3:10/3:15 : AEROBIC POWER "1st level" (speed for Marathon, specific for HM, special for 10000m, aerobic support for steeple and 5000m, general for 1500 and 800)

d) Intervals at 105/110 % of the AnT (2:52 > 3:00 per km) using distances between 1000 and 3000m : AEROBIC POWER "2nd level" (speed for Marathon and HM, specific for 10000m, special for 5000 and steeple, aerobic support for 1500 and 800m)

e) 10 / 15 times 600m in 1:36 / 1:38 with short recovery (1:30, for example) : LACTIC ENDURANCE (connected with AEROBIC POWER "2nd level" and LACTIC SPEED ENDURANCE)

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g) 3 / 4 times 600m in 1:23 rec. 6 / 8 min : LACTIC CAPACITY (connected with LACTIC SPEED ENDURANCE and LACTIC POWER)

h) 1 time 600m in 1:20 (max speed) : LACTIC POWER.

The different speed are connected between, but for every speed you can find the direct support only from the speed immediately slower (for endurance), and from the speed immediately faster (for speed).

So, every speed is a different mean of training. The difference between the old and the modern system, is that in the old we considered only 3 big groups of speed : AEROBIC very slow, developing volume at low intensity, LONG RUN at AnT level, developing endurance at medium intensity, and SPEED ENDURANCE, running short intervals very fast.
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So, we use now more speeds in training, very close, giving them a different mean. RUNNING AT 3:20 is VERY DIFFERENT from running at 3:10, BUT FOR THE MOST PART OF THE ATHLETES IS HE SAME (Long Fast run at personal sensation).
Running on the track 5 times 3000m in 8:20 for a runner able to do 26:30 in 10000m, is something UNDER RHYTM, but is a SPECIFIC SUPPORT different from long run. When you are able running it, you can run 10 x 1000 no more in 2:42, but in 2:36, for example. SO, THE DIRECT INFLUENCE OF THE SPECIFIC SUPPORT ON THE SPECIFIC TRAINING IS VERY BIG.
So, personally, I don't have care about mmol and the classic ideas of Thresholds, but I look at THE SPECIFIC SUPPORT for every distance.
But at the end of October I can explain better my phylosophy, when I have some more time.

Before going to New Dehli together with Ahmed Hassan Abdullah (Albert Chepkurui) and John Korir(that are in Torino for training, we leave next Wednesday, 29), where we meet also Robert Kipchumba and Rita Jeptoo training in Kenya, and the Ugandian team training in Kapcherwa, I read again some of these very interesting posts, that are going to overtake all the other discussions before. I am happy for this, because it means that, when there is a TECHNICAL and METHODOLOGICAL argument, many are really interested in understanding and in explaining their experiences.
I promised that, after WHMCh, I can post the full season of Shaheen (but also of some other athlete, for example Ahmed Hassan, if he wins a medal in his first HM, after winning Bruxelles with 26:59). Of sure, I need some time for writing everything, but I can explain his training and also the reasons of it.
At the beginning of November (5-6-7) I am, together Peter Thompson from GBR, the rapporteur of some methodological type of training for middle and long distances, during the yearly conference of European Association of the Coaches.
I have to prepare expecially a work regarding the differences between the training of a European runner, and an African (under the cultural, social, physiological, psychological and methodological point of view). I can send to someone that can post the work all what I prepare, that is also what European Coaches can have.
Awaiting that moment, I want to explain something about my normal phylosophy of training.

a) I think that the level of aerobic training must be connected with the specific training. The AEROBIC SUPPORT cannot be too much far from the specific speed that athletes have to use normally in their

competition. So, we cannot speak about AEROBIC ENDURANCE only in one way.
In my opinion, EVERY SPEED SLOWER OF MORE THAN 80% OF THE SPEED OF THE RACE HAS NO MEAN OF TRAINING, BUT OF REGENERATION BETWEEN THE REAL WORKOUTS.
An example : if I run a Marathon in 2:10 (3:05 per km pace), 18.5 is 100% of the speed every 100m, so 80% of the speed is 3:05 + 37.0 = 3:42. From this speed TRAINING FOR BUILDING RESISTANCE BEGINS, not slower.
But, if I run 10000m in 28:20 (2:50 per km), my 80% is 2:50 + 34.0 = 3:24. If I run slower than this speed, I go for a regenerative work, not for a real training.
This is true in the field of the event DIRECTLY INFLUENCED BY THE THRESHOLD. But, when we speak about LACTIC EVENTS (like already 3000m SC, or 1500, or of course 800m) the aerobic level that we need must be more or less high, in order to support the LACTIC ENDURANCE and/or the LACTIC CAPACITY, that have a specific role in the specific event.
What is for me LACTIC ENDURANCE ? Is the quality connected with the ANAEROBIC THRESHOLD and with the LACTIC CAPACITY at the same time.
What is for me the LACTIC CAPACITY ? Is the quality connected with the LACTIC ENDURANCE and the LACTIC POWER at the same time.
May be that my terminology is different from your, so I try to explain me with an example.
I am able running, at 4 mmol, at a speed of 3:10 per km, and when I try to run 600m at my max speed, I can run 1:20.
With this attitude, my type of training can be :

a) What I want slower than 3:40 (till 2:30) : GENERAL RESISTANCE (not specific, also for Marathon)

b) From 1 hr to 1:30 at 3:30 : AEROBIC RESISTANCE (in part specific for Marathon, not specific but general for the other events)

c) From 40:00 to 1:10 at 3:10/3:15 : AEROBIC POWER "1st level" (speed for Marathon, specific for HM, special for 10000m, aerobic support for steeple and 5000m, general for 1500 and 800)

d) Intervals at 105/110 % of the AnT (2:52 > 3:00 per km) using distances between 1000 and 3000m : AEROBIC POWER "2nd level" (speed for Marathon and HM, specific for 10000m, special for 5000 and steeple, aerobic support for 1500 and 800m)

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VERY DIFFERENT from running at 3:10, BUT FOR THE MOST PART OF THE ATHLETES IS HE SAME (Long Fast run at personal sensation).
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I want to explain something that I told to Scott, speaking 3 months ago, and saying what I had in my mind. When I speak about "Cram slow", I want to explain that the official best of Cram on 400m was 48.5. Also supposing that he could run REALLY in 47.5, this is a very slow time for running 1:42.88. I want to tell that IS POSSIBLE RUNNING VERY FAST 800m HAVING A QUITE SLOW SPEED, IF YOU HAVE A VERY HIGH SPECIFIC ENDURANCE. And this is true also for the best, for example Kipketer, Coe, Sammy Koskei, Johnny Gray, Bungei. Go to see the PB in 400-800 regarding the top 100 in the world, and you can see that THE BEST SPECIALISTS OF 400 NEVER ARE AMONG THE BEST IN 800. Also phenomenons like Juantorena or Konchellah, able running 400m in 44:26 and 45.1 only 18y old, are not among the best, also if were able to win OG and WCh. If they could have the same specific endurance of Cram, Coe or Kipketer, they could run very easy under 1:40. But, of course, they couldn't have the same coefficient of endurance because are DIFFERENT ANIMALS, being sprinters. So, I want to demonstrate that you can run fast also having a relative slow speed, if you are able to develop a very high coefficient of endurance. This means that there is not only ONE SYSTEM of training, but you must use what is better according to your specific qualities.

Secondly, when I tell that personally I don't think that there are big genetical differences between Africans and Europeans or Americans, I speak essentially about the organical characteristics. Everyone can see some difference in the body : very small and reactive calfs, for example, and a different specific weight.
But also in Europe we have athletes like these. In Italy, Genny Di Napoli was more talented than the 99% of Kenyans, and his morphology was the same of a Kenyan. How many Di Napoli there are in Italy ? How many Jim Ryun in US ?
The big difference is that in Kenya ALL THE TALENTED RUNNERS BECOME RUNNERS, and their problem can be the correct training and the continuity in working, not their recruitment. But, in our Countries, almost nobody approaches athletics, going to other sports or, the most part of times, going to something else having nothing to do with any sport.
I fully agree with the last poster. There is a lot of talent also in our Countries, but no more much interest.
And, regarding what the popular interest can mean, see in your Country what happens with soccer. With your sprinters, jumpers, with your football and basket players, with your skiers, do you think that in US there is not talent enough for having a good team of soccer ? But the point is that your team is weak. Why ? Because there is no interest in this sport, not sure because of lack of talent.

Why have you to run 1500m for being No. 15 in the world, when you can be the No. 2 or 1 in 10000m and (in the future) in Marathon ? Remember that the best runners are THE FASTEST AMONG ATHLETES HAVING THE SAME ENDURANCE. So, the fact that Bekele is not beatable, at the moment, in races from 10 and 15 km, when he's in shape, IS DUE TO THE FACT THAT HE HAS MORE SPECIFIC ENDURANCE THAN EVERY OTHER ATHLETE. But, when he goes for 3000 and 5000m (also if he's the World Record Holder)he can lose the race, like happened in WCh 2003 and in OG 2004, BECAUSE IS LESS FAST THAN ATHLETES HAVING THE SAME SPECIFIC ENDURANCE (same for that distance, of course).
In theory, if you are the No. 2 in the world in 200m, and in front you have Michael Johnson, and you want to become the No. 1, and you have good attitude in SPECIFIC ENDURANCE (for your event), you have to move to 400m. Too many times athletes that can be better in longer distances waste a lot of years for very little improvement in the same event, and, when are already old and consumpted, decide to move directly to

Marathon. This is, of sure, one of the reasons because European and American runners are no more competitive in 5000/10000 with the Africans.

Dear Marco, looking at the yearly progression of the athlete, we can see a "stagnation" during the last 4 years in 800m (an improvement between 18-22 years of 1.11 is very little) while, at the same time, his improvement in 1500m is ok (5.45). This fact means that the SPECIFIC TALENT of the athlete is not in direction of a high lactic endurance, but of "medium" lactic endurance supported by a good aerobic level. I have some doubt seeing the weight (67,6 kg seem to me too many for a runner 1.74 tall), so I suppose that he can be a "muscular" type of runner. But probably this is due also to the lack of long run. I think that, if this guy goes to long run (for example, twice a week 1 hr 20:00 progressive with last 20-30 min fast) he can lose 3 kg becoming about 64 kg heavy.
So, I suggest the following road :

1) Increase the mileage, and the number of training sessions per week. He can run an average of 160 km per week, going (one week every 3, during periods without competitions) also very close 190 km. This is a correct base for an athlete that is talented for longer distances.

2) Put him in some long competition on road (one HM in 62:30, per ex., and 1-2 times 10k under 29:00) in order to build a correct mentality for every type of event, playing down the idea of fatigue connected with distance

3) Go for long intervals on track (for ex., 2000/3000/2000/1000/1000/1000 with short recovery of 2/3 min, running at 10000m pace (about 2:52 per km, ex : 5:45 - 8:40 - 5:45 - 2:50 - 2:48 - 2:45) trying to maintain during the weeks the same speed, reducing recovery times

4) At the same time, go for "medium" intervals in sets (for example, 4 sets of 600/500/400/300m with 1:30 recovery, alternating speeds : 1:36 - 1:14 - 62 - 42 for the first and the 3rd set, 1:28 - 1:18 - 57 - 46 for the 2nd and the 4th set) using 5:00 recovery among the sets

5) And use full speed with very long recovery, for example 5 x 400 in 53 rec. 8:00, or 3 x 600 in 1:22 rec. 8:00, for increasing the LACTIC POWER, that is a very important part of training.

In this way, you can prepare the athlete for changing event in 3 years, but the first effect is THAT HE CAN IMPROVE IN 1500m and also in 800m (may be 3:36 and 1:47 ?). Remember always that training is WHAT YOU DO. Don't be afraid about distance, or about speed : is all the ingredients are present in a programme, the athlete can improve in every distance, IF IS AEROBICALLY TALENTED.

Anonimous, I apologyze if I couldn't reply to you and to many other writing to me, but I think that you have no idea about a my normal day. For example, at the moment I have here in Torino (only 2 weeks after coming back from Kenya and WCCCh, where there were not internet normally) the following athletes for training : Silas Kirui (winner of HM in Prague last Saturday in 1:01:07) - Paul Kanda (60:55 and 2:11:53) - David Makori (2:08:49, he will run Torino Marathon on 17/04) - Samson Kosgei (2:11:43, he also will run Torino) - Martin Toroitich (Uganda) that has to run in his first Marathon in Torino (but may be that I put him in Trieste on 8/05) - Wilson Busienei (Uganda, 13:12 and 27:29, he will pace 12 km in Stramilano, then go to run HM in Humarathon on 17/04) - John Korir (after sleeping for one day in the Airport in Dallas, arrived for the competition in Washington only 30min before the race. Now is here and will run on Saturday the Scarpa d'Oro with Lebid) - Albert Ndiwa (a ne guy running 28:30 in 10k) - Daniel Rono (60:14 in HM, he will debut in Marathon in Madrid on 24/04) - Amman Majid (Qatar, Marathon in 2:15 but able to run 2:10, now injured) - Florence Barsosio (2:27:00, she will run Paris on 10/04) - Jennifer Chesinon (2:31:26, she will run Madrid on 24/4) - Dorcus Inzikuru (Uganda, 9:29 on steeple, African Record) - Robert Cheruiyot (2:08:13, he will run Paris) - Rodgers Rop and Daniel Cheribo (going to Paris) and Rita Jeptoo (going to Torino).
So, I have to organize the training for different group, but at the same time I have other type of problems. Friday I go to Paris in the early morning, coming back to Torino on Monday 11. But, after a training with a part

of the guys, Monday night I'll go to Qatar for two days, then I'll go to Iten in Kenya on Thursday and Friday for giving the programs to the Qatar athletes for the next 10 days. After I come back to Torino for the Marathon, and Monday 18 I'll go again to Kenya, staying till 1st of May, when I go again to Qatar till the meeting (13-5). After this, I go to Kenya again till Hengelo (28-5), and after I stay in Europe, moving to St. Moritz from the beginning of June.
So, because the day is only 24 hours long also for me, I have to do some choice : when I'm able to answer to the e-mails arriving to me, I do it. If I have some e-mail coming from coaches of top athletes, I reply them before answering to athletes "amateur". But this not because I don't take care, but because I really have no time.
And in any case, what I try to post is my phylosophy of training, because I don't think possible to give personal programs for athletes that I don't know and never I could see in my life. Depends on the knowledge of everyone to understand the mean of what I write, and on their choice to use or not what I propose. Nobody has the "spell" for changing a donkey in a horse, but there are things well known that can become general culture for people not yet expert in managing their training.
And, regarding the "Genius", I think that a lot of people can read magazines of medicine, knowing in theory everything, but cannot be doctors. In a period where we speak of "specialization" regarding every thing, is very strange that, looking for a delicate machine like the human body, everyone can think possible to be the best specialist for himself. But probably taht's the reason because so many runners are able to destroy themselves.

Now I tell you something that the most part of people doesn't like to hear, but this is my opinion, coming from the knowledge (PERSONAL KNOWLEDGE) that I have with many among the best runners of the World.
I'm sure that, with the talent of many Africans, the current World Records are really WEAK. The explanation of the records of Bekele (and, before, of Gebrselassie) is in the fact that they were the first very talented athletes having a "European" approach (under the point of view of the professionalism) that means to have the focus in athletics not only for short time every year, but for a long time in their life. They have that continuity that the most part of Kenyans don't have (except Tergat or, in the past, Kiptanui).
I don't want to repeat a lot of time the same things, but, believeme, when I see Nicholas Kemboi running 26:30 after 55 days of training (good for the first time in his life), COMPLETELY CLEAN like all my athletes (the first is SHAHEEN), and when I say "CLEAN" it means that they don't use not only some drug, but also some integrator and, in any case, any pharmac (they live and train using the normal food of African people : ugali, meat of cow, chicken, vegetables, milk, and nothing else. They don't drink Gatorade or Isostad or some integrator, don't assume Vitamins, don't take Iron, don't get Aminoacids like the most part of western athletes, also my Italians, normally do) ; when I see this, or I see Stephen Cherono running in 7:53, and I KNOW THEIR TRAINING BECAUSE IS MY PROGRAMME, I also know very well HOW MUCH MORE THEY CAN DO.
Do you think possible to reach your top with less than two months of good training, or, with the correct continuity, 26:30 can become very close 26:00 ?
Do you think possible that your limit is 7:53 on steeple, when you train for about 120-140 km a week during the track season, and in my mind you have a clear lack in specific endurance ?
If Shaheen will be not able running under 7:50 in the next 3 years, I will feel myself unhappy, because it means that I was not able to find the key for reaching what is talent can permit him.
This is the point : the most difficult thing, with a talented african, is to educate him in continuity at high level, in training, changing his life in a full professional way.
I don't believe in any drug, for me nothing can enhance the performances like a correct training. But this is true only with the athletes VERY STRONG IN THEIR BRAIN. The main effect of EPO, for example, is that athletes taking it become sure that can train more and can recovery more, so they finally try to do WHAT COULD DO ALSO BEFORE, but had not the courage to try.
So, with EPO can improve weak athletes, not strong. Who is strong is strong in his mind, and takes his strength from some presumption (I'm the best in the World) that is fed by the strongest self-confidence in his talent, mental and physical.
Because I think that this is the real secret, I work in this direction, trying to make easy what is difficult.
For the African, THE RACE IS ALWAYS EASY, training is always difficult, because they fear the volume and the continuity, not the intensity. So, I try to educate my top runners in accepting a continue increase of

training during the years, and I don't need to touch their mentality about the competitions, because already is very aggressive and without any fright.
About the programmes of Nicholas, no secrets. You must have patience. I had all the training of my athletes in a computer that a thief robbed me in Nairobi the 31st of January 2004. Of course, I have all their workouts in my books, but I had not time, till now, to write in ordered way their training. In my computer I had already everything ok, because I used these in some seminary. There were also the analysis of every month. Now, I have to rebuild everything, but at the moment my time is very little. But, if you want, I can send in short time the programmes really done by Albert Chepkurui (Ahmed Hassan) during this winter (he took the bronze in long cross) and also something regarding the new guy Gamal (former Kipkemoi Katui) that, in his first competition, was n. 5 in short and n. 12 in long cross in WCCCh.

My explanation is very simple : Nicholas has the talent for running very close 26:00, having speed and endurance at very high level. But, before the period in St. Moritz, his training was no more than 50% of what he needs for these results. So, if an athlete running 35:00 with 5 sessions not very hard every week is able to move to 10 sessions among which there are 2 or 3 workouts of very good level, he can improve to 33:00 or less in very short time. The proof of this is in the last season. Nicholas, disturbed for many reasons, came back to the same typeof training of before, and again ran 13:19 and 27:17, with very short period of training a very little volume.
For this year, there is an important newness for him, but you can know this fact only at the end of April. I think that this new fact can help him in finding the full focus on training, that can allow him to compete with Bekele in the next future.

cannot speak about the training of Gabriele Rosa, because never we spoke together regarding the particulars of his system. I can only say that I hold him in high esteem under technical and organizational points of view. He was the first coach to understand the big potentiality of Kenyans for the Marathon, and gave them a basic phylosophy that is still very appreciated. He was also able to involve a big Company like FILA (and now NIKE) in a project that, at the end, regarded about 400 runners.
Another thing : I'm absolutely sure that he is FULLY HONEST in his training, without using any type of drug. He has a scientific and medical approach, using many tests and allowed supports, and is able to provide in short time when there is some injury that, normally, brings the athlete to lose one year.
He is essentially a marathon coach, also if, in his career, had top results also on track (with world records from Tergat and Wilson Boit Kipketer). But Marathon is his main interest.
Being a man looking at the future, he is now planning to organize something in China. We'll see in the future, but it's sure that dr. Rosa is one of the most important personages of long distances world.

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know that many my athletes don't have a correct date of birth on their passport, also some Kenyan that was able to win World Junior Championships. But this regards their FIRST PASSPORT, and in this case is not possible to control. But the situations of Qatar and Bahrain are very different. The athletes coming from African Countries to Qatar arrived with their OLD PASSPORT, and Qatari government NEVER CHANGED THEIR DATES OF BIRTH. The ministry of interior takes the old passports, changes the names of the athletes but keeps the personal datas that are in the old passport. Instead, Bahrain changes the dates voluntarly, for having athletes able to compete for more long time in age competitions. The most obvious case regards Gregory Konchellah, well known in the world like born in 1983. Last year Bahrain changed is official date of birth in.... 1987 for putting him in Juniors, but he refused, and became the second in the World. Of sure, I don't like this fraudolent mentality.

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I'm very happy about the results of my Qatari athletes in WCCCh, also if in short race we can do something better. Shaheen (that was at 85% of his top shape, having suffered for a problem of virus, not very bad but disturbing him during the period from the beginning of March to 10 of the month) tried the impossible, running 200m in about 26.0 after 2.200m with still 2 km to go. He was able to put Bekele back of 30m and Songok of 50m in about 300m. Of course, after 800m he payed the attack in very heavy way.
The reason of this attack was that the most part of the athletes thought Bekele in medium shape, and at the same time Shaheen was afraid about the finish of Chebii and Songok. Anyway, it was a mistake. I'm sure that, without this mistake, the correct position for Shaheen could be the second, and in this way Qatar could win the silver medal as team with 30 points against 33 of Kenya.
But winning bronze medal in all the events (short, long and junior) plus the individual bronze of Hassan, was very satisfactory for us. I was particularly happy about the 5th position in short and 12th in long of Jamal (in the past Kipkemoi Katui), an athlete 27 years old, that last year ran 13:19 and 8:24 in steeple with a ticket payed by Shaheen for running in Europe, and that I put together Shaheen two years ago only for training. This guy never competed before, and I think that can run under 13:00 during summer. Another athlete able to reach the top shape for the cross was Ahmed Hassan Abdullah (Albert Chepkurui) that, after the bronze in WHMCh last year, was on the podium in the cross for the first time in his life, with a very intelligent race (with one lap to go he was n. 9 very back the leading group).
But I'm also very happy about Shaheen in long cross. He showed me that in the future can become competitive also in the longer distance.
Regarding Bekele, he's a monster. I did a comment on him few minutes ago, on another post.
One thing is sure : if someone tries to beat him, he can be destroyed going to asphyxia in the last lap. We are talking about an athlete that improved the WR of 5000m running alone the last 2 km under 5:00, and the WR of 10000 running alone the last 5 km in 13:05.
But, back Bekele, the situation is very fluid. Ethiopians announced Bihranu and Dinkessa in very good shape, and they arrived back Hassan. Zersenay Tadesse, that won a bronze in OG because Boniface Kiprop lost for too much aggressivity, this time was able to legitimate his silver with a very impressive performance, and his 2nd place was due to his value, not to the mistake of other athletes.
In short race, Songok made the mistake to follow Shaheen, and at the end finished the energies, so Chebii could reach a very good 2nd place coming from back.
Too strong for the other runners Augustin Choge in the juniors. Is clear the hand of Brother Colm in the development of this talent, very intelligent and educated boy that can really be the future of Kenya.
About the women, the young Dibaba was able to imitate Bekele, winning both the races with her very strong finish. But, really, I was not particularly impressed by some talent out of the "top" normality.
African runners are always the strongest, and now Qatar and Bahrain follow them with runners coming from African Countries. For Europe and America is always more difficult to have motivation for competing in cross at high level.
Last thing, very delicated but real. IAAF must absolutely find a system for controlling the real age of Juniors and Youth. There are Countries that change the passport making the athletes younger of 5 or more years. For example, I had in the past a my athlete officially born in 1984 (Kenyan) that now is a Bahrain runner born in .... 1989. This is a very scandal, and is not possible that all the world must accept this situation. Another athlete (see interviews on Kenyan newspapers) is the old Kenyan Hosea Kosgei, called in the Kenyan camp together the Kenyan team one month ago, born in 1986, suddenly competing with Bahrain with official date of birth 1988.
This is unacceptable. I invite all the Federations that are correct in their situations to request to IAAF a commission for solving the problem.

Racer 1, I speak essentially about cross, and I repeat : in long cross Bekele is unbeatable. Go to my technical analysis in another post. Bekele is a perfect machine for the cross. I agree with you that he can be beated on track, and in 5000m this already happened. But, at the moment, nobody has the physical and mental talent for beating him in 10000m. Don't look only for what you can see. The mentality is something that you cannot know, only who really knows these athletes can know. I tell you that, in the world, the FULLY PROFESSIONAL ATHLETES like metality in long distances are Bekele, Sihine, Shaheen, Kipchoge and Tergat. When I say "fully professional" I mean THE ORGANIZATION OF THEIR LIFE. Under this point of view, the n. 1 was Gebrselassie, and for Kenya was Moses Kiptanui. ALL THE OTHER ATHLETES HAVE LONG PERIODS OF THE YEAR NOT DEDICATED TO ATHLETICS. One thing is running, one thing is training.
Of course, everyone can be beated, but when ? I think that we have to await a lot of years, or the first opportunity with Bekele out of shape (but if he is out of shape, he doesn't compete). This is the reality, believe to someone living every day these situation.

I'm in Iten, and this night there is power (during last 4 days no power for the continuous rain), so I can read your messages. At first, please, don't do any graduatory about "the best coach in the world". This is useless and of sure not correct. I know a lot of coaches that have good knowledge and never the opportunity to follow top runners. Of course, I (like Rosa) had the possibility of growing in some specific knowledge only after coaching many Kenyans. My merit was to seek and to find this opportunity, that can be considered a choice of life. And of course, when you can "manage" the preparation of many and different top runners, you can have new experiences and sometimes a new mentality.
To coach Africans is easy if you think that the goal is to beat Europeans runners, but is more difficult under other points of view. In any case, it's a completely different thing.
You become a good coach when enjoy the improvement of your athletes not for yourself, but for them. You must be a friend, a teacher, a guide, before being a scientist, and this is particularly true with African people. They are very simple, and the first quality that can appreciate is the human behavior of the coach, not his specific knowledge. Remember that every athlete is a different man, and this is the key for his improvement.
Regarding my athletes, we are at the last 2 weeks of a long period of preparation. Shaheen will run WCCh in short : he had some small problem, but I think that can be ready. Among my Qatari athletes, Sultan Zaman improved from last year, running 2nd in Caceres back Lebid and winning Diekirch, but is strong expecially on the mud. Kwalia is not too much adapted for a cross, and Hassan had to stop training for the last 2 weeks due to a tendon injury. But the team is not bad, and I hope to present 2 athletes that nobody knows, that can be a very important "atout" for the team.
Regarding my Kenyan athletes in the team (Mosop, John Korir, Abraham Cherono in long run, Catherine Kirui, Irene Kwambai and Irene Limika among women), I personally think that the strategy of removing the top runners from their coaches during the last 4 weeks is not correct, and like me Patrick Sang and Brother Colm think the same. In my personal strategy, the best runners must continue with their coaches till last 10 days, when they have to go all together in a camp for assembling the "spirit of the team". The idea that WCCCh is a team competition is correct, but if you don't have legs for running fast, what is the importance of the tactic and of the team ? When in Paris the Ethiopians are able running last 5000m in 12:57 and the best PB of the Kenyans is 13:03, what a team can do ? But anyway, I wish to Kenyan team to grow again, having some good chances against Ethiopians (expecially if Bekele and Sihine have problems).
Now, we are on the finish line, and the only thing that we can do is to await and to look.

Ne-now, do you know how many kenyan skiers there are ? And do you know how many bikes there are in Kenya ? So, if statistics is not only an opinion, is easy to recruit 500 top runners among a number of 10 million, is not possible to recruit 3 top skiers among a number of.... 3 athletes ! About cyclists, I'm sure that Kenyans could be good specialists, expecially on the mountains. But the fact is that, if you want to train with a bike on Kenyan roads, nobody can guarantee that you can live longer than one week before finishing your life under a lorry or a matato.
Don't look at sports where technology is fundamental. If you don't have, you cannot be able to compete.

But, if you have advanced technology, probably you are not able to do something without it. Running is the most natural activity, without any technology, and white people today is slave of every type of technology, for doing every thing (for example, few people are yet able to use basic mathematic without a calculator). Africans are only a little bit better than many years ago : the kenyan record of 800m is the same from 1984, now is yet possible to win steeple in OG with 8:05 (in 1976 8:08 from a European), only 5000 and 10000 really improved, because of changing in training systems.
But the real problem is WHITE PEOPLE TODAY. If the interest in running (not only for fun) is limited to a very small percentage, is practically very hard to produce good runners in the future.
Another problem is our mentality. In our Society the spots are pushing for a CHEMICAL and PHARMACOLOGICAL society. We are bombarded with a lot of FALSE infos : without integrators we cannot do anything, without supplements we cannot do any fatigue, without tablets we cannot lose fat, without PH we lose our memory. We cannot live without a lot of substances taken from the extern.
This way of thinking makes a man very weak, and not confident in HIS NATURAL RESOURCES. When we read a lot of posts on letsrun, we understand that, for a great part of american runners, IF YOU RUN FAST IS BECAUSE YOU ARE DOPED. Do you think that this is the best way for approaching top results ? I can guarantee that African runners, if have a good coach, never have any idea of doping (not only, but every substance for helping your performance). UGALI, MILK, VEGETABLES, MEAT of cow or of CHICKEN, that's all. And when they see white athletes using some tablets, they say "here is the main reason because you are not competitive : your lack of UGALI and MILK, that for us is LIFE".

Ne-now, may be that my English is not very good, but I think that is possible to understand what I want to say.
Your arguments are very much debatable, and I want to reply to you discussing what you say.

1) Do you know some person (of every Country) that goes to live abroad, starting ABROAD a professional sport ? I suppose that, if a Kenyan goes to live in another Country, is only for two different reasons : a) he has a very good opportunity of working at higher level than in Kenya (for example, in some University or in some important enterprise, or because he's a political man) and 2) because, not having any specialization, hopes to find some job abroad for improving his life. In this two situations, do you think that someone has time and motivation for training in PROFESSIONAL WAY as cyclist or swimmer ? You are completely out of reality.

2) I agree with you that, if African runners of 28 try to have a competition with a bike against white runners of 30, are the white athletes to win. But the reason is very simple : AFRICANS ARE NOT ABLE TO USE A BIKE ! If you see in Kenya the type of bikes generally used, you can agree with me. Kenyan bikes are usually chinese models. The saddle is very high, people pedale on the top of their feet with their legs completely straight, they have no gears, and is very evident that nobody has any knowledge of biomechanics, using very wrong positions. So, your analizys starts from not correct bases : in our Countries, 90% of the boys learn to use a bike when are very young, in Africa the percentage is very little, and the way of using not technically correct.

3)The fact of Nicholas Kemboi is a personal situation that happened because the guy was confused for many reasons, not connected with his activity. I never said that Nicholas was lazy when he trained very hard for two months in 2003 improving till 26:30. I said that he was "lazy" when he finished to train hard for other reasons.
In 1999, Christopher Kosgei, elder brother of Stephen Cherono, that was my first World Champion, was very serious from October 98 till August 99, training very hard. During that period, he could be an example for every one. Soon after winning the title, became completely lazy, finishing his career without any reason, in very good health and without physical problems. This doesn't mean that ALL KENYAN ARE LAZY, and doesn't mean that CHRISTOPHER WAS ALWAYS LAZY. This means that CHRISTOPHER FINISHED HIS CAREER BECAUSE BECAME LAZY FOR A LOT OF DIFFERENT REASONS. Don't do the mistake of changing some particular situation in general behavior.

4) Regarding what Marius Bakken wrote, sorry, but I don't agree. In western countries there are a lot of

runners OLD and AMATEUR, but very few runners in agonistic and competitive way. In Africa, competitivity is the base of the activity. In USA and Europe, fitness is the base of activity, and young runners are, at the same time, tennis player, skiers, cyclists and global sportsmen. So, the goal is to build their body for having better health and better image, not to try to overtake their limits for running faster (that instead was the motivation of European and American runners of 30-20 years ago, see Lindgren and Prefontaine, for example).
May be that today there are motivated athletes (like Dathan, Webb, Deena Kastor and some other). But the problem is : what type of base they were able to build when very young ? Here there is the difference.

5) Regarding the denish research, you of sure know that, while the datas regarding swedish and kenyan boys present very similar value, the datas regarding runners of 20-25 years are very different. So, if you want to analyze the situation, you can see that the most important difference is due to the physical activity (may be official training or natural training) that the boys do in the age from 8 and 20 years. IS DURING THIS PERIOD THAT WHITE PEOPLE DON'T INCREASE THEIR QUALITIES BECAUSE DON'T DO ACTIVITY ENOUGH, NOT BEFORE, in other case it could be possible to find big difference when the boys were very young. So, of sure there are some genetical differences, but, believeme, the most important source of difference is the different style of life.

When I was young, I remember that normally played 4-5 hours a day soccer or other activities, in the streets near my house, in the center of Torino. In the last 15 years, in Italy is no more possible to stay on the street, because they are so busy and full of cars that you have no place for walking.
In the periferal areas, in Kenya, you can yet see children 3-6 years old running for more than one hour pushing a big tyre of a tractor, or using games that our society forgot.
So, may be possible for a mzungo to be competitive with the top runners, but only growing in areas where the natural activity is yet the base of your life.

Regarding Shaheen, he started the preparation from the beginning of November, developing 3 weeks of long run, with a pick of 1 hr 48:00 (about 32 km) during the last week of the month. After this, we used a period of 5 weeks (till the end of December) for developing strength endurance (twice a week there are short sprints uphill, till 20 times, 80m long, and once a week repetitions of about 400m climbing very hard, in times about 1:30 with recovery 4:00 because the intensity is very high) and long endurance at high intensity. During this period, the general volume of km isn't very high (about 140-150 a week), but the speed is always fast (never slower than 3:30 / 3:20 per km, in very hilly courses at 2400m of altitude). We tried to train for the first 5 days of the week with 2 sessions very close (5:30 and 10:00 in the morning) in order to increase the specific capacity of training hard. In this case, both the sessions were fast, and never there was an easy session for recovering. On Saturday we used only one session (normally long and fast run, about 22-24 km with last 5 km under 3:00 per km), in the early morning, recovering from 10:00 in the morning till Monday at 5:30 (always there is rest on Sunday).
During the period of Christmas, Shaheen had some problems, that probably were connected with the two sessions very close. So, I decided to leave this type of training, coming back on the normal system(two sessions, one at 6:00 in the morning and another at 16:00 in the afternoon). In any case, Shaheen continues to run fast.
From 20th of Jan (one week after Edinburgh cross) we started to use mixed fartlek (for example, 2 x 6:00 + 3 x 4:00 + 4 x 2:00 + 6 x 1:00 fast for a global working time of 38:00, recovering 2:00 jogging), and now we have to move to different type of fartlek (10 x 1:00 rec. 1:00 + 10:00 very hard + 10 x 30.0 rec. 30.0 + 6:00 very hard), sometimes using also hills of different length, but always at high intensity. During the last two weeks before WCCCh, my fartlek with all the athletes becomes surprise training, with the athletes running very fast when I press the clacson of the car, but not knowing how long they have to run, and how long they can recover.
The goal of Shaheen is to run well in short cross in World Championships. The same goal is for the Qatari Team, already 2nd last year.
Regarding Kwalia, he developed a good work of long endurance. At the moment, he is yet heavy when has to use agility. We have to start now to work in this direction, after two tests in Caceres last Sunday and in Diekirch next Sunday, that are the only competitions before WCCCh.

About Sergey Lebid, his normal long run is at a pace of 3:45 per km, with only last 15 min faster. Regarding intervals on track, he usually goes for short repetitions (from 200 to 400m) at good speed (28 / 62) for many times, with very short recovery. What he never did before our collaboration was the so called "Italian Medio", that is a long continuous run from 6 to 15 km at a pace of 95% of PB in 10000m. In the case of Lebid (that has a 28:08 not "real", because can run in 27:20 when in shape)a "Medio" can be, for example, 12 km at 3:00 / 3:03 pace. We have to consider that Sergey uses to compete frequently, almost every week, and the competitions are his "Medio" training. When instead we are during the track season, and Sergey goes only for few competitions, he needs to put in his training long intervals (from 2000m to 1000m) that never used before. He started to use these distances in St. Moritz, training with the Kenyan Mark Bett, a my athlete having 12:55 and 27:02 of PB. After using this type of training, Lebid was able to beat all the National Records from 3000 to 10000m, being very competitive in meetings like Monaco and Berlin.
When he is at home in November - December (before European Championships), he uses a lot of hills and long run on very hilly courses. He is very strong in his muscles, but is not able to stay with the leaders if the beginning of the race is very fast. I think that this problem is due to a lack of long-fast run, and is at the same time physiological and psychological problem.
For increasing his kick, one of the workouts that he prefers is 400 fast (61) / 200 recovery in 45 / 300 fast (45) / 200 recovery in 45 / 200 fast (27) / 200 recovery in 45 / 100 sprinting (1600m in 4:40), that he repeats 5 times with 4/5 minutes recovery.
Speaking instead about Shaheen, we must not forget that are speaking of an athlete able running in 7:53 steeple, and probably under 12:40 in 5k. If you think that he has the ability to run for 5k at 2:32 pace, and for 10k at 2:40, you understand that 3:20 is 25% slower of the 10000m pace (16.0 every 100m compared with 20.0), and this is not so hard. If we want to follow the same proportion, for a runner of 28:20 the same intensity is running at (17.0 + 4.25 = 21.25) 3:32.5, and for one of 30:00 is running at 3:45. Another thing : don't make the mistake to think that the altitude can penalize too much the pace in the case of a Kenyan living at high altitude. The difference for an athlete like Stephen or John Korir or Moses Mosop, that live normally at 2400m, in case of long run, may be of 5% compared with the same training at sea-level (3:20 in Iten = 3:10 at sea level). The best Kenyan runners in 10000m, if living at 2400 / 2700m, have difference between their PB in Nairobi and their PB at sea-level, not too big : John Korir 27:44 - 26:52 = 52.0 (5.2 per km), Paul Kosgei 27:44 - 27:21 = 23.0 (2.3 per km), Wilberforce Talel 27:46 - 27:30 = 16.0 (1.6 per km). Their parameters are not the same of European and American runners.

Let me give my opinion, as this is my last reply for some day, because tomorrow I'll go to Kenya again till WCCCh.
I think that the genetical difference is not so important to justify so big differencies. I don't look at African of todays, but at white runners of 20 years ago. During the European Championships of Prague (1978), the EUROPEAN NUMBER 9 (and all were really European, not Maroccan or Algerian with French team) ran 27:41 : NUMBER 9 IN A EUROPEAN RACE. In 2004, the European n. 10 in the seasonal list (after a full year) ran 28:25.
In the junior Italian Team 1982, we had 5 athletes under 14:00 : Mei 13:45, Carenza 13:45, Panetta 13:46, Nicosia 13:51 and Gozzano 13:58. In 2004, the 2nd Italian Junior ran 14:40, almost 1 min slower than 22 years before.
So, what happened ? Simply, our way of life now is completely different. When we speak about "quality of life", we speak about some machine working for us, and the task of a man is only more to press a bottom. THE MODERN TREND IS TO CANCEL EVERY TYPE OF PHYSICAL FATIGUE. With this type of mentality, we cannot have young athletes prepared physically and mentally for an activity where FATIGUE IS THE BASE OF EVERY THING.
I followed Salvatore Antibo in the period 1988-1992, being Italian responsible of 5000/10000m together his coach Gaspare Polizzi. I'm sure that the Antibo 1990 could very easy be the first runner under 27:00 in 10.000, if some other runner could run so fast. When he was 2nd in Seoul OG in 27:23, his final training in Sestriere (2050m of altitude) was 4 times 2000m (rec. 3:00) in 5:45 plus 1 x 1000m in 2:37. In 1990, the same training was 4 x 2000 in 5:28 (difference of 7.5 per km) plus 1 x 1000 in 2:31. So, it's very reasonable to think that his value at the moment was under 27:00, and, being able to finish last lap under 55.0, THE

ANTIBO 90 COULD WIN A MEDAL ALSO IN OG 2004. The same for Panetta 1987 : he won World Championships in 3000 SC leading the race from the start, in 8:08 without pushing in the last furlong having more than 30m of gap, 3 days after winning silver medal in 10000m back Kipkoech.
The problem is that now in Europe there is not Antibo and there is not Panetta, there is not Coe, Cram, Ovett, there is not Lopes and Mamede, there is not Abascal and Gonzalez, there is not Garderud (8:08 in 1976), Malinowski, Baumgartl, in Switzerland there is not Deleze and Ryffel, and the level of European Athletic is now very low in middle and long run (except Marathon). And in US, where are Ryun, Wohlhuter, Spivey, Salazar, Nenow, Shorter, Bill Rodgers and a lot of other runners ?
If in 1982 you had 200 runners under 2:20, and 20 years later only 20, is because african runners are too strong or because our society is no more able to produce runners, because there is no more interest in this type of activity?
Don't forget that performances in athletics are a product of social interests. Do you know some white boxeur at the moment in top specialists, after Rocky Marciano, Rocky Graziano, Gene Fullmer and others ? How many years are that no white men agree to catch some kick on the face ?
So, the situation is very clear : if African have interest in running, involving the 50% of young people, and Western People has no interest, involving 0,0005 % of young people, of course the winners are Africans.
In swimming, do you think that there are no African swimmers because of genetical reasons, or because they don't have pools for training ?
In 1960-80, physiology tried to explain that the qualities of a sprinter and/or of a jumper were at the top when the age was 20-24, after had to decrease. This looking at some statistic valueting the age of finalists in OG. But, when athletics became professional, the average of the age of sprinters became 10 years older. At 30 year of age an athlete is yet young, and we have a lot of top runners around 35 years old (Gail Devers, Merlene Ottey, Drummond, the last Michael Johnson, Carl Lewis winning OG at 35, Christie, Allen Johnson and many others). So, the most important input is the social input.
The only way for having again some white at the top is to change again the costumes of our society. But I think that in the future is easier that African change : in the big town nobody runs, and also there the interest in running decreases every year. Kenya, Uganda, Tanzania and Ethiopia recruit their runners from the Mountain areas, and is now more difficult also in those Countries to find good runners, motivated for their instinct and not only looking for the opportunity to earn good money.

Your training is interesting, but practically is very hard to do. A 2:51 average for 14 km with variations can be like a 2:45/2:47 even pace, that means the World Record of 15 km (27:30 + 13:45 = 41:15). So, in theory is a good idea, but you must reduce a little the speed of the km of recovering (that's not recovery, but support of the final speed at fast pace).
In any case, I appreciate the attempt to use your fantasy for building some workout, according the phylosophy of the improvement of Power-Endurance, that is the key of modern training.
It's always very important to use the brain for building something of personal, in full agreement with a correct system of training. We must remember that the athletes are not machines with the same attitudes, and that is possible to have same results from very different athletes that for that reason need different kinds of training. This is also the reason because I don't agree to speak about percentages of aerobic / anaerobic in any type of event. This is an exercitation of phylosophy that nothing has to share with practice.
The big problem, in this type of workout, is that an athlete has no time to do all the training, because he needs a long period of different training for fully recovering so tough kind of training. This is also the reason because I never had an athlete able to finish my type of training, lasting about 6 month. We must always think that we have to respect the will of the athletes to compete : athletics is also to compete, not only to train. When an athlete becomes an animal for training, instead that an animal for competing, is mentally finished and no more able to reach good results.

Now I am in Italy, arrived last Friday for 5 Mulini. Today I was in San Vittore Olona, where Stephen Cherono won the race falling down before the last lap, when already had about 80m of gap on Boniface Kiprop. The course was dry and flat, so the conditions were good for Shaheen, that doesn't like mud. This one was the last test before World Cross Country Championships, also if I have the idea to put him in long cross in Nairobi next Saturday for the last test of long endurance (but it depends on his recovery in the next days).

Regarding Sergey, he doesn't run any indoor this year. Last year he wanted to run indoors, but I didn't agree, so I refused to make programs for a strategy that I could not agree. After the bad past season, Sergey came back to the old system : cross season finding the top shape for European Ch. in December, and then trying to maintain the same level for January and the beginning of February. Today Sergey won in Caceres in Spain, where second was Sultan Zaman, my Qatari athlete that is growing very well in the training camp in Iten, Kenya. For him this was the first competition of the year, he will run yet next Sunday in Luxemburg or Belgium, then he will come back to Iten where we stay with all Qatar team till 15th of March. Today, n. 4 was James Kwalia, also him in Iten. From the same group, regarding ladies, today I had in Caceres the Ugandian Dorcus Inzikuru, winner, and in 5 Mulini Rita Jeptoo (3rd on Saturday in European Cup and 3rd again today) and Florence Barsosio (only n. 11), in Italy for running next Sunday in Italian Club Championships.
Sergey will run yet next week in Italian Club Championships, then goes back to Ukraine for preparing World Cross Country Ch. (12 km). He has the goal to increase his endurance at high intensity, because is very fast in the final if the race doesn't start very fast, but finds some difficulty in following the pace if the speed at the beginning is very high. For reaching this goal, he has to develop his power-endurance using long intervals at high speed, or long fartlek (for example : 2 times 6:00 + 2 times 5:00 + 2 times 4:00 + 2 times 3:00 + 6 times 1:00 very fast, recovery 3:00 moderate pace and 1:00 between the minutes fast). Sergey normally runs a lot of km not fast, going for short distances on track. This is a system that doesn't allow to increase the specific endurance too much : we need to use long and fast distances for increasing this quality. That's the reason because he is very good when the course is muddy. The mud reduces the opportunity to run fast, and always is an advantage for athletes not very strong in long endurance at high speed. This happened in Oostend 2001, when Sergey was 2nd with a lot of mud, but for being competitive in dry conditions (like probably this year) he needs more specific endurance, his very good strength endurance is not enough.
Regarding Boniface Kiprop, he now goes home for preparing long run in WCCCh, and from 15th of February has to chose between Iten and Nakuru where preparing the race. In Iten I have the other Ugandian athlete (his old brother Martin Toroitich that yesterday won National Championships, and Wilson Busienei that is very strong on track), with also Dorcus Inzikuru that will run short race at WCCCh. Boniface competed every week, and now needs a period of hard training for reaching a better shape.
Regarding the fact that many athletes train 3 times a day, I want to explain to European and American runners that really their sessions are 2, with a third very early in the morning but also very slow. I told that with Shaheen we tried to use 2 sessions of good quality very close in the same morning, but I preferred to change after 40 days because it was very difficult to recover, and the general volume had to decrease for permitting this type of strategy. My plan for Shaheen during the last month is to go to 3 times a day for the first 5 days of the week, then only one session on Saturday and full rest on Sunday. This is the same type of training that he used during the last month before the World Record of steeple last year. But, for being able to work so hard for 3 weeks, he needs to be at 80% of the shape without pushing too much in the 3 previous months of training.
Regarding Nicholas Kemboi, he is in training from the beginning of January, but yet far from a good shape. In any case, is now motivated, and I think that can run well from the next month of May.
At the moment, inside my Kenyan group, the faster is Moses Mosop, that didn't want to run WCCCh but, after winning last week very well in Portugal, changed idea (also for my pressure) and tries to qualify for World Cross, being probably dry (he's not good when is muddy). Instead, John Korir had a lot of problems, and is not in good condition. He can qualify in any case for Kenyan team, but has to solve an ulcer that disturbs him very much when has to push for long time. Anyway, from next week the training becomes harder and more specific.

It's of sure accettable to put sprints after a workout, but my advice is not to use this system like normal system of training. I prefer to put sprints uphill after long run (after aerobic training, not involving too much fast fibres) also if some time I put sets of very short sprints (for example, 6 x 60m uphill) between one interval and another, when I go for long intervals (4 x 3000m + 1 x 1000m with 6 x 60m sprints among each one). Anyway, everything is possible. The most important thing is to think that is important what you do, not what you don't do. So, respecting a good balance in training, you can use the biggest percentage of training in aerobic way, because the intensity is lower and you don't need long recovery, and, when intensity is higher, you can reduce the number of workouts. Training is like a pyramid, the big base is aerobic, then, increasing the speed, you go for less time and have to use with less frequency this type of workouts. Different is the

situation of short sprints, that, not provoking high lactate, have only a neuromuscolar mean. You can go often for this type of workout, without any problem and without any interference with other type of training. This is the main type of training for the biomechanical system of an athlete, but don't forget that the endurance (specific or general) is something regarding the bioenergetical and enzymatic system.

Probably my reply is not fully connected with your question, but I want to try to explain why, training specific endurance, you can improve in your speed. The first question is : what the speed is ? Is your max speed (for example, 11.8 for 100m for Gebre) or is "relative max speed" connected with your event ?
Personally I think that speed is every thing faster of 10% of the event speed. So, if you are a runner of 800m in 1:44, your race speed is 13.0 every 100m. 10% of 13.0 is 1.3, 13.0 - 1.3 = 11.7. When you run in 11.7 you go for SPEED, and the fact that you can run 10.5 or 11.0 is not important, because important is to run at 12.5 speed longer possible. Of course, the same speed has different goals in relation with the distance. 11.7 for 100m is speed, 11.7 x 3 = 35.1 for 300m is speed endurance, 11.7 x 4 = 46.8 for 400m is the BASIC SPEED for the final distance.
For a Marathon runner of 2:06 (3:00 per km), 110% of the speed is 2:42 per km. Of sure Baldini never run faster than 2:42, but about 3:00 he tries to develop his SPECIFIC ENDURANCE. For example, starting with 4 x 5000m in 15:00 rec. 1000m in 3:30, the final workout can be 4 x 5000 always in 15:00, but recovering 1000m in 3:10, eventually adding a final 2000m in 5:45. THIS IS A DEVELOPMENT OF SPECIFIC ENDURANCE.
Now, I want to give an example.
You run 10 times 400m in 60.0, recovering 1 minute, reaching a final level of lactate of 12 mmol.
After a mix of different type of training, 2 months later, you become able to run not 10 times, but 12 times in 60.0, reaching the same level of lactate (12 mmol). Do you think that, when you run 12 times, after 10 times the level of lactate is already 12 mmol ? Of course not, may be about 10. But, if you want to go for ONLY 10 TIMES at a final level of 12 mmol, you can run no more in 60.0, but in 59 or less. SO, TRAINING SPECIFIC ENDURANCE AT A SPEED THAT IS NOT MAXIMAL, YOU CAN IMPROVE YOUR RELATIVE SPEED.
But, if you are able running 1500m (that is a short distance) in 3:43 when you run 10 times in 60.0, you become able running in 3:40 or less when you are able running in 59. AND THIS WITHOUT USING MAX SPEED.
Of course, you must use continuous run at high intensity for 20-30 min, and also short sprints for training your neuromuscolar system (the answer of BONO is very correct).
This is the reason because, in the modern training, long run at low intensity is useless, and max lactic speed also. And this is the reason because I use so much hills of different length at max intensity.

I'm sorry if cannot follow the posts very well, but here in Iten it's very difficult to use internet. Sometime we have to await one hour without connecting, some other time the connection finishes suddenly when we are reading something or writing our e-mails.
Anyway, this night (here are 11:30 p.m.) I am lucky, as internet is working.
I saw some post, and I'm surprised to see that we are at 1040 posts. I'm also proud that this record is from a post with my name, but every record is done for being beated, so.....
I read also some post regarding Brad Hudson and Ritz. Please, don't think that my connection with Brad can mean that I prepare some program for his athletes. If they run well, is because Brad is a very good coach, with the will to grow and the curiosity to experiment something new. We are in touch thru e-mail, and my contribute is to tell him my experiences and the reasons of these, also the mistakes that I did and that I don't want some other can repeat.
He asked me what I think about hills, altitude and workouts for strength endurance, and I shared with him my experiences. That's all.
About the percentage of aerobic/anaerobic in some events of athletics (like 800m or 1500m) I think that it's not possible to give numbers. An example : do you think that the percentage of aerobic and anaerobic can be the same for 1:42.88 of Steve Cram or for 1:42.something (at the moment I don't remember very well) of Patrick Konchellah or 1:43.11 of Gregory Konchellah ? Or do you think that the 1:43.88 of Said Aouita and Donato Sabia are the same ?
You can use very different percentage (from 30 to 70) of both aerobic and anaerobic energy, depending on

the type of fibres and your training. Also in Marathon we know, today, that the best runners can use a percentage of ANAEROBIC energy that some year ago was supposed to be useless, if not damageous, working like a "turbo", depoending on the ability in using a part of the lactate for new energy. So, I think that to talk too much about numbers is an exercise of phylosophy, nothing to do with the ability to coach different athletes.
If you allow me to do some comment, I think that American coaches are too much scientific, and sometime lose the ability to watch inside the reality. Personally, I never met a scientist that was also good coach, because they want to use the athlete in function of training, not training in function of the athletes. Don't forget that the most important problem to solve is to make easy what is difficult, and for this goal we need to be very simple, natural in our approach, bringing our athletes to train more without too much pressure. That's the reason because too much hard training is a mistake : because athletics become a continuous examination, no more a pleasure. You can train hard preserving the ability of enjoying your training, instead too many times athletes think that training is a "must", and lose their nervous energies in fighting in training. Under this point of view, we have very much to learn from African runners. When we are able to learn from them, we can teach them something that they don't know. From this type of mixture we can build top results : scientific knowledge applied to natural attitude and capacity of preserving nervous energies.

am in Iten, and here internet works very bad and is very slow. Now are 10.40 pm, and I read some post after 4 days. Regarding the length of the ramps, I want to remind that the effect is to recruit the highest possible number of fibers in muscles interested in the action. So, is not important to use longer distances, because the goal is not to make high quantity of lactate, but is a neuromuscolar effect. Ramps can have a very hard gradient (may be about 30%), and can last about 6-8 sec. The difference between ramps and hills is in the gradient, and of course in their duration. With ramps I want to develop explosive strength, basic strength for every type of exercise. I have not care about recovery time : when I feel ok, I go again. Instead, with sprints climbing, I use a gradient between 10 and 15%. I cannot speak of real run on the ramp, because the speed is very slow : ramps can replace weight training. Instead, sprints climbing are sprint at max intensity, and can go till 100m, depending on the gradient. They can last about 12-15 sec. In this case, the athlete can produce a good levbel of lactate, but the quantity in his muscles is little, and he can remove it in short time. I can vary length and gradient according what I need. Remember that in any type of training we can use different executions, that can become less or more interesting depending of the needs of every athlete.
Regarding the other question : I don't know Hadd, and I never heard to speak of him before this post. Of sure, he is not Italian. I don't want to comment what other coaches wrote, I write what I normally do, and the reason for doing. But, you know, there are many system valid for coaching an athlete, and not an ABSOLUTE TRUTH.

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I never had an athlete with peroblems after sprinting on hills. What is really dangerous is running downhill, because you cannot use elastic reactivity and is very difficult to have soft impacts.
Regarding Nicholas, his basic work was based on long run till 1 hr 30:00 and short sprint climbing. During that period Nicholas ran 2 HM, the first one in 62:07 in february or beginning of march, the second in Lisbon where he finished in 60:31. But after this, he went for easy training for two months, and in Hengelo (1st of June) he ran only 28:19, lapped by Bekele, Gebre and Sihine. So, when he went to Switzerland, I needed to rebuild also general endurance, also if I spent for this goal only one month. This period was of sure very important, but for running 26:30 the specific period was most fundamental.

But is not possible to say that one period is more important than another. Without basic period, is not possible to go for specific period of quality. But without specific period is not possible to reach your best. It's like building a house : is more important the first floor or the tenth floor in a house of 15 floors ? One cannot exist without the other. So, if is not possible to develop intensity without basic training, is not possible to develop performances without intensity.

I'm in Iten from one week, organizing the camp for Qatar athletes, Kenyan and Ugandian. The situation here is OK, weather is good, and the group is growing with the most part of the athletes coming from January. I have a lot of young runners that want to join the group, that really is not a group, but many groups.
For example, this morning we went for a session of mixed fartlek of 6/5/4/3/2/1 minute with 1 min recovery, repeated twice, with the group of Stephen Cherono (Shaheen), with his brother Abraham that wants to move to 10000m leaving steeple (now is very strong), with new guys like Daniel Kemboi and Kipsemboi Katui, with Mbarak Shami former Richard Yatich, with Qatari Sultan Zaman (8th in short cross 2004) and Khamis Saifeldin (finalist in Athens in steeple). Training strats at 5:50, yesterday it rained and many roads are full of water.
In the afternoon I went in Kamariny stadium for a session of technique and exercises with James Kwalia and his group (Nicholas Kemboi is at home for holidays).
From January, all the Ugandian team arrives : Boniface Kiprop, Wilson Busienei, Martin Toroitich, Malinga, Dorcus Inzikuru and other.
So, when there is some new info, I can give you it. With Shaheen, for erxample, I'm trying to use two sessions very close during the morning (6 o'clock and 10 o'clock), resting in the afternoon. This is an attempt to use SPECIAL BLOCKS also daily, with two workouts with short recovery, followed by a longer recovery. After one month I can understand if this system can work or not.
Greetings to all the posters

During the track period I never use a microcycle, because training depends on the frequency of competitions and their position in calendar. For example, we think of a month (like June) where you have to compete in 3 races, 2 very close (1500m on 3rd and 3000m on 6th), and one after 3 weeks (again 1500m on 27th). In this case, my month can be the following :

1st - easy regeneration for 40min + strides (twice)

2nd - 40min easy + strides (once)

3rd - 1500m RACE

4th - 40min easy + strides (once)

5th - 40min easy + strides (once)

6th - 3000m RACE

7th - 1 hr easy (once)

8th - a) 1 hr progressive from moderate to fast
b) 40 min moderate + 10 x 60m sprint uphill

9th - a) 1 hr 10 min with short variations of speed, lasting 30/45 sec., one every 3 min about (at personal sensation, for mechanical reasons)
b) 30 min easy + 20 min hard

10th - a) 5 couples of 2 x 600m rec. 1:30 in 1:32 < 1:27, rec. 4 min between sets (2nd test faster)
b) 1 hr easy regeneration using feet in elastic way

11th - a) 40 min easy + technical exercises (4 times 30.0 skipping fast, 4 x 30m bounding, 4 x 30m heels-to-buttocks in elastic way, 4 times 30.0 skipping with long strides (60cm about)
b) 1 hr easy

12th - a) 40:00 easy + stretching
b) 30:00 easy + 10 x 50m sprint uphill

13th - a) Mixed track : 2000m in 5:20 (rec. 5:00) + 5x200 in 27.0 rec. 1:00 (rec. 5:00) + 1200m in 3:09 (rec. 5:00) + 4 x 300 in 42.0 rec. 1:30 (rec. 5:00) + 800m in 2:02 (rec. 5:00) + 2 x 400 in 57.0 rec. 1:00
b) 40:00 easy vregeneration

14th - 1 hr 20min with 1 hr moderate + 20 min fast

15th - a) 40 min easy
b) 40 min easy

16th - a) Warm-up + 3000m in 8:15 + 2000m in 5:22 rec. 6'
b) Warm-up + 6 x 500m in 1:12 rec. 3/4 min
(This is a SPECIFIC BLOCK, good for increasing Specific Endurance : must be recovered very well)

17th - a) 40 min easy
b) 40 min easy

18th - a) 40 min easy + 2 sets of 5 x 150m very fast climbing, rec. 2 min among tests, 5 min among sets
b) 40 min easy

19th - With rec. 8:00 : 1200m in 3:06 (32 + 32 + 32 + 32 + 32 + 26) + 1000m in 2:32 (31.5 + 31.5 + 31.5 + 31.5 + 26) + 800m in 1:58 (31 + 31 + 31 + 25) + 600m in 1:26 (30.5 + 30.5 + 25) + 400m in 54.5 (30 + 24.5)

20th - a) 40 min easy regeneration
b) 40 min easy regeneration

21st - a) 1 hr 10 min with short variations of speed
b) 40 min easy + strides

22nd - a) 20 min easy + 15 min very hard progressive run
b) 40 min medium pace + 1 x 2000m in 5:15

23rd - a) 1 hr moderate + some exercise (skip, bounding)
b) 40 min + 6 x 50m sprint uphill

24th - a) 40 min easy + 5 times 100m running with very high frequency + 5 times 100m running with very long strides
b) 40 min easy

25th - 40 min easy + strides

26th - 40 min easy + strides

27th - 1500m RACE

This can be, for example, a type of training for an athlete of 1500m already in good shape that wants running near his PB of 3:35.

Look yourself for the distribution of workouts.

Regarding the second question, the answer is NO. A specialist of 1500m doesn't have a MAX LASS, because the race is too short. In this case is important the level of the Threshold (in some case can be about 5mmol). Workouts like 4x2000 or 8x1000 can be able to help the athlete in rising his AnT. Instead, regarding stamina, you need something of higher intensity.

Because you can better understand my idea (for a 3:36 runner, 14.4 every 100m) :

15 x 500m in 1:20 (16.0 every 100m = 88/89% of intensity)
with 1 min recovery : TRAINING FOR AEROBIC POWER (has influence in rising the AnT)

10 x 500m in 1:15 (15.0 every 100m = 96% of intensity)
with 2 min recovery : TRAINING FOR LACTIC ENDURANCE (depending on Aerobic Power)

4 x 500 in 1:10 (14.0 every 100m = 103% of intensity)
with 5 min recovery : TRAINING FOR LACTIC CAPACITY (depending on LACTIC POWER)

2 x 500 in 1:05 (13.0 every 100m = 110% of intensity)
with 12/15 min recovery : TRAINING FOR LACTIC POWER

Trainings for "Stamina" are the last two workouts, in very high lactic area.

Today I have the last opportunity to reply, because tomorrow I go to Qatar then to Kenya. I'm happy about yesterday, because for the first time I had athletes winning in the same day 2 different marathons, men and women (Milano with Cheribo 2:08:38 and Jeptoo 2:28:11, both PB, and Firenze with Kiprotich Korir 2:11:43 and Florence Barsosio 2:29:11, after 2 years without competing for a baby), but also busy, because also the athletes will leave with me tomorrow during the night. I had in my house the two ladies for the last 5 weeks (Florence went home one week after running Dublin in 2:33:58 on 25th of October, then came back), while the guys were in Kapsabet for following specific programs with Amos Korir, one of the best Kenyan coaches working with me.
Coming to the questions, these are my replies :

1) The modern system of preparation is based on the specific intensity. You must use many years for reaching your best, but during all this time you must increase the intensity of EASY TRAINING. For example, if during the first year of career we have an athlete able to run 14:30 at 17 (2:54 pace), during winter he can use, for improving his Endurance, workouts for Aerobic Power like 5 x 2000 in 6:10 (3:05 pace = 93% of intensity). During the next season, supposing that he can now run 14:10 (2:50 pace), he can use 5 x 2000 in 5:50 (2:55 pace = 97% of intensity), and intervals at 90% of the race intensity have no meaning, except for increasing volume (for example, 5 x 3000 in 9:15 if the athlete can move to longer distances. I think that also for you is normal to think of 5 x 2000 in 5:50 rec. 3:00 for an athlete running 14:10. So, tell me what is the difference, in percentage, with a top runner running 13:00 when he goes for a continuous run at 95% of the pace. I want to remind that the jump of quality in long distances happened with Ron Clarke, that was the first athlete running "long and fast" in training, near the race speed (for example, 15 km in 45:00, that 40 years ago was absolutely out of the mind of coaches and athletes). I remember that in France, for example, Michel Jazy (3:36 and 13:24) every year started his training running till 3 hours at 4:30 / 5:00 per km, following Van Aaken system (the coach was Frassinelli), for improving his capillarity. Really, he could not improve his capillarity, simply he lost time. This is a type of training good for the first 2-4 years of activity, not for a top runner. His problem is to improve his enzymatic system, and this is possible only putting in crisis the system going at high (but not max) intensity.
So, if for example for a runner able running 28:00 that never ran longer than 1 hr can be SPECIFIC FOR THE MARATHON running 2 hr 20 at 3:45 pace (because in any case this training is something new that can stimulate his body in direction of improving Resistance), for a marathoner "full time" already expert a long at 80/85% of Marathon Pace is only general training (also if are 3 hours) and the effect on performance is practically nothing. We cannot use intensity too low in relation with the race pace, and expecially we cannot leave this type of stimuli for long time (all winter, for example). Of course, this type of work is planned not frequently, and the intensity is not like during the competition season. In other terms, if you want running 800m in 1:43 during summer, also if you don't prepare indoor season, in every moment you must be able to run 1:47, not 1:50. In this case, the percentage of your intensity is (1:47 - 1:43 = 4.0 = 96% of intensity). The same for longer distances.

2) About Shaheen and Kwalia (but also Abdullah Hassan, previously Chepkurui), you don't find this type of work in my programs because are programs of two years ago, but, because training is a continue development of system according to development of the athlete, now they use circuits and higher intensity already during winter. Every 2 years, I take a long period (may be 4-5 months) during which the athletes train only for increasing volume and efficiency, without nothing specific. This is the case of next year 2006, when the Qatari have like main goal Asian Games in Doha in December.

3) Regarding relations among AnT and OBLA, OBLA depends on the level of AnT, but for 5-7 years you can only work for increasing AnT, not yet for creating specific MAX LASS. When you become able to run at 9 mmol for 6-7 min, for example, your AnT is not different from the Threshold that you had the previous year, when you were not able to LAST long time at the same intensity. You become more resistant at the same speed not because are able to increase your Threshold, but because are more able to use a part of lactate like energy. SO, THIS IS A PROBLEM OF SHUTTLE LACTATE THRU THE FIBERS, that is a different problem from that of lactate elimination. See what I sent to Michael Bautista, regarding tests with top athletes (it was the theme of the Congress of European Coaches in Abano Terme from 4 to 7th of November, where Peter Thompson and myself were the speakers).

4) Regarding the importance of changing every year the training, increasing the percentage of SPECIAL TRAINING and reducing the percentage of GENERAL TRAINING, this is one of the principles of methodology, irrimessible if you want to develop yourself lasting long time. You cannot build a house without basis. I always make the example of a house : Gebre can have a skyscraper of 60 floors, a normal athlete a house of 10 flours and and Amateur of 3 floors, but in any case that spend 10 years for building everything, increasing both volume and intensity during this period. After this, your aerobic attitude is consolidated, and you have no more margin in that direction. You must think of SPECIFICITY of training, reducing the basic training because, with or without, nothing change in your body. You already have your house, with the top. What you can do is to make the house more comfortable, inside, for living better. So, there is a specific goal for every age and for every period of your career. When you look for training of a champion, you look for a LAST PART OF A PROJECT, that is not yet your situation. YOU MUST LOOK FOR THE ROAD that the champion ran during his career, not for the final step.

5) You must know very well that, without long basic preparation (in your life) you cannot become a top level runner. If you think to have mental and physical attitude for running fast, you must have patience, but cannot skip the most important step for a runner : BUILDING YOUR BODY AND YOUR MIND FOR IMPORTANT GOALS. Why, when you are not treained, you run (for example) 33:00 for 10 km, and after 6 months of training you run 30:30 ? Because training changes your physiology, and you are no more the same person. But is also important to know that you cannot build everything. Like in a car, the final quality depends on the quality of material, not only on the time used for making the car. So, you can dream, but step by step : a good advice is to dream what you can reach, not what is beyond your possibility.

6) Regarding how many times I use some circuit : I already explained that, in my training, programs are something personal. So, I use the elements of preparation in different percentage, according to what I think that the athlete needs. If I have an athlete needing more strength, I use more times ; if I have an athlete needing more agility, I use another type of circuit. Everything I show you is an example, because you can work on this with your fantasy, making a cloth on the measure of your athletes. I cannot give a schedule good for everybody, because this is possible if we suppose that everybody has same attitudes and same motivation. We know that this is not the reality. I USE WHAT I NEED BETTER AT THE MOMENT.

7) Regarding Komen, two answers : 1) Don't think that his real date of birth is 1976 : Komen is 3 years older, like many Kenyans. 2) He was one of the greatest talent all time, but his activity during 1996-1998 was devastating : I think that he tried to beat a World Record more than 20-25 times in 3 years ! So, the main problem for a talented athlete is HOW IS POSSIBLE TO LAST AT TOP LEVEL LONG TIME. This depends on training and on technical choices, that are the base for the motivation. When you are burnt, also your motivations finish, and you become a normal runner, using your name and what you did in the past for earning some money, without big future goals.

I'm yet in Italy till tomorrow (I leave at 12.00 from Milano). So, I can answer to your question.
I don't think that we must use a big number of specific speed training. I am used to analyze training during a full period, taking from my sensations (regarding ALL TRAINING, not only specific workouts) the idea of the shape of the athlete, and what he needs. For example, if you run 50 miles per week, using like max mileage in one session 10 miles at medium but not very hard pace, and are able to run on track 10 x 1000m in 3:00 recovering 200m in 1:30, may be that you run 10000m in 30:30. Next year, you increase the volume to 80 miles per week, you run a longer run of 15 miles, and run 10 miles a little bit faster, but you go on track using the same speed and recovery of before (10 x 1000m in 3:00). After this, you are able running in 29:30. And still, the SPECIFIC SPEED ENDURANCE TRAINING WAS THE SAME ! What did happen ? That your specific work of quality had the opportunity to be recovered better and to become more stimulating for your physiology.
This is the reason because I NEVER USE TWO TIMES THE SAME TRAINING, also if I use trainings having the same goal.
I want to avoid that the athlete becomes slave on his times and his tests, putting every time in relations his current training with the past training, and drawing a conclusion that is wrong BECAUSE HE DOESN'T ANALYZE THE GLOBAL ASPECT OF TRAINING.
I prefer to work around the speed of the race : a mix of speed and endurance (the first one little faster than the race speed, the second one little slower, but in any case very close the speed of the event) normally can produce best results, preparing some SPECIFIC WORKOUT that I use with attention and thriftiness.
Personally, I don't use more workouts like 10 x 400 in 60.0 recovery 1 min for a specialist of 1500m (that I use instead normally with runners of 5000m). In my personal experience, I remember that was able running 10 x 200m in 27.0 (with the last in 24.9) recovering 1 min, and at that time my personal best in 800m was 1:59.8 ! And Giorgio Gandini, coach of Francesco Panetta, was able running in 1957 in training 30 x 400 in 64 rec. 60m jogging in 40.0, with PB of 3:47 / 14:42 / 31:34 (the Italian National Record for Women is of my athlete Maura Viceconte, 31:05.54, that has 4:26 in 1500m) !
So, clearly, is not this type of work that can produce the best performance. You become specialized in recovering very quickly, but during the race this is not possible. So, is better to try to increase the Threshold and the Speed, going for workouts of Lactic Endurance only few times, at high intensity.

Now I'm in my Hotel in Doha, fortunately with Internet, awaiting one day before meeting the President of Qatari Federation. I'll stay here for about 10 days, after I'll go to Iten, starting to follow the group with Shaheen, Hassan (Albert Chepkurui), Kwalia, Nicholas Kemboi, Mosop, Paul Kosgei, John Korir, the Ugandians, and many others (also a group of ladies for cross and marathon).
I cannot post at the moment the full training of Shaheen and Kemboi last year, because these training are in a computer that a thief robbed me on 31st of January at Nairobi Airport, and from that time I never had time to write from my diaries the training of the athletes (I used only those periods useful for some Congress, when I had to speak about specific training). Anyway, I have everything, and during the period in Kenya I think to order this material in a correct way.
From when I am in Kenya, I write in my computer the full training of my athletes, day by day. I think that can be possible to post, every 2 weeks, the real training that they used, with some comment regarding the reasons and the problems that we can meet.
Regarding the "intermittent training", this is a type of training derived from Interval-training, that in any case can be interpretated in many different ways.
The first using this type of training in systematic way was Gilles Cometti, a French coach specialized in the preparation of soccer players. They used to increase the specific speed endurance for a player, thru a big number of repetitions on very short distance (for example, 10 x 20-30m at max speed, controlling time with photocells, running ahead and coming back with a very little interval, about 10 seconds). But, for example, the type of training that I saw many years ago used by American 400m runners (may be one full lap with 10 steps in max acceleration followed by 10 steps without pushing, called, if I remember, "killer" with another word), is a type of intermittent training too.
This type of training is very much used by swimmers. They swim fast for 50m (in a long pool), then use only the time for turning (may be 5-10 sec.), and go again, for many times.

My friend Bonifazi, a physiologist that is also a researcher with Italian swimmers, told me that, using this training, you can keep the level of cortisol very low, having the same result of continue activity (without rest) under the point of view of the "shuttle" of lactate.
The classic type of intermittent that we use, for example, with some specialist of 800m (like Italian Andrea Longo) is 4 sets of 10x150m in 21.0 recovery 30.0, with 5/6 min among sets. The speed (about 14.0 every 100m) is about 92/93 % of the speed of the race (1:44.0 is 13.0 every 100m, so 1 sec is 7% of the time), and this fact is very good under biomechanical point of view. If you take blood at the end of every set, for checking the lactate level, you can see a very low level (may be about 7-9 mmol), SO THIS TRAINING HAS AN AEROBIC EFFECT. With Longo, for example, if we go for 6 km at 3:20 (with very low relation under biomechanical point of view : 20.0 is a speed of 18 km/h, 13.0 of 27.7, so the percentage is 65%), at the end we find a higher level of lactate (may be 12-13 mmol).
With long runners, I use also some time this training. For example, during winter, I use normal workouts of long intervals for increasing Aerobic Power (5-6 x 2000m in 5:40 for an athlete able running, in full season, 5 x 2000m in 5:20), with 3 > 2 min recovery, alternating with sessions where I use "long intermittent training", where I already use the speed of summer with short recoveries (for example, 5 sets of 5 x 400m in 63/64 with 20.0 of rest between tests, and 4/5 min between sets). In this way, I always have in my programs the "specific speed" that I want to train. In other terms, I use the final volume of training at lower percentage (may be 92 > 95 %, in the example of 2000m, 5:40 is 94% of 5:20 like intensity), and the final intensity that I want to build with many intervals, reducing step by step the duration of recovery.
The difference among the modern system and the old, is that now we BUILD the final performance, using the SPEED like key of the training.
For example, If I want to build a performance of 27:00 for 10 km (2:42 per km), having time I use essentially two type of Special Training :

1) Long continue run on track, at two different speeds : RACE SPEED (16.2 every 100m) and AEROBIC THRESHOLD SPEED, 20% slower (19.5 every 100m). The developing system is the following, using always 14 km :

a) 10 x 400m at 16.2 (64.8) alternated with 1000m in 3:15 (19.5 pace) for a final time of 4:19.8 every 1400m = 43:18

b) 10 x 500m at 16.2 (1:21.0) alternated with 900m in 2:55.5 (19.5 pace) for 4:16.5 every 1400m = 42:45.0

c) 10 x 600m at 16.2 (1:37.2) alternated with 800m in 2:36 for 4:13.2 every 1400m = 42:12

d) 10 x 700m at 16.2 (1:53.4) alternated with 700m in 2:16.5 for 4:09.9 = 41:39

e) 10 x 800m in 2:09.6 alternated with 600m in 1:57 for 4:06.6 = 41:06

Normally I never was able to continue (the final goal is 10x1000 in 2:42 rec. 400m in 1:18 = 14 km in 40:00), because there are competitions and we need to arrange some workout, but the idea of develop is that one.

2) Intervals at 2% of speed higher (in this case, about 15.8 every 100m = 63.2 or 1:19.0 or 1:34.8 or 2:06.4 or 2:38.0) till 1000m, starting from 12 km with more tests, then reducing number of tests, increasing their length, using a modulation in recovery times :

a) 6 sets of 5 x 400m in 63.2 rec. 30.0 among tests, 4:00 among sets

b) 6 sets of 4 x 500m in 1:19.0 rec. 30.0 among tests, 4:00 among sets

c) 6 sets of 4 x 500m in 1:19 in couples (rec. 15.0 among the first 2, 45.0 among the 2nd and the 3rd, 15.0 among the last 2)

d) 6 sets of 2 x 1000m in 2:38, rec. 1 min among tests, 4 min among sets

e) 6 sets of 2 x 1000m in 2:38, rec. 1 min among tests, 3 min among sets

f) 6 sets of 2 x 1000m in 2:38, rec. 30 sec among tests, 4 min among sets

At this point, you can go for 6 x 2000 in 5:20 rec. 3 min, or for something mix like couples of 1500m in 4:00 and 500m in 1:18 rec. 1 min and 4 min among sets. You can use your fantasy, but the phylosophy is the same : to keep the same volume, increasing the length of SOME TEST (not all), reducing recovery among SOME TEST (npt all), using more modulation regarding recovery times and length of tests.

How you can see, starting from a mathematical point of view (at vthe end of every thing, if you want to run in 27:00 the speed is always 16.2 every 100m, you can be kenyan or american, tall or small, black or white, fast or resistant, but the final speed is OBJECTIVE, not SUBJECTIVE), you can develop your SPECIFIC ENDURANCE building your specific attitude to last at that speed. In this way, you can build your specific OBLA or MAX LASS.

Of course, this is possible always when the athletes are already READY in their body after many years of training, at the beginning BASIC and FUNDAMENTAL, before becoming so specific. That's the reason because, without patience, is not possible to build a top runner in short time.

Regarding the work that I described for John Korir, the difference between sprints uphill and "ramps" (or steep slope) is in the gradient (about 10% for sprints and circuits, and 30% or more for ramps). Also the mean is different : we use circuits for STRENGTH ENDURANCE, sprints (not during circuits, but alone) for RECRUITMENT OF THE HIGHER NUMBER OF FIBERS, ramps FOR FUNDAMENTAL STRENGTH FOR A RUNNER. In this case, ramps replace training of weights. When you go for a training having like goal the improvement of STRENGTH (not Strength Endurance) or SPEED, you must use very high intensity (near the max) and recovery is very important, because you must be fresh. Your goal, in fact, is not ENDURANCE, but the ability to work at max intensity for your muscles. So, recovery after every ramp (but also after every sprint climbing) must be FULL (may be also 2min or more, depending from the length of the sprint, that in any case never is longer than 100m, normally 80m).

How many hard workouts in a week ? I use normally 2 very hard workouts, not in the same direction. But I want to remind that there are many levels of intensity, not only very hard workouts and regeneration. An example of weekly programme for an athlete of 13:30 (may be European) during the Fundamental Period :

MON
a) 1 hr progressive running from 3:45 to 3:25 per km
b) 40:00 easy + 10 x 80m sprint uphill

TUE
a) 30:00 easy + 8:00 / 6:00 / 4:00 / 2:00 / 1:00 fast recovery 2:00 moderate (about 4:00 per km)
b) 40:00 easy + exercises (skip, bounding, running in frequency, running with long strides)

WED
a) 1:20:00 at 3:45 pace
b) 30:00 easy + 4-6 km continuosly running uphill (80% intensity)

THU
a) 50:00 easy regeneration
b) 50:00 easy regeneration + stretching

FRI
a) 30:00 warm-up + 4-6 circuits lasting 4-5 min (uphill)
b) 1:00:00 easy regeneration

SAT
a) 1 hr with short variations of speed
b) 40 min easy

SUN
30:00 easy + 12 km at 3:05 pace

In a normal periodization, we have a FUNDAMENTAL PERIOD lasting (for an athlete not having cross as specific target) from November to March (all winter). We can use NOV as General or Introductive Period. In the first 4 weeks of training we can use a weekly microcycle, having the goal to increase your basic qualities, for being ready to start the real training in December. This is a very simple microcycle for introductive period :

MON

a) 1 hr moderate run (for ex., for an athlete able running 3:50 / 14:30 / 30:00, about 6:00 a mile). Every week you can add 10min (1h10 - 1h20 - 1h30)

b) Warm-up + 4 easy circuits (only 300m climbing, with 4x60m sprint at 80% connected by 10 squat-jumps, 30m skipping, 30m bounding). Every week you can add 10m to the sprints (70m - 80m - 90m)

TUE

a) 30 min easy + 5 times 4 min fast (at 3:00 pace per km) rec. 3 min easy (at 4:00 pace). Every week add 1 min to the tests, with same recovery of 3 min easy (5 x 5:00 - 5 x 6:00 - 5 x 7:00)

b) 40 min easy regeneration

WED

a) 30 min easy + technical exercises :
* 5 times 30 sec. skipping fast with short strides (going to 6 - 7 - 8 times during the following weeks)
* 5 times 30m heels-to-buttocks (6-7-8 times foll. weeks)
* 5 times 50m running with very high knees (6-7-8 times)
* 5 times 30m bounding (6-7-8 times)

b) 50 min easy regeneration

THU

a) 30 min easy + 4 km continuous running uphill (gradient about 5%). Every week add 1 km at the same pace for 5/10km runners, try running faster 5 sec per km if miler.

b) 1 hr with short variations of speed. Short variations last from 30.0 to 45.0, trying to use a good frequency. Recovery is about 2:00 / 2:30, running at a basic speed of 4:00 / 3:50 per km. Normally I use one variations inside every 3 min of run.

FRI

a) 1 hr 20 at 3:45 per km (every week running faster of 5.0 per km : 3:40 - 3:35 - 3:30)

b) 40 min easy regeneration + technical exercises like Wed

SAT

a) 30 min easy + 8 km (if miler) or 12 km (if long runner) fast, increasing speed every 4 km (miler : 13:00 at 3:15 + 12:40 at 3:10) (long runner : 13:20 + 13:00 + 12:40). Every week you must run 2.5 sec. faster per km : 12:50+12:30 - 12:40+12:20 - 12:30+12:10 = 24:40 average 3:05 at the end of the period. The same for 12 km.

b) 40 in easy regeneration

SUN

Long run at personal sensation, adding 5 min every week :
from 1h20 to 1h40 for milers, from 1h30 to 2h (adding in this case 10 min every week) for 5/10 km runners.

This is an example of training for INTRODUCTIVE PERIOD, where we have 2 workouts of technical exercises, 1 circuit climbing, 1 long fartlek, 1 continuous run uphill, 1 fast progressive long run, 1 short fartlek, and a good general volume. At the end of the period, the athlete can run, per week, from 170 to 200 km (110 to 125 miles)

Steeper hills, you are wrong speaking about high intensity for a training like this. For running 13:30 you must train, and this one is an easy training for the first month of preparation. I want remind that every workout can be HARD or MODERATE or EASY depending on the interpretation. For example, like already some else replied you, the training of Monday is not at Threshold speed. If a runner of 13:30 runs at Threshold about 3:40 > 3:25, in that moment is not able running in 15:00. You must calculate the intensity in relation to your performance : the "internal load" is completely different, and you must know that, when 3 athletes carry out the same training, the only sure thing is that THEY HAD A DIFFERENT TRAINING. Training is not what you do, but the value and the cost of the answer from your body. So, you must learn that, also for the same athlete, the same training, depending on personal conditions (also psychological) and external conditions (for example, weather, cold, hot, etc..) can appear very different. 10x1000 in 3:00 during a nice day, carried out when you are fresh at the beginning of a training period, can have the same effect of 10x1000 in 3:10/3:15 when temperature is very cold and you are tired because of previous training or personal problems. So, you must to learn to distinguish "internal load", that is the ANSWER or your body to the proposal of training, and "external load", that is the proposal.
About the short sprints uphill, I can assure you that is a type of training that doesn't leave any tiredness in your legs, expecially when you are used to do it. Of course, you must use full recovery (about 1:30 / 2 min), not running coming back and going up again after 30 sec. It's not a circuit, their goal is different (recruitment of the higher number of fibers). About every type of fartlek (long like on Tuesday, or short) is the type of interpretation that can make a work hard or moderate. During this period, every thing is moderate. For example, if on Tuesday I want to replace long fartlek (that I prefer because you must follow your sensation at the beginning of training, not needing to follow specific speed like when you are preparing an important competition) and I put 3000 / 2 x 2000 / 3 x 1000m, for the above athlete of 13:30 times can be 9:00 - 5:50 - 2:50, that are very slow. So, this training is not hard, because only the tests are at Threshold level.
Regarding the short variations of speed, in my programmes this is a workout of easy regeneration, not a fartlek for "building" something. The mean is to train, running easy, the ability to change length of strides and frequency, using 30/45 seconds of easy effort for mechanical reasons. Don't think that always "Fartlek" must be something very hard : originally the word meant "Game of running", and was at free interpretation of every runner.
Personally, I prefer not to use track, because european and american runners lost the "instinct" of running, changing something that is natural in mathematic : running at Threshold with cardio, going on track for controlling always the speed, measuring every thing for being sure. Running is something else, and for running fast you must follow your sensations, and for following you must know what your sensations mean. Task of a coach is to follow the athletes for teaching them to "hear" and to "feel" themselves, and to arrange their training with big goals, leaving a good space to personal interpretations. For example, if I decided an easy day of regeneration after a hard training for a my athlete, but there is a group that after 30 min starts running very fast, and my athlete runs fast with other athletes because for him this is funny and stimulating, for me is OK : but I have to arrange the next workout. Of course, I cannot permit that an athlete goes for 5

times in hard work, but this is my task : to give an address to his talent, not to humiliate his talent in a jail that makes him to lose the ability to enjoy running.
Last thing : about "ramps" that sometimes I use (see John Korir training), these NEVER ARE LONGER THAN 40m (many times only 20m), depending on the gradient. In any case, are very different from sprints uphill (about 10%), because you must use more STRENGTH in less dynamic way (so, while I use sprints during all the season, I finish with ramps after the first 2 months of preparation).
Why are better climbing than on flat ? Because climbing you can use and develop a higher percentage of STRENGTH : a normal runner cannot recruit a high percentage of fibers carrying out flat sprints, because the limits for his speed are mechanical. Climbing, you have less risk (it's very easy to have some injury sprinting on flat, practically impossible sprinting climbing) and can use more fibers. Of course, sprint is sprint, and the interpreation is AT MAX SPEED. Long and complete recovery in this case, forget to be long runners : one thing is to prepare your ENDURANCE (that is an enzymatic problem), another thing to prepare your muscles to work (that is a mechanical problem). Is completely useless to have a car with a very powerful engine, having a lot of problems in the wheels.

Dear Tim, you have reason when you speak about 4 x 2000m. Only now (because when I write I have no time to read again what I wrote) I can realize that I read 2-3% FASTER, while is 2-3% SLOWER (faster are more short intervals). Of course, if you try to do 4x2000 at 2% faster of your PB in 5000m, you are not able (but nobody is able). Good analysis by you.
Instead, regarding 4-6 km continuous run at 95-98% (of course, 95% is for 6 km, 98% for 4 km) I confirm what I wrote. In your example, 95% is a pace of (2:36 = 156 sec, 5% of the pace is 7.8 sec per km = 2:43.8) and for 6 km this is a final time of 16:22.8 passing at 5 km in 13:39, very normal for an athlete able running in 13:00. The same case for 4 km at 98% (that is 2:39.2 per km) : 4 km in 10:36.8 are absolutely normal for a top athlete, going at 3000m in 7:57.6.
Our goal is not to improve AnT, but to create a special MAX LASS (or OBLA, if you prefer) that is the key of the specific endurance at high intensity.
You must not make the mistake to think of training for a young athlete like a miniaturization of the training of a top runner. The system for building your specific ability is something that has to change every year. So, with the beginner you must have a very big percentage of GENERAL TRAINING, using long aerobic run at low intensity but also technical exercises, exercises for cohordination, for elasticity, for reactivity. You must not only build the engine, but also TEACH TO THE ATHLETE ALL TECHNICAL THINGS THAT HE NEEDS FOR RUNNING FAST IN THE FUTURE. So, you must be a teacher more than a coach.
Going on in your career, the percentage of General Training decreases, and the area of Specific increases. So, your example regarding Kwalia, for example, isn't pertinent, because you are speaking of an athlete coming from 15 years of training, and our beginners are really beginners. So, they have to do WHAT KENYANS DID FOR 10 OR MORE YEARS, without knowing the final effect, like normal activity connected with their type of life (also playing, for example, for 1 hr running and pushing a big tyre of a tractor when they are 8 years old), and that in our society nobody does (but in the past, at the time of Prefontaine and Lindgren, for example, I think that also in US was the same). So, what is able to do in training a 20 years old like Kwalia or Kipchoge, may be possible for an American or a European when is 28 years old, after having built the base that he doesn't have.
One thing is sure : if you want running fast in competition, you must run fast in training. The problem is WHEN and HOW, not IF. A workouts like running 6 km at 95% of your pace in 5 km is something that you can carry out once every two weeks, for example. I never used microcycles, thinking that in the modern methodology for top runners this is not possible. For example, during the last 41 days before winning World Championships 99 in Seville in 3000 SC, Christopher Koskei (elder brother of Shaheen) had to compete 14 times in races of steeple (one every 3 days !). So, I had to manage this situation, and at the end he won, reaching his top shape for the Championships. How is possible to think of a microcycle ? May be that we use something similar during the Fundamental period, but in any case we have so many type of workouts to do that is not possible to put every thing in a short period. Another reason is that I prefer to adjust training following the effects of the previous training. My schedules are outlines lastings normally 2 months, but at the end of the period the training effectively carried out is like the program only for 50%, the other 50% is the product of a change that I do looking at the effects in short time of training already made.
If you want to follow a training like what (not only me) we use with top runners with a young runner, you make

a big mistake. Remember always the 3 most important points of a good training : CONTINUITY, GRADUALNESS and MODULATION. You must have patience in building the body and the mind of an athlete, doing some hard training only when is possible.
Last thing regarding who tried to use the scheme for circuits that I wrote. Not refuse circuits, but try to adapt them to your current situation. Where I write 200m running go, for example, for 50m, where I put 40m bounding go for 20m only, reduce the length, don't use too high intensity, and START TO PREPARE YOUR BODY FOR BECOMING ABLE TO DO THIS WORK NEXT YEAR. Remember that the most important part of training is TRAINING FOR BEING ABLE TO TRAIN : 80-85% of your training has to have this goal, 15-20% the goal to prepare the competition.

I'm yet in Italy for some day for Milano and Firenze marathon, before going to Qatar on 1st (I had to change program for some small problem there) and to Kenya on 10th.
So, I try to reply briefly, where is possible.

1 - Sagittal splits are knee-flexes with the front leg flexed, and the rear leg extended. You must jump, on the place, changing the legs jumping.

2 - Hops with blocked knees are jumps on the place using only feet, with legs completely extended.

3 - Squat jumps are jumps high pushing from a position of 90 degrees (half squat) between thigh and shinbone. You must jump higher possible. Your knees cannot go to your chest, but legs must remain extended

Regarding circuits for Strength Endurance, we must use 3 different types of these, according to the periods.

An example : a very simple circuit with 10 squat jumps, 30m bounding, 30m skipping, connected by 60m sprinting uphill, for a total of (4x60 sprinting + 2x30 with ex) 300m climbing.

A) FUNDAMENTAL PERIOD : I have the goal to increase the general volume of the work. The intensity of both sprints and exercises can be 70-80%. I use them for about 40-50 days, once every week, increasing number of repetitions.

B) SPECIAL PERIOD : I have the goal to increase the STRENGTH, maintaining the same volume of before and the same intensity of sprints, but trying to use max. intensity during exercises (for example, during squat jumps I try to jump higher possible). In this period, sprints at 75% are the support for the improvement of STRENGTH. After every circuit the athlete is very tired, because the max. intensity in STRENGTH is very hard nervously. So, you need longer recovery between every circuit. In this type of circuit, focus is on EXERCISES. If I want to develop this type of training, I have to reduce the recovery time.

C) SPECIFIC PERIOD (or COMPETITION PERIOD) : I have the goal to increase my specific characteristic, that is RUNNING. So, I go to the sprints at my max. speed, connecting them with exercises at 75% of intensity. In this type of circuit, focus is on SPRINTS. As my goal is to train the body in recruiting the most part of fibres in a muscle, while full of lactate, I NEED TO CARRY OUT THE CIRCUIT USING MY MAX INTENSITY IN RUNNING, with long recovery. If I want to develop this type of training, I have to prolong the circuit for increasing SPECIFIC STRENGTH ENDURANCE, not to increase the number of circuits or to reduce recovery time.

I come back later.

I'm at home, after the Congress, and I will stay in Italy till 20th of November, before going to Qatar and then to Kenya. Next winter, I'll spend many months in Kenya (normally in Iten) for coaching a big group of Qatari-Kenyan, Kenyan and Ugandian athletes. If some one want to join the group, is possible to do at a very low cost, so, living some time with these athletes, you can cancel many urban legends regarding Kenyan

athletes (a lot of time I can read something regarding African runners that makes me laugh for its commonplace, written by people that never went there but think to know everything....).
I have only some minute for partially replying to Racer1.

1.
In the programs regarding Shaheen and others that I spent before, you cannot find workouts regarding Circuits because, at that time, the athletes did'nt use this type of training. This fact is not due to a different interpretation of training, but simply means that a coach must be on the place for teaching different ways of execution, and different goals, seeking and finding correct opportunities given from the habitat for building circuits using WHAT YOU HAVE. This year, after becoming responsible of Qatar for middle distances, I could stay in Kenya longer time, and for the first time I had the opportunity to check different places, good for this type of training. So, in the current program they have circuits, in the programs of the past not yet, but only sprints uphill or easy technical exercises that I had the opportunity to teach during European stages.

2.
These are examples of this type of training, because during a Congress I cannot show ALL THE TRAINING OF AN ATHLETE, but not because is a secret, but because we have no time, and must cut what is not interesting and doesn't concern the theme. So, don't think that, during 4 months, an athlete can go ONLY 4 TIMES for a well specified type of training : this means that this training IS CASUAL, instead TRAINING MUST BE SOMETHING FOLLOWED A REASON. Under this point of view, never you have to froget CONTINUITY and GRADUALITY, to big principles of Training.

3.
Someone wrote that has not at his disposal a type of hill like I described. In this case, he can change the circuit, using exercises joined with run at different speed. You must have fantasy, not becoming prisoners of schemes that cannot use. If I want to live in a house costing 2 millions dollars, and I don't have this money, the other option is to live in an apartment that I rent, smaller, with a rent of 400 dollars per month. So, the first thing that is important to understand is that AT THE BASE OF A PERFORMANCE THERE IS THE TALENT, so the most important part of training are MAMA and PAPA. When someone asks me "how much is the percentage of intervent of a coach with a top runner", I answer "0 or 100%. Zero because, without talent, the best coach cannot change a donkey in a horse. 100, because, without a coach, may be that the talented athlete could remain a talented man, never becoming an athlete".

4.
Regarding the last week of Kwalia before Bruxelles, I confirm that the last 6 days were dedicated to very easy run. This is another legend that we have to discredit : that REST can be damageous. In the MODULATION that I use, there are LONG PERIODS OF VERY HIGH LOAD WITHOUT COMPETING (or using competitions like training), and periods of competitions (may be 3-4 races in a very short time) during which training is pratically almost nothing. There are weeks of 40 km, due to travels, problems of accomodations, tiredness due to a lot of reasons. So, with Kenyan runners, I teached them NOT TO PAY ATTENTION TO THEIR TIREDNESS DURING TRAINING AT HOME, because in this way is possible to develop GENERAL and then SPECIFIC VOLUME, but i learnt from them that, during competition periods, YOU MUST RESEARCH THE FULL AVAILABILITY OF ENERGIES, because if your physical and nervous energies are not at the top, you cannot have a top performance. So, when a Kenyan is tired, his training is to sleep (may be also one day). When a European, or an American, is tired, the first thing is to go running, because training is not considered something in order to improve, but something like a drug, irremissible also in very bad general conditions.

5.
At the end, this is the reason because is not correct to say TRAIN HARD, WIN EASY. You must TRAIN WELL. Train well is, of course, train hard. But in managing training, you must manage different situations having the final goal to improve in your ability in performance and during a big competition. THE REST is what allows a correct MODULATION, and MODULATION is what allows the SUPERCOMPENSATION. Without mixing these elements, is not possible to have a GOOD TRAINING, but only a hard training, not able to produce the best possible results.

Sorry, Antonio, but in some case I can't agree with you. I also think that some athlete is under drug, but I never was surprised by the Chineses record.
One question : if a Country like Norway, where the number of female runners was so little than normally it was not possible to organize races on track for WOMEN ONLY (a lot of time Ingrid Kristiansen or Grete Waitz competed in mixed races) was able to produce the 2 best runners in a period of 10 years, why do you think that a Country like China, where there were one million women running with an organized plan (the organization started in 1985 having the final goal to have OG for 2000), under a very great motivation lasting 6-8 years, couldn't produce SOME runner able to beat the World Record ?
I want to remember the history of the group. In China, almost 1 million young girls went to run with the dream of OG. It was not a goal of money, but ideological. The best runners wanted to be the CHINESE HEROES, going on the red book of Mao on his side. Their training was unbelievable under the point of view of the continuity and the motivation, using 3 sessions per days for many years.
After 3 years, about 300 selected runners were collected under the guide of Ma Juren in Liaoning area. He worked for other 3 years with the leading group, reducing it at less than 50 units, and AMONG THEM THERE WERE NOT WANG JUNXIA. In 1991, Ma Juren knew that in the area there was a girl beating the boys in the mixed races on road, and went to speak with her. She went for a test, running 1500m in 4:17.18. After 8 month Junxia Wang became World Junior Champion in 10000m, running 32:29.90 and 8:55.50 in 3000m. IN ONE YEAR, SHE WAS ABLE RUNNING 3:51.92 / 8:06.11 / 29:31.78 (with the second half in 14:26) and a full Marathon in 2:24:07, when she was only 20y old.
Regarding the race of the record, I remember that the second back her was Zhong Huandi, well known, running 30:13.37, while the 3rd was Zhang Lirong in 31:09.25.
This demontrates that there was not a strategy of drug, because of sure the 3rd Chinese doesn't need to use doping for running 31:09, selected among 300 runners selected among 1 million running people. I had another idea : Wang Junxia was one example of runner at the chromosomal border between the sexes (also looking at her morphology is possible to see a lot of male particulars), and really nobody wanted to analyse this aspect.
What happened after 1993 ? China didn't have OG, and every project for the sport was abandoned. Not only, but the Liaoning region asked for the 80% of all the money that the group could earn, while the previous agreement between Ma Juren and the Region was that all the money won by the group had to be used for building a big Training Center for may be 400 athletes. This change of goal meant a lack of respect for the athletes, that felt them deceived. So, the motivation in all the athletes, that before were pushed by a big ideological strength, suddenly finished, beacuse they understood to have wasted many years of their life for a wrong ideal.
We are western people, and cannot understand how much strong can be an ideological motivation for asian people. You can remember the example of Tsuburaya, best Japanese Marathon runner that, non winning Tokyo OG, killed himself making harakiri.
So, don't be surprised if women so motivated, selected in a field of 1 million runners, could have SOME athlete beating every World Record : Chinese women were like Kenyan and Ethiopian men, statistic isn't an opinion.
Regarding other point that I read from when I came back from Qatar (yesterday night), I can explain that I left Lebid because I didn't agree his choice of running last year W indoor Ch instead WCCCh. Now, I have very friendly relations with Sergey, and when he needs some advice, I give him, BUT NO MORE A FULL PROGRAMME, because I cannot do a programme not following my goals.
At least, my opinion about the improvement in speed and the improvement in every type of performance. Of course, is obvious that IF WE ARE ABLE RUNNING FASTER EVERYWHERE, WE CAN IMPROVE. But I think that there is too much phylosophy in all this talking, and little substance. If I give to an athlete a programme with 40 km a day, 10 x 1000m in 2:28 rec. 1:00 and 15 x 400 in 52.0 rec. 1:30 on track, and I find some one able to do it, of sure I can have an athlete able running 3:22 / 12:20 and 25:30. The problem is : HOW CAN I BRING AN ATHLETE TO IMPROVE IN TRAINING ? Because it obvious that an athlete improving in training can improve his performance, but is not so obvious what road he has to follow for improving in training. So, please, stop thinking of training like something of mathematical. The real problem in training is the ability in growing every where, preserving a good balance between all what you need. So, training is more an art than a science. How many times we had the some athlete running better when his

tests were less significant, because not under psychological pressure ? Do you know, for example, that before OG of Athens, the best tests of Baldini were in 1996, after winning WHMCh, and in spite of this, he dropped out New York Marathon after 27 km because nervously empty ? So, what is the correct system for measuring the level of your nervous tank ? Believe me, a lot of people are able to build a mathematical sample, but few are able to change the mind of the athletes. This is the more difficult thing.

I sent to Michael Bautista the last 4 months of training of Dorcus Inzikuru, that won in Athens 3000 SC running in 9:15.04 very easy. I told him that, after WCh, I will send to letsrun the training of Shaheen and Jamal Salem (pay attention to this name).
Regarding my previews before, I knew that Shaheen could run under 8:00, but I don't want to speake to much before the race, because for running 100% you must find some condition that not always we can find, so your performance doesn't depend only on you, and I prefer to have a low profile.
In this case, everything worked very well : we found a wonderful weather, a good rabbit,and the only problem was when Salem fell down after 1990m, and Shaheen had to jump him soon after overtaking the barrier.
I can give you the splits of the races in Athens :

1500m W (splits of Jamal) : 63.6 - 2:08.8 (65.2) - 3:14.8 (66.0) + 44.3

1500m M (splits of Bashir) : 55.87 - 1:55.24 (59.37) -
2:53.71 (58.47) + 39.8

(splits of Ivan Heshko) : 56.60 - 1:55.80 (59.20) -
2:54.06 (58.26) + 39.2

3000 SC W (split of Dorcus) for 400m (I was on the track moving 4m ahead every lap) :
1:08.44 - 2:24.55 (1:16.11) - 3:40.33 (1:15.78) -
4:56.51 (1:16.18) - 6:13.44 (1:16.93) - 7:26.31 (1:12.87) - 8:39.80 (1:13.49) + 35.24

3000 SC M (split of Shaheen)
59.67 - 2:04.67 (1:05.00) - 3:09.48 (1:04.81) -
4:14.43 (1:04.95) - 5:16.90 (1:02.47) - 6:21.25 (1:04.35) - 7:26.33 (1:05.08) + 30.95

Nothing to share between the two Njenga. The marathon runner lives in Japan, and of sure is not a journalist.
Peter Njenga stays in Kenya, and of sure is not a runner.
I will reply to the Kenyan journalists (Omulo Okoth and Peter Njenga) directly when I go to Kenya, because in a normal Country is not accettable that is possible to write a lot of lies without having any responsability.
Anyway, don't care about these stupidities.
Regarding Mottram, I like this guy very much, but, my personal opinion, he doesn't have many chances for a medal in Helsinki. The field in 5000m can be one of the most qualified in all the events.
Regarding El Guerrouj, I have the idea that he doesn't compete in this distance : being back with his preparation, or doesn't run, or runs 1500m (without Bernard Lagat is possible to win also if is only at 85% of his shape).
I think that Bekele, at the end of every thing, goes to double. But, without El Guerrouj, the race can be different.
Kipchoge doesn't permit that the race is too much tactical. I think that, in any case, the winner must run very close 12:50, and I don't know if Mottram is able to do this.
I don't believe very much in Gebremariam, but I think that Sihine can come back at high level.
And don't forget Augustine Choge, very fast in the final, and may be Chebii (if is able to qualify : probably, for trials, Isaac Songok goes for 5k, and his final is very fast).

I have the opportunity to explain how much I'm disgusted for the way of making journalism of Omolu Okoth. This man is accustomed to write big lies, quoting nameless sources, hoping in this way to avoid his personal responsabilities.
In his articles (because are 2, not only one, in the second there are a lot of names of athletes) Okoth never wrote my name, but it's very clear that an Italian Coach training Qatar in Iten can be only Renato Canova.
For pointing how much disinformed and in bad faith he is, you can only imagine if somebody can recruit athletes for both Qatar and Bahrain together. Is like thinking that Kenya and Ethiopia can have a common plan for recruiting and development athletes, as these two Countries are, in the sport, like dog and cat.
Okoth invented that I set up an agency for "siphoning" athletes : it's so ridicolous that I have nothing to explain.
In the other article, he puts on the same plan Qatari athletes (for some of them I was really the referement) and Bahrain athletes that I never heard about in my life.
And, because every one can know the truth, athletes like Richard Yatich (Mubarak Shami) and Daniel Kemboi (Essa Ismail Rashed) changed with a letter of "No objection" from Kenyan Federation already one year ago, because they had PB of 28:17 and 14:05 not interesting Kenya.
And, about James Kwalia and Nicholas Kemboi, this was a negotiation carried out by the President of Olympic Committee of Qatar with some high official of Kenya.
Regarding Jamal Bilal Salem (Kipkemoi Katui), he, already 27 years old, was in the list of the athletes changing in order to have the opportunity to help Shaheen in his training. Last year he ran only two races : 13:19 in 5k, and 8:24 in steeple, in Europe with a ticket paid by Shaheen. Who could have care of a runner with those PB born in 1978 ?
Regarding Thamer Ali Kamal (Thomas Kosgei), he NEVER compited, before going to Qatar, in Kenya, neither in his school.
I don't know all the other athletes of Bahrain, except Abel Cheruiyot (Abdul Yagut) that was my athlete and decided to change in one week in August 2003.
The fact that I recruit athletes "for fee" is something so ridicolous that can seem a joke. On the contrary, I support diretly with my money many athletes ALL KENYAN for helping them in becoming professional runners.
When there is something to justify, Okoth always uses this system. What can he think if I tell that "an unnamed source informed me that a journalist of Athletics writing on East Standard, having the initials O.O., got good money for spoiling the figure of the Italian Coach training in Iten" ? Can he be happy ? I don't make his name, but I think that everyone can be sure that is Omolu Okoth.
In the full article, there are ciphres regarding salaries very wrong, infos regarding prizes completely wrong, names that don't exist (both Qatari and Kenyan). And there are very stupid assertions like "he disdains Kenyans" that are put in evidence as wrong looking at my normal activity.
If my way to disdain Kenyans is to stay with them, to teach what is possible, to have friendships, to become a guide for them, to coach athletes bringing them to win World Titles (like Christopher Koskei in steeple '99, or Robert Kipchumba in Juniors cross 2000 and 10000 on track, or Paul Kosgei in HM 2002 and World Record of 25 km in 2004), not saying always "yes" but some time discussing for improving their ability in planning, I of sure disdain them in all my life. But whom really I disdain are people not honest, inventing false informations for personal goals.
Speaking about something more important and pleasant, this night in Milano Dorcus Inzikuru, Ugandian specialist of steeple, improved the BP of 2000 SC from 6:11.74 to 6:04:46, running alone in front from the first meters.
Her splits :
1:12.2 / 2:25.6 (1:13.4) / 3:39 (1:13.4) / 4:53.8 (1:14.8) - 6:04.46 (1:10.66)
Dorcus is 23 years old, and is daughter of a Pastor. I knew her during a stage of IAAF in Eldoret in 1999, and from that moment she became my athlete, not having any coach in Uganda. In 2000 won World Junior Ch. in 5000m.
She (like the most part of my top runners) lives in my house when we are in Europe for training and competing.
May be because I disdail Africans.....

Dunes, in Australia and US there are many athletes that can be selected, but I spoke about athletes like Lewis, Michael Johnson, Bubka, Isinbayeva, Jonathan Edwards, Bekele, Gebrselassie, etc. I don't think that these Countries ever had MANY of these athletes. I made the example of Ian Thorpe. How many Thorpe does Australia have ?
Don't forget that we are speaking about 3 opportunities. I think that 1 of 3 must be given thru a technical choice, leaving free for trials the other 2.
My case is different, because I decide ALL THE TEAM 3 months before, also because, after the 6-8 bests, in Qatar there is nobody strong, so the gap is very big.
But, looking for example at Ethiopia, NEVER Gebrselassie or Bekele went thru trials, this is completely stupid.
Tell me : after winning during last 4 years 8 titles of Cross short and long, World Championships in 10000, OG in 10000, having beated the WR of 5000 and 10000 and the WR indoor of 5000, do you think intelligent that Bekele has to put himself in competition with the other Ethiopian for finding a place in his team ? Or for him is better to have a precise plan of training, where the focus is the total shape for the main event ?
Believe me, it's not easy to be at top shape for two important event like Trials and WCh in a period of 5-6 weeks, and these athletes need to be already at their top for trials, that sometime are more difficult than WCh.
After trials, don't be surprised that many athletes can go out of shape for the main event.
Another solution can be to use trials for selecting not the final team, but the final rose (for example, 5 athletes). In this case, the final definition can arrive during the last 2 weeks before Championships, looking at the final shape that the athletes can show in their two last competitions, close to the Championships.
In any case, it's possible also to manage technically some difficult situation, if the athletes are intelligent.
For example, before WCh of Seville '99, I had the must to put Christopher Kosgei (elder brother of Shaheen) in 14 competitions of steeple during the last 41 days before the Championships. This was because he had already contracts with the organizers that was not possible to cancel.
In that case, using a big modulation after chosing the level of the competitions, I decided to go only in two meetings with a specific preparation (Paris S. Denis and Zurich), and to use the other meetings like part of training. At the end of all this problematical period, he was the winner of Gold Medal, and was the only Kenyan in doing it....

I loved athletics from when I was 12 years old. At that time, I decided that, grown up, I wanted to become Italian National Coach.
But I never was interested in top results for myself. My motivations are basically two : to investigate what is possible to do with the human body, where for human body I want to mean physiology and psychology, finding the personal key for the best way of improvement (that is different one from another), and to help the athletes in improving their personality and their life.
I believe very much in the role of athletics (and of every type of sport, generally) like education for the life.
My principles are the principles of a teacher, before than a coach. I think that I'm at first an educator, secondly a coach.
This is the reason because I cannot accept in my mind not only any type of doping, but also any type of help from external sides. I think that the greater strength is in the mind, and I work for increasing the self confidence in my athletes.
When you use something that can help you (may be also permitted, but under the psychological point of view the effect is the same), you become "slave" of it, and you think that a part of your strength depends on it.
I don't want this situation. I want that the athletes can be sure about themselves, and when something is going bad, they have to have the ability in analyzing the reasons without finding excuses that are damageous for them.
I try to educate my athletes, expecially African, in a different type of life. I want that my athletes have respect for the other, but also for themselves, not wasting their life. I try to be a guide, because they need, but I'm not sure to be able EVER to do it.
A lot of time I read about athletes prepared in laboratory, considered like machines, where winning is all what they want.
I don't know if I'm perticularly lucky, but I don't recognize anyone of the top runners in this stereotype.
Many of my athletes are among the top in the world (Shaheen in steeple, Paul Kosgei in 25km, Nicholas

Kemboi, Ahmed Hassan, James Kwalia, Jamal Salem, Mark Bett, John Korir, Dorcus Inzikuru, many Marathon runners men and women), and I'm friend of other (like Baldini) that are the greatest in their event. Believe me : all these athletes are COMPLETELY NORMAL GUYS, having a normal life, normal feelings, normal behavior. They live in a normal house, have normal friends and normal families.
If it's true what many people think (that the top level sport is something destroying any moral value, as the only important thing is to win), probably the reason because my athletes are able to win and to last is THEIR NORMALITY.
About training, I never went to some laboratory for controlling my athletes (except blood tests every 1-2 months, because it's very important to know what CAN HAPPEN IN THE CLOSE FUTURE, and from the blood tests you can have a lot of informations). Of course, I went to test them some time, but this was for having datas for scientists and for myself that I needed for explaining what happens inside the body, but NEVER I USED THESE INFOS FOR MY TRAINING. So, I check the results of my training, but don't use them for my program : I modify the program according to what I see every day DURING the training, not according to the datas of the tests.
Here every one speaks about percentage : 85 / 90 % of VO2, etc. But I never used a CARDIO for controlling the heart frequency, for example, BECAUSE THESE DATA CAN CHANGE EVERY TIME AND ARE NOT SIGNIFICANT. I use lactate-tests that can give me NUMBERS confirming what I already know, because it's possible to see every thing during training.
At the end of every thing, I like to coach athletes because I can have with everyone a personal relation.
I like to speak too much (as you had the opportunity to see...), and I feel gratified thru this type of relation.
I cannot be a coach without being also a friend, may be a father or a elder brother (looking at my age).
To coach athletes is not something "dry" and theorical, but is something "alive" and pragmatic.
You must have passion for human people, almost like a missionary. You must have heart. And you must work for the others, not for yourself.

Dune, training depends on the situation of the race. For example, when in the past we went for training in altitude. that normally is dry and more fresh, we had different results competing soon after going down, during the first 48 hours. When the situation of the race was very hot and humid, the athletes competed in bad way. When the competition was in the same conditions of training, we had very good results.
My advice is, in any case :

a) The most part of TRAINING OF QUANTITY must be done when weather is good (may be at 5:00 in the morning or at 9:00 p.m. You cannot use a normal training of volume in very hot conditions, because you have to take care about the recovery after training.

b) If you go for TRAINING OF QUALITY, with high intensity but not very much volume, and short distances (may be no longer than 500m) you can also go when is very hot. In this case, you must have care in opening the recovery times (for ex., when you normally use 3:00, going to 5:00) and using a lot of water for drinking and refreshing, possibly resting where there is shadow.
Training of quality in the same condidtions of the race is good, for having a better adaptation.

c) Generally, you can go for training of speed also when is very hot, not for training of endurance

d) About food and drinking, I advice to use more vegetables for reintegration of vitamins, to drink a lot (ad water is the best thing), to eat using more salt for replacing what you lose in training.

Regarding Marathon, I explained in another new post what I normally use when the race is very hot and humid.

And, regarding the irony of True, I want to say that in this type of situation a Country doesn't need that type of democracy, but needs professionalism.
Of course, I don't decide 3 months before a race who is selected because they are sympatic or pay me, but because I had the opportunity to follow them ALWAYS and they could show me their attitudes, and I could

prepare for them specific training for their goals.
Of course I decide. This is called organization, and there is in any type of Company. Who can decide the strategy of General Motors, for example : the Management Committee (with its branches, technical, echonomical, etc...) or every worker ? Who can decide the policy of a Country : the Parliament or every citizen ?
If an athlete want to reach his best, he has to plan technically his training, not in casual way, but with very precise goals. You cannot suppose that everyone can reach the top, in short time, expecially when already there is able to stay at the top, and we know that he's consistant.
I totally disagree with a system of trials very dry, where there is no technical appreciation for what the athletes were able to show in their career (not years before, but only during the last period).
You have to decide what you want :
1- I don't want to have any problem in my choices, because there are problems with lawyers, unhappy people, media etc. In this case, because I think that NOBODY IS OVER THE PARTS and people is not confident in this, I go for trials. This is the best way for not having problems, but also the worst way for selecting the strongest team possible.
2- I want to put together the strongest team possible. In this case, I preselect athletes that always showed better results than other (for example, who always wins a medal, who has the best 5 performances in a Country, who already was able to be the best in a set of competitions that I named at the beginning of the season for indicating the shape of the athletes, there are many systems), making rules that everybody has to know. So, this is not my decision, but the consequence of a rule. And after, I go for trials for the remaining places (can be 2 for each event, with 1 selected following the other system).

Do you think that, if Ian Thorpe could not compete in Athens in 400m, he had the same opportunities of the other swimmers ?

To recognize same opportunities it means to recognize the value of an athlete, not the value of ONE DAY.

For the title is different : of course, the winner in WCh, OG or US Championships is the best THAT DAY. But, if you are the best ALWAYS and you don't have the opportunity to compete, how is possible that you can win ?

_____>

I'm happy about Nicholas performance, because at the moment he has very little training, due to personal problems (his wife was very sick for long time during winter, and he assisted her in the Hospital without really training) and also to the situation that confused him before changing citizenship. Now, he is officially Qatari, and can run in World Championships. The race in Doha was only a test that I needed for checking his current base. He was with the leading group for 1600m (obviously too fast, you can see the splits that I wrote in another post), and was not able to stay at the same pace after that distance. He ran 5:07.4 at 2000, then 6:14.8 (1:07.4), 7:20.6 (1:05.8) and 30.3 last 200m, showing that he needed to recover after the fast start, but had yet good energies in the final. I think that at the moment, running at even pace of 2:35, he can run 7:45 that is not so bad.
His next race will be 5000m in Hengelo, where his goal is to run in 13:15. I think that in two full months of training with the correct motivation he can repeat this time twice, running about in 26:30 / 26:40 for World Championships. And after, we look at HM Championships...

think that the main reason because Kenya is going to lose its supremacy is a false sense of democracy (the same of US, Australia and of all the Countries using dry trials).

Of course, Countries having a lot of talents have to guarantee opportunities also for newcomers. May be normal that an unknown US sprinter, or an unknown middle distance runner of Kenya, can improve so much in one season that he can have the opportunity to be selected and, why not, to win a medal. See last year Timothy Kiptanui, for example, or this year Daniel Kipchirchir Komen,
But I think that, when you have athletes that always were able to reach top results in top events, you must

guarantee them that they must be sure about their selection. This was the main reason for the change of citizenship of Stephen Cherono : not money, but to be sure that he could run ALWAYS in WCh, Olympics (also if last year he didn't have the release) and every type of competition having a title. Top athletes know very well that, winning these competitions, you can have a lot of money from sponsors, Companies, organizers, IAAF. But you cannot win if you are not there.
When you have Michael Johnson, Bubka, Gebrselassie, Bekele, Shaheen, Maurice Greene of 4 years ago, Carl Lewis, Allen Johnson, Jonathan Edwards, Marion Jones, Paula Radcliffe, it's simply ridicolous to ask them to pass thru trials for qualifying themselves.
The case of Bungei in 2003 was clear : he was the winner of ALL the competitions till Kenyan trials, and during the last 3 years NEVER he lost one race from another Kenyan.
Being sick during the week of Trials, he was cut from WCh.
Do you think that he had the some opportunity of a newcomer ? Can you cancel 3 years of supremacy because you have a small problem for one week (but it's the wrong week) ? This is the first point.
The second point is a technical point.
Kenya is the only Country in the World that doesn-t respect the job of personal coaches and managers. An example : Brother Colm is following from the beginning of their career (I hads only a short period in 2003 with Augustine as coach) talentes like Isaac Songok and Augustine Choge. They were able to improve continuously, becoming the best Kenyans, always selected. The same for Eliud Kipchoge. When they win trials, is because their training is good, and it means that their coach and their manager are working very well for developing those athletes. After this, the Kenyan system is to put all together during the last 5-6 weeks, going to a National coach that nobody knows, that never spoke with the personal coaches, that doesn't know anything about the technical plans of the athletes, and that wants tu use a "plan of group" that is the most ridicolous choice before a top event. So, the normal solution is that the athletes go out of shape.
Kenyan say that they have to work like a team. But what does it means ? What is the team that can face the Ethiopians running 12:57 the last 5 km of 10000m in Paris, when the best PB of kenyan runners is 13:03 / 13:09 / 13:13 ? It's a problem of team, or is it a problem of personal value ?
They are speaking about tacticts, but nobody knows the other runners, because nobody has experience. All the coaches live always in Kenya. So, their tactical proposal are completely out of any reality. In Paris, the tactic of 3000 steeple for Kenyans was "You have to lock Stephen Cherono, then you decide who can win". After this, Ezekiel Kemboi said "we awaited a tactical race, and were surprised for the fast start of Shaheen". So, the tactical choice is for the stronger, not for the weaker : this one has only to follow and to await.
In Kenya, nobody is happy about this situation, but nobody has the balls for clearly speaking.
In Ethiopia the situation is very different. The National coaches are the coaches of the athletes from their beginning, so there is continuity in the training plan. The same is with my Qatari athletes : all them are always with me or with my collaborators, and never change their guide. I decide whom I put in the team, and every one has very precise targets far from the competition.
Till when Kenya doesn't modify this system, guaranteeing the full assistance to the best athletes, they go to lose their chance step by step.
But, for doing this, Kenya Federation must have more respect and knowledge for the coaches, understanding that the technical knowledge is something of important.
And, at the moment, it seems that the Officials think that a good coach is only an optional.

don't use ABSOLUTELY any type of drink that is not water for my athletes, track or marathon is the same.
When I was responsible of Italian Marathon, I and Lucio Gigliotti (that is for me a brother, we were responsible together for 15 years working every day in our National Center) tryed to prepare OG in Atlanta '96 using also Maltodestrine. This happened because the preview for the Olympic Marathon were 30-32 degrees at 95% of humidity. Italian and Spanish (of sure the more advanced schools in marathon) feared that, because of the humidity, after 28-30 km the athletes can be totally dehidrated, and our first aim was to reintegrate the lost salts.
I had some test in training. For example, in Tirrenia in June, at 11:00 a.m (32 degrees, very humid), I controlled the weight of my fenmale athletes : Curatolo 39.3 kg, Viceconte 47.7, Ferrara 42.6. After this, the athletes went for 4 km warm-up, then a test with 2 times 2000m in 7:00 and 6:50 taking blood for the lactate level, then 30 km at 3:35 ov average, then again the test with 2 x 2000m in 7:00 and 6:50 for controlling the difference after and before running 30 km, and at the end 1 x 2000m free (I remember yet times : Curatolo

6:16, Ferrara 6:46, Viceconte 7:02) for investigating how much glycogen they had still in their tank.
The athletes had to drink every 5 km from a bottle with maltodestrine, 2 liters, and at the end we could control how much every athlete drank. When they arrived we controlled their weight again : Curatolo 35.6, Ferrara 39.3, Viceconte 43.8. It means that the athletes lost :
Curatolo 3.7 kg (drinking all the 2 liters), Ferrara 3.3 kg (drinking 1.8 liters) and Viceconte 3.9 kg (drinking 1.2 liters). I always have these datas with me, because I use it in some seminar.
This means that, without drinking, athletes of that weight could lose an average of more than 5 kg, about 10-13% of their weight, during a marathon in those conditions.
The problem was that our training was in Asiago in July, always with fresh temperature. Using maltodestrine every day, sweating very little, they took weight, and their performances were not able to improve.
When we arrived in Atlanta, the day for the Marathon of women was very fresh, and all our scintific approach became a boomerang.
From that experience, I sistematically refuse to use anything with my athletes. But it's very important to teach to the athletes how to drink, and that for them to take more water possible is a must.
I think that nothing like a correct training can change your methabolism, also looking for long run.

Master of obvious, why do you think that is easier running 5k at 95% of PB for a runner of 13:00 than for a runner of 17:00 ?
For a runner of 13:00 (2:36 pk), 100% of time is 15.6 every 100m, and 5% is 0.78, so 95% (in our system) is running at 16.38 each 100m = 2:43.8 pk = 13:39.
For a runner of 17:00 (3:24 pk) is 20.4 every 100m, and 5% is 1.02, so 95% is 3:34.2 pk = 17:51.
Do you really think that a 17:00 runner cannot run, in his training, a 5k in 17:51 ?
If you think this, it's clear that you are not able to increase your Threshold.
But for you what is more important : to increase your Threshold or to improve your PB ?
And, when you become able to run in 16:30 using a combination of training (long run at 80% from 1 hr to 1 hr 20:00, medium run at 90% from 30:00 to 40:00, short fast run at 95% from 15:00 to 20:00, long intervals of 3k - 2k at 100%, medium intervals of 1000m / 800m at 102/104%, short intervals of 600/400m at 105/108%, where those percentages are referred to the 5k time), without controlling every moment your Threshold, do you think that your Threshold is yet the same or that has increased ?
I think that you must become more pragmatic, thinking of the EFFECTS of training, not the PHYLOSOPHY of training.
Don't make difficult what is easy. It's easier improve from 17:00 than from 13:00, if you want. Believe me, for some one running 17:00, to run 16:30 is essentially a problem of quantity and quality of training. For someone running already 13:00, may be his effective limit, if he already trains with high volume and high intensity.

Antonio, I fully agree with you that the same training for two different athletes is really like two different types of training.

Of course, the INTERNAL LOAD, that is the very mean of training, is different, according to the different qualities of each one.

But my example was for explaining that it's not possible to say that is more difficult for a normal runner to improve that for a top runner.

Of course, there are many different situations to consider.

If I have a strong runner, and I see that, with his talent, he can become a real professional runner (to be professional today it means to be able to earn from more than 30.000 USD per year, and for doing this you must be able to run 1:45 or less, 3:33 or less, 13:05 or less, 8:08 in steeple or less, 2:09 in full Marathon or less, if you are Kenyan), I push him to train very hard twice a day, BECAUSE HIS EFFORTS MUST BE PROPORTIONAL TO THE ADVANTAGES THAT HE CAN HAVE.

But, if I see that an athlete has a great passion, but not ABSOLUTE talent for reaching these types of results, I try to teach him that he has to continue running for FUN, but cannot have an unreachable dream that can ruin his future life. You must know exactly where are you living, not sacrifying all your existance for long time for something that you cannot ABSOLUTELY obtain.

I think that this behavior is very honest with everyone.

So, it's clear that I cannot admit someone training 150 miles a week for running 17:00, because the final goal cannot justify this type of choice.

But, if we speak about training, also if everybody has his limitis, believe me, it's not too much difficult to improve till NORMAL AVERAGE LEVEL for everybody having a very normal level of talent. These levels (1:55.0 - 4:00.0 / 4:20.0 - 8:50.0 / 9:35.0 - 15:50.0 - 33:00 / 1:12.0 HM - 2:30 / 2:32 Mar) are possible for each normal person. Everything depends on which level of interest you have.

I spoke with Kada, the coach of El Guerrouj from his beginning, soon after the victory in Athens (1500m). Nothing changed in his training, but something in his tactical behavior, and his psychological approach to the competition.
For 9 years (1995-2004) the only tactic of El Guerrouj was to have very strong pacers, to follow them till 1200m at a pace too fast for every other runner, and to fight against time with 30m of gap, not against other competitors.
This made him unable to be ready in the only situation that he had to face against another athlete (the Olympic Final in Sydney). Hicham was not in top shape, having at that time some physical problem, but my opinion is that in any case he could have strength enough for winning the race. The fact is that he was not used to control the tensions of a fight shoulder to shoulder, and in this case he became too anxious and confused.
My opinion was that Hicham started to win Athens when he lost from Lagat in Zurich.
His season was a disaster : very bad race in Rome (n. 8, if I remember well), a duel with Isaac Songok in Lausanne with a contested result (victory with 1/100, but I'm not sure that he was the real winner), a good "solo" in Heusden, and the defeat by Lagat after a wonderful head-to-head lasting the all final furlong.
These events teached him to fight with other athletes, not only with himself.
I remember very well Ostrava 2003, when Stephen Cherono beated him during his first attempt in 5000m.
I told to Stephen, before the race : "Hicham is already in good shape, because one week ago won in Turin running 7:30 with 3:49 + 3:41, practically alone in the last 1500m. So, I think that he can try to beat the World Record, because the requested split at 3000m is 7:37. But I'm sure that, at that time, he thinks to be alone. So, he must not to be alone, but you must to stay with him. If you are able to be with him till 4k, he is no more sure about himself, reducing his pace. If you have yet some energy, try to overtake him only for 100m, after this stay back him, and we see what can happen".
When Stephen, 700m to go, overtook Hicham, he was very much confused, and was not able to maintain the same speed.
In all his career, Hicham thought to be not very fast in a short sprint, and always preferred to have a very strong progression during last 500m. But, if he was not able to have a break of 20-30m, in this case could become the best rabbit for the other runners.
After winning 1500m, he was really very much more relaxed, and for the first time in his life decided, in 5000m, to follow during the last lap instead of to attack.
So, he discovered to be able to finish in 12.0 last 100m, faster than every other runner (like it's logical, being the World Record Holder of 1500m).
This can show how much a different psychological approach can influence the tactical behavior.
After winning 1500m, Hicham was another athlete, and this happened only few days after the first event.

I'm now in Kenya (Iten) for following my group, and read the last posts (it's clear that the goal is to reach 2000 posts, but after we can stop this thread...).
My athletes now are recovering from the tough training for WCCCh. Now I have some athlete competing in

Gulf Championships in Bahrain, but are not big races. One of them is Nicholas Kemboi, that is the last athlete gone to Qatar (and now Qatar doesn't accepr more new stranger athletes, because there is the queue from African Countries...). Last year, Nicholas was very much disturbed from this situation. He at first wanted to go to Bahrain, then, when saw that there they wanted to change his date of birth, refused, like James Kwalia, After this he spoke with Qatar, but the Country didn't do anything because there was the negotiation regarding Shaheen for OG. So, Nicholas tried to go in Kenyan team starting his preparation only at the end of May, and this was not enough. Personally, I think that the great talent of Nicholas is demonstrated more from the time of last year (27:17 with only two months of training) that from the 26:30 of 2003. You must know that, on the road, at the end of 2002, in Trento, there was a race where Bekele beated Nicholas for 20 cm, running 27:47 (both). And you must also know that the second 13:42 was under very heavy training, because of sure I don't go for any tapering when competitions are not important. Nicholas went for a very tough training (12 x 1000m with the average of 2:44, but the n. 6 and the n. 12 in 2:36, in Davos, with 1:30 recovery) only 3 days before the race. So, don't think that a top athlete has to prepare every race like a big race. Another example is Christopher Koskei, that in 1999 ran 14 competitions of 3000 steeple in the last 41 days before the Final of WCh, where he won. Among these competitions, I chose only 2 meetings (St. Denis and Zurich) for running fast, the other were like workouts, with hard training very close the races.
Regarding the athletes of today, we will go in Doha with Shaheen trying to increase the World Best in 2000 steeple (may be 5:13) on 13th of May. There I put always Jamal, Kwalia, Nicholas and the young Rashed in 3000m, everyone at 75% of the best shape. But, in any case, the season is very long, and the type of training that we use at the moment is general, for increasing strength endurance and general resistance.

I'll just post it here for everyone:

PROGRAM FOR STEPHEN CHERONO (From 31st of March, 4 weeks)

Morning
Afternoon

Mon
1 hr 10 min fartlek with 10 x 2 min fast / 1 min moderate
50 min easy

Tue
45 min
45 min

Wed
45 min
45 min + 10 x 1 min very fast uphill (rec. 3’)

Thu
45 min
1 hr 20 min progressive (3’50” > 3’10”)

Fri
20 min warm – up - (Track) :
4 sets (recovery 5 min) of 600 / 500 / 400 / 300m recovery 2 min between every test in :
1'34" – 1'16" – 60" – 43"
40 min easy

Sat
45 min easy
1 hr easy

Sun
Rest

Mon
50 min easy
40 min easy + 20 times 100m climbing sprinting at max. speed (recovery 3 min)

Tue
1 hr moderate
40 min progressive (from 3'40" > 3'20")

Wed
1 hr moderate
45 min easy

Thu
20' warm-up - (Track) :
3 times 2000m alternating 1 lap fast (62" / 63") and 1 lap medium (75") (example :
63" / 75" / 63" / 75" / 62" = 5'38")
recovery 5 min
45 min easy

Fri
50 min easy
50 min easy + diagonals

Sat
1 hr 10 min with short variations (10 x 1' fast recovery 2' easy)
40 min + 10 times 100m uphill sprinting

Sun
Rest

Mon
40 min easy + 10 x 400m in 61” rec. 200m in 50 secs / 1 min
40 min easy + 3 x 2000m in 5’40” recovery
4 min jogging (2’50” p/Km)

Tue
45 min
45 min

Wed
45 min + 10 x 20” very fast uphill
1 hr easy

Thu
20 min w.up - (Track) :
7 x 1000m in 2'42" rec. 4 min

Fri
1 hr easy
1 hr with short variations

Sat
20 min warm-up + 5 km continuous run climbing (about 8 % of gradient)
40 min easy

Sun
Rest

Mon
1 hr 10 min with short variations (10 x 30" fast rec. 1 min easy + 10 x 1 min fast rec. 2' easy)
50 min easy + diagonals

Tue
20 min warm – up (track)
5 couples of (1200m + 300m, recovery 2 min between tests), recovery 6 min among the couples, in 3'09" (63" per lap) - 42"
30 min easy

Wed
1 hr moderate
40 min easy + 10 times 100m sprint climbing

Thu
1 hr moderate
30 min easy + 2 sets of 6 x 100m (track) in
13" recovery 15" between every test, and 5 min between sets (this one is called "intermittent training", and is the best way of training for improving the threshold before some lactacid training)

Fri
50 min moderate
50 min easy è diagonals

Sat
20 min warm – up (track)
4 x 600m (rec. 2') in 1'33" / 1'33" / 1'33" / 1'28"
4 x 200m (rec. 2') in 28" / 28" / 28" / 25"
4 x 500m (rec. 2') in 1'16" / 1'16" / 1'16" / 1'12"
4 x 300m (rec. 2') in 45" / 45" / 45" / 41"
4 x 400m (rec. 2') in 60" / 60" / 60" / 56"
(Recovery among sets : 5 / 6 min)

Sun
Rest

PROGRAM FOR STEPHEN CHERONO (From 8th of May, till Ostrava (12th of June)

Morning
Afternoon

Thu, 8
45 min + 12 times 150m hard climbing
1 hr 10 min progressive (3’50” > 3’10”)

Fri
20 min warm – up - (Track) :
4 sets (recovery 5 min) of 1000 / 600 / 300m recovery 2 min between every test in :
2'34" – 1'30" – 43"
40 min easy

Sat
45 min easy
1 hr easy

Sun
Rest

Mon, 12
50 min easy
40 min easy + 20 times 100m climbing sprinting at max. speed (recovery 3 min)

Tue
1 hr moderate
40 min progressive (from 3'40" > 3'20")

Wed
20' warm-up - (Track) :
5 times 1200m with last lap very fast

(66" + 66" + 56" = 3'08")
recovery 5 min
45 min easy

Thu
1 hr moderate
45 min easy

Fri
50 min easy
50 min easy + diagonals

Sat
20' warm-up - (Track)
5 x 400m in 58" rec. 1 min - (rec. 5'/6')
1 x 1600m in 64" per lap (4'16") - (rec. 5'/6')
5 x 300m in 42" rec. 1 min - (rec. 5'/6')
1 x 1200m in 64" per lap (3'12") - (rec. 5'/6')
5 x 200m in 26" rec. 2 min
40 min easy + diagonals

Sun
Rest

Mon, 19
1 hr easy
45 min moderate

Tue
40 min easy + 10 x 400m in 58” rec. 1 min
40 min easy + 3 x 2000m in 5’30” recovery
4 min

Wed
45 min + diagonals
1 hr easy

Thu
1 hr progressive running (3'50" > 3'10")
40 min easy + exercises for rapidity (skip, heels to buttocks, run with very high knees and short strides)

Fri
20 min w.up - (Track) :
7 x 1000m in 2'38" rec. 4 min

Sat
1 hr easy
1 hr with short variations

Sun
Rest

Mon, 26
20 min warm – up (track)
4 couples of (1600m + 400m, recovery 2 min between tests), recovery 6 min among the couples, in 4'16" (64" per lap) - 57"
30 min easy

Tue
1 hr moderate
40 min easy + 10 times 100m sprint climbing

Wed
1 hr moderate

30 min easy + 2 sets of 6 x 150m (track) in
20"5 recovery 20" between every test, and 5 min between sets ("intermittent training")

Thu
50 min moderate
50 min easy + diagonals

Fri
40 min + 12 x 100m climbing sprint
50 min easy + diagonals + exercises for rapidity (like last Thursday)

Sat
20 min warm – up (track)
4 x 600m (rec. 2') in 1'31" / 1'31" / 1'31" / 1'27"
4 x 200m (rec. 2') in 28" / 28" / 28" / 25"
4 x 500m (rec. 2') in 1'15" / 1'15" / 1'15" / 1'11"
4 x 300m (rec. 2') in 45" / 45" / 45" / 41"
4 x 400m (rec. 2') in 58" / 58" / 58" / 54"
(Recovery among sets : 5 / 6 min)

Sun
Rest

Mon, 2
1 hr progressive (last 15 min hard)
40 min easy + 10 times 100m climbing sprint

Tue
20' warm-up - (Track)
3000m in 8'20" + 2000m in 5'30" + 1500m in 3'58" + 1000m in 2'32" + 500m fast
(recovery 6 min between every test)
30 min easy regeneration

Wed
1 hr with short and easy variations of speed
40 min moderate

Thu
30 min easy + 20 min very hard competitive
50 min easy + diagonals

Fri
20' warm-up - (Track)
2 sets of (800 / 800 / 800 / 200m) rec. 6 min among sets, 2 min among tests, in :
2'04" / 25"

40 min easy

Sat
1 hr 20min moderate with some variations (personale sensation)
40 min easy + rapidity (like last Friday)

Sun
Rest

Mon, 9
40 min + 10 x 200m in 27" / 28" rec. 1'30"
40 min easy

Tue
40 min
(Travel to Ostrava)

Wed
40 min

Thu, 12
RACE 5000m (Ostrava) (goal : 12'52")

PROGRAM FOR STEPHEN CHERONO (From 23rd July till Zurich)

Morning
Afternoon

Wed 23
40 min moderate + 6 times 2 min hard competitive climbing (recovery 4/5 min)
1 hr easy

Thu 24
1 hr 10 min progressive running
1 hr with short variations of speed

Fri 25
30 min easy + 40 min fartlek with 3 min / 2 min / 1 min hard rec. 2 min easy for 3 times
50 min easy + exercises for technique of hurdles

Sat 26
(Track)
10 x 600m in 1'32" rec. 2 min (not very hard after the workout of yesterday)
1 hr easy

Sun 27
Rest

Mon 28
1 hr 20 min (30 min easy + 20 min with 1 min fast / 1 min moderate + 20 min easy + 10 min hard competitive)
40 min regeneration

Tue 29
50 min + 10 x 80m sprint climbing
40 min

Wed 30
40 min easy
(Track)
2000m / 400m (rec. 2') in : 5'25" (65" per lap) – 57"
- (rec. 6 min) -
1600m / 400m (rec. 2') in : 4'16" (64" per lap) – 56"
- (rec. 6 min) -
1200m / 400m (rec. 2') in : 3'09" (63" per lap) – 55"
- (rec. 6 min) -
800m / 400m (rec. 2') in : 2'04" (62" per lap) – 54"

Thu 31
50 min easy
50 min easy

Fri 1
1 hr moderate
50 min easy + exercises for technique of hurdles

Sat 2
(Track)
4 sets of 3 x 400m (rec. 1 min between every test - 4 min between sets) improving speed :
62" – 59" – 56"
40 min easy

Sun 3
Rest

Mon 4
1 hr moderate
1 hr with short variations

Tue 5
50 min easy + diagonals
30 min + 30 min hard

Wed 6
1 hr moderate
40 min moderate + exercises for techinique of hurdles

Thu 7
(Track)
4 x 1000m in 2'32" rec. 4'/5' - (Rec. 8') -
6 x 500m in 1'12" rec. 4'/5' - (Rec. 8') -
800m in 1'54"
40 min regeneration

Fri 8
50 min easy
1 hr with short and easy variations

Sat 9
1 hr progressive running (from moderate to hard)
40 min + 10 times 80m sprint climbing

Sun 10
Rest

Mon 11
(Track)
1000 / 600 / 300 rec. 2 min in 2'36" / 1'30" / 43"
- (Rest 6 min) -
800 / 600 / 300 rec. 2' in 2'02" / 1'30" / 43"
- (Rest 6 min) -
600 / 400 / 300 rec. 2' in 1'30" / 57" / 43"
- (Rest 6 min) -
500 / 300 / 200 rec. 2' in 1'13" / 43" / 26"
- (Rest 6 min) -
800m in 1'56"
40 min regeneration

Tue 12
40 min
(Travel to Zurich)

Wed 13
(Arrival to Zurich)
40 min

Thu 14
40 min

Fri 15
RACE 3000 m SC in Zurich

PROGRAM FOR PAUL KOSGEI
(last 7 weeks before World Half- Marathon Championships in Bruxelles, Belgium)
Note: No races, only training. The goal is to improve aerobic power and muscular endurance. Your can have only the African Military Ch. On 10000m, easy back John. We can change the program when we know if you are on the team. In any case, your first serious race are WHMCh, for winning!
1^ week

Mon 1 hr easy running
30 min easy + Exercises for strenght :
3 sets of 20 squat-jumps•
3 x 100m bounding with long steps•
(pushing hard)
Tue 60 min easy
20 min warm-up
10 x 200m in 28 secs recovery 200m jogging
Wed 20 min warm – up
5 x 600m in 1’39” (the last in 1’30”)•
5 x 500m in 1’22” (the last in 1’13”)•
5 x 400m in 64" (the last in 58”)•
5 x 300m in 45” (the last in 40”)•
Recovery between every test : 1’30” / 2’
Recovery between every set : 5 / 6 min 40 min easy regeneration
Stretching and diagonals

Thu 1 hr 10 min easy running
50 min easy + Technical exercises :
6 x 100m skipping•
6 x 100m bounding•
6 x 50m heels to buttocks•
Fri 20 min warm – up + 6 km tempo uphill 50 min easy
Sat 1 hr + 12 x 15secs sprinting climbing 50min easy + diagonals
Sun 1 hr 30 min progressive running (4 min > 3’) Rest

2^ Week

Mon 1 hr 20 min easy
40 min easy
Exercises for strenght like Mon 19 (4 sets)
Tue 50 min easy
8 x 1’30” fast climbing (recovery 4’ / 5’) 50 min easy + diagonals

Wed 50min easy 30 min + 8 x 100m climbing sprinting
Thu
20 min warm – up
10 x 1000m (3’ > 2’57”) rec. 200m in about 1’30” 20 min warm - up
2 x 2000m in 5’40” rec. 5 / 6 min jogging
Fri 50 min easy 50 min easy + Technical exercises (like Thu)
Sat Long run moderate (2 hr / 2 hr 20 min) 30 min + 8 x 100m sprinting climbing
Sun 30 min warm – up + 6 km tempo uphill Rest

3^ Week

Mon 1 hr easy running 40 min easy + Exercises
Tue
4 sets of 4 x 600m improving speed and reducing recovery (times : 1'40" – 1'36" – 1'32" – 1'28")
Recovery between every test : 2' – 1'40" – 1'20" – 1'
Recovery between every set : 5/6 min 40 min easy regeneration
Stretching and diagonals
Wed 60 min + diagonals 60 min progressive run
Thu
1 hr 30 min easy running 50 min easy + Technical exercises:
8 x 100m skipping•
8 x 100m bounding•
8 x 50m butt kicking•
Fri 90 min easy with short variations 40 min easy + 2000m (track) in 5’25”
Sat 50 min easy + 12 x 100m climbing sprinting 50min + diagonals
Sun 1 hr fast running + 6 km tempo uphill Rest

4^ Week

Mon 50 min + diagonals 50 min easy

Tue
20 min warm – up
4 sets of 5 x 400m in 62 secs (rec. 1’30” between every test and 5 min between the sets) 20 min warm – up
4 km (track) progressive running (3’ + 2’55” + 2’50” + 2’45”)
Wed 1 hr easy regeneration 40min easy + diagonals
Thu
20 min warm – up
12 km fast on the road (3’ > 2’58” pace) 30min easy + diagonals
Technical exercises
Fri 1 hr + diagonals 40 min easy + 10 x 100m sprint climbing
Sat 20 min warm – up - (Track)
10 x 1000m in 2’55” rec. 200m in 1’30” about 20 min warm – up - (Track)
4 x 1000m in 2’35” rec. 5’ / 6’
Sun 2 hr 30 min moderate Rest

5^ Week

Mon 1 hr easy running 40 min easy + 15 x 100m sprint uphill
Tue
1 hr 10 min progressive running 1 hr easy + Technical exercises:
6 x 150m skipping•
6 x 150m bounding•
6 x 100m butt kicking•
Wed
20 min warm – up
5 x 3000m in 8’50” rec. 3’ jogging about 1 hr progressive run + diagonals
Thu
Warm – up
6 - 8 x 400m in 57” rec. 3 - 4 min 40 min easy + stretching
Fri 1 hr with short variations 30 min easy + 10 x 100m sprint uphill
Sat 2 hr 30 min moderate Rest
Sun 40min + diagonals 40 min + diagonals

6^ Week

Mon 50 min + diagonals 50 min + diagonals
Tue
25 warm – up
2 x 2000m in 5’35” rec. 4’ jogging
- Rest 8’ / 10’ -
8 x 400m in 58” rec. 1’30” jogging 40min + diagonals
2 km about tempo uphill (max. speed)
Wed 1 hr 10 min easy running 1 hr easy
Thu
Warm – up
15 km. in 45’30” Warm – up
3 x 60 secs climbing (max. speed) rec. 8’ / 10’
Fri 40 min easy + diagonals 40 min easy + diagonals
Sat 1 hr progressive running 50 min + stretching
Sun 2 hr from moderate to hard competitive

7^ Week

Mon
20 min warm – up (Track) - With rest 5/6 min :
1000m in 2’32” + 800m in 2’ + 600m in 1’28”
+ 400m in 56” + 200m max speed 40 min regeneration
Tue 50 min easy 50 min easy + diagonals
Wed 50 min easy 30 min easy
6 x 100m sprint climbing
Thu 40 min easy 30 min easy + diagonals
Fri 40 min easy g
Sat 30 min easy + 5 times 80m climbing sprint g
Sun WORLD HALF MARATHON (Bruxelles) g

PROGRAM FOR THE GROUP OF YOUNG RUNNERS
(6 weeks from the beginning of November, before the cross season)

Morning
Afternoon

(1^ week)

Mon
1 hour easy running
1 hour easy running

Tue
50min easy running + 100m x 10 uphill sprint
(max. speed)

Wed
1 hour 10min progressive running (from easy to fast)

Thu
1 hour moderate pace

Fri
1 hour 20min progressive running (30min easy + 50min from 3min 40s to 3min pace)

Sat
50min easy + 100m x 10 uphill sprint

Sun
2 hour easy (personal sensation)

(2^ week)

Mon
20min warm-up
10k “medium pace” at 3min 15 > 3min05

Tue
1 hour easy

Wed
25 min warm-up
3000m x 3 in 9’10” recovery 3min jogging
1000m x 3 in 2’55” recovery 1min30 jog

Thu
1 hour progressive running (3min40 > 3min 20)

Fri
45min easy
45min easy

Sat
25min warm – up
6 km climbing fast (gradient 7-10 % about)

Sun
1 hr easy jogging

(3^ week)

Mon
1 hour easy

Tue

20min warm-up
20 times 60secs fast recov. 60secs easy

Wed
1 hour 10min moderate

Thu

20 min warm – up + 14 km at 3’20” / 3’10”
(about 46 min fast)

Fri
1 hour easy

Sat

45min easy + 60secs uphill fast (recovery 3min walking) x 10 times

Sun
1 hour 40 moderate pace

(4^ week - block of volume)

Mon
20min warm-up
2000m x 5 in 5min 55 (track) rec. 3min jogg.
40min easy

Tue
45min easy + 10 x 100m sprint climbing
45min easy

Wed
1 hr 10min progressive
1 hr easy

Thu
20min warm – up
40min fast with short variations (40secs about every 3min) on cross country ground
20min warm – up - (Track) :
With recovery 3 min jogging :
3000m (8’40”) + 2000m (5’46”) + 1000m (2’45”)

Fri
1 hour easy
1 hour easy

Sat
1 hour easy
1 hour easy

Sun
30min easy
6 km climbing fast (same course of previous Sat.)

(5^ week - second period of volume)

Mon
45min easy
45 min easy

Tue
1 hour easy
40 min easy + 10 x 100m sprint uphill

Wed
25min warm-up
4 groups of 400m x 5 (rec. between the tests :
60secs - between the groups : 4 min) in
64" / 64" / 64" / 64" / 61" the last, for every group)
40min regeneration

Thu
1 hour easy running
1 hour easy running

Fri

1 h 10min progressive running
40min easy + 10 x 100m sprint uphill

Sat

1 h 20min with short variations (30 / 40 secs)
every 3min about
45min easy

Sun

40min easy
10 km very fast on cross country ground

(6^ week)

Mon
1 hr easy regeneration

Tue
50min easy + 10 x 100 sprint climbing

Wed
1 hr moderate

Thu
1 hr easy

Fri
45min easy

Sat
25min warm – up
12 km (road) at 3'10" pace
25min warm – up + 10 x 1'30" fast climbing
recovery 3' / 4'

Sun
50min easy

Note :

This is the beginning of the program for preparing the National Cross Championships, for beeing selected for WCCCh . It's very important for you (that are very young) to modulate volume and intensity for growing in a correct way. I use often a "specific block" with two hard sessions in the same day. This block provokes a fast improvement in the shape, but it's important to recover very well after the workout. Remember to write every workout you do, because only knowing what really you did in training is possible to arrange the next period. After this period, you can use 1-2 race in Kenya for testing your shape ; if is

OK, you can also run in 2-3 crosses in Europe, for knowing some muddy course. I want to stay in touch with your coaches and with you personally. Good work to everybody.

Renato Canova