



Panel on Distance Training Moderated by Peter Daland with Don Gambрил, Richard Shoulberg, Jon Urbanchek, and Mark Schubert

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Coach Peter Daland is one of the most respected names in American coaching. The head U.S. Olympic coach of the women in 1964 and the men in 1972, Coach Daland later served as Director of Competition for the 1984 Olympics in Los Angeles. Coach Daland has filled various national coaching duties over the years, coaching teams in Russia, GDR, World University Games, and the Olympics. Coach Daland has coached 33 swimmers to Olympic berths since 1960. Coach Daland is a former president of the American Swimming Coaches Association and currently is serving as president of the World Swimming Coaches Association.

Peter Daland: We have a fine panel this morning and we thought long and hard about these people. First of all we have Don Gambрил, Associate Athletic Director of the University of Alabama, past Head Olympic Coach, many times Assistant Olympic Coach, developer of great distance swimmers starting with a world record holder in the 1500 and the 800, Patty Coretta. I had the honor

of serving with Don on the '72 Men's staff and we had some interesting experiences. We probably can't relate all of them here.

Next we have Richard Shoulberg, famous for great 400 IMer's that he's developed, men and women, out of Germantown Academy and Foxcatcher.

Next is Jon Urbanchek, University of Michigan and Wolverine Swim Club. Jon is the coach of the current NCAA Men's Champion and a man who's developed many great distance swimmers and 400 IMer's. In fact this man and I shared Rod Strachan, who was Olympic Champion in 1976.

And finally, I say finally assuming George isn't going to make it. I hope you're all critical of him when he arrives. Say: Good God, can't you even be on time the one time you've been invited over a ten year period ? Finally,

Next is my successor at USC, past Head Olympic Coach, developer of many great Olympic swimmers, World Record holders, World Champions, probably famous first for the great job he did with Brian Goodell, Mark Schubert, USC.

Now a lot of you may wonder why are we having a distance panel. Why not a breaststroke panel, a backstroke panel, a sprint panel, and so on. Because, except for Janet Evans, in the last twelve years we have been grossly deficient in this area of swimming. So it was our idea at the ASCA Board of Directors that we would bring back past and present experts and specialists and see if they could throw out some ideas that would inspire you coaches to go out

and develop another generation of people who were like the successful people we had in the sixties and seventies.

What I'm going to do is take some basic topics and let them play around with them and then we'll have questions if we have still lots of time. We may even have a topic suggestion from the audience aimed at a specific speaker or the group. So microphones will be flying around here.

The first topic I'd like to put to our panel is how have you, or are you using, long single shot swims in your program? Doc Councilman back in the fifties developed a swimmer named George Breen who went on to get four Olympic Medals and set World Records. He was a person with little talent, but Doc did a remarkable job with this courageous young man and one of the things he used about once a week or once every two weeks was to time George on a two mile swim. It wasn't 3,000 meters because he wasn't using a metric pool. He was using a yards pool and then that started to be copied by a lot of coaches in the sixties and seventies. A lot of us felt it was an important part of the distance program. So I'm going to ask these guys what they're doing in that direction and how they're doing it. So we'll start over with Jon.

Jon: Thank you very much. Peter you put me on a spot. Peter and myself shared a gentleman named Rod Strachan in the seventies and I had a great fortune to work with Rod pretty much from the start of his career, about five or six until the sunset about age twenty one after graduation from USC. One day Rod came to me, and those were the days that Mark Schubert set the stage for distance type of training in the seventies. We went from probably 6,000 meters maximum to pretty much up to about ten. So one day Rod came to a Saturday morning workout and says, "Jon, can I do the whole ten

thousand straight?" Sure. We didn't know anything about threshold those days, didn't know anything about energy systems. Rod just wanted to do it. Rod jumped in and I got so excited I started printing up one by one foot cards with "one", "two," "three," and so on to designate each thousand meters he had gone. By the time the workout was over, every athlete, every kid in the pool got out and was standing at the edge of the pool and Rod kept going and going until he finished ten thousand meters. I don't remember the average, maybe I think 1:06 or 1:07, that was a pretty good swim at that time. At that time people wanted to swim, they wanted to do this. Now a days if I were to tell my kids that they were going to go straight ten thousand meters for time I think most of them would be in the locker room before I made the announcement. So I think it comes down to attitude. At the University of Michigan we're trying desperately to bring back that environment which promotes that attitude of distance swimming. I'm trying extremely hard to let the last ten years bring that attitude back and I think the problem is attitude and environment and I think they go side by side.

Mark: Usually early in the season we start off with thirty minute swims and we might not have it be all straight freestyle. Last week we went a thirty minute swim with ten minutes free, ten minutes back, ten minutes choice or drill. But then we get into more straight swims whether it be freestyle or other strokes. Perhaps with the flyers it might be 200 free, 100 fly. Thirty minute swims, forty-five minute swims, up to an hour swim and then at that point when I feel that they're pretty fit we will go three days that we go pretty long sets such as three to five 1500's, or perhaps a 3,000 going 2,000-1,000, or a 3,000 going two 1500's, and then maybe three 500's — something of that nature. I try to use the straight swims during the first six weeks to lead into more serious sets that are based either around the 800 or 1500.

Dick Shoulberg: First of all I want to thank Peter for asking me to be here. I'll mention two high school swimmers that I've had the pleasure of coaching. Dave Wharton on Columbus Day 1985, at the age of 15, did a timed 16,000 meter IM going 250 meters fly, back, breast, free. We did it on Columbus Day because the World Championships in '86 would be in Spain. We did it at the du Pont facility, an indoor 50 meter pool. He descended his 1,000's. The first 1,000 was not an easy 1,000. At the 11,000 mark, the last 100 meters he did backstroke. He put his head up and he said, I'm sorry I miscounted. Then we built the whole season off of that one swim. Before the World Championship Trials we only did a 3,000, but proportionately the swim was a lot faster. He went on and broke his first American Record at the age of 16.

In 1987 I told a young lady named Trina Radke that for her to go to the Hawaiian Training Camp, the Olympic Training Camp, she had to do a 14,000 meter fly, four times with legal turns, and then at the Hawaiian Training Camp, Frank Keefe would time her. She'd do it again. She didn't complain and she made the Olympic Team. She never made the finals in the 200 fly until the morning of August 5th, 1988 and that night she made the Team.

I think the reason my athletes aren't swimming as fast as they did in the 80's is because I'm not demanding the same type of excellence. I know, coaches, it's our responsibility to challenge our athletes. So instead of doing a 16,000 meter, we only start with a 12,000. Maybe we'll go back to 16,000 this year. But I really know that the American swimmers can dominate in the distance events, but coaches have to want to run up and down the pool for 16,000 meters and it's not always easy. So that's the way I look at distance swimming.

Gambril: I'm not coaching now and I haven't since the 1991 World Championship Team but perhaps I can add to what the others are saying by just reviewing again a little bit of history. Jon Urbanchek is a little bit too young to remember what some of the distance people were doing out of his lane in the early 60's. But I can remember well, going to my first Olympic Trials in 1964. I just had a young girl as Peter mentioned earlier. She was thirteen years old and broke the world record by 15 seconds, broke the 800 by five on the way out and they were doing 10,000 a day at that time. I had three girls make that Olympic Team. I was a young coach and thought I knew a lot more than I did. I talked to the group of coaches and remembered they just wanted to know what we did for workout. I started to tell them, and bouncing 10,000, and things off of them. They were swooning. They couldn't believe that the workouts were going that far consistently, especially with young swimmers.

Out of that program — and a lot of this is a reflection and shadow of Peter's program as well — we went to national long distance swims in the Southern California/Pacific Swimming area. All the girls that made the team, including Jean Hallerk and Sharon Stoddard, who won Gold Medals in Tokyo, swam in that three mile distance swim. I took them across the country to another three mile national swim when they were thirteen and fourteen year old kids. So again, I really think that not only is the environment that Jon Urbanchek mentioned necessary in college, but its awfully difficult if your trying to create that environment in college and they've never even visited it before.

I feel very definitely that many swimmers are not putting enough mileage in, especially at an early age. I'd like to comment just on Jon Olsen, who I've had in my program essentially since he was nine years of age. He came almost every summer. One holiday one of my former assistants had him at the

YMCA in Montgomery. Jon's first junior nationals, once again the same old story, was the 1,000 freestyle. He really didn't begin sprinting until he was a junior in high school. He really wasn't a recruitable college athlete until he was a senior in high school. Here he is, at 26 or so, still one of the world's top swimmers. The reason he did so well this year is that he went back and did his best 400 meter freestyle this past summer going 3:54. His prior best was 3:56 in 1989. Now the 200 has come back a little bit. So as we talk about a distance panel and the different things we talk to you about today, remember it pays a lot more dividends than just the distance people.

Daland: Many of you heard in the 80's of the Mission Viejo animal lane and I'd like to ask Mark to tell us something about that and the pride that those people had that were chosen to be in that lane.

Mark Schubert: Well, it wasn't just during the 80's. When I took the job at Mission Viejo in 1972 it wasn't rocket science that if you wanted high school swimmers to go to the national championships you were going to accomplish that in the 1500 free, the 400 free, and the 400 IM. So that's pretty much when we decided to be a distance based program, because I wanted to develop a team of swimmers going to the national championships. That wasn't to say that we trained everybody that way, but we started off with one lane of people that were committed to do it. I think if there was any secret to success at Mission Viejo it was the fact that we had swimmers that ended up being in actually three or four lanes that were committed to distance swimming, that took a lot of pride in it, that enjoyed being challenged every day in practice, and that's kind of how the animal lane evolved.

Then we were also in kind of fun competition with programs like Bill Rose's program and also Industry Hills later on when they had Jeff Kostoff. We

would kind of trade sets every week and it was real fun in California comparing each other's workouts and training sets and then trying to go one up by either making the set tougher or trying to accomplish it faster. There were some pretty legendary performances that came out of that kind of competition. Then when we would get together for swim meets it was a war again.

Again I think that the real key is making a commitment to have at least one lane in your pool being a distance lane. Make a commitment to train them a little bit differently. I think the point that Coach Shoulberg made about the coach being willing to spend the time and effort to coach distance swimmers is important because you're not going to be able to let practices out after an hour and a half, or two hours. You are going to have to commit to spending two and a half hours in a practice session to do the job.

Daland: Do any of the other panel members want to comment on that concept ?

Jon: I just alluded to the environment. I think that Mark set the stage for us in the 70's. We all tried to copy him, to be like Mark, the "Mark of Excellence" in those days.

I'd just like to go back to the previous question. I didn't really give you an answer as far as the training. At the college level we try to keep the yardage up on a weekly basis. We strive for 80,000 a week, either yards or meters. When you say strive, if you go ten workouts and go 8,000 that's

pretty good during a college season. During the summertime we try to go for 90,000. That's our goal. I don't think you can pretty much go beyond that. But I also discovered that I don't think we need to go more than that. I think if we do go 80-90,000 meters per week, smartly, with all the knowledge we have received in the last twenty years through science, if we can apply it properly then we don't have to go 16,000 straight. I think we can do two 8,000 workouts smartly in one day and then probably accomplish the same thing. You don't have the boredom and the rebellion to do that.

I think now that's two decades past and I think the kids are a lot smarter now. Many of the kids today would not know Brian Goodell, unfortunately. They would not remember Rod Strachan and those names. You can't bring them up anymore. We have to face today. We live it today. We have to apply the principals and the science of today. That's why coaching becomes a challenge for us. For awhile there was a snow ball rolling. It stopped rolling. We've got to get this thing going again. That's what we're here for. Your opinion and your input will definitely help us to go back on the right track.

Daland: Our next topic is sets of long rest 100 meter swims — perhaps on 1:45 for the men and 1:50 or so for the women — where you try to go 1500 race pace or better. Kerrine Perkins is doing this in Australia and his coach feels that is perhaps the most important drill that they do every week. They do it a couple of times a week. I'd like to have our panel talk about that and whether they've done it in their program and what they think about it.

Don Gambriel: Now I know why my sprinters didn't go any faster than distance swimmers are going now. Their long rest 100's were on 1:45. Really Peter I

don't have a lot to comment on that. It's just that I feel we have to do some race/pace swimming. You can't just do long swimming. I think long swimming is important. I think it's an important part of the program, but you've got to at the same time swim at race pace. We've been, by contrast, and I know a lot of Chevoor's swimmers were training basically the same in the late 60's and early 70's (the Debbie Meyer, Mike Burton era), on very short rest series. When I say short rest I'm talking three to five seconds rest on hundred repeats and quite frequently maybe twenty to thirty of those. But I really don't have any experience training distance swimmers on that type of interval personally.

Shoulberg: We do a couple of different test sets where we'll have the athlete swim 100's or 125's if we're in the 25 yard pool. You have to realize that our program is basically a developmental program and the majority of our athletes are high school age. But in '91-'92 I had the pleasure of working with six athletes who tried to make the team and four did. Two made the team in the 400 free. We have a test set. If we're going yards it's 125 yards, if we're going meters we'll go 100 meters, and we'll rest approximately fifteen seconds the first four and then the next four we'll rest ten seconds more. But we've never done our hundreds on 1:45. The most we've done them on is approximately 1:30. Sean Killion had unbelievable swims at the 1:30.

On my girls, or my women, we probably didn't give them as much rest as our men. Our test sets for the women would be maybe on the 1:25. We had a young lady named Kathy Heddy who swam with Peter's daughter, who went 4:11 in 1986 and she used to do series of hundreds on the 1:20, 1:25. When we would descend them we never started out slow. So maybe the first 100 was like an 85% effort and then we started to go fast.

Gambril: That just brought one thing to mind. I would like to mention again I don't like to take myself completely out of the era of fast swimming. I did have the opportunity in '76 when Doc made the divisions I worked with the distance swimmers on that team, with close contact with Mark. I had Brian Goodell's log book as well as Bobby Hackett's the entire time. Our role before we left training camp to go to Montreal was to go 1500 on a 1:05 base on 100's. Both Bobby and Brian did that. I realize that's not as fast as Kerrine Perkins, but it's a hell of a lot faster than I've seen many Americans go lately.

Jon: Going back to Perkins and a couple of other distance swimmers that they have in Australia, it's definitely a pride that they have in their distance program there.

We do a lot of faster swimming, race pace swimming, which we call VO2 max type of training and try not to go too far beyond into the sprint training with the distance freestylers. Tom Dolan this year did twenty 100's at 1:20, then twenty 100's at 1:30 continuously and he averaged 51.7 on that set. The last three or four of them were 49, even down to 48 at the end. He started out with 52 at the beginning and went down 48.8, average was 51.7 and he was able to hold exactly one second over that time for the 1650 where he averaged 52.7 for 1650 at the NCAA's. So a test set like this one could be motivational, and to predict results, so I do use quite a bit of this type of swimming sets. One, to motivate, or get the good efforts out of the athletes. Two, you have a ballpark figure of what you can expect from your athlete and I think that creates a good confidence in them when they can do something like this and they come back and do it.

I think the key here is try to create a weekly training cycle where you could use all these so called energy systems that we talk about through US Swimming. I think we have to incorporate that kind of training from now on. We cannot go backwards. We have to accept science, it's here and all the younger coaches and younger athletes know a lot more about science than we did ten years ago. My ten year old campers coming in there know the energy systems. They know aerobic, anaerobic, and thresholds and it's a great improvement. I think we are advancing. I think our young athletes probably pick it up faster than some of the older coaches. That's my comment.

Daland: Is there any other phase of distance swimming that you'd like to talk about ?

Dick Shoulberg: I spread sunshine in my program by letting the athletes train distance. Because if you give them a little bit of rest, just a teeny bit of rest, they see improvement. Athletes will come back if they see improvement. I think it's critical that your developmental age athletes want to come back to practice for more. You don't really have to shave, rest, and taper, and all that. Give them a couple of days of easier swimming. You can do it in practice or you can do it at a local meet. But it's so easy to improve. And it is so much easier to improve in the 200 fly or the 1650 than in the 50 free and I've had a few pretty fast 50 freestylers. But just by letting kids see improvement during the season by manipulating your training, I think that's the easiest way to have athletes want to come back and do distance swimming.

Daland: I'm going to open up the discussion to questions from the audience.

Here is a question about heart rate sets. Some coaches use them, some coaches don't. Where should coaches be going ?

Jon: The heart rate set could easily be substituted for the set we just mentioned to you a few moments ago. That would be perhaps swimming 100's or 200's with a rest of not more than 30 seconds to 40 seconds. That would be probably equal to the Australian heart rate test. When we see the times they accomplish it's pretty much what we call in my program a VO2 max set. The heart rate would be another way, a very simple way to monitor what is happening in the body. Just take the heart rate. You don't have to do about lactates. You don't have to do a whole lot, just measure the heart rate. If you know what the maximum heart rate is then you can set up a heart rate set. If you do a 200 swim at max and have a 200 heart rate then you can set up a heart rate set. If you want to set up a heart rate set you go ten beats less. You can average 190 on that, that would be about 32 beats on a six second count. That's the kind of effort you want. It's very simple. Every young child can, and in fact enjoy taking their pulse and knowing what the body is doing. So I think it's easy to create science in the trenches. You really don't need a whole lot and I think it's applicable to anyone.

Question: Why are the Australians beating us so soundly in men's distance swimming today. Their third representative is well ahead of our first?

Mark: I think it's basically a matter of the talent pool either not being involved with the sport of swimming, or the talent pool in swimming is swimming shorter events and getting interested in shorter events earlier in their career. It used to be in the era before junior nationals when you were a high school swimmer you had to swim distance in order to make it to the top

echelon and go to a national championship. I also think it's a matter of commitment by coaches to distance programs. I think that there are athletes out there that want to train hard, that they want to be pushed. I think the comment about your team being as good as the coach is willing to push them and see where the outer limits are is very true.

Shoulberg: The Australians have always had great tradition in distance swimming and I think it's their mentality and how they approach it. If I have an athlete in our high school program who has a junior national cut in the 50 free, the 100 free, 100 back, 100 fly, then nine out of ten times he will get a better scholarship offer than if I have an athlete who only has senior national cuts in the 1650. So parents start to see Johnny is doing all this extra work and getting less of a scholarship. I would still rather have Johnny make senior national cuts in one event than four events in junior nationals. There's been a big swing for scoring in the shorter events. I just think it's our approach and I realize that the Australians right now are blessed with some really great distance swimmers.

Question: How do you establish a distance program and still avoid shoulder problems and or burn out.

Mark: I hate to keep referring back 20 years, but there haven't been a whole lot of Americans that have swum faster than Brian Goodell. Brian basically trained once a day until he was 14 years old. He played football, had a good individual medley background as an age group swimmer, and good technique in all four strokes. When he was 14 he got serious about swimming. At that time he started training twice a day, two hours in the morning, two and a half hours in the afternoon. We continued to keep it

interesting by training all four strokes and competing in all four strokes. The challenge was, and I'll never forget the day that I selected the team to travel up to Santa Clara and it was a huge deal for us because we had never really even taken anybody to nationals, and Brian didn't get selected. He was so pissed off that he didn't get to go with the high school age kids. He said, "What do I need to do?" I said, "Well here's the time standards. The 1500 is going to be the easiest thing to do." By the end of the summer he'd made the time standard.

We didn't do all mega yardage things. But, certainly we did an introduction to that to start off longer swims. Sometimes we'd do 2000's where we'd go ten 200 IM's and things of that nature. I do think it's important to keep it interesting. I think it's important to vary the training. I think it's important to vary the energy systems. But you need to introduce them to it. You need to make sure that they have a good attitude towards it. A lot of times that's a team attitude. If the team attitude is such that they wonder who is the freshman that's going to come in this year that's going to have to swim the 1650. That really gags me. So I make sure that all the Seniors get the benefit of getting to swim the 1650 in at least one dual meet so we don't have that kind of attitude.

Don Gambriel: I just want to give a pep talk to the coaches. I think that the difference between whether your team accepts this or not entirely rests with you and your motivational approach to that. I work now as an associate athletic director, I'm happy to say, at Alabama where I am in charge of every sport but football and I hire the coaches. It comes back to the same thing and I don't care if it's women's soccer, I don't care if it's baseball, or whatever it is, it comes back to the coach's motivation during workouts. I saw a baseball coach come in last year, take exactly the same team late in June with almost no new athletes on the team, same pitching staff and turn the team around. They won 41 games, where they had won 20 the year before. In the playoffs they won four games in the ninth inning. It was right here, in

your workout. If you're sitting down while you keep that guy an extra hour in the distance lane and just marking down laps that he does and giving him the times instead of moving up and down like a Jack Nelson on the deck and keeping things going and being a part of the thing, then you're not doing the job to motivate that team the way that you should.

Jon: I was going to add a comment to that. The fact is that at the younger age distance should be the most important thing but when we're talking about college age, like Mark mentioned about whose going to swim the 1500 meters, it is getting tougher and tougher as we go along in age. I think you create an environment where you respect the distance swimmers and provide a program for them, and respect the stroke swimmers and provide an ideal program for them, and at the same time respect the middle distance stroke oriented people and treat them equally. I always feel guilty about being biased toward the distance individual medley swimmers. I don't think I'm doing it intentionally, but that's the way it comes back — the athletes sometimes feel the coach favors those people more. Remember, we don't have sprint training in Michigan! Just remember that Michigan has won 15 NCAA individual titles in the last seven years and they were all in sprint, and only three in distance. So I should be talking to you here about sprint training, not on distance training. But, in that 15, the last three were in the 800 freestyle relay which at Michigan we think is a sprint relay. So we have done real well. Try to meet the needs of everyone in the group so you cannot really be biased towards anyone group because they all should feel like they are important. I definitely feel like we can meet everyone's needs. But it becomes more work for the coach to create an ideal program. You have to have different workouts for different groups. Sometimes you might have to write seven different or eight different workouts for one afternoon. That becomes time consuming and you may not want to do that.

Peter: What are we doing with our 19, 20 and 21 year old distance prospects that separates us from the Australians.

Jon: I'll have to concede to the Australians in the 1500 meters. It's unfortunate. They are ahead of us. It used to be a light year, but now it may be only one or two years ahead of us. I feel that in order for us to beat the 1500 times from Australia our athletes are going to have to perform better anaerobically. We're not going to beat Perkins unless our guy can also go a good 3:40 something, or 1:48 or 1:49 for the 200. If we don't have the speed for the 200 and 400 they're going to walk away from us. So we not only have to worry about the aerobic base, we also have to worry about the speed base. If you don't have the potential to go that fast they're not going to go under. They're never going to beat the American Record of 15:01 unless we can teach them how to swim fast for 200 meters and 400 meters. That comes with systematic training of the energy systems, otherwise it's not going to happen.

Daland: The bottom line puts the emphasis on the relay and the sprint swimmer, not on the distance swimmer. Penny Taylor asks what can we club coaches do about that ?

Don Gambriel: It's not your only concern. Your only concern is there may not be any bottom line to the scholarship in the near future for men if things don't change a great deal. The 200 relays were an unfortunate event for college swimming and United States Swimming in my opinion.

Peter Daland: I was on the NCAA Swimming Committee for six years. For six years I brought up the subject of getting rid of those two short relays. Every time I was out-voted by college coaches on the committee. Most of them without major teams in the meet, but they still had the vote. The relays are still there and they are absolutely destructive from the point of view of the development of middle distance and distance free.

Next topic. Greg Troy, one of our very finest distance coaches, wants to know how we're going to get feedback, back from the older swimmers — the 19, 20, 21 year olds — who stop doing the type of things they did when they were 16, 15, 14. Should they get back to that type of work?

Shoulberg: In '83-'84 we had a girl named Sue Heon who wanted to make the Olympic Team. She never beat her teammate Polly Winde and she decided that she wanted to make the team. We knew Tracey Caulkins was pretty darn good, so for both girls to make the team in the 400 IM it was going to be difficult. I sat down with both of them and I told them that to make the Olympic team they were going to have to return to distance based training. So Sue went along with it and Polly didn't. Sue went from a 4:53 to a 4:46 at the age of 22 1/2 because she went back to real hard work on short rest.

I remember the day we did a 15,000 time trial in May of '84. I told the athletes who were going to go to the Olympic Trials to stop at 7500 but hold a certain pace. We had a girl in there named Erika Hansen who went the whole 15,000 because she was a young little kid who was really a great swimmer. But, Sue Heon at the 7500 meter mark turned and went the next 7500 meters holding 1:10's. That's 150 1:10 100 meters. I think the 24 year old, or the 22 year old,

needs to do that type of work. I think if they stop it at the age of 17 or 18 they hurt their careers. If you talk to people in track and field, and you talk to some triathlon triathletes, they're doing a lot of work at an older age than 22. Your athletes will do it, like Sue did it, if you present a challenge to them.

Daland: I have a thirty year old Master swimmer who on five work outs a week did his best distance times this year in the Masters nationals. We set up a special kind of program for him because when you only have five workouts a week how are you going to be a distance swimmer? Practically the whole workout has to be the main set. Basically you're warming up and doing the main set. I convinced him that he could do it and he went there and he won in his division and set a new record. It can be done. So if people feel that with limited pool space and time you can't do this, you are wrong, you can do it.

Next topic: How does the panel feel about changing the scoring system to put more emphasis on distance points?

Schubert: I think that's an artificial solution to the problem. I think the problem is day to day at the swimming pool in practice. I think you need to create an environment that encourages the swimmers that are going to be successful in distance swimming to do the proper training, to do the amount of work necessary. I don't think the sprinters ought to be doing that kind of work. You know for college coaches all you need to do is recruit four good sprinters and make a commitment to good sprint training for those people to have success in the short relays and the other relays. We're going to keep trying to get rid of them, but trying to make changes in the NCAA's is like trying to hit your head against the wall. I made myself physically ill my first four years as a college coach, worrying about that. Then I decided I wasn't

going to worry about that. Just tell me what time I can get into the pool and I'll take care of my day to day business and let some other administrator worry about the rules. I think you just need to commit to training your athletes in the events that they are going to be successful in. Give them the proper program. For distance swimming you need to really encourage them to take a lot of pride, set their goals for them. Hopefully you're going to get some people that are talented and can do a good job.

Daland: Should we have longer national events like the old three and four mile swims we had every year, like a 5K, or a 3K? Should we have those events and make them very important so that all the clubs are interested in getting involved, which would put a lot more people on a big aerobic program? Is that a good idea-panel?

Jon: That depends on if you have the opportunities. Not everybody has the chance to go out and swim in the ocean. I'm going to go back up to Penny. I didn't have the chance to answer you. Most colleges go with the short distance oriented, short versus long program. But I think most of us coaches up here would not compromise our ideals for winning a team championship versus what's best for the athlete. I think that's a philosophy that I hold to and it seemed to work. There are some programs still in America which still promote what's best for the athlete. Face it, we can't make any gene transplants. That's physiological. Some kids are going to be sprinters and distance guys are going to be distance. I don't think we can make too much change. We can make everybody be a fairly good 200 person. You can stretch the 50 guy to a 200. You can bring the 1500 guys down to the 200. That's why our 200 program is quite good. But it's all physiological. You can't make a whole lot of changes. So I recommend, back to the second question of Peter, I think long distance swimming will help, but we have to put some rewards on it, make it fun, make it exciting. I just don't see our kids going to

go a 3,000 or a 5,000 swim at the stage we are now unless we do some brain washing at the coaches' level.

Daland: What distance taper do the panel members recommend ?

Jon: Good question. My answer to the taper has always been that we try to maintain different types of tapers. I always say it's not the taper that brings you the results, it's what you do from day one, from September one until thirty, forty days out, or whenever. We experiment with so many different tapers and it seems like it really has no effect on how fast you swim.

Dick Shoulberg: We do more than 80,000 a week on an average because of our age. In the morning practice we only swim 75 minutes. One year we went up to 90 minutes. But we increase yardage/minute. We think it is the whole key. Then at the end when we taper our distance swimmers we do some test sets and we also look at body composition. The lighter framed, skinny kid is going to get a heck of a lot more work than the distance swimmer who is more muscular. That's how we basically taper them. I've studied the results of the improvement of my team each year and the years that I kept the freestyle under 50%, between 48% and 50%, were the years that my distance swimmers and IMer's improved the most. If you only do freestyle I don't think you are developing enough strength in all the muscles of the body. I know that has nothing to do with taper, but I wanted to mention that we keep accurate records of percentage of free, back, fly, and IM. In the years that we had our greatest team improvement — even though -we may not had our greatest swimmer — we kept the freestyle about 48%.

Don: With the swimmers that I worked with over several Olympics, in tapering, the constant rule that we abided by was the last couple of weeks do not necessarily go way down in the mileage, but go way down in the quality to where you still do a 3,000 swim but it would be a relaxed swim, or maybe with paddles. Then come back and do a set of 100's, short rest, maybe eight 100's descending — something working with race pace. The general rule of thumb being that if you weren't doing good on that test set then you take more rest. If you were doing exceptionally good then you might pick up the work a little more and just kind of feel your way into it. But I kind of agree with Jon. I think if you've done the work the entire season then it's pretty easy to taper. But if you're fumbling trying to find out how to make a taper work for a training program that wasn't there, it's not going to.

Just one last thought that I'd like to interject on something that Jon said a little earlier about the anaerobic base you have to have to attack Perkins. I seem to remember that Brian Goodell was around a 3:55, 3:56 swimmer when he went 15:01. So if we have 3:48 swimmers now I don't know why we're not closer than we are than 15:10 still in the mile.

Mark: Well, Brian Goodell was actually a 3:52 swimmer, but that's after he worked with Coach Gambriel for six weeks before Montreal. Thanks Coach. Just as a general rule I think tapers are very individual and you need to really pay attention to the success or failures you have in different seasons. I never feel comfortable until I've gone through at least three tapers with an athlete. But I think for the women probably anywhere from eight to ten days taper, not very long, and pretty much a drop-off type taper. For the guys, a three week taper, but the first week really keeping the mileage up and taking the intensity out. Then doing a drop-off type taper anywhere from 10-14 days out from the championship.

Daland: Has the recruiting of international distance swimmers had an effect on our distance program ?

Don Gambriel: I'll go back to history and that's about all I'm worth up here folks. I know in 1968 I had a relay that broke the world record and it didn't count because most of the relay was made up, or half of it at least, was made up of foreign swimmers. At the same time I was coaching Gunnar Larson and Hans Faschnat who were both world record holders. At the same time it didn't seem to bother Mike Burton and Brian Goodell and some of these other guys that were around. I recall that Peter had numerous Australian Olympic swimmers at that time. Doc had Kevin Berry and Bobby Winden. So it isn't just now that these people have come here. It used to be such that if they came here it gave us, we felt, a better chance to beat them. If we had them here we could race them every day and every week, instead of just at the Olympics.

Daland: I'll answer that too because I did have some people. Murray Rose came from Australia after the '56 Olympics, where he had been the winner in the 1500 and the 400. He came into an area, Southern California, where no one had ever gone under five minutes for 400 meters. Within three years we had a dozen people who were just dragging on him, getting the inspiration. If he could go 4:30, they could certainly go 4:50. It was a very positive influence and completely opened up the possibility of developing distance swimming in Southern California. So we owe Murray Rose a big vote of thanks.

Jon: I believe the competition will make us better — although I should disqualify myself because I was a foreigner at one time. Some of you still call me a foreigner. But I think my experience with the foreigners is nothing but positive. What they bring to our program you can't really measure it in seconds and points. I think there's a lot more to it than just looking at that. Perhaps, taking some of the scholarships away from our athletes, you can measure it that way, but I think the overall benefit to have a foreign athlete is definitely outweighed by some of the negatives that goes with it.

Daland: How much of this 80,000, 90,000 a week aerobic training does the athlete need at the college age and are our athletes getting that right amount at the college age?

Jon: We don't know a whole lot about the Australians. We get a few workouts. Out of 365 days we might see one or two workouts so it's really not an indication of what's going on all year round. But, talking to the coaches, they're definitely not going over 100,000. They barely go over 80,000 at least at the later stages of their life. We don't know what they've done at age 14 or 15 to see if they did build the capillary system with a lot of aerobic work when they were young. We suspect that it is very important between ages eleven, twelve, thirteen, fourteen to do a lot of distance work. As Councilman put it, you have to lay down the road work, the railroad tracks, which are capillaries. This eventually will give you enough blood to make the muscle last, to work for a longer period of time. What I know, is that the Australians are not ahead of us as far as mileage. As a matter of fact, they think they do less. But, they do it wiser than we do and that's probably an Australian attitude problem.

Daland: Mark Schubert, can you tell us about having a stronger aerobic distance training program in the high school years.

Mark: Well I don't know that I'm prepared to give you performance times. I could probably do a little research. But I can tell you that Jesse Vassallo became a great swimmer because he came to Southern California to race Brian Goodell every day in practice. It was just very plain and simple. Brian Goodell won the Olympic Gold Medal in Montreal because he had an opportunity to train for six months with Steven Holland every day. Instead of wondering how fast Steven Holland went in practice and shooting for his competition times he could race him every day in workout. I think as we become more isolationists in American Swimming by throwing the foreigners out of the nationals and not letting them score, and discouraging racing against top people, for example not having the Chinese swim in the Pan-Pac games, I think we hurt ourselves. I think we need to have the attitude that we're willing to stand up to the best any time, any where, whether it's performance enhancing drugs or not, and race the way Americans are capable of racing. I do think that before we see better performances from the Australians at the age of 18 and 19 we're going to have to see better performances out of high school distance swimmers. It used to be in Southern California that if you couldn't break 4:25 in the 500 freestyle you couldn't make the finals in the CIF Championship. Now CIF Championships are won in 4:31, 4:29. There's not nearly the depth, there's not nearly the competitiveness. There's not nearly the work ethic on the high school age level.