The integration of competitive Olympic weight lifting with discus and hammer throwing

by Allan Wirth

This is an account of a programme of collaboration, conducted at the Manitoba High Performance Centre, between the author and Mirek Korkoswski, former member of the Polish national weight lifting team. It discusses the problems that had to be solved, in order to harmonize a programme of training and competitive Olympic weight lifting with that of specific training for the throwing events. The athlete taken as an example is Theresa Brick, one of Canada's top throwers, who competed in World Championships in both Olympic weight lifting and athletics. A detailed account of the Olympic weight training programme is given and the athlete's progress is charted in both sports.

The Manitoba High Performance Centre has, for several years, been the site of a rather unique programme, which involves the throws athletes from the track and field centre training and competing in the Olympic Weightlifting Centre (OWC). The athletes in fact have two coaches, former Polish National team weight lifter, Mirek Korkowski and myself. Each of us deals with our own area of expertise, namely weightlifting and throwing.

The integration of both programmes presented each coach with a unique set of considerations, which had to be addressed in order to ensure the successful development of the athletes. The coaches' dilemma was to find an approach which would allow the training programmes of both sports to be harmonized and still bring about maximum results. The nature of the rest and recovery cycles, the competitive schedule and the applications of intensity and volume needed to be co-ordinated in both sports. This required the monitoring of results and work-loads, as well as the adjustment of the very nature and focus of the various phases of the training year. The major concern was how to control and adapt the programme, in order to guard against over-training and thus reduce the detrimental effect it would have on the learning of technique.

The programmes, which have produced several outstanding world class results, have been effectively integrated by the coaches and athletes involved. This article will highlight Theresa Brick, one of our centre's most successful athletes. In 1985, upon graduation from high school, Theresa came to the High Performance Centre to train for the throws. Although she appeared to have no great potential because of her height (5'4" = 1.65m) and lack of throwing experience (she was a high school sprinter), she nevertheless possessed several advantageous qualities: an eagerness to learn, a willingness to work and train hard and an abundance of fast-twitch
muscle fibres. Theresa progressed very nicely in her first season of training, reaching the 40m mark in the discus.

Following her first season of throwing, Theresa undertook the added pressure of adding hammer and Olympic weightlifting to her training programme. This was the true beginning of our collaborative programme, bringing together the coaches and setting up the programme design. During the next several years many modifications were devised and utilized, in an attempt to overcome the problems of Theresa’s new dual athletic career. Coaching became a series of compromises and modifications, while Theresa became more aware of her body and how it reacted to the new training loads.

The benefits of integrating these two sports far outweighed the problems. The progression, in terms of performance, can be documented (see Figure 1). However, what is not so apparent was her new-found focus. Theresa found a new sense of purpose for the indoor season. The long months of turns and releases into a net could now be focused into a new competitive opportunity, namely Olympic weightlifting. This is not to say that technical development in the throws was deleted from the programme; only that efforts became more focused and Theresa was now more mentally and physically aware of the changes occurring as a result of the training. The very nature of throwing and lifting, with their technical and power requirements, make this combination a natural occurrence – an excellent blend of athletic purpose and form. Theresa noted that she now had a renewed enthusiasm for the indoor season, since the competitive nature of Olympic weightlifting afforded her a chance to compete and test herself more frequently.

As mentioned earlier, modifications to the training programme were required at various phases, most notably during ‘heavy’ phases in the Olympic weightlifting. We modified the training phases to concentrate more on the component parts of the throwing technique (entry, release, etc.) and worked on timing and rhythm only when the lifting was not so intense.

We feel that over the past 9 years Theresa has developed a competitive edge as a result of her competitive lifting that ordinary weight training would not have given her. The nature of Olympic lifting bears a strong resemblance to the competitive throwing situation. The lifter is given 3 attempts in both the snatch and the clean & jerk for a total of 6 attempts.

The integration of training for both sports has not been all clear sailing. Several conflicts, notably in the competitive schedules, have occurred. However, in each situation, the athlete’s best interest was kept foremost in our minds. The coaches have always worked in an atmosphere of respect and co-

Figure 1: Annual progression of Theresa Brick’s performances
operation and, when this prevails over egos, the athletes and coaches will all be successful.

If we now examine Theresa’s progression in the discus and hammer as well as her lifts, we will see how the integration of the two sports has proven to be very beneficial (cf. Table 1).

Table 1: Annual progression of Th. Brick

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL</th>
<th>DISCUS</th>
<th>HAMMER</th>
<th>OLYMPIC Lifts</th>
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<tbody>
<tr>
<td>1985</td>
<td>40.00m</td>
<td>46.00m</td>
<td>150kg</td>
<td>130kg</td>
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<tr>
<td>1986</td>
<td>45.46m</td>
<td>47.54m</td>
<td>170kg</td>
<td></td>
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<td>1987</td>
<td>49.50m</td>
<td>53.76m*</td>
<td>180kg*</td>
<td></td>
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<tr>
<td>1988</td>
<td>50.78m (1)</td>
<td>53.00m</td>
<td>187.5kg*</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>52.02m (3)</td>
<td>55.60m*</td>
<td>202.5kg*</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>52.78m (3)</td>
<td>55.80m*</td>
<td>202.5kg*</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>53.26m (4)</td>
<td>54.80m</td>
<td>205.2kg*</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>58.40m (12)</td>
<td>56.26m*</td>
<td>207.0kg*</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>58.40m (12)</td>
<td>56.26m*</td>
<td>207.0kg*</td>
<td></td>
</tr>
</tbody>
</table>

indicates number of discus throws over 50m
indicates Canadian record

Theresa’s performances in 1993 earned her the privilege of competing in two world championships. The first was in athletics, at the IAAF Championships held in Stuttgart, Germany and the second in Olympic Weightlifting, held in Melbourne, Australia.

I will highlight Theresa’s training programme during 4 critical stages in her preparation during 1993:
1) Canadian National Weightlifting Championships
2) Legends National Throwers Meet
3) World Track and Field Championships
4) World Weightlifting Championships

**Canadian National Weightlifting Championships, 22 May, 1993**

Looking over the following daily workouts, beginning on May 7, one will note the high intensity for the snatch and clean & jerk. This is an example of a ‘heavy’ workout and, therefore training for the discus would be correspondingly lighter, with the emphasis placed on component parts rather than timing and rhythm. Theresa exhibited a great deal of fatigue, especially in the legs, during this phase and our attempts to work on timing and rhythm were not productive. Special notice is also drawn to the high volume and intensity on May 7 and 14, followed by a lessening of the load, both in terms of volume and intensity, leading into the Championships. Theresa weighed in at 69.8kg and totalled 200kg (snatch 87.5kg and 112.5kg clean & jerk). Prior to this competition, she had competed in only 3 discus events, with her best performances at each meeting being 54.56m, 48.92m and 51.90m.

**Training programme prior to National Weightlifting Championships**

Friday, May 7

Snatch:
2x3 (50kg) / 1x3 (60kg) / 1x2 (70kg) / 1x2 (75kg) / 1x1 (80kg) / 1x1 (85kg) / 1x1 (90kg) / 1x1 (95kg) / 1x1 (100kg) / 1x1 (105kg) / 1x1 (110kg) / 1x1 (115kg) / 1x1 (120kg) / 1x1 (125kg) / 1x1 (130kg)

Clean & Jerk:
2C+2J (70kg) / 2C+2J (80kg) / 2C+2J (90kg) / 2C+2J (100kg) / 2C+2J (110kg) / 2C+2J (120kg) / 2C+2J (130kg)

Clean Pulls:
2x4 (95kg) / 2x4 (105kg)

Back Squat:
1x4 (80kg) / 1x4 (100kg) / 1x4 (120kg) / 1x4 (140kg) / 1x4 (160kg) / 1x4 (180kg)

Saturday, May 8

Rest

Sunday, May 9

Throwing:
10-20 stands

Technique work

Hill bounds

Sprints

Monday, May 10

Power Snatch:
2x2 (50kg) / 2x2 (60kg) / 2x2 (70kg) / 1x2 (75kg) / 1x1 (80kg)

Snatch:
2x2 (65kg) / 2x2 (75kg) / 2x2 (85kg) / 2x2 (95kg) / 2x2 (105kg) / 2x2 (115kg) / 2x2 (125kg) / 2x2 (135kg) / 2x2 (145kg) / 2x2 (155kg) / 2x2 (165kg)

Clean & Jerk:
2x(2C+2J) (70kg) / 2x(2C+2J) (80kg) / 2x(2C+2J) (90kg) / 2x(2C+2J) (100kg) / 2x(2C+2J) (110kg) / 2x(2C+2J) (120kg) / 2x(2C+2J) (130kg) / 2x(2C+2J) (140kg) / 2x(2C+2J) (150kg) / 2x(2C+2J) (160kg) / 2x(2C+2J) (170kg) / 2x(2C+2J) (180kg) / 2x(2C+2J) (190kg) / 2x(2C+2J) (200kg)

Back Squats:
1x4 (80kg) / 1x4 (100kg) / 1x4 (120kg) / 1x4 (140kg) / 1x4 (160kg) / 1x4 (180kg) / 1x4 (200kg)

Tuesday, May 11, a.m.

Snatch:
3x3 (55kg) / 3x3 (65kg) / 3x3 (75kg) / 3x3 (85kg) / 3x3 (95kg) / 3x3 (105kg) / 3x3 (115kg) / 3x3 (125kg) / 3x3 (135kg) / 3x3 (145kg) / 3x3 (155kg) / 3x3 (165kg) / 3x3 (175kg) / 3x3 (185kg) / 3x3 (195kg) / 3x3 (205kg)

Clean & Jerk:
2x(2C+2J) (75kg) / 2x(2C+2J) (85kg) / 2x(2C+2J) (95kg) / 2x(2C+2J) (105kg) / 2x(2C+2J) (115kg) / 2x(2C+2J) (125kg) / 2x(2C+2J) (135kg) / 2x(2C+2J) (145kg) / 2x(2C+2J) (155kg) / 2x(2C+2J) (165kg) / 2x(2C+2J) (175kg) / 2x(2C+2J) (185kg) / 2x(2C+2J) (195kg) / 2x(2C+2J) (205kg)

Back Squats:
1x2 (75kg) / 1x2 (85kg) / 1x2 (95kg) / 1x2 (105kg) / 1x2 (115kg) / 1x2 (125kg) / 1x2 (135kg) / 1x2 (145kg) / 1x2 (155kg) / 1x2 (165kg) / 1x2 (175kg) / 1x2 (185kg) / 1x2 (195kg) / 1x2 (205kg)

p.m.

Throwing:

Technique work

Bounds on Flat

Sprints

Wednesday, May 12

P. Snatch:
2x3 (50kg) / 2x3 (60kg) / 2x3 (70kg) / 2x3 (80kg) / 2x3 (90kg) / 2x3 (100kg) / 2x3 (110kg) / 2x3 (120kg) / 2x3 (130kg) / 2x3 (140kg) / 2x3 (150kg) / 2x3 (160kg) / 2x3 (170kg) / 2x3 (180kg) / 2x3 (190kg) / 2x3 (200kg)

P. Clean:
1x4 (55kg) / 1x4 (65kg) / 1x4 (75kg) / 1x4 (85kg) / 1x4 (95kg) / 1x4 (105kg) / 1x4 (115kg) / 1x4 (125kg) / 1x4 (135kg) / 1x4 (145kg) / 1x4 (155kg) / 1x4 (165kg) / 1x4 (175kg) / 1x4 (185kg) / 1x4 (195kg) / 1x4 (205kg)

F. Squats:
1x4 (80kg) / 1x4 (100kg) / 1x4 (120kg) / 1x4 (140kg) / 1x4 (160kg) / 1x4 (180kg) / 1x4 (200kg)

Thursday, May 13

Rest
Friday, May 14

Snatch:
2x3 (60kg) / 1x3 (60kg) / 1x2 (70kg) / 1x2 (75kg) / 1x1 (80kg) / 1x1 (85kg) / 1x1 (87.5kg) / 1x1 (90kg)
Clean & Jerk:
2x(2C+2J) (70kg) / 1x1(2C+2J) (80kg) / 1x1(1C+1J) (90kg) / 1x1 (95kg) / 1x1 (100kg) / 1x1 (105kg)
Clean Pulls:
1x3 (65kg) / 2x3 (105kg)
B. Squats:
1x4 (60kg) / 1x4 (80kg) / 1x4 (100kg) / 1x4 (110kg) / 2x3 (120kg)

Saturday, May 15

Rest

Sunday, May 16

Throwing:
Easy full throws, 45m range
Bounds up hill
Sprints
Medicine ball work

Monday, May 17

P. Snatch:
2x3 (45kg) / 2x3 (55kg) / 2x3 (55kg) / 2x2 (65kg) / 1x1 (70kg) / 1x1 (75kg)
Clean & Jerk:
2x(2C+2J) (75kg) / 2x(2C+2J) (85kg) / 2x(1C+1J) (95kg)
Snatch Pulls:
1x3 (72.5kg) / 1x3 (82.5kg)

Tuesday, May 18, a.m.

Snatch:
2x3 (50kg) / 2x3 (60kg) / 1x2 (70kg) / 1x1 (75kg) / 1x1 (80kg)
P. Clean & Jerk:
2x(2C+2J) (65kg) / 2x(2C+2J) (75kg) / 2x(1C+1J) (85kg)
F. Squats:
1x3 (80kg) / 1x3 (90kg) / 2x3 (100kg)
Press:
4x4 (25kg)
p.m.
Throwing:
Technique work
Bounds into Sand pit
30m sprints

Wednesday, 19 May

No training

Thursday, 20 May

Power Snatch:
2x3 (40kg) / 2x2 (50kg) / 2x1 (60kg)
P. Clean & Jerk:
2x(2C+2J) (60kg) / 2x(2C+2J) (70kg) / 1x1(1C+1J) (80kg)
B. Squats:
3x3 (60kg)

Friday, 21 May

Rest

Saturday, 22 May

National Weightlifting Championships

Legend National Throwers Meet
June 12, 1993

Following the National Weightlifting Championships, Theresa’s training focus was on the Legends Meet (a national throwing competition held annually in Canada). This meet was used for the selection of the National Team, specifically for the World Championships and F.I.S.U. The emphasis in this particular competition required the intensity and volume of her training to be reduced somewhat, in order to aid peaking. This subtle change in training allowed Theresa to concentrate her efforts in the hammer and discuss mainly on the timing and rhythm of the throws, rather than the separate aspects. The individual components of the throw were now blended together in a unified, cohesive fashion. Training was further augmented by jumps, bounds, sprints and medicine ball exercises, to integrate more fully the central nervous system. Theresa’s results were beyond expectations, with 58.40m in the discus, the 4th best throw ever by a Canadian woman and 56.26m in the hammer (a new Canadian record, bettering her previous mark of 55.80m set in 1991).

Training programme prior to Legends

Monday, May 31

F. Squats:
3x8 (80kg)
P. Snatch:
3x5 (40kg) / 3x4 (50kg) / 3x3 (60kg)
Snatch Pulls:
2x6 (70kg) / 3x5 (80kg)
Press:
4x3 (25kg)
B. Squats:
2x5 (80kg) / 3x5 (90kg)

Tuesday, June 1, a.m.

Split Squats:
4x5 (50kg)
P. Clean:
2x5 (55kg) / 3x4 (65kg) / 3x3 (75kg)
P. Jerk:
2x5 (50kg) / 2x4 (60kg) / 2x3 (70kg)
Leg Extensions:
3x10
Leg Curls:
3x10
Bench Press:
4x8
p.m.
Throwing:
General Warm up
High Performance Competition
Discus: 49.84m
Hammer: 51.96m
Wednesday, June 2, a.m.

Snatch:
2x3 (50kg) / 2x3 (60kg) / 2x2 (70kg) 2x1 (75kg)

Clean & Jerk:
2x(2C+2J) (65kg) / 2x(2C+2J) (75kg) / 2x(2C+2J) (85kg)

B. Squats:
1x5 (50kg) / 1x4 (100kg) / 3x3 (110kg)

Press:
4x5 (35kg)

p.m.

Throwing:
Light throws, 1-20 standing & 10-20 full throws

Bounding

Sprints

Medicine ball

Thursday, June 3

Throwing:
Stands with 1.5kg & 1kg balls
Stands with discus
Full throws

Double leg bounds

Medicine ball

Friday, June 4

Vertical Jumps:
3x8

Sit ups

Upright rows
4x8

Tricep extensions
4x8

Leg press
2x8 / 2x6 / 2x4

Jerks:
2x5 (60kg) / 2x4 (70kg) / 3x3 (80kg)

Saturday, June 5

Repeat Thursday, June 3 workout

Sunday, June 6

Hammer:
5-10 continuous turns
10-20 throws on rhythm
10 throws with full four turn and release

Discus:
5-10 stands
5-10 South Africans*
20-25 full throws

Abdominal work and medicine ball

Monday, June 7

Good mornings**:
4x8 (50kg)

P. Snatch:
2x5 (40kg) / 3x4 (50kg) / 3x3 (60kg)

P. Jerks:
2x5 (50kg) / 2x4 (60kg) / 5x5 (70kg)

F. Squats:
1x4 (70kg) / 1x4 (90kg) / 2x3 (100kg)

Leg Extensions:
3x8

Tuesday, June 8

Discus throwing:
5-10 stands

10-15 South Africans
10-15 full throws

Hill Bounds

Sprints

Wednesday, June 9

F. Squats:
4x6 (70kg)

Snatch:
2x5 (45kg) / 2x5 (55kg) / 5x4 (65kg)

Jerk Press:
5x5 (55kg)

B. Squats:
1x8 (80kg) / 1x5 (100kg) / 4x4 (110kg)

Thursday, June 10

Discus:
5-10 stands
10 full throws, emphasis on rhythm & time

Hammer:
10 one turn releases
10 four turn releases
10 sets of continuous turns to end practice

Friday, June 11

P. Snatch:
2x3 (40kg) / 2x2 (50kg) / 2x1 (70kg)

P. Clean & Jerk:
2x(2C+2J) (60kg) / 2x(2C+2J) (70kg) / 1x(1C+1J) (80kg)

B. Squats:
3x3 (80kg)

Saturday, June 12

Legends Meet

a.m. Discus qualifying 56.16m

p.m. Hammer final 56.26m * Canadian record

Discus Final 58.40m

World Track & Field Championships, August 17, 1993

This pattern of training continued through to the National Senior Championships, July 30 & 31, where Theresa defended her titles as National Champion in the hammer and discus. Following the Nationals, preparation began for the World Championships in Stuttgart, Germany. In planning this phase of the

* South Africans: 1½ turns discus drill. The thrower stands outside the rear of the circle, facing the direction of throw. He ‘winds up’, places his left foot just inside the circle and immediately drives off it, with the right leg following in an arc to plant the right foot in the centre of the circle. The left leg is then swiftly swept straight back to place the left foot near the front of the circle (power position). The drill can initially be practised without using a circle and without a discus.

** Good mornings: Weight training drill for back strengthening. With barbells on the shoulder the trunk is bend forward until parallel to the ground and raised back to upright position, like a ‘deep bow’.

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programme, consideration was given to the added stress of a long overseas flight as well as the lingering effects of an intestinal infection. Theresa’s results were below those expected but, considering it was her first World Championship, the lessons learned will be of great value in the future.

**World Weightlifting Championships**
**November 17, 1993**

The final test in 1993 was the World Weightlifting Championships in Melbourne, Australia. The training programme was designed for a period of time when her entire focus was on weightlifting. Theresa placed 4th by body weight (tied for 3rd in both total and clean & jerk).

**Training programme prior to IWF World Championships in Melbourne, Australia**

**Monday, November 8, a.m.**

Clean & Jerk:
- 1x(2C+2J) (70kg) / 1x(2C+2J) (80kg) / 2x(2C+2J) (90kg) / 2x(1C+1J) (100kg) / 3x(1C+1J) (105kg)
- P. Clean & Hang:
  - 2x(70kg) 3x(80kg)
- B. Squat:
  - 4x(80kg) / 4x(100kg) / 4x(110kg) / 3x4(120kg)

**Tuesday, November 9 (weight 71.29kg)**

Snatch:
- 2x3 (50kg) / 2x3 (60kg) / 3x2 (70kg)

Clean & Jerk:
- 2x(2C+2J) (70kg) / 1x(2C+2J) (85kg) / 1x(1C+1J) (87.5kg)
- P. Pulls:
  - 3x(95kg)
- B. Squats:
  - 4x(80kg) / 4x(100kg) / 3x(110kg)

**Wednesday, November 10 (weight 70.6kg)**

Snatch:
- 2x3 (40kg) / 2x(50kg) / 3x(60kg) / 2x(70kg)

Clean & Jerk:
- 2x(2C+2J) (67.5kg) / 2x(2C+2J) (77.5kg) / 1x(1C+1J) (87.5kg)

**Sunday, November 12 (weight 71.29kg)**

Snatch:
- 2x4 (50kg) / 2x3 (60kg) / 3x2 (70kg)

**Clean & Jerk:**
- 2x(2C+2J) (75kg) / 1x(2C+2J) (80kg) / 1x(1C+1J) (85kg) / 1x(1C+1J) (90kg) / 1x(1C+1J) (95kg)
- P. Pulls:
  - 3x(95kg)
- B. Squats:
  - 4x(80kg) / 4x(100kg) / 2x3 (110kg)

**Monday, November 15 (weight 70.6kg)**

Snatches:
- 2x3 (50kg) / 3x(60kg) / 2x(70kg) / 1x(75kg)

**Clean & Jerk:**
- 2x(2C+2J) (67.5kg) / 2x(2C+2J) (77.5kg) / 1x(1C+1J) (87.5kg)

**Tuesday, November 16**

**Wednesday, November 17 (weight 69kg)**

92kg Snatch
110kg C&J
202kg Total for 4th place (tied for 3rd place)

In 1994, Theresa has improved her personal best by totalling 207.5kg (92.5 Snatch and 115 C&J), setting new Canadian and Commonwealth records. Theresa is currently preparing to attempt a world record in the 70kg class with a lift of 120kg in the clean & jerk. We are confident this will also aid her discus and her hammer performances. In conclusion, this programme must be viewed with several parameters taken into account. Firstly, the programme is designed specifically for Theresa, to fit her time restraints, job, family requirements and competitive schedule. Secondly, any programme, regardless of how successful, is just a guide for training and is not an exact recipe for success.