

Roundtable Questions: New Javelin for Women



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In 1999 the IAAF has introduced a "new" javelin for women with a shifted centre of gravity by 3 cm. NSA asked two very experienced national coaches Peter Lawler (AUS) and Anders Borgström (SWE) and Steve Backley (GBR) on their experiences with a new implement and how it has affected technique and training.

NSA:

How do you judge the introduction of the "new" javelin for the women last season?

BORGSTRÖM:

We had less flat landings and that is very positive! I would rather discuss the competence and ability of the athletes rather than that of the judges.

LAWLER:

The changes in the women's javelin should have coincided with those of the men's implement in April 1986. Although flat calls were often a problem with the men's implement, they were always a much greater problem with the women's javelin. The issue was never distance, it was always the legality of the landing. Specifically, the Nemeth model must bear the responsibility for necessitating a change in javelin specifications. For too long elite female throwers excelled in competition, especially the Cuban Women who utilised a baseball slide technique with the Nemeth javelin. Now the event is fair for all and current distances have not suffered. Secondly, the 80 m record has been erased and that is comforting.

BACKLEY:

The old W.R. of 80 m was never going to be approached by current throwers therefore it was essential to change the implement to create a new world best. In addition to this, the event was becoming very difficult to judge and the change has enhanced the ability of officials to judge the event more accurately.

NSA:

Do you think that the change of centre of gravity by 3cm was correct or too much?

BACKLEY:

It is comparable to the men's change in 1985 and the men's event has gone from strength to strength as a spectacle in the arena. The decision was a good one.

LAWLER:

The change has been conservative. Watching the women in Seville, there was little discernible difference in flight characteristics. The 3 cm change can be interpreted in Shakespearean parlance as "Much Ado About Nothing". The winning distance in Seville was superior to Atlanta. Compare this to the history of the men's transition; Hohn threw 96.96 m in Canberra in the 1985 World Cup, the last international event with the 'old' implement. It took Zelezny until 1996 to surpass this and Hohn's 104 m World Record remains unapproachable.

BORGSTRÖM:

In looking at the aerodynamics of the javelin and the desire to achieve valid

throws, it was definitely not too much. You could make a case for even more distinct landings, thus eliminating the problem completely; this would be a particular benefit within combined events. Overall, 3 cm was just perfect, so an additional solution would in that case have been to increase the minimum diameter of the rear part of the shaft. On the other hand we now have the same relative size diameter for the 800g and the 600g javelins and that makes life a little bit easier in terms of equipment control, which, if executed correctly, is complicated enough anyway. So, I'm satisfied with the change as it stands.

NSA: Are you still using your old javelins in training? If yes, why do you use them?

LAWLER:

Yes, I am still using old javelins in training. Just as in 1986, it takes several years and generous budgets to convert the equipment shed to a quiver of new spears. The changeover is particularly noticeable in schools and small athletic clubs. It will take several years for the old model to be cremated.

BORGSTRÖM:

Yes! Old javelins, distance rated up to 55 metres, show approximately the same aerodynamic characteristics as the new javelins, so they are OK to use for normal outdoor throwing. In the Nordic countries we have cold winters with a lot of snow, so an important part of our off-season preparations is indoor throwing into a net. The old javelins, distance rated over 55 metres, are just perfect for indoor use after we cut the tip by a few cm and replace it with a small, circular metal protector. By being accurate you can maintain the centre of gravity of the javelin and it feels well balanced in your hand.

BACKLEY:

Although I'm not using 600g implements, apart from specific speed work leading into

the season, I'm able to obtain custom made javelins direct from the manufacturers. Elite throwers have no difficulty in replacing implements, but lesser throwers, clubs, and other organisations do experience financial difficulty and have to buy when they can afford to do so.

NSA: How did biomechanical parameters like angle of release, or release velocity change?

BORGSTRÖM:

When using a javelin gun a slighter higher angle of release seems better with the new javelin. Even so, speed of release is the absolute dominant factor and in practical throwing you must also take into consideration that a thrower is capable of producing a higher speed of release at a lower angle, so any apparent difference is less in practice. I would say that this is much more a question of feeling for the athlete and I see no deliberate need for change, although a long-term scientific study could show a slightly higher angle of release.

LAWLER:

To answer the second part first, as there is no increase in weight there is no change in the release velocity. It would be foolish to make the same predictions as we did with the change in the men's model. The predictions that the physique required would resemble that of shot putters armed with the technique of the 1930's proved to be completely erroneous. The 3 cm change is subtle, the weight is the same, the length is the same therefore the angle of release will remain basically the same. The angle of release will remain the prerogative of the idiosyncratic thrower. For a driver like Louise Curry (nee McPaul), there is no change required. In her first competition with the new spear in Austria in June 1999, she threw a near P.B. irrespective of spear model. In Australia, we await the reappearance of Joanna Stone, a much higher thrower, to see the impact of the new regulations. Like high throwers amongst the men such as Makarov, she will be affected more by the gravity shift.

BACKLEY:

Release velocity has almost certainly not changed – the higher the release speed the further the athlete throws, however the angle of release is crucial and the thrower must 'hit' the new specification implement 'cleanly' through its point at between 36-38 degrees for optimum delivery.

NSA:

What effects on technique and coordination did you experience with the new javelin?

BACKLEY:

The skills of throwing the implement remain the same but the control needed to maintain contact with the javelin is higher – more practice is needed – instead of benefiting from a head wind the new implement will fly further with a 'tail wind' – just as the men's implement does.

LAWLER:

The new spear will improve the 'feel' of the implement in the withdrawn position. With a little more weight in the head, the thrower will have a higher kinaesthetic sense of a weighted point to drive against. The balance of the old spear was so good, it felt weightless in the withdrawn position. I predict a greater consistency in throwing a series with the new spear. There are no other technical changes necessary to master the new implement.

BORGSTRÖM:

None as a result of the change in the rules. You are always developing your approach to training and technique, but I think there are other parameters which can be bigger influences in our work with athletes than the rule change in question.

NSA:

Did you change the loading in strength and speed training? If yes, how did you change it?

LAWLER:

There are no changes in the training of a javelin thrower. None whatsoever!

BORGSTRÖM:

No changes at all based on the change of the rules!

BACKLEY:

No.

NSA:

What are your expectations on the performance development of the women's javelin throw?

BORGSTRÖM:

Last year's throwing was still far behind the level that Petra Felke and Fatima Whitbread achieved over a decade ago. I am convinced that they would have been able to throw 72-75 metres with the new javelin. There are some athletes on the scene at the moment who are showing great potential, so I expect throws of over 70m in 2000 and 71-73 metres within two or three years.

BACKLEY:

High skill levels must remain: the unusual distances sometimes achieved with head winds will not occur with the new specification and the event will become very competitive around the 66-70 m distances. The crucial element is that the implement will now stick in and be easier to mark for the field judge and easier for spectators to see how far the spear actually travelled to its point of contact with the ground.

LAWLER:

Seville indicated that the current distances are unaffected by the new spear. The old stars need not retire. They were prominent in Spain and they will be there in Sydney. The new breed will dominate due to the vigour of youth, not mastery of the new spear. The old are not redundant. To repeat myself, the new spear is "Much Ado About Nothing".

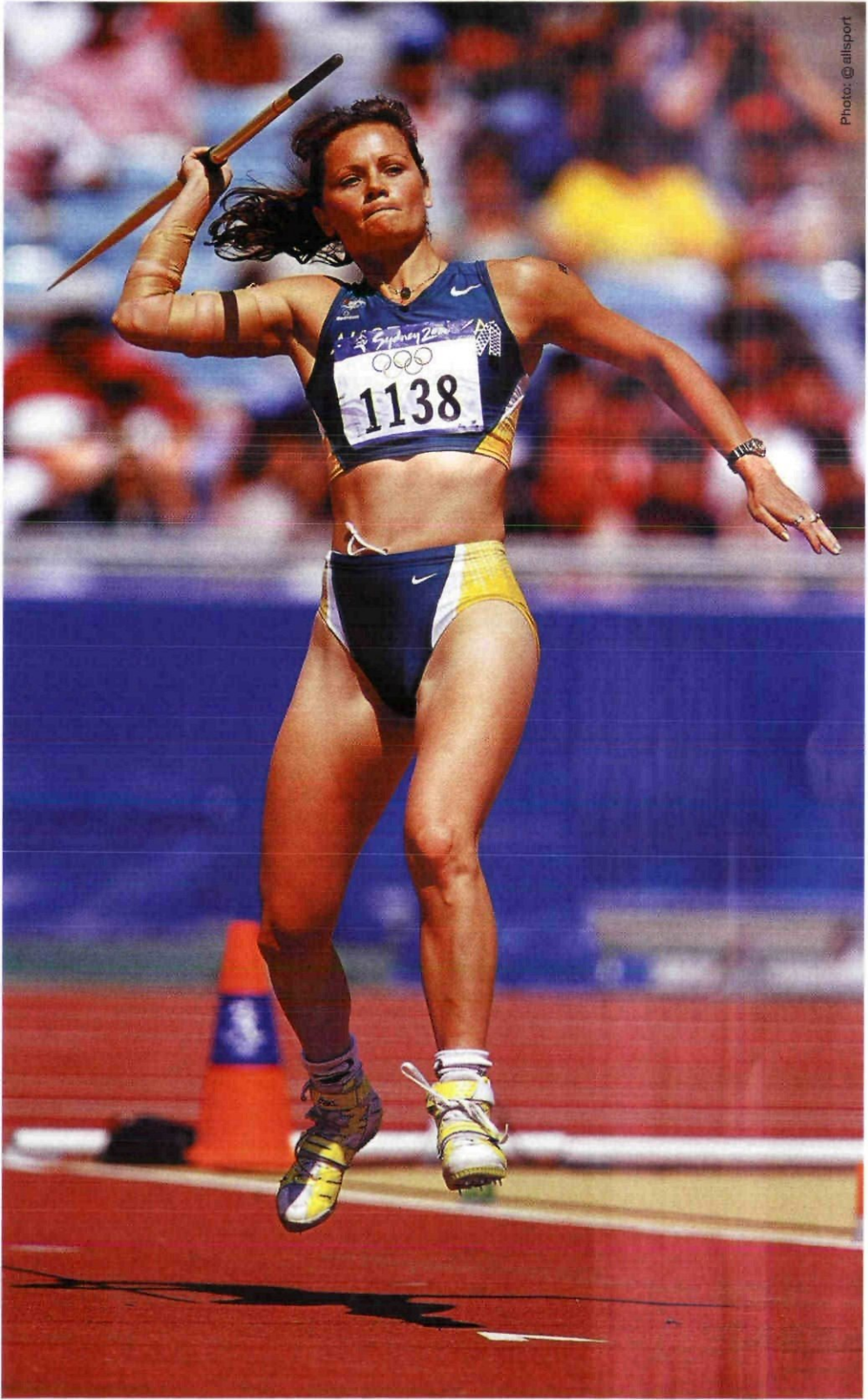


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