

## NSA Photosequences 12 and 13 Race Walking

### Jin Binjie Wang You

Sequence by Helmar Hommel (© Hommel AVS 1990)

The sequences show the final stage of the 5,000 metres race walk at the I World Junior Championships in Athletics, Athens, 1986.

#### Jin Binjie (PRC)

Born: 1 April 1971

Best Marks: 5,000 metres - 20:55.5 (1989); 10,000 metres - 43:15.6 (1989)

Bronze medallist in the I World Junior Championships in Athletics, Athens, 1986

#### Wang You (PRC)

Born: 4 April 1971

Best Marks: 5,000 metres - 21:18.1 (1989); 10,000 metres - 44:15.5 (1989)

World Junior Champion 1986

### Commentary

Fulvio Villa

In order to simplify the technical analysis of the photosequences of these two Chinese race walkers, we shall refer to them as A (Jin Binjie) and B (Wang You).

Their movement pattern indicates they have similar technical bases, very well interpreted in both cases, so that their action is modern and perfectly in line with the best international race walking schools.

#### Technique analysis

In Frames A/1 and B/1, the axis trunk-leg of both athletes is perpendicular to the ground. According to IAAF Rules, this is the moment at which the walking judge must check that the supporting leg is straight. Both athletes undoubtedly comply with this rule; frames A/11 and B/8 show the athletes in the same stance, and confirm this judgement.

We can then observe the beginning of the forward propulsion (Frames A/3-A/13 and B/2-B/10) as the heel of the rear leg leaves the ground. This phase should begin as soon as

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*(Editor's note: An analysis of Chinese women's race walking will appear in a future issue of NSA)*

*Translated by Alessandra Lombardi*

## Photosequence 12 - Jin Binjie (PRC)



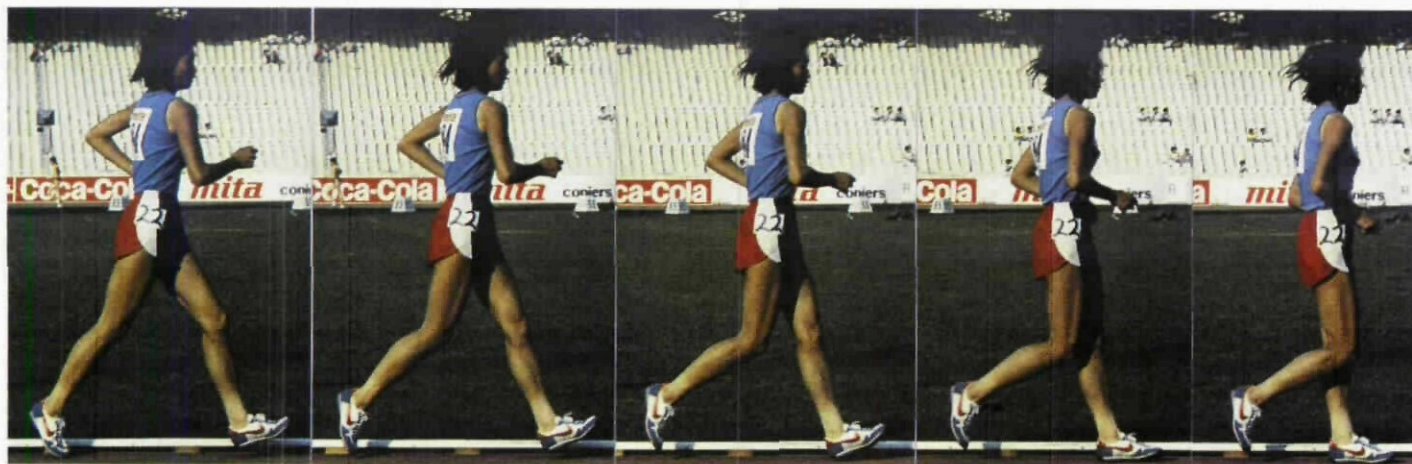
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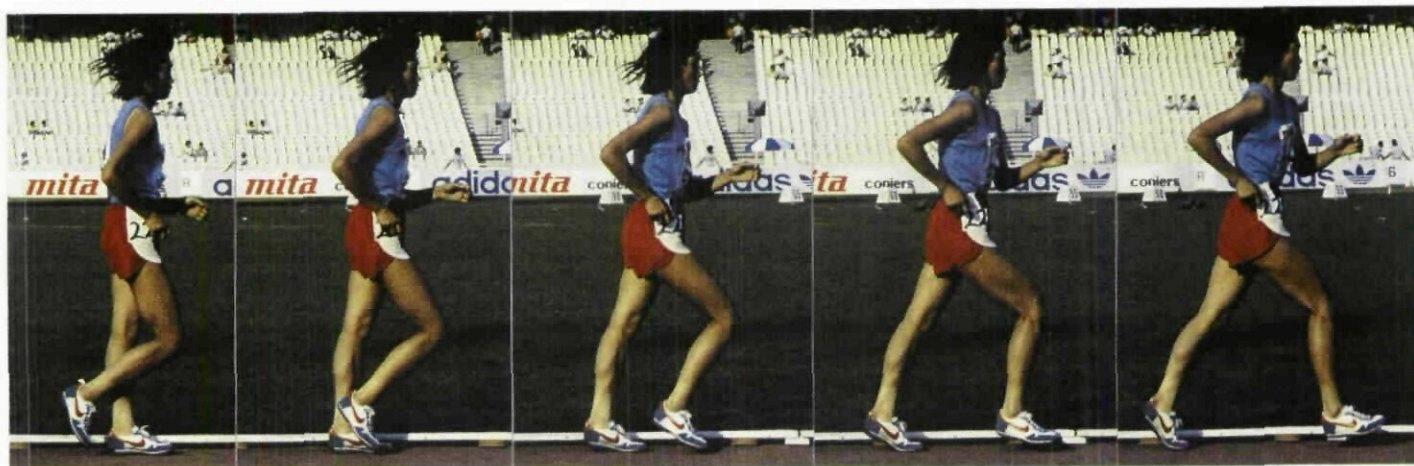
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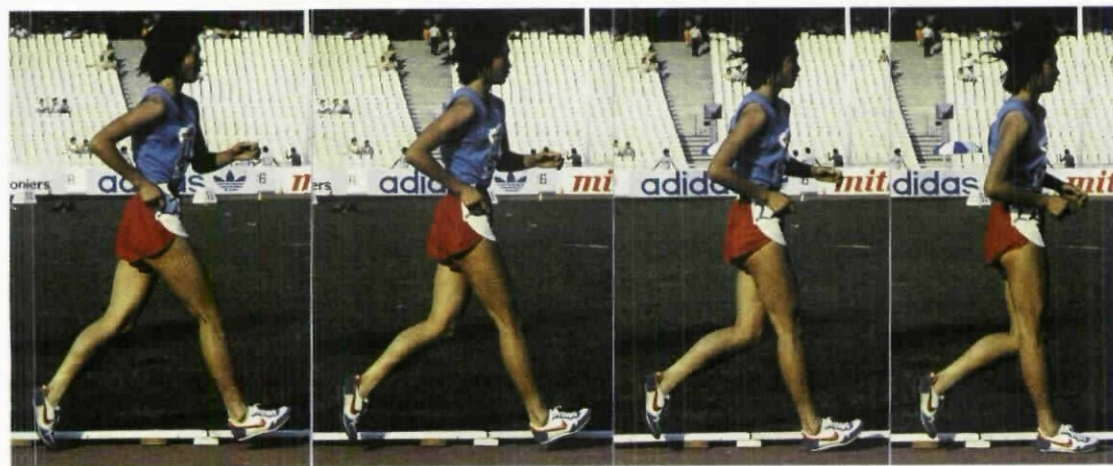
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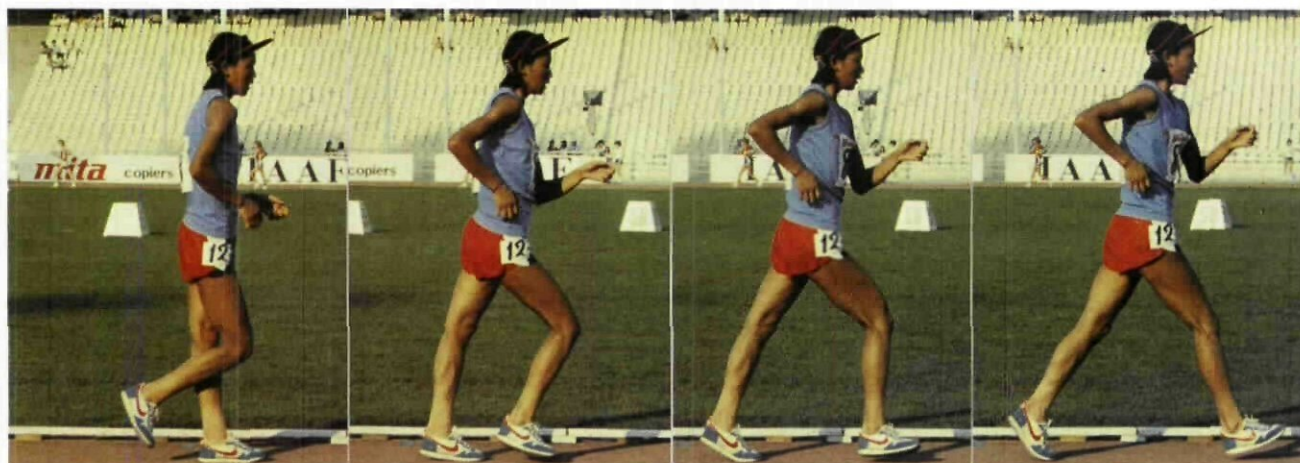


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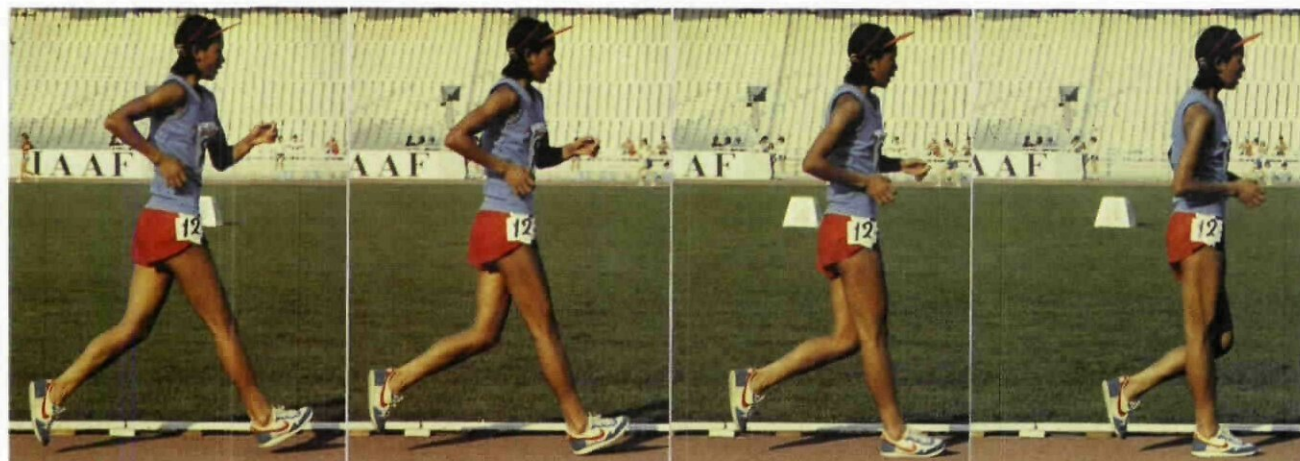


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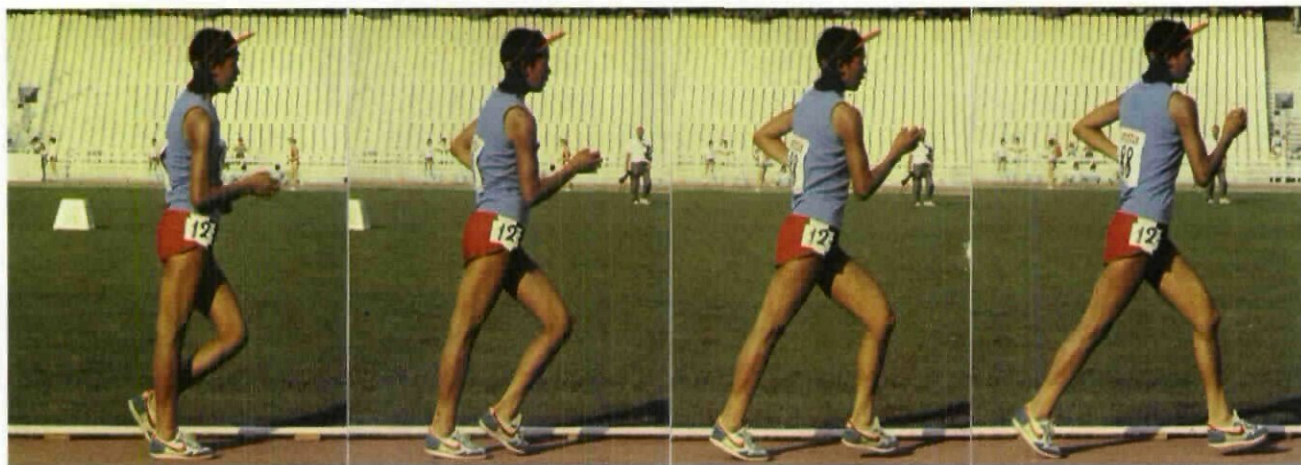


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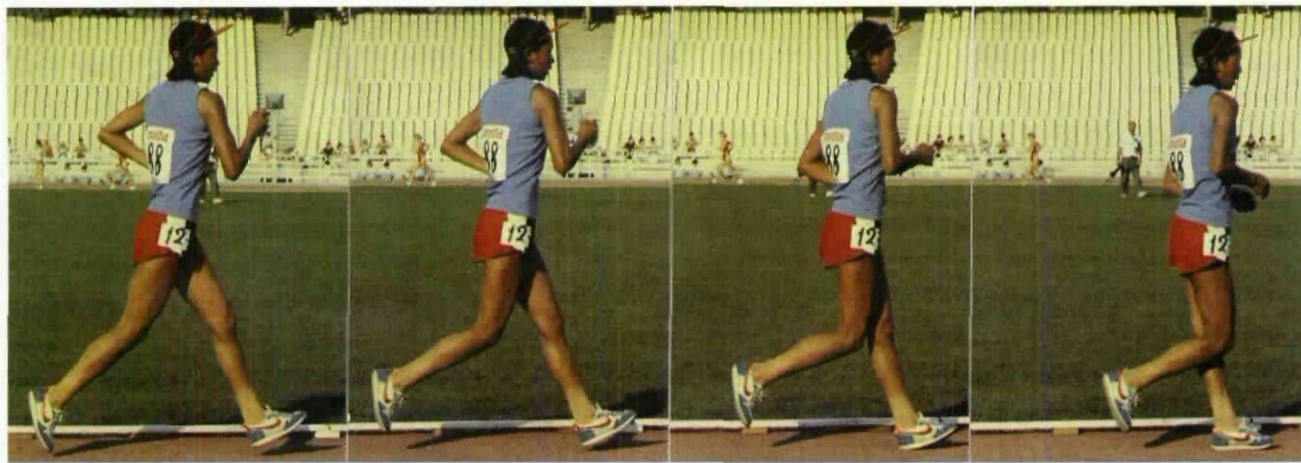


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the centre of gravity has moved, ahead of the ground support, so that forward propulsion is not dispersed upwards. Both athletes respect this technical principle; the long and efficient thrust they achieve points to an excellent muscular conditioning.

The swinging phase, i.e. the translation of the rear leg to the next point of double limb support, begins when the rear foot leaves the ground and ends when the heel makes contact with the ground, ahead of the projection of the Centre of Gravity. We can observe the complete action of athlete A with the right leg (Frames A/7-A/18) and of athlete B with the left leg (Frames B/5-B/15). At the beginning of the swinging phase the heel should not be raised too high, so that the movement may be swift, with the foot parallel and close to the ground (Frames A/14-A/15 and Frames B/11-B/12). The velocity of the foot during the swinging phase is more than double that of the trunk.

The double limb support, i.e. when both feet should contact the ground, is not present in this race walking photosequence. The flight phase, which we can observe, shows loss of contact (Frames A/7, A/17, B/5, B/13, B/14). This is a consequence of high speed and should, according to IAAF Rules, have caused the disqualification of both athletes. However, the fluidity of the movement and its apparent adherence to the correct movement pattern concur in concealing the flight phase, inducing the judge to overlook the infringement of the rule.

The final extension of the knee of the swinging leg allows both athletes to make contact with the ground having already straightened the support leg (Frames A/8, A/18, B/6, B/15). The angle of the foot as it contacts the ground is in both cases lower than the 40 degrees recommended by the literature. This is a technical choice that can be explained by the need to shorten this phase and begin a new forward propulsion as soon as possible. The correct movement pattern of Race Walking does require a gradual, dynamic contact of the whole foot (heel-toe): this action is fleetingly shown in Frames A/8-A/9; A/18-A/19 and B/6-B/8, B/15-B/16.

The inclination of the trunk during the flight phase is slightly greater in athlete B, although the vertical oscillation remains within the 0-4 degrees range prescribed by the technique.

The arm movement of both athletes efficiently balances and compensates the rotational momentum typical of a race walker, without becoming rigid. The angle at the elbow remains close to the required 90 degrees; it is only slightly lower in athlete B when her arm is in front of the trunk.

Lastly, the action of the pelvis and of the hip joints indicate a good level of flexibility in both athletes.

### Comparison

The similarities between these two race walkers have already been underlined. This obviously does not detract from the psychological and physical individuality of each athlete whose respective movements are always unique and irrepeatable.

For the comparison of the technique of Jin Binjie and Wang You, we concentrate on the following features: movement of the trunk, the swinging phase, touchdown of the foot and subsequent heel-toe action.

As regards to the movement of the trunk Jin Binjie's action appears to be more compact and linear; Wang You's trunk is more actively involved showing a greater vertical oscillation (Frames B/1 and B/9) and trunk rotation (Frames B/13-B/15).

During the swinging phase, Wang You's leg moves closer to the ground - compare Frames A/13-B/2; A/14-B/3; A/15 and 16-B/4. A difference can be clearly observed at the moment of touchdown, when the angle of Wang You's foot with the ground (Frames B/6) is greater than Jin Binjie's (Frame A/18). Consequently, the former's heel-toe action can be more gradual (Frames B/6-B/8) and remain equally dynamic and accepted by the walking judge.

To conclude, both athletes show an efficient technique, but a constant control of their movements seems advisable if they are to maintain a correct race walking style as their capacities increase with training.

