Attaching Significance to Questioned Footwear Impressions Characteristic of the Nike Air Force I

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1982  $89.95
There has now been 38 years of production of the Nike Air Force I
Sources have estimated that 5 million Air Force I athletic shoes are sold in the United States each year.
"Air Force Ones" by Nelly

“Big boy.. Big boy.. Big boy”

[Chorus]

“I said give me two pairs  
cause I need two pairs  
So I can get to stomping in my air force ones  
(Big boys) stomping in my air force ones”
Nike Air Force I tread design
Currently, at least one other Nike shoe also has this outsole design.

Nike Air Jordan
(several models)

This is an Air Jordan – Air Force I “fusion”
To Complicate Matters:

Besides the “real deal”, there are an unknown number of counterfeit Nike Air Force I shoes being manufactured and sold.

(“Counterfeit” shoes are those with uppers and outsoles that are made to look like the Air Force I shoes.)

AND.....
NIKE AIR FORCE I

Outsole Design COPYCATS

Some examples I have found.
(There are likely more out there)
“Great” - “Air / A”
“Great” - “Air / A”
“Great” - “Air / A”
“Juliano’s Slicks”
“Vlado Luxury Kicks”
“Vlado Luxury Kicks”
“British Knights”
“British Knights”
Ellesse
“Almosts”
“Kangaroos”
Kangaroos
“Ascot Crest”
“Ipath Yogi”
“Ipath Yogi”
“Nike Air Feathers”
So why am I showing you all of these?

The outsole design of the Nike Air Force I is a very popular one seen in casework in some parts of Michigan.

Some of our analysts feel like they see this tread design in a relatively large percentage of their footwear cases.
To Add to the Problem

What if you have a small partial?

There are several more outsoles that have portions of their designs similar to the Air Force I
What if your questioned impression looks like this?
“Reebok Lottery Hoop”
“Reebok Lottery Hoop”
Questioned Impression
“Nike Carmelo 1.5”
• Besides the abundance of actual Air Force I shoes, there are counterfeits and copycat outsoles, and there are shoes with partially similar design elements.

• Some of us feel like we see this tread design “all the time” in our casework.

• Many of our cases include multiple known pairs of Air Force I shoes submitted. In some instances they are from different suspects, and at times there are numerous pairs reportedly belonging to one suspect.
14 Pairs of AFI’s Submitted – 6 different sizes
2 suspects
9 of the pairs were reportedly owned by one of the suspects (though varying in size)

Evidence Received:

<table>
<thead>
<tr>
<th>Container</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#7</td>
<td>#L-7</td>
<td>Brown bag containing: A letter, a payment statement, a carbon copy of a personal check and a pink sticky note, supporting partial footwear impressions.</td>
</tr>
<tr>
<td>#6</td>
<td>#L-8</td>
<td>Brown bag containing: Two pieces of paper and an index card supporting partial footwear impressions.</td>
</tr>
<tr>
<td>#101</td>
<td>#2_1</td>
<td>1 - Black plastic bag containing shoes identified as from One pair of red, white and blue Nike 1950, US 9 1/2.</td>
</tr>
<tr>
<td></td>
<td>#27</td>
<td>One pair of white high top. <strong>Nike Air Force I</strong>, US 10 1/2.</td>
</tr>
<tr>
<td></td>
<td>#32</td>
<td>One pair of black and white low top. <strong>Nike Air Force I</strong>, US 10 1/2.</td>
</tr>
<tr>
<td></td>
<td>#7</td>
<td>One pair of black low top. <strong>Nike Air Force I</strong>, US 9 1/2.</td>
</tr>
<tr>
<td></td>
<td>#8</td>
<td>One pair of dollar design low top. <strong>Nike Air Force I</strong>, US 9 1/2.</td>
</tr>
<tr>
<td></td>
<td>#9</td>
<td>One pair of white top. <strong>Nike Air Force I</strong>, US 9 1/2.</td>
</tr>
<tr>
<td>#102</td>
<td>#11</td>
<td>Black plastic bag containing: One pair of black <strong>Nike Air Force I</strong> athletic shoes, US 10.5.</td>
</tr>
<tr>
<td></td>
<td>#13</td>
<td>One pair of blue and black <strong>Nike Air Force I</strong>, premium air athletic shoes, US 11.5.</td>
</tr>
<tr>
<td></td>
<td>#17</td>
<td>One pair of <strong>Nike Air Force I</strong> athletic shoes, blue and red with white stars, US 12.</td>
</tr>
<tr>
<td></td>
<td>#3_1</td>
<td>One pair of tan, brown and white Nike Air athletic shoes, US 10.5.</td>
</tr>
<tr>
<td>#103</td>
<td>#6</td>
<td>One pair of black low top <strong>Nike Air Force I</strong> athletic shoes, US 10.5.</td>
</tr>
<tr>
<td></td>
<td>#18</td>
<td>Sealed paper evidence bag containing: One pair of white low top <strong>Nike Air Force I</strong>, US 11.</td>
</tr>
<tr>
<td>#104</td>
<td>#L-A</td>
<td>Sealed envelope containing a DVD of footwear photos (A - C, E and F).</td>
</tr>
<tr>
<td></td>
<td>#L-A-1</td>
<td>A dental stone cast of impression A from the crime scene.</td>
</tr>
</tbody>
</table>
One might develop the opinion that this tread design “is commonly encountered in our environment”
So, a result for an impression like this might be:
The questioned impression is consistent (or: corresponds, or: similar, etc.) in tread design and size of tread to the submitted right Nike Air Force I shoe and could have been made by that shoe or another shoe with the same characteristics.

*Might even add:*

Comparison of accidental/unique characteristics was attempted, but was unsuccessful due to the insufficient quality of the questioned impression (or something to that regard).
Back to this: One might develop the opinion that the Nike Air Force I tread design “is commonly encountered in our environment”

Troublesome to me, and food for thought:

That report conclusion is the same conclusion I would use for a case involving a tread design that I have never before seen in 10 years of casework.
Switching gears for a moment:

“Attaching significance to an association”

OR

What is going on in the “Trace Evidence World”
Associative Evidence

• Typically cannot give a statistical basis for our association; we can’t say that there is only a 1:2 quadrillion chance that samples originated from same source.

• Since we can’t put a value to it, many have decided that there is little value in the evidence.

Christopher Bommarito - Michigan State Police
• “Tiers of Association”

• By giving the reader (investigator, prosecutor, jury) a scale of association types (context), they can get a better sense of the relative strength of an association

• This association scale is **put in the report**
Why?

• Gives the report reader a better idea of the continuum of possible conclusions and thus the relative strength of association (provides context)

• Report more accurately reflects the conclusions that would be presented at trial.

• Flexible: Can write conclusions in analyst’s own words but still use terminology that lends context.

Christopher Bommarito - Michigan State Police
Trace Evidence Terminology Key for Associative Evidence:

Note: This key provides general statements of association and may not be applicable in every case.

Type I Association: A positive identification; an association in which items share individual characteristics that show that the items were once from the same source.

Type II Association: An association in which items are consistent in all measured physical properties and/or chemical composition and share unusual characteristic(s) that would not be expected to be found in the population of this evidence type.

Type III Association: An association in which items are consistent in all measured physical properties and/or chemical composition and could have originated from the same source. Because similar items have been manufactured and would be indistinguishable from the submitted evidence, an individual source cannot be determined.

Type IV Association: An association in which items are consistent in measured physical properties and/or chemical composition. This sample type is commonly encountered in our environment and may have limited associative value.

Type V Association: An association in which items are consistent in some, but not all, physical properties and/or chemical composition. Some minor variation exists between the known and questioned items and could be due to factors such as sample heterogeneity or contamination of the sample(s).

Inconclusive: No conclusion could be reached regarding an association between the items.

Elimination: The items were dissimilar
Type I Association

- **Identification**
- A positive identification; an association in which items share individual characteristics that show that the items were once from the same source.
- An example of this type of association would be two broken fragments of glass that physically fit (fracture match) together and were once one piece.

Christopher Bommarito - Michigan State Police
Type II Association

- **Unusual association**

- **An association where the two items are consistent in all measured physical properties and chemical composition and share unusual characteristic(s) that would not be expected to be found in the population of this evidence type.**

- **An example of this type of association would be a four layer automotive paint transfer where two were OEM and two were architectural paint.**

Christopher Bommarito - Michigan State Police
Type III Association

- Typical Association
- An association in which items are consistent in all measured physical properties and/or chemical composition and could have originated from the same source. Because similar items have been manufactured and would be indistinguishable from the submitted evidence, an individual source cannot be determined.
- An example of this type of association would be a four layer automotive paint transfer where all the layers are OEM paint.
Type IV Association

- Association of common materials
- An association where the two items are consistent in measured physical properties and chemical composition. This sample type is commonly encountered in our environment and has limited probative value.
- An example of this type of association might be denim fibers or white cotton fibers
- An example of this type of association might be class only footwear association of size 10 Nike Air Force One shoes in SE Michigan
Type V Association

- Problematic Association

- An association where the two items are consistent in some measured physical properties and chemical composition. Some minor variation exists between the known and questioned items and could be due to sample heterogeneity or contamination of the questioned sample.

- An example of this type of association would be an automotive paint smear transfer where the analyst cannot find an uncontaminated portion of the sample.
Inconclusive

• Results of the examination and comparison of the two items were inconclusive.

• An example of a situation where this would be warranted would be a paint smear where the colored topcoat transfers to a clear coat but spectra is almost all clear coat.
Elimination

- The two items were dissimilar in physical properties and/or chemical composition and did not originate from the same source.
Trace Evidence Terminology Key for Associative Evidence:

Note: This key provides general statements of association and may not be applicable in every case.

Type I Association: A positive identification; an association in which items share individual characteristics that show that the items were once from the same source.

Type II Association: An association in which items are consistent in all measured physical properties and/or chemical composition and share unusual characteristic(s) that would not be expected to be found in the population of this evidence type.

Type III Association: An association in which items are consistent in all measured physical properties and/or chemical composition and could have originated from the same source. Because similar items have been manufactured and would be indistinguishable from the submitted evidence, an individual source cannot be determined.

Type IV Association: An association in which items are consistent in measured physical properties and/or chemical composition. This sample type is commonly encountered in our environment and may have limited associative value.

Type V Association: An association in which items are consistent in some, but not all, physical properties and/or chemical composition. Some minor variation exists between the known and questioned items and could be due to factors such as sample heterogeneity or contamination of the sample(s).

Inconclusive: No conclusion could be reached regarding an association between the items.

Elimination: The items were dissimilar.
Trace Association Chart adapted to Footwear:
“Now if you looked, and seen lime green forces and kiwi
You couldn't get this color if you had a personal genie”
Footwear Association Key – 1st draft

**Type I Association:** A positive identification; an association in which items share individual/unique characteristics that show that the impression(s) was made by the submitted shoe.

**Type II Association:** An association in which items are consistent in tread design, size of tread, and some wear/individual characteristics, but not enough for Type I positive ID.

**Type III Association:** An association in which items are consistent in tread design, size of tread, and possibly some wear characteristics and the shoes could have made the impression(s). Because similar shoes have been manufactured and would be indistinguishable from the submitted evidence, an individual source cannot be determined.

**Type IV Association:** An association in which items are consistent in tread design and size of tread. This tread design is commonly encountered in our environment and may have limited associative value or the impression is of insufficient detail for type III association.

**Type V Association:** An association in which items are consistent in tread design, but no size comparison could be made (no scale, photo not taken with film plane parallel to impression, small partial, photo insufficient detail, etc.).

**Inconclusive:** No conclusion could be reached regarding an association between the shoes and questioned impression(s).

**Elimination:** The items were dissimilar in tread design and/or size and the submitted shoes did not make the impression(s).
Type 1 Association (Identification):
Highest degree of association expressed in footwear/tire impression examinations. The questioned impression and known shoe/tire share individual/unique characteristics that identify the particular known shoe/tire as having positively made the questioned impression(s).

Type 2 Association (High degree of association):
A high degree of association in which the questioned impression(s) corresponds in tread design, size of tread, wear and/or possible individual/unique characteristics to the known shoe/tire, but is lacking sufficient individual characteristics or some other feature(s) for an identification to be made.

Type 3 Association:
An association in which the questioned impression(s) corresponds in tread design, size of tread, and possibly some wear characteristics to the known shoe/tire. Because similar shoes have been manufactured and would be indistinguishable from the submitted evidence in tread design and size of tread, an individual source cannot be determined.

Type 4 Association (Limited association):
A limited association in which the questioned impression(s) corresponds in tread design and possibly size of tread to the known shoe/tire but limiting factors in the questioned impression and/or photograph do not allow for a higher association or an elimination.

Also could include for this association level: This tread design is commonly encountered in our environment and may have limited associative value.

Type 2 Non-Association (High degree of non-association):
A non-association in which the questioned impression(s) exhibits some dissimilarities to the known shoe/tire but the questioned impression and/or photograph lacks sufficient quality or detail for an elimination to be made.

Type 1 Non-Association (Exclusion or Elimination):
Highest degree of non-association. The questioned impression(s) does not correspond in tread design and/or size of tread and/or wear characteristics and/or individual/unique characteristics to the known shoe/tire. The known shoe/tire is eliminated from making the questioned impression(s).

Inconclusive:
No conclusion could be reached regarding an association between the shoe/tire and questioned impression(s).
Type 1 Association (Identification):

Highest degree of association expressed in footwear/tire impression examinations.

The questioned impression and known shoe/tire share individual/unique characteristics that identify the particular known shoe/tire as having positively made the questioned impression(s).
Type 2 Association (High degree of association):

A high degree of association in which the questioned impression(s) corresponds in tread design, size of tread, wear and/or possible individual/unique characteristics to the known shoe/tire, but is lacking sufficient individual characteristics or some other feature(s) for an identification to be made.
Type 3 Association:

An association in which the questioned impression(s) corresponds in tread design, size of tread, and possibly some wear characteristics to the known shoe/tire.

Because similar shoes have been manufactured and would be indistinguishable from the submitted evidence in tread design and size of tread, an individual source cannot be determined.
Type 4 Association (Limited association):

A limited association in which the questioned impression(s) corresponds in tread design and possibly size of tread to the known shoe/tire but limiting factors in the questioned impression and/or photograph do not allow for a higher association or an elimination.

Also could include for this association level:

This tread design is commonly encountered in our environment and may have limited associative value.
**Type 2 Non-Association (High degree of non-association):**
A non-association in which the questioned impression(s) exhibits some dissimilarities to the known shoe/tire but the questioned impression and/or photograph lacks sufficient quality or detail for an elimination to be made.

**Type 1 Non-Association (Exclusion or Elimination):**
Highest degree of non-association. The questioned impression(s) does not correspond in tread design and/or size of tread and/or wear characteristics and/or individual/unique characteristics to the known shoe/tire. The known shoe/tire is eliminated from making the questioned impression(s).

**Inconclusive:**
No conclusion could be reached regarding an association between the shoe/tire and questioned impression(s).
Report Wording Example:

The questioned impression is consistent in tread design and size of tread to the submitted left shoe and could have been made by that shoe. **This is a Type 3 Association (See Association Chart).**
Air Force I Discussions:

Some examiners feel that they should qualify an Air Force I-type questioned impression that has limited detail because of its prevalence in casework ("in our environment")
Other examiners feel that because they see differences in the **known** impressions of Air Force I shoes of similar sizes (ex: differences in wear), they would not want to qualify an AF1-type questioned impression “could have” association.

(The examiner does not want to minimize the potential value of a “good” questioned impression)
And how does that apply to the questioned impressions which have limited detail, where the wear and possible accidentals may not be visible?

What do you think?
Further FOOD FOR THOUGHT:

Is the Air Force I tread design common in the our **overall** environment?

or

Is it just common in the environment of **those committing or involved in crimes**?

Does that make a difference?
What do I think?

• I think we all have a unique set of experiences. We are each exposed to a differing variety of evidence depending on our regional areas, years of experience, etc.

• I think there is going to be subjectivity to the determination of a level of association in regards to the Air Force I or ANY tread design that may be prevalent in your “environment”.
• I think we have the responsibility to portray the significance of our evidence to the best of our ability

• AND to do so in our reports
References:

- www.NikeAirForce1.com
- www.PickYourShoes.com
- www.Nike.com
- Herb Hedges, Nike Inc.
- Foster & Freeman – Sicar/ Solemate
“Air Force Ones” by Nelly (continued)

“Now some time I get em free some time I gotta pay;
Walk in the mall and they now what I'm bout to say”

“Gimme the black and platinum, and leather gray;
Ones in the back and (yo) the pair you got on display”

“I'm just a sneaker pro
I love pumas and shell toes
But cant nothing compare to a fresh crispy white pair ” (of Air Force Ones)
“Thank you” to my Michigan State Police colleagues

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