Visual Impairment and Sporting Performance

Implications for Vision Classification in Paralympic Sport

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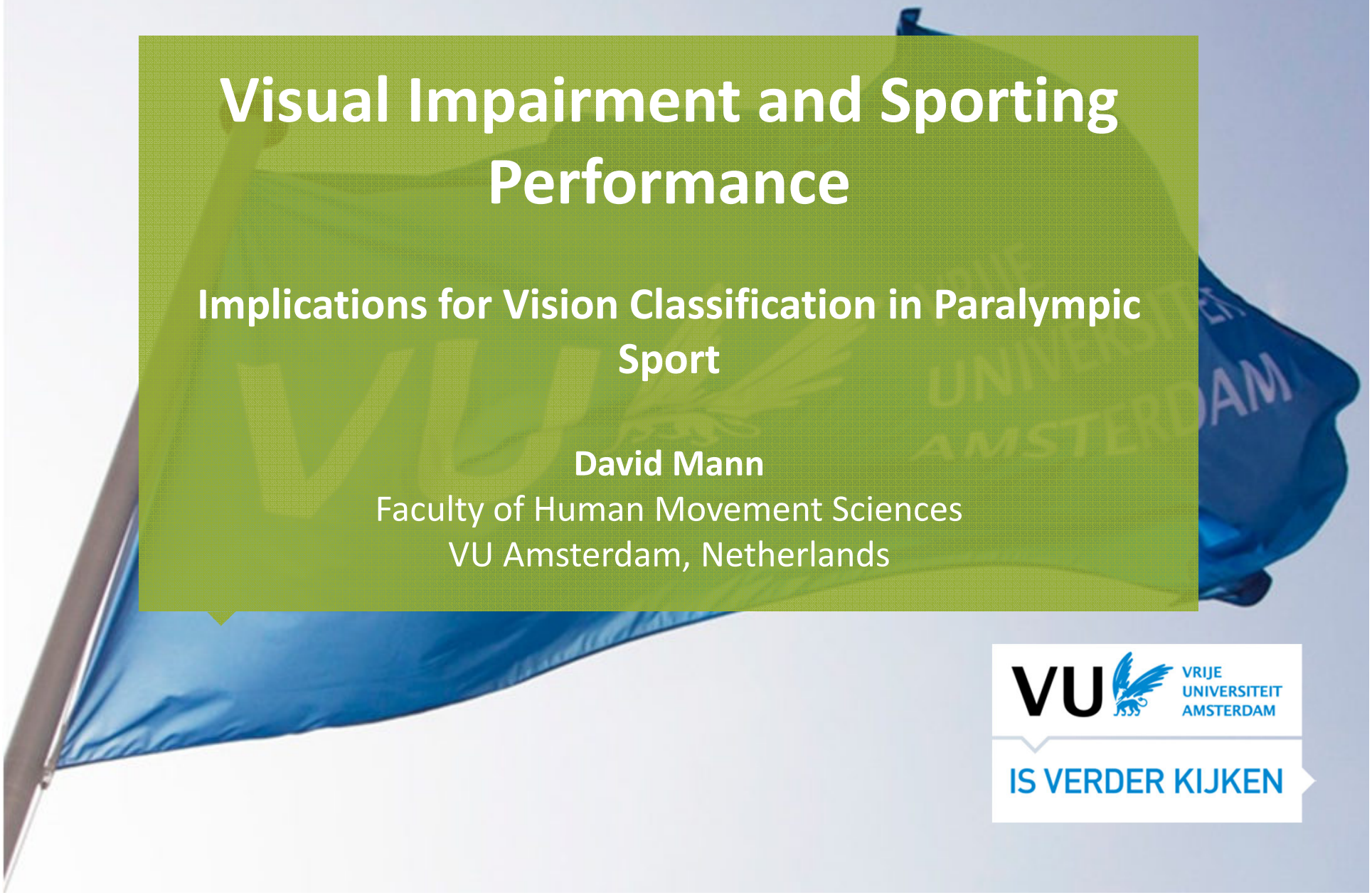

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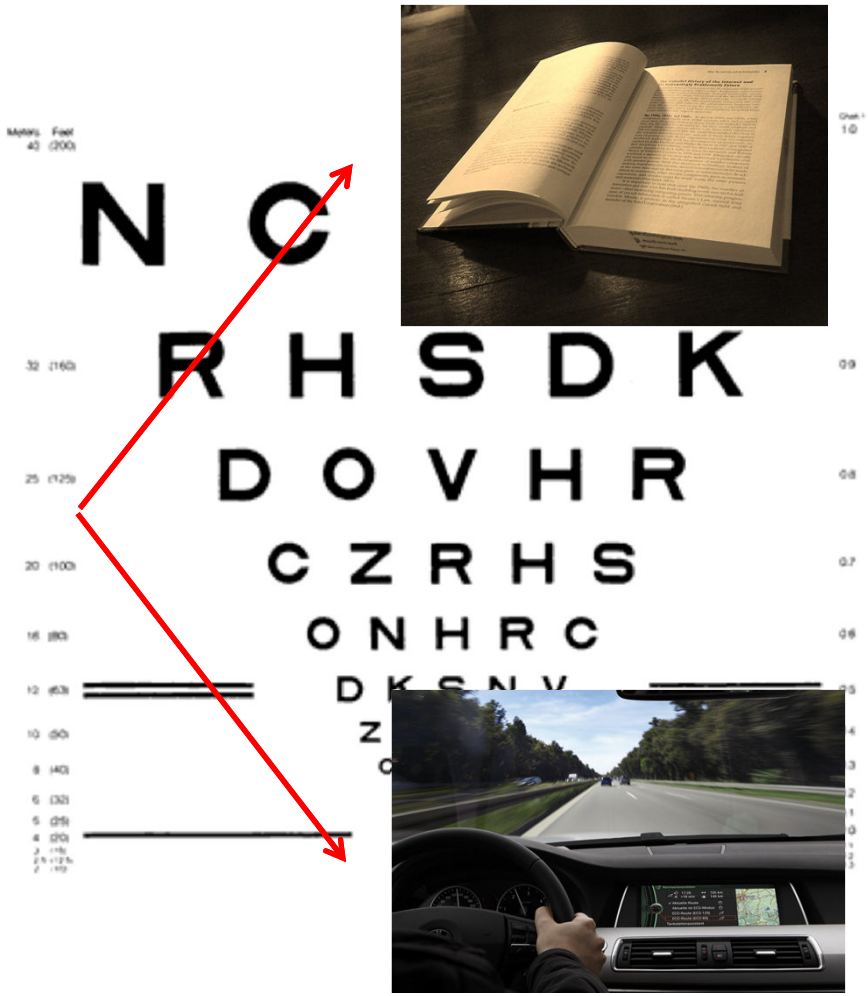
IS VERDER KIJKEN

MEASURING VISUAL PERFORMANCE



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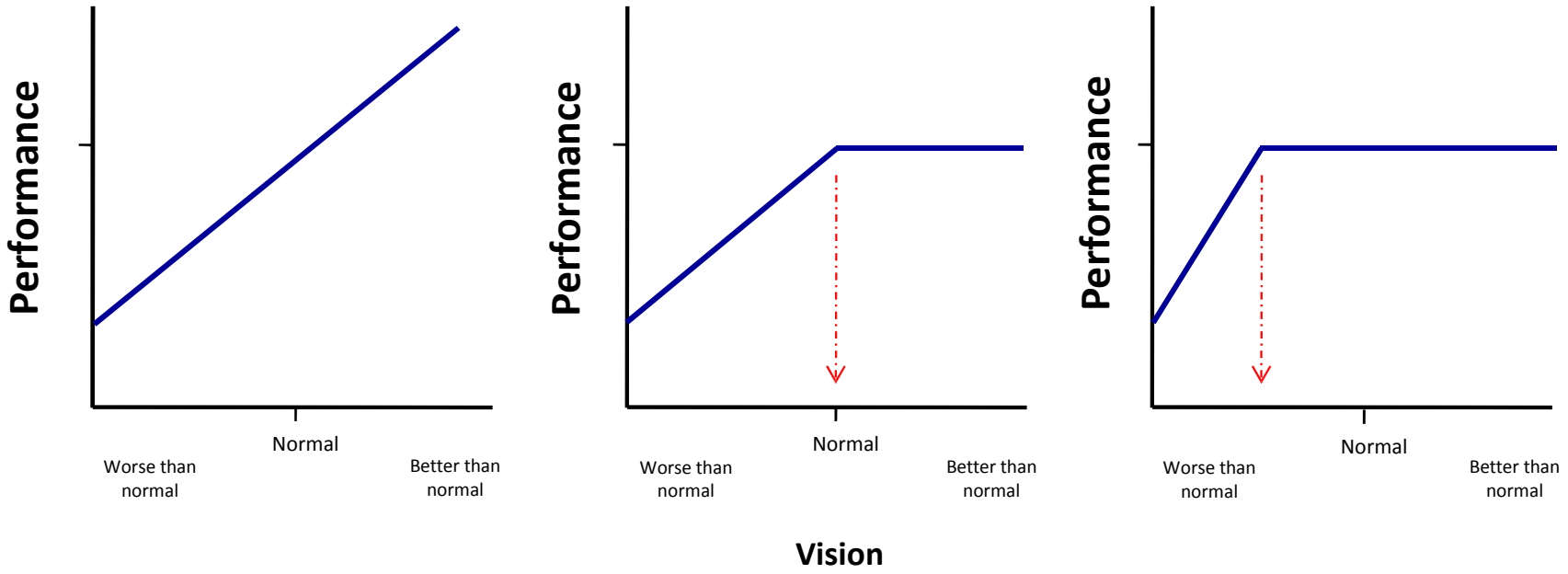
HOW GOOD DOES VISION NEED TO BE FOR SUCCESSFUL SPORTING PERFORMANCE?

"Any improvement in vision will lead to an improvement in performance"

"Normal vision is needed for best performance"

"Vision can be below normal levels for best performance"



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VISION AND CRICKET BATTING

Plano (6/6)	+1.00D (6/11)	+2.00D (6/20)	+3.00D (6/49)

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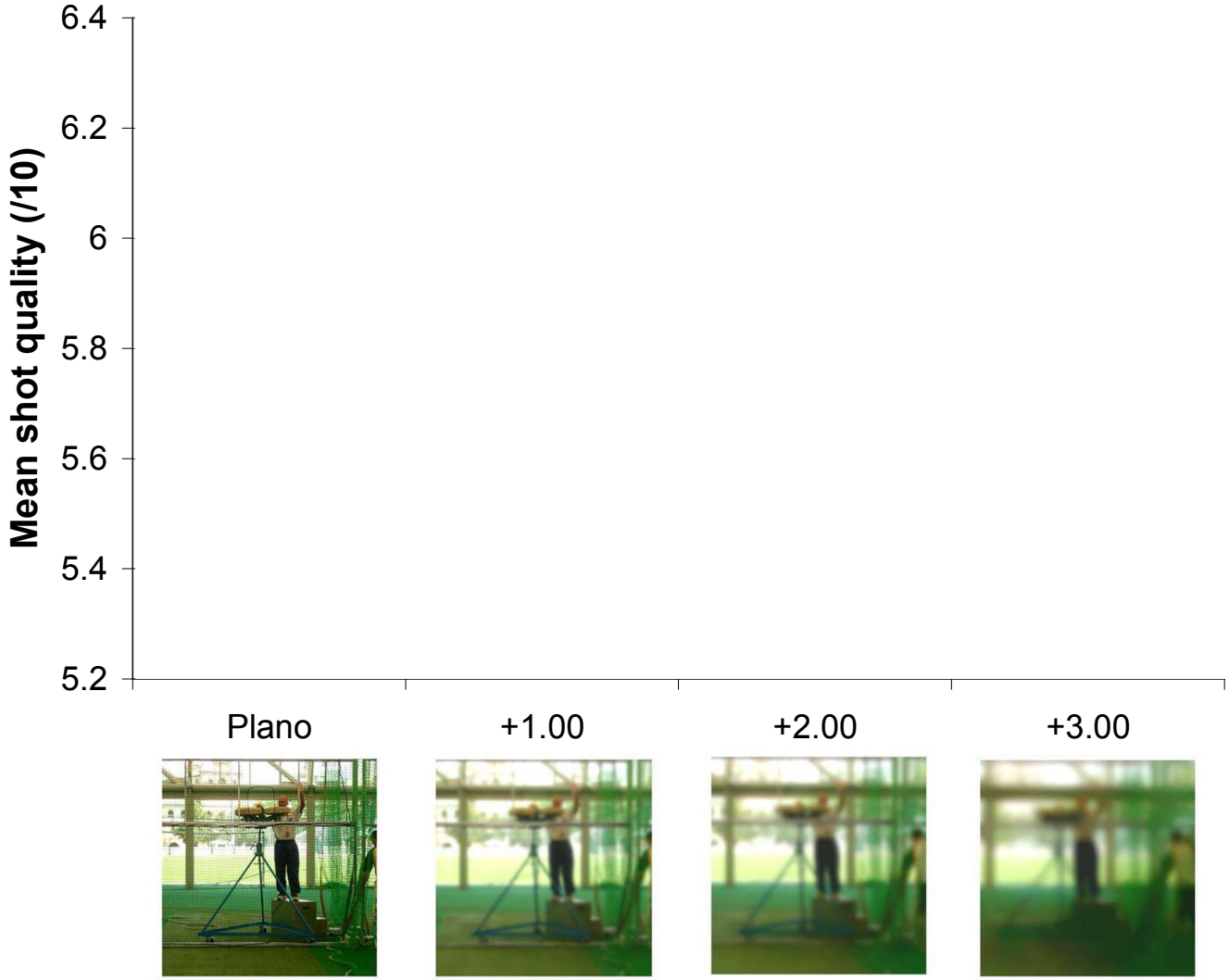
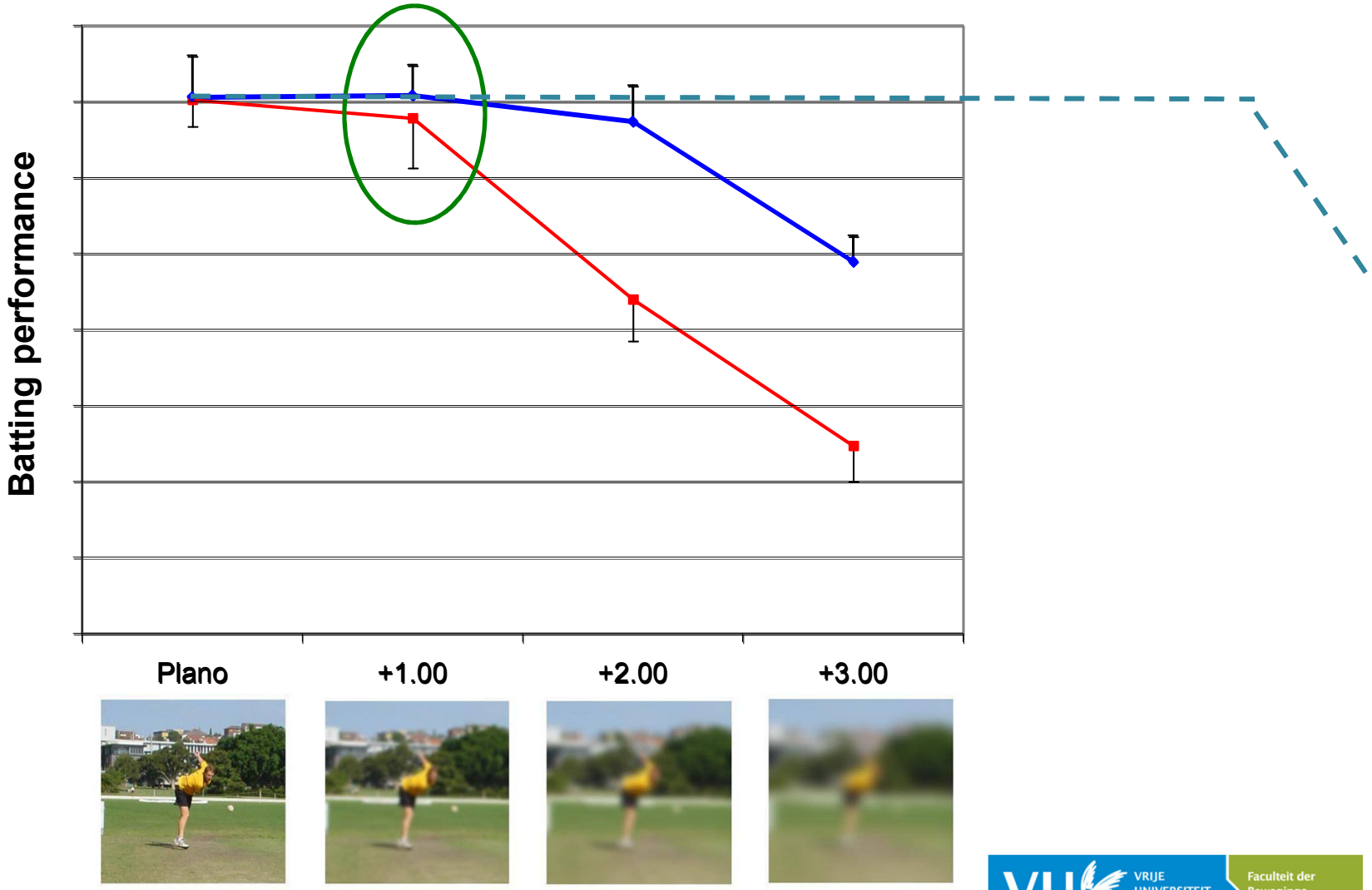
STUDY 1: VISION AND BATTING PERFORMANCE



Mann, Ho, De Souza, Watson & Taylor (2007). *Human Movement Science*

STUDY II – VISION AND BATTING PERFORMANCE



Mann, Abernethy & Farrow (2010). *Human Movement Science*

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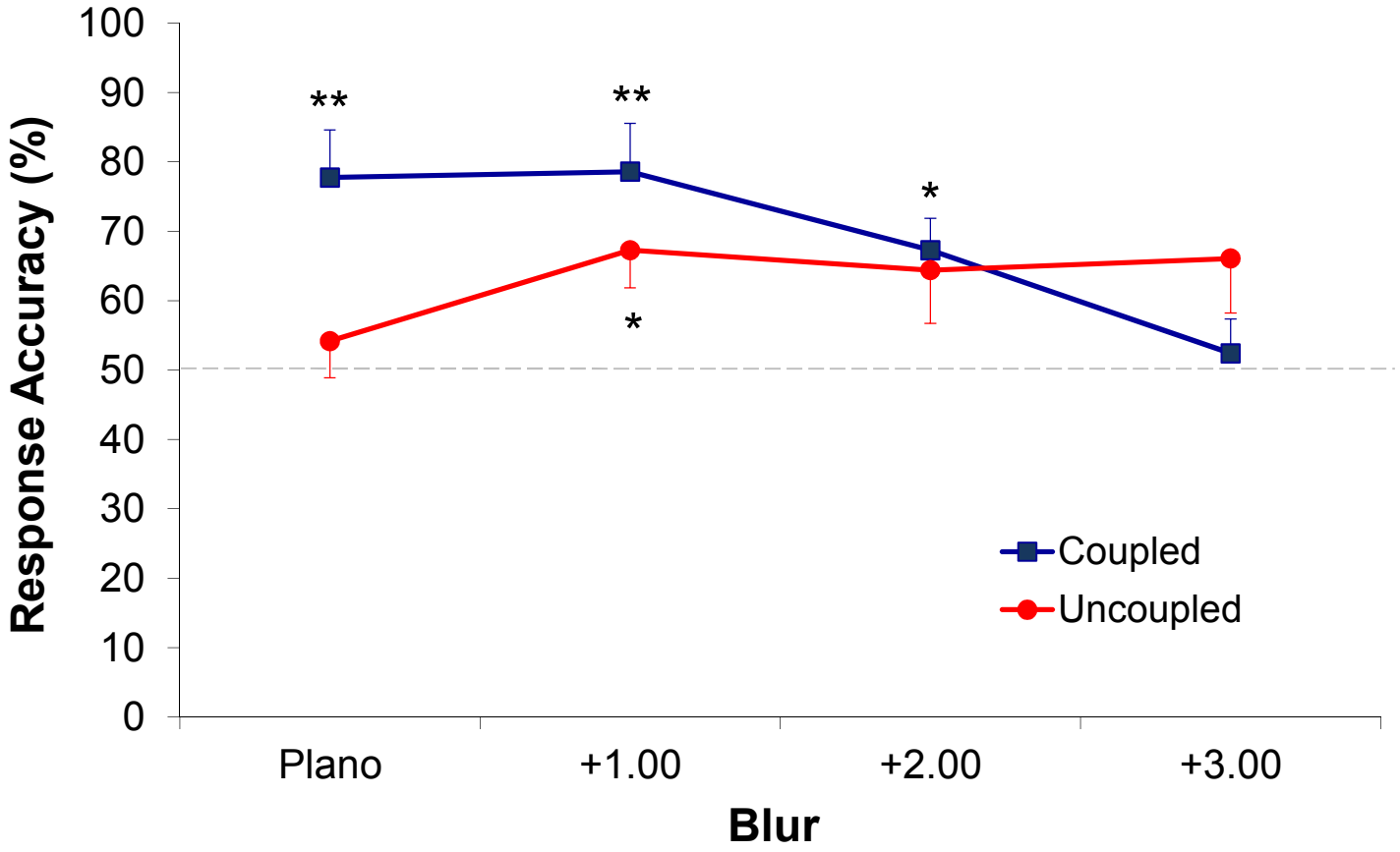
STUDY III – VISION AND ANTICIPATION



Mann, Abernethy & Farrow (2010). *Attention, Perception & Psychophysics*

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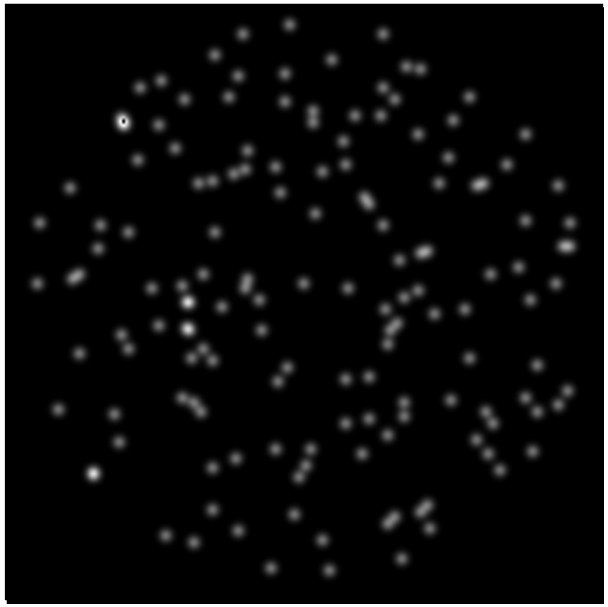
IMPROVING PERCEPTION WITH BLUR

Motion perception



Blurring peripheral vision

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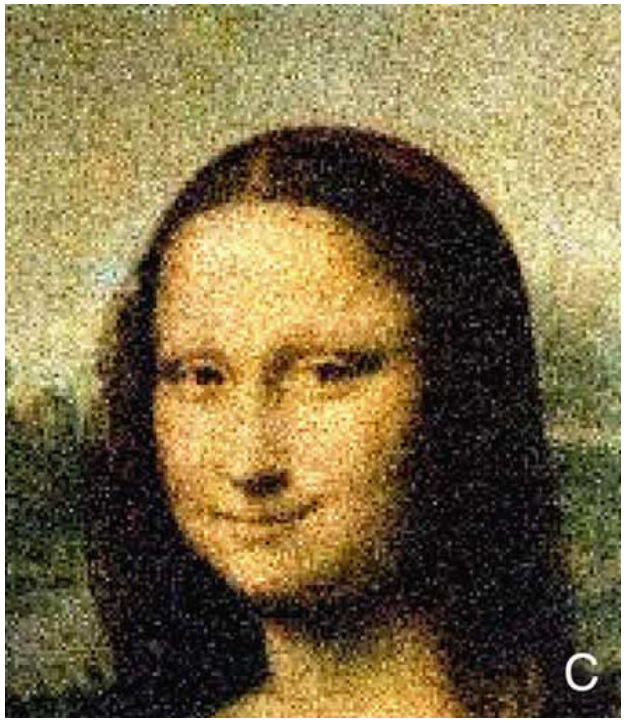
IMPROVING PERCEPTION WITH BLUR



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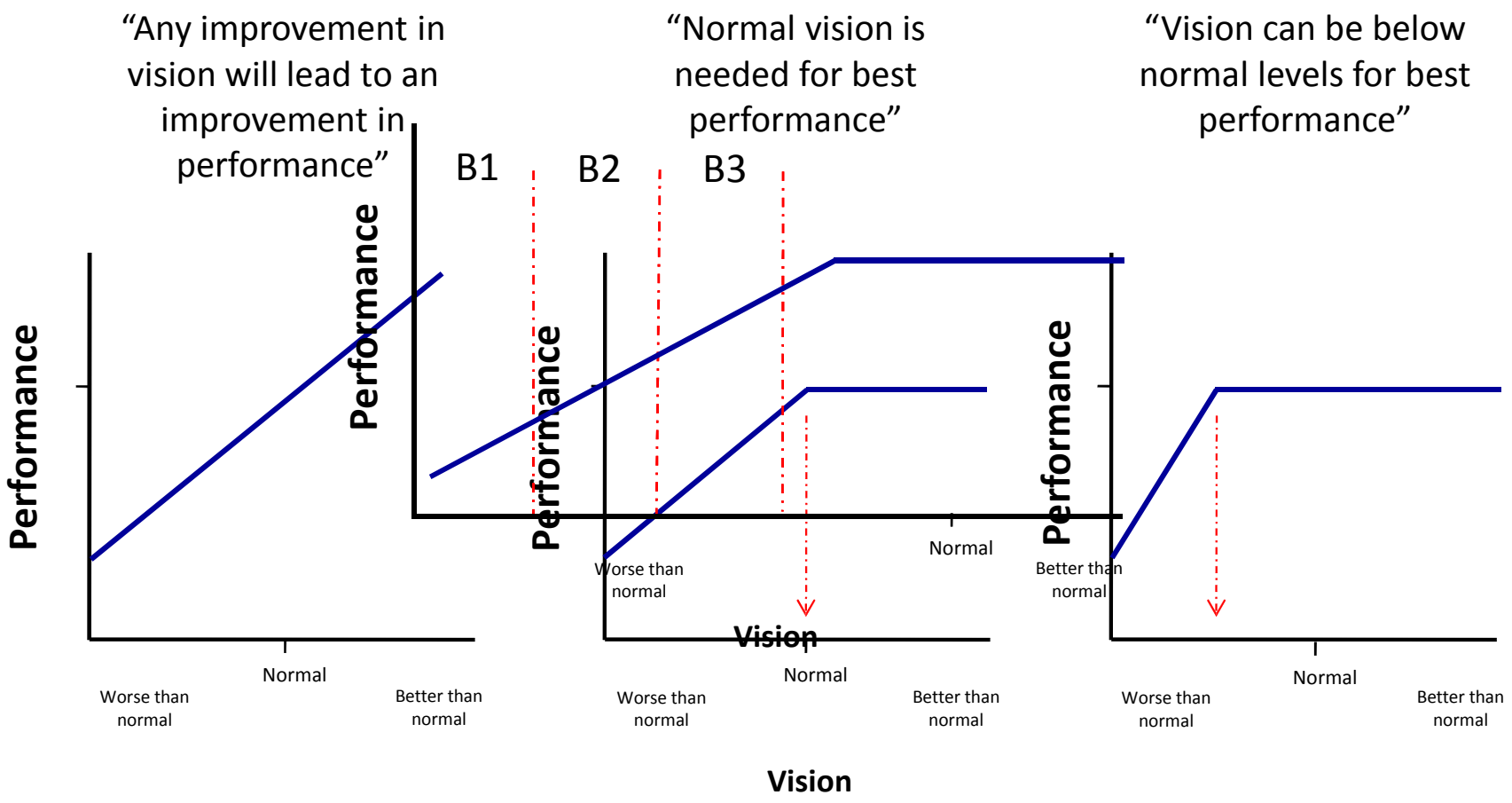
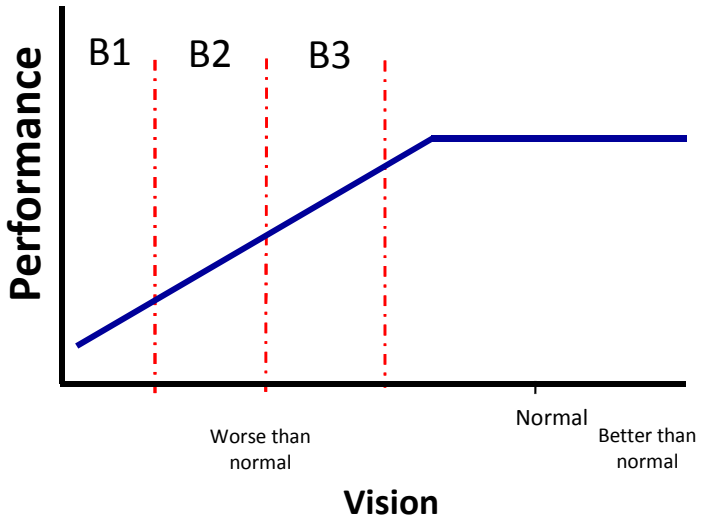
HOW GOOD DOES VISION NEED TO BE FOR SUCCESSFUL SPORTING PERFORMANCE?



IMPLICATIONS FOR VISUAL CLASSIFICATION IN PARALYMPIC SPORT



- Surprisingly high levels of visual impairment are required to decrease sporting performance
  - Even greater effect for less visually-demanding sports
  - Sometimes the results can be very counter-intuitive!
  - Visual control of movement may act sub-consciously
- Evidence-based sport-specific testing is necessary to establish impairments likely to impact performance

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ACKNOWLEDGEMENTS

Collaborators

Bruce Abernethy (University of Queensland, Australia)

Damian Farrow (Victoria University, Australia)

Donghyun Ryu (University of Hong Kong, Kong Kong SAR)

Cricket Australia

Sports Science Sports Medicine Advisory Group research funding

Johnson & Johnson Vision Care

Daily disposable contact lenses

Netherlands Organisation for Scientific Research

D.M. is supported by a Rubicon Grant (446-10-029) awarded by the Netherlands Organisation for Scientific Research (NWO) and the Marie Curie Actions Cofund.