Visual jurisprudence: the dangers of photographic identification evidence

Katherine Biber argues that caution is required when using photographic evidence in court.

Photographic evidence is commonly viewed as 'reliable', 'unbiased', and 'true', contradicting studies demonstrating that expectation, motivation, context, and prior experience fundamentally affect our perception. Photographs require interpretation; they do not speak for themselves. Critical writing about photography has cautioned us against proving things from pictures. Nevertheless, the criminal courts have embraced photographic evidence in ways that might be dangerously disproportionate with what we know about its accuracy. These dangers are most apparent when photographs are used to identify people.

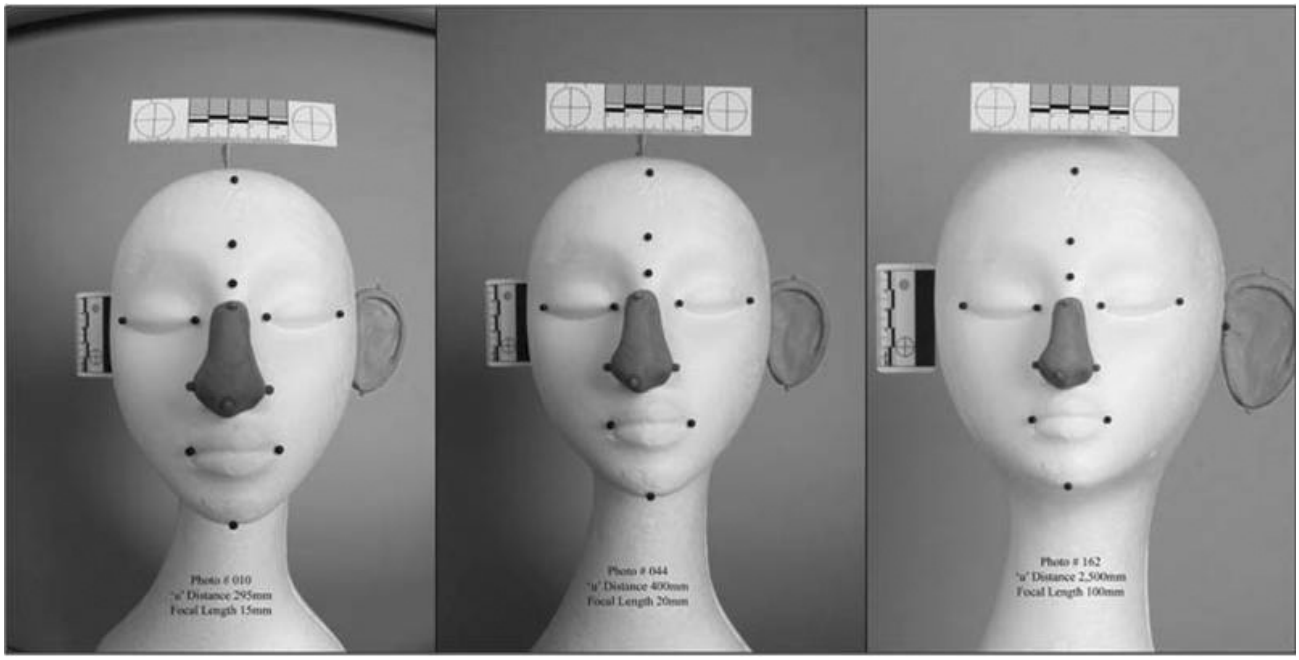
Impact, accuracy, and reliability

Photographs capture a three-dimensional object in a two-dimensional medium. This has an immediate impact upon the accuracy and reliability of photography, and must be considered before putting photography to highly probative uses. Historically, photography was used to create a visual record of a crime scene; photographs were also taken of exhibits, wounds, and of the people accused of crimes ('mug shots'). Lighting, angle, distance, lens type, contrast, resolution, compression, and other technical factors distort the relationship between the image and the object it represents (Edmond et al., 2009). Today, many forensic techniques continue to rely upon photography (photographs are taken to record footwear impressions, fingerprints, tyre impressions, toolmarks), and these techniques acknowledge the distorting effects of photography and impose strict controls to govern the questioned image (say, from the crime scene) and the reference image (against which the questioned image is compared).

This experimental image, taken by Glenn Porter, shows the variation of facial morphology caused by different camera 'u' distances. 'U' represents the distance between the subject and the lens. Visual analysis shows that the nose becomes progressively smaller and the ear becomes progressively larger, falsely suggesting that the sizes and relativities between the facial features are different. Image reproduced with permission of Glenn Porter.

The more recent proliferation of visual forms of surveillance and control means that photographic sources are able to capture crimes in progress and, most importantly, pictures of their perpetrators. CCTV, mobile telephones, and ATM cameras produce more images than ever. The sheer volume of this material has lent weight to the assumption that it has a reliable evidentiary application; that images of people can prove their identity. There is an international standard for digital images when they are used to achieve facial 'recognition' (ISO 19794-5), but this standard is not applied in criminal courts.

Whilst forensic scientists are able to point to reliability and validity studies for other dominant



Images of variations in facial morphology.© Glenn Porter. Reproduced with permission of Glenn Porter.

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identification sciences (DNA, fingerprints), there is no scientific basis for claiming that it is either reliable or valid to identify a person from a photograph. Reliability and validity are characteristics of all scientific measurement systems, revealing the error rate, accuracy and consistency of a scientific technique and its human operators. As none of these factors is known about photographic identification evidence, it is impossible to say how much – if any – probative value ought to be accorded to it.

Context and consequences

Anglophone criminal jurisprudence seems to accept that, where a photographic image is sufficiently clear for the purpose of identifying a person within the image, the jury can compare the image with the accused sitting in the dock and decide for themselves whether or not they are the same. This process relies upon the uncritical acceptance of the assumption that a photograph is an accurate image of the world and that, properly examined, it can yield truths. Aside from the technical distortion, this assumption discounts the importance of context: the jury already knows that somebody else – here, a team of police and prosecutors – has already decided that this is a photograph of the defendant, and that their role is simply to agree or disagree with that decision.

Pre-trial, identifications from photographs are frequently admitted from eyewitnesses to crimes. Whereas the rules of evidence operate on the basis that eyewitnesses are the best-placed people to make identifications, the rules do not refer to psychological scholarship demonstrating that there are many factors that impede accurate eyewitness identifications from photographs: stress, violence, weapons, suggestion, racial difference. Recent technological innovations have been introduced in some jurisdictions in an attempt to address the implicit dangers involved in eyewitness identification. In the UK, since 2008, the Policing Code of Practice prefers VIPER identifications (Video Identification Parade Electronic Recording), where full-body-in-motion, rather than static face-only images are shown. Preliminary studies suggest this is more effective, less stressful for witnesses, and less prejudicial for suspects (Pike et al., 2002).

In the UK, courts continue to accept recognition evidence that has been shown to have higher reliability (where the recognition is made from a photograph by a person who is well-acquainted with the suspect), whereas the High Court of Australia has ruled this evidence to be irrelevant and, therefore, inadmissible (Smith v The Queen (2001) 206 CLR 650). Instead, Australia has followed a pathway first cleared in the UK, admitting photographic identification evidence from people recognised as 'experts'. The dangers in following this course arise from the problem that the courts are conferring 'expert' status upon practitioners whose own disciplines have not yet determined the accuracy, reliability, or validity of

Images from CCTV used in prosecution of Bradley John Murdoch: Courtesy of Northern Territory Police.

what they do. Whereas English courts have, since at least 1991, embraced a collective terminology first coined by the British media – 'facial mapping' – the Australian courts generally require these witnesses to describe themselves as – and actually to be – practitioners of recognised disciplines including anatomy, physical anthropology, facial anthropology, forensic anthropology, visual imagery analysis, and forensic photography. In both countries, these witnesses are called to give evidence about whether or not it is possible to identify the accused from a questioned photographic image.

These three images were used in the prosecution of Bradley John Murdoch for the murder of English backpacker Peter Falconio, and the abduction of his girlfriend Joanne Lees. By comparing these images with reference images of Murdoch, a forensic anatomist testified in the Northern Territory Supreme Court that, in her opinion, this was Murdoch (R v Murdoch [2005] NTSC 78).

Specialised knowledge

'Facial mapping' describes a range of practices for which there are no teaching institutions, no formal courses or qualifications, no regulatory bodies and no published experimental studies. Operators use a wide range of equipment and techniques and, when surveyed, revealed a stark lack of consistency about their methodologies, standards, tolerance for error, and the certainty they attached to their findings (Kemp, 2008). Whilst the inherent characteristics of an image, and the equipment from which it is produced, generate a very wide range of variables within the visual image (Porter and Doran, 2000), only a minority of experts pay attention to this danger. And as there is no statistical information about the frequency of particular facial characteristics within a relevant population, there is no way of assessing the accuracy of a witness's claim to a 'match'. One report has shown practitioners to be highly vulnerable to unconscious influence, for instance where extraneous information given to them about the police investigation affected the results of their photographic analysis (Campbell-Tiech, 2005). Nevertheless, mock jury studies have indicated that where the court admits evidence from an 'expert', juries are willing to give significant weight to that evidence, even where it is demonstrably wrong (Kemp, 2008).

In many Australian jurisdictions, uniform rules of evidence apply, and the rules governing the admissibility of opinions from people with specialised knowledge ('experts') have led to arguments being made to exclude evidence from witnesses claiming expertise from techniques for which there is not a sound scientific basis. Although one leading authority states that such witnesses do not satisfy the admissibility standard as experts, their evidence can nevertheless be given on the basis that they have acquired 'ad hoc' expertise in a particular set of images (R v Tang [2006] NSWCCA 167). That is, whilst they are not regarded as experts in photographic identification generally, the amount of time they have spent analysing the evidence from a particular case means they can testify about photographic identification in that case. UK courts also accept evidence of this kind, although a lower admissibility threshold means that UK courts continue to recognise facial mappers as 'experts'.

Indeed, UK courts routinely cite the same authority for all questions about the admissibility of photographic identification evidence (Attorney-General's Reference (No 2 of 2002) [2002] EWCA Crim 2373). That judgment accepts that whatever the witness knows is enough to meet the admissibility standard, and provides no requirement to establish the legitimacy of the techniques used by the witness. Courts in the United States have long required parties to establish that there are good grounds for accepting the existence of a claimed body of knowledge, and that evidentiary reliability is a pre-requisite for legal reliability (Daubert v Merrell Dow Pharmaceuticals, Inc 509 US 579 (1993)). The current consultation by The Law Commission into expert evidence in criminal proceedings in England and Wales aims to impose a reliability standard for expert evidence, and will report its findings in 2010 (The Law Commission, Consultation Paper No 190). By importing a reliability standard into the rules of evidence, scientists and other practitioners will be motivated to conduct studies determining the actual reliability of the identification evidence they offer. Where reliability is an admissibility standard, we can be more confident in claiming that the criminal standard of proof has actually eliminated reasonable doubts. ■

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