In 1984, a man broke into Jennifer Thomson's home, where he raped her ("The Story of Ronald Cotton," retrieved from [4]www.innocenceproject.org/cases/ronald-cotton/). At trial, Thompson reported having made considerable effort to memorize her attacker's face. Thompson was highly confident she would be able to recognize him again, given the opportunity. Thompson soon identified Ronald Cotton as her attacker from a photo lineup. Thompson later identified him again in a live lineup. She said she was 100% sure of her
identification. Cotton spent ten years in prison before he was proven innocent through DNA evidence. When Thompson was later presented with the man whose DNA was a match to the DNA left at the scene, Thompson stated she had never seen him before. Thompson is white, Cotton black.

Some of the most damning evidence against a criminal defendant comes from an eyewitness to the event. Unfortunately, where the eyewitness is of a different race than the perpetrator, grave errors can occur in identification. The cross-race effect refers to the finding that humans encode, and thus remember, members of the same race better than members of other races. In fact, a same-race face is 2½ times more likely to be remembered and recognized by a white eyewitness than a cross-race one. This leads to disastrous consequences: Recent analyses show that eyewitness identification error accounts for nearly one-third of wrongful convictions. In terms of false identifications, the wrong suspect is more than 150% as likely to be chosen in a cross-race situation. When an innocent person is wrongly convicted, our whole system of justice suffers?and a guilty party remains free, perhaps permanently.

What Causes the Cross-Race Effect?

There are two basic classes of CRE theory: perceptual learning models and alternative social cognitive theories. Perceptual learning models suggest that lack of experience or contact with members of other races is what causes the CRE, and that through increased contact, we can fully eliminate the effect. However, according to recent meta-analysis, one? s level of quality experience with members of the target race does matter; but the relationship between experience and effect is weak. Further, it is not clear why experience matters. Two competing cognitive mechanisms have been proffered: first, that expertise allows the cross-race (CR) face to be processed in a configural manner, as same-race (SR) faces are. Without that experience, processing occurs in a feature-based manner or piecemeal fashion (Hugenberg et al., 2010).

The second mechanism advanced, the ?face-space model,? offers that faces are represented in memory like a series of dots on a grid-board, and that SR faces are represented in a more spread-out fashion, allowing one at a time to be selectively chosen. CR faces, on the other hand, are grouped tightly together at the periphery, so that when an attempt is made at recall, more than one is brought into focus.

Social cognitive theories focus on how social categorization of same- and cross-race faces affects the process of encoding (Hourihan et al., 2013). The feature selection-model suggests that the CRE is due to our tendency to think categorically about CR or ?out-group? members, whereas we individuate SR or ?ingroup? members (Hugenberg et al., 2010). Individuation allows us to fully attend to the entire face. The cognitive disregard model holds that the CRE (and other in-group/out-group biases) occur because we simply disregard those who are not in our group (SR). Because we did not pay attention at encoding, we cannot later retrieve the proper image. The ingroup/outgroup model advanced by Sporer (2001b) suggests that we can be motivated to effective processing if the CR target is believed to be an ?ingroup? member. Recent research, however, shows that the cause of the CRE is most likely a hybrid of all of these.

Hugenberg and colleagues (2010) advanced the Categorization-Individuation Model, arguing that social categorization, perceiver motivation, and perceiver experience in CR faces work collectively during encoding. Though it is believed that most of the time all three processes are at play, there may be situations where perceivers can be motivated to eliminate the CRE. Individuation occurs where a person discriminates within the individual samples in a given category?for instance, taking time to really look at a particular color in a set of crayons. Categorization, on the other hand is when you only look at the characteristics that make the crayon similar to all the other crayons in the box. Hugenberg and colleagues argue that generally we look at CR persons as just another crayon in the box, whereas with SR persons, we look at the individual crayon and what makes it different from the others. It is important to realize that social categorization occurs almost immediately upon contact. However, because individuation takes time, it requires additional motivation?motivation that is often not present for CR faces (Hugenberg et al., 2010).
Individuation, however, can be manipulated in some circumstances. A recent study shows that when a perceiver feels the distinctiveness of his group threatened, the CRE is lessened. The threat of losing group distinctiveness causes us to try to differentiate ?us? from ?them.? This is accomplished by perceiving both groups as ?homogenous,? resulting in a reduced ability to recognize SR faces. The most recent studies show that while the CRE can be lessened with instruction, elimination may be impossible. Oddly, in the Pica et al. study, instructions to black participants improved both same- and cross-race sensitivity.

There are additional arguments that the CRE affects not only encoding, but retrieval as well. Witnesses have a more lenient response criteria for CR faces, meaning they are more likely to choose a CR face than a SR face when uncertain regarding identity?errning on the side of mistake, rather than caution. This equates to more false identifications, and potentially more wrongful convictions. Encoding processes and cross-race contact is an ?estimator variable.? Estimator variables, unlike system variables, cannot be controlled by outside sources. An example of a system variable is the instruction set given to a person during a lineup procedure (Bornstein et al., 2013). In some instances, special instructions given prior to retrieval?for instance, at the lineup procedure?may lessen or eliminate the CRE. Bornstein?s replication of the Hugenberg (2007) study reiterated that informing persons prior to lineup of the cross-race effect might moderate the results, though not end in a reduction of the CRE. Rather, instruction made the participants more conservative, and this resulted in fewer false identifications. The lack of success in retrieval moderation of the CRE reiterates the fact that the effect occurs at encoding.

**Raising Awareness?In Hopes of Preventing the CRE**

It is important to ask what can be done? And, who should be targeted? It certainly is nonsensical to believe that we can provide the necessary experience with other-race faces and the motivation to individuate to an eyewitness. If we could reach the witness prior to the crime, many different methods could be used to intervene that could reduce or possibly eliminate the CRE (Wilson et al., 2013). However, we cannot train and ?premotivate? the entire population, and we do not know the identity of a witness before a crime has occurred and been reported, at the earliest. Further, the effects of training are short-lived, so the witness training must be continuously maintained (Wilson & Hugenberg, 2010).

**Pre-Encoding Influences**

Categorization results in a failure to differentiate what makes a person unique from others. While training of the general public is simply not a viable option, training of police officers can be systematic and influential. Studies show that as a rule, police are no better eyewitnesses than the general public. This is true for both facial recognition and recall (except under conditions of prolonged exposure). Because police officers are often eyewitnesses?e.g., an officer is called to the scene where he comes into contact with the suspect?and we can expect that this will happen as part of their job, it is logical to train officers, providing a high-quality cross-racial experience and motivating them to individuate. It is important to note that the CRE does not occur due to racial prejudices; therefore, racial sensitivity training is not the training at issue here. Further, because the witness must personally be motivated to individuate, we must be sensitive to the reasons that police would want to individuate (so that the bad guy is punished and no innocent person is wrongfully convicted, costing precious agency and personal resources).

**Can We Remedy the CRE?**

Though we may be only able to train select populations in an effort to reduce the CRE in the pre-witness stage, there are a number of additional things that can be done to prevent decision errors or lessen the effect of the CRE in a criminal prosecution (Wilson et al., 2013).

**Post-encoding Influences**
Lineup Construction:

Police tend to be less careful in selecting similar fillers when creating CR lineups than when creating SR lineups. Though this may be attributable to experience and categorization, a simple remedy is to have an SR officer create an unbiased lineup filled with foils of proper similarity.

Lineup Instructions:

One of the key factors in reducing decision errors is the elimination of suggestibility in lineup instructions. While unbiased instructions tend to result in fewer correct choices, or hits, they also result in fewer misidentifications. However, if the point of the justice system is to make sure the verdict is ?just? (defined as guided by truth, reason, justice, and fairness, see www.dictionary.com), then fewer misidentifications must be our key focus?even if that comes at a cost of correct hits.

Lineup Presentation? Blind Administration:

Eyewitnesses are more likely to make a false identification (in sequential lineups) when the administrator knows the suspect?s identity. This effect occurs even when an [unbiased] supervisor is in the room. Further, biased administration can negatively impact even well-encoded CR faces, resulting in misidentification.

Confidence v. Accuracy:

As a general rule, it is especially important to record identification procedures. However, these recordings are not as telling for CR cases as they are for SR cases (Smith et al., 2001). These recordings include the key reports of confidence level and judgment strategy. Confidence level is subject to many system variables and outside biases, such that if a confidence rating is not gained immediately at retrieval, the entire identification is questionable. Similarly, eyewitnesses who report using relative judgments, such as ?I compared the photos to narrow choices,? make more false identifications than those who report using absolute judgments, such as ?I just knew it was him, I am not sure why.? Response latency?or how long it takes the witness to positively identify a target from a lineup or photo array?must also be recorded. Studies show that for choosers, accuracy is indicated when identification is made in 15 seconds or less (Smith et al., 2001). However, the CRE may have additional effects on this point, especially considering that the CRE makes one more lenient in his choosing. Further, the length of the retention interval exacerbates the CRE (Marcon, Meissner, Frueh, Susa, & MacLin, 2010).

Prosecutors believe that virtually all eyewitness identifications are correct. Unfortunately, this is simply not the case. Studies show that clerks asked to identify customers they had just seen can only do so at a 34% accuracy rate. And, when asked to make this same identification only 24 hours after the encounter, accuracy was no better than chance levels (16%). What is incredibly alarming about these accounts is that the clerk-witnesses stated they were confident enough in their identifications to testify in court regarding them. A recent study found a greater proportion of false identifications made with high confidence levels in CR, as opposed to SR, faces. The magnitude of the CRE cannot be ignored, and fact-finders at trial must be made aware of both the differential rate and the lack of diagnosticity for confidence ratings with regard to CR identifications (Brigham et al., 2007).

Estimator variables, those that are measured after the identification has occurred, are often used to determine the likelihood that a ?suspect? identification is correct. However, estimator variables are ineffective in CR cases. The confidence level of the witness, which carries great weight with a jury and judge regarding the credibility of the witness, is a poor ?postdictor? (an indicator after the event has
already occurred) of accuracy. In fact, studies show that confidence levels correlate to just under 30 percent accuracy in CR cases. Neither confidence level nor judgment strategy, while possibly useful indicators of accuracy in SR cases, are adequate in CR cases. This is important because the ruling set by the Supreme Court in Biggers relies heavily on confidence to determine accuracy, yet confidence, decision-time, and judgment strategy have little effect in CR cases (Smith et al., 2001). The same is true with regard to confidence levels prior to lineup (i.e., at the scene of a crime) with regard to CR witnesses (Hourihan, Benjamin, & Liu, 2012).

Though the CRE is quite robust, the general public is relatively unaware of it. In fact, a recent study by Abshire and Bornstein found that less than half of a mock venire knew anything about the CRE. Further, even among those who were aware, little value was given to the effect, considering the power it can have over the eyewitness account. Finally, the study found that black mock jurors were more aware of the phenomenon than white. A separate study of jurors in a mock trial concluded that only 18% of jurors would vote to convict where there were no eyewitnesses to a crime. However, 72% would convict on the same facts if there were one credible eyewitness. Finally, even when the eyewitness was fully discredited, the conviction rate remained high?at 68%?never returning to the previous ?no eyewitness? level, despite the eyewitness being shown to be not credible. Bryan S. Ryan, Note, Alleviating Own-Race Bias in Cross-Racial Identifications, 8 Wash. U. Jur. Rev. 115, 122 (2015) (internal citations omitted).

However, one item that must be recorded, and is of great value with regard to CR cases, is non-identifications, which should be trusted as diagnostic. In the Cotton case, supra, the perpetrator left Thompson?s home after raping her, broke into another woman?s home shortly thereafter, and raped her as well. The second victim did not identify Cotton as the perpetrator. This was treated as a non-issue in pursuing Cotton and was not admitted at trial, despite being of exculpatory value (Hourihan et al., 2012).

Expert Testimony at Trial:

Rather than merely informing jurors that research has found eyewitness testimony is fallible, it might be useful to give them examples of field research in which even SR identifications are highly suspect. It appears unequivocal within the scientific community that CR eyewitness testimony is less credible than SR eyewitness testimony, which is already highly suspect. Wilson et al. calls the evidence for the CRE ?reliable, robust, and overwhelming, a real and systematic bias that unduly harms suspects that are not of the witness?s ethnicity.? In fact, in writing this paper, this author only found one article whose writer implied the opposite: Importantly, Bartolomey was a prosecutor for the New Jersey Attorney General?s office at the time she authored the article, and the New Jersey Supreme Court had just authored the opinion in Cromedy, for which appeal Bartolomey had authored an amicus brief in support of the state?s position. New Jersey v. Cromedy, 727 A.2d 457 (N.J. 1999)(holding that all courts must specifically instruct jurors of cross-racial identity issues in certain cases).

Bartolomey argues that the evidence of the CRE is ?hardly overwhelming,? and that any such effect will decrease and disappear as the world becomes more and more multicultural. She further argues that expert testimony regarding the CRE puts a ?cloak of expertise on questionable stereotypes about interracial recognition that may or may not reflect the recall capacity of a witness,? demeaning that witness in the eyes of the jury for no reason other than that the witness and defendant have different-colored skin. The quote from Wilson et al. (2013) at the beginning of this section counters the statements by Bartolomey in two ways: First, it shows that expert witnesses are proper in all eyewitness cases under the rules of evidence; and second, it balances against the argument that any instruction or witness would invade the province of the jury, calling into question the credibility of the witness simply because it is a cross-race identification.
Federal Rule of Evidence 702 (most state rules are very similar) provides that an expert witness can give opinion or other testimony where the expert’s scientific, technical, or other specialized knowledge will help the trier of fact understand the evidence or determine a fact at issue in the case. Fed. R. Evid. 702 (2015). Some benches have held that the CRE is common-sense information that all jurors are intuitively aware of. *Cromedy*, 727 A.2d at 463?64. Based on this, a judge may deny an expert witness, holding that expert testimony therefore would not assist the jury in making a factual determination. However, these cases are aging, and in many states, expert witnesses are being allowed to testify as to the CRE, especially as it has become better known (and thus accepted under the Daubert standard codified in Fed. R. Evid. 702).

**Jury Instructions:**

Traditional methods of legal safeguarding, such as pretrial hearings, cross-examination, and closing arguments, have proven insufficient in preventing wrongful convictions, especially those based on CR identification.

Bartolomey argued that criminal trial procedures have evolved to allow ?maximum opportunity to expose a case of mistaken identity? through the traditional methods named above and through alibi witnesses, character testimony, or DNA evidence; therefore, jury instructions regarding the CRE are not biased, but completely unnecessary. The problems with Bartolomey?s argument are numerous. In fact, Bartolomey makes a key point against her argument without even realizing she did so:

> Absent an ironclad alibi or definitive DNA results . . . it is difficult to prove with a scientific certainty the negative fact that a defendant was not at the crime scene. Archival studies seem to offer little hold of yielding hard scientific data in this area.

The Constitution and thus the American system of justice require that the Government prove the accused guilty beyond a reasonable doubt. It does not require the accused to put forth any evidence. Why? Because, it is virtually impossible for an innocent citizen to disprove a negative. Further, we have had each of the traditional methods Bartolomey named for decades, yet wrongful convictions based on eyewitness identification still occur. Though some have been cleared by DNA evidence, the larger majority of crimes in which eyewitness testimony sealed a conviction did not yield any type of DNA evidence by which the now-convicted person could be cleared (or proven guilty).

Bartolomey also argues that compared to research experiments, which employ mostly ?unmotivated college students,? real-life crime victims are highly motivated to pay close attention to the perpetrator. The crime itself ?cues an onlooker? to pay attention, as his identification might be needed in the future, Bartolomey argues. The facts in *Neil v. Biggers* showed that even the most well-designed experiment could not compare to a knifepoint sexual assault that lasted between 15 and 60 minutes, during which the victim studied the perpetrator, making an identification unlikely to be tainted by witness bias. However, this is exactly what occurred in the case of Ronald Cotton, noted at the beginning of this paper, and Bartolomey? s theories simply do not hold water.

In cases where expert testimony is not allowed, and preferably in addition to such testimony, the jury should be provided with instructions that inform them of the issues with CR identification, and require them to make a credibility finding. This is both impartial, yet instructive. Unfortunately, as shown above, even where the confident witness has been found incredible, the damage brought by his testimony may be difficult to impossible to repair. Bryan S. Ryan, *Note, Alleviating Own-Race Bias in Cross-Racial Identifications*, 8 Wash. U. Jur. Rev. 115, 122 (2015)(internal citations omitted). However, it is a start.

What cannot happen is qualified instructions: In the *Cromedy* opinion, the New Jersey Supreme court
held that a jury instruction on cross-racial identification is required where: (1) identification is a critical issue in the case; and (2) the identification is not corroborated by any other admitted evidence. *Cromedy*, 727 A.2d at 467. The qualification is improper because it is then discretionary upon the court to decide if corroboration exists. In the Cotton case, the State offered at trial a flashlight found in Cotton’s home that ‘resembled’ the one used by Thompson’s attacker, and evidence that the rubber on the bot-tom of a pair of shoes belonging to Cotton was ‘consistent with’ rubber found ‘at one of the crime scenes’ ([4](www.innocenceproject.org/cases/ronald-cotton/)). This alone could be enough evidence for a trial court to find corroboration exists and not require the instruction. And yet, Cotton was innocent? a victim of the cross-race effect.

**Other Thoughts**

While race is the most obvious category in which individuation should be focused for improvement, it is by no means the only group for which categorization occurs. Indeed, the in/outgroup categorization has been found for gender, age, and even to which university one ‘belongs’. This shows there is no limit as to the levels and groups to which individuation bias might be found. Indeed, studies show that age may additionally contribute to the CRE because as people age they generally are less discriminatory, basing choices on familiarity as opposed to recollection, magnifying the CRE and resulting in higher rates of false identification. Though police might be trained on CR group bias, it would be imprudent to suggest we can eliminate all bias, and it is important to consider such effects when it comes to eyewitness identification? both in research and in trial.

**References**


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