Bias and Perception[*]
Susanna Siegel
To appear in "Knowledge, Justice, and the Social Mind", eds. E. Beeghly and A. Madva

How do biases influence perception? If we select a culturally specific bias for the purposes of illustration, then we can address this question from three perspectives: from the receiving end of biased perception, using cultural analysis; from within the biased perceiver's mind, using cognitive science; and from the perspective of epistemology. This entry will consider all three perspectives and discuss their relationship. The culturally specific example will be a type of racialized perception found in the U.S.A.. The epistemic consequences of racial bias in this context has deep implications for how reasonable it can be to act on what one 'sees' when those perceptions are influenced by bias, and this entry will introduce those consequences at the end.

1. Cultural analysis
In a narrative that is easy to recognize, George Yancy (2008) describes a type of micro-interaction between strangers:

> When followed by white security personnel as I walk through department stores, when a white salesperson avoids touching my hand, when a white woman looks with suspicion as I enter the elevator, I feel that in their eyes I am this indistinguishable, amorphous, black seething mass, a token of danger, a threat, a rapist, a criminal, a burden . . .

In the US, narratives resembling this one have long been found in many registers, such as memoir (Coates (2015), Cadogan (2018)), fiction, film, music, poetry, ethnography, and social scientific studies (Glaser 2014), including psychological studies of stereotype threat (Steele 2011) and studies in political sciences of the effects on political attitudes of contact with the criminal justice system (Lerman and Weaver 2014). Some renditions of this narrative detail what it is like to navigate public space when the possibility of being responded to as a threat or likely criminal is salient, including the often elaborate efforts and adjustments made to prevent that response, or reverse it, or negotiate it in some other way. Other versions of the same narrative highlight, encourage, and enforce the point of view of the reactor, such as the high-profile Willie Horton ad in the 1988 US election Mendelberg 2001, the political scientist John DiIulio introduction in the 1990s of the concept of a "superpredator" to describe black youth who were supposedly prone to crime (DiIulio 1996, Hinton 2016), and around the same time, analytic philosopher Michael Levin's defense of racialized fear Levin 1992).

The wealth of cultural production of narratives casting black men in this role makes it plausible that this racial attitude is widespread, and part of what people embedded in U.S.

society have to respond to both from within their minds and in the behavior of other people. Here's a portrait of how the same attitudes might inhabit a differently positioned person, who I'll call Whit.

Whit is eighteen years old. He has always lived in the same town, in the early-twenty-first-century United States. He inhabits a world of a white people. All of the people that he and his parents take themselves to depend on are white. White people are his neighbors, his teachers, his schoolmates, the professionals that regularly interact with his family (accountants, teachers, doctors, lawyers, mechanics, local religious figures, and community leaders), his friends and his family's friends, his local politicians, police officers, restaurant owners, and people he sees when he goes to restaurants.

Whit knows that elsewhere, not everyone is white. He knows there are black professionals of all kinds. He knows that in other places, distant from where he lives, there are neighborhoods where people are mainly black, where they tend to be much poorer than his family is, and where many people his age have a lot of contact with the criminal justice system. He doesn't know personally anybody who lives there.

If Whit were asked to assess the productive capabilities or personal credibility of a man who is black, he would tend to be disproportionately doubtful. And if he expressed or acted on his doubt, he would not face any challenges from the people within his usual social horizons. In this way, Whit has little in his mind or life to pull against his absorption of the attitude that black men are dangerous.

Whit's racial isolation is the kind that Allport (1954) predicted would make a person more likely to absorb the presumption depicted in the narratives, rather than contesting the presumption or discounting it. Of course like any individual's outlook, Whit's cannot be entirely predicted by social context. And conversely, Whit's social situation is not the only route to the racial attitude he ends up with.

The fact that Whit's attitude is normal worsens his society. From the point of view of people on the receiving end of Whit's reactions, his attitude will be obviously unjustified. Imagine stepping into a line at an automatic teller machine where Whit and his friends are waiting, and seeing their palpable discomfort as they look uneasy and make sure their wallets are deep inside their pockets. Or imagine asking Whit for directions, and finding him ill at ease in talking to you, seemingly suspicious of whether what you want is really directions, as opposed to something else. In these situations, you'd think Whit and his friends were in the grip of a fear that they were projecting onto you. There's nothing more you could do to manifest the ordinariness of your own behavior. Outside of Whit's world, many people would easily pick up on the ample cues that indicate innocuous everyday activity. Due to their racial attitudes, Whit and his friends either don't take in these cues, or they discount them. In these ways, their perception is compromised.

The examples of Whit's obtuseness and Yancy's experience in the elevator gives us two common manifestations of racialized bias in social perception. Yancy describes what it is like to be perceived when you are on the receiving end of that kind of bias-influenced

perception. And Whit's scenario shows us how someone unknowingly steeped in racialized bias could end up with perceptions that are congruent with the bias, without having a clue about either the bias or its effects on perception.

2. Cognitive science
Alongside cultural analysis, psychological experiments provide evidence that racial attitudes can operate even in the minds of people who would explicitly disown the hypothesis that black men are dangerous. For instance, consider a set of experiments designed to test how racial attitudes impact perception:

> -A mild human collision where one person pushes another is seen as aggressive or playful, depends on the perceived race of the pusher (Duncan 1976, Sagar and Schofield 1980).
>
> -A face in a picture is matched (for coloring) to a darker to a lighter patch, depending on the racial label written under the face (Levin and Banaji 2006, see Firestone and Scholl 2015 for discussion).
>
> -A boy in a photograph said to be accused of a felony is estimated to be older when the child is black than when he is latino (Goff et al. 2014).
>
> -A man categorized as black is estimated to be both bigger and stronger than a man of the same size and strength who is categorized as white (Wilson et al 2017).
>
> -Emotions are detected at lower thresholds when they are congruent with stereotypes linking anger to Morrocan men and sadness to white Dutch men, as measured by implicit association tests (Bijlstra et al 2014).

How should these experiments be interpreted?

An important distinction is the difference between visual appearances (a kind of perceptual experience), and the beliefs or judgments you form in response to them. Perceptual experiences are the conscious aspects of perception, in which the things you're perceiving are presented to you in a certain way. For instance, when you put a straight stick in water and suddenly it looks bent, your visual experience presents it as bent, but what you believe or judge is that it's straight. We don't always believe our eyes, and that situation shows that there's a difference between what you experience and what you believe in response to it.

We can also appreciate the difference between experience and judgment by considering cases where what you judge in response to perception goes beyond what you see. For example, if you're looking for your brother in the kitchen, and see that the kitchen is empty, your experience tells you about what is in the kitchen, and then you infer on the basis of the experience that your brother isn't there. Here, you do believe your eyes. But in addition, you also form other beliefs that go beyond what you experience.

It's useful to have a way to discuss the ways a perceptual experience presents things to you, and that's the point of the notion of the contents of experience. If the stick looks bent even when you know it's straight, then the contents of your visual experiences include "it's bent". Contents characterize your perspective on the world in perceptual experience. Your experience is accurate if things are the way you experience them, and they're inaccurate if things aren't that way. The experience of the stick is inaccurate.

The experiments listed earlier raise the question whether the background expectations are affecting perceptual experiences, or only beliefs formed on the basis of those experiences. For example, in the case of the collision: does the pusher look aggressive, or do some perceivers just believe he is, on the basis of how he looks to them?

It can be difficult to test experimentally whether the effect shapes the content of the experience, or rather influences people respond to their experiences. But we can understand a range of different ways in which bias can affect perception, even if we don't know from cognitive science where exactly the effects lie.

We can see the potential range of effects on perception by focusing on different possible interpretations of the result of an experiment done by Keith Payne. The experiment was designed to test the influence of racial attitudes on categorizing the things you see (Payne 2001).

> *Weapon categorization*: Participants in an experiment are shown an object quickly and asked to press a button designated for "gun" if it is a gun, and a different button if it is a hand tool—pliers, wrench, or a drill. Before they see the object, they are quickly shown a man's face. The man is either black or white. Participants frequently indicate "gun" when shown a tool, but more frequently make this error following a black prime, compared with a white prime. (Payne 2001)

When participants in Payne's experiment misclassify a pair of pliers as a gun, there are many possible ways in which they might in principle arrive at their misclassification.

> • *Disbelief*: The pliers look to the subject exactly like pliers. But the subjects disbelieve their perceptual experience, and misclassify the object as a gun.

> • *Bypass*: The pliers look to the subject exactly like pliers. Subjects do not respond in any way to the experience—not even by disbelieving it. The state activated by the black prime controls their classification error directly, bypassing their experience.

> • *Cognitive penetration*: The pliers look to the subject exactly like a gun, due to the influence on perceptual experience of a cognitive state activated by the black prime.

> • *Attention*: The pliers look somewhat like a gun, because the state activated by the black prime directs the subjects' attention to features of the pliers that are

congruent with being a gun (metallic), and away from features incongruent with being a gun (shape).

• *Introspective error*: The pliers look to the subject exactly like pliers. But subjects make an introspective error in which they take them- selves to experience a gun. The introspective error makes them misclassify the object as a gun.

• *Hasty judgment*: The pliers look to the subject somewhat like pliers and somewhat like a gun. Before perceiving enough detail to decide the matter on the basis of what they see, subjects judge that the object is a gun, due to the state activated by the black prime.

• *Disowned behavior*: The pliers look to the subject exactly like pliers. But the state activated by the black prime guides the behavior of pushing the button that subjects use to indicate their classification verdict. Subjects immediately afterward will regard their answer as mistaken.

These options differ from one another along several dimensions. Some options impact the content of a judgment, rather than the content of perceptual experience (Disbelief, Bypass, Introspective error). Other options impact the content of experience, either by influencing it directly (Cognitive penetration) or by selecting which features will be attended (Attention). A different dimension of influence constrains the role of the experience in making a judgment (Bypass, Haste), or in producing behavior (Disowned behavior). These options illustrate the possibility that perception could have less impact on behavior than we might have supposed—even when we are engaged explicitly in a classification task that we would normally use perception to accomplish. Perception's usual role in guiding behavior is neutralized.

These different ways that a prior state can influence perception can be systematized using two philosophical distinctions. The first distinction is between perceptual experiences and judgments (or beliefs) formed in response to them. The second distinction is between two aspects of perceptual experiences: their contents, as opposed to the role of the experience in the mind. Haste, Bypass, Disowned behavior and Disbelief all illustrate ways that racialized bias can influence the role of the experience in the mind. Cognitive penetration and Attention illustrate ways that racialized bias can influence the contents of experience.

Payne's results are probably best explained by the Disowned Behavior option, given a follow-up experiment that allowed participants to correct their responses (Stokes and Payne 2010). But the distinctions between different potential analyses show us a range of ways that prior states including racialized bias can influence perception.

One way to influence perception is to influence patterns of attention, and these patterns in turn can affect the contents of experience. In the context of Payne's experiment, attention could be directed to different parts of the object, depending on the influence of racialized bias. Other experiments suggest that racialized bias can influence the distributions of

5

attention across wider scenes, and the bias can function as what psychologist Jennifer Eberhardt calls a "visual tuning device". Here's an example.

> *Crime-suggestive acuity*: After being shown a man's face in a subliminal prime, participants are shown a sequence of progressively less degraded images, beginning with visual noise and ending with a clear image of an object and asked to indicate when they can recognize the object. They identify crime-relevant objects (guns or knives) at lower thresholds than crime-irrelevant objects, after being shown a black man's face, compared to crime-irrelevant objects, and compared to crime-relevant objects after being shown a white man's face. (Eberhardt et al. 2004)

This experiment belongs to a series from which Eberhardt concludes that there is a two-way association between the concepts 'black' and 'crime'. In the task described above, a racialized prime prompts attention to crime-related objects. In a different task, priming with crime-related objects prompts attention to black male faces as opposed to white male faces. Attention is measured using a dot-probe task. In the experiment, two faces of men appear, one black and one white, and then both disappear and a dot appears in a position of one of the faces. The task is to find the dot. When participants are primed with a crime-related object before they see the faces, they find the dot faster when it replaces the black face. The crime-prime seems to facilitate attention to black faces.

Associations

So far, I've discussed a range of ways for racialized bias to influence perception, using experiments from cognitive science to illustrate behavior that could be underwritten by a range of different psychological relationships between bias, perceptual experience, and perceptual judgment. The experiments we've discussed activate what the experimenters call a "stereotypical association" between the concepts 'black man' and 'danger' or 'crime' (Eberhard 2001, Payne 2006). It is unlikely that the content of racialized biases is independent of gender categories, and the experiments discussed so far focus exclusively on men (Johnson et al 2012). A wide range of black feminist writings from the U.S. have long discussed the ways that racialized narratives, dynamics, and representations of race have different contours depending on whether they focus on men or women (Cooper 1872, Murray 1970, Crenshaw 2015, Dotson 2017, Morris 2016). Like the experiments I'm discussing, I focus on men here. When it comes to the general structure of racialized bias, though, there's reason to think the structure will be the same whether the racialized bias concerns men or women, even if the contents differ. For instance, according to Johnson et al 2012, black women are perceived as more masculine and Asian men are perceived as more feminine.

 An analysis of racialized bias in terms of associations between concepts could mislead us as to the underlying structure of the racialized bias. When the experimenters say that participants make a "stereotypical association," they are saying that the mind moves from one concept to another. We can better understand what kind of movement of the mind this could be by drawing a few more distinctions (cf. chapter 1 of this volume. G Johnson). These distinctions will later help us analyze the epistemic impacts of racialized bias.

First, here are two different ways to associate concepts X and Y, such as 'salt' and 'pepper.'

> *Minimal association between concepts*: transition from isolated concepts expressed by words: e.g., "drip" to "drop," "salt" to "pepper," "tic" and "tac" to "toe."

This kind of movement between concepts is a mental analog of the verbal phenomenon in which a person hears "salt" and (perhaps upon being prompted to report the word that first comes to mind) says "pepper." Associative transitions can also be made between thoughts.

> *Minimal association between thoughts*: transition from thought involving X (X-thoughts) to thoughts involving Y (Y-thoughts), with no constraints on which thoughts these are.

In a minimal association between thoughts, whenever one thinks a thought involving the concept 'salt'—such as that the chips are salty, or that the soup needs more salt, or that salt on the roads prevents skidding— one is disposed to think a thought—any thought— involving the concept 'pepper.' A minimal association between thoughts is therefore a kind of association between concepts. When it is used in a salt-thought, the concept 'salt' triggers a pepper-thought. But which thoughts are triggered is not constrained by the semantic relationships between them.

Both kinds of minimal associations leave entirely open what standing attitudes the subject has toward the things denoted by the concepts, such as salt and pepper. A subject with a minimal association may have zero further opinions about salt and pepper, if for her, the concepts are no more related than the words "tic" "tac" and "toe." If she does have further opinions, she may think that salt goes well with pepper, that salt and pepper should never be seen or tasted together, that where there is salt there tends to be pepper, that salt and pepper are exclusive seasonings, or any of an enormous variety of other thoughts. No standing outlook about how the things denoted by the concepts are related belongs to a minimal association.

A minimal association between 'black' (or a more specific racial concept) and 'crime' could be an artifact of a presumption that black men are especially unlikely to be holding a crime-related object. If they're not an artifact of this kind of presumption, and they are merely minimal, they do not belong to the same phenomenon as the racialized perceptions and attitudes discussed in section 1. Minimal associations are also unable to explain several other experimental results from cognitive science:

> *The shooter task*: Participants in an experiment play a video game. They are supposed to press either a button designated for "shoot" or "don't shoot," depending on whether the person they see on the screen (the target) is holding a gun or an innocuous object—such as a cell phone or wallet. The targets are men. Sometimes the men are black, sometimes white. Participants more frequently press "shoot" when shown an unarmed black target than they do when shown an unarmed white

target (Correll et al. 2002, Correll et al. 2007, Plant and Peruche 2005, Glaser and Knowles 2008, James et al. 2013).

Age overestimation: Participants are shown a picture of a boy aged 10–17, paired with a description of a crime that the boy is said to have committed. They are asked to estimate the boy's age. Across subjects, the pictures of boys and their names change, but the crime descriptions stay the same. Both police officers and college-age laypersons overestimate the age of black boys by at least four years when the crime is a felony, but overestimate ages of white and latino boys by only two years, for the same crime. On a scale of culpability, black boys are rated more culpable than white or latino boys for the same crime. (Goff et al. 2014)

Looking deathworthy: Defendants in capital crimes whose victims are white are more likely to be sentenced by juries to death, the more stereotypically black their faces appear. (Eberhardt et al. 2006)

Minimal associations do not predict the Looking Deathworthy result, or age overestimation. These results link 'black man' and with negative concepts in a specific way, not just minimally. Minimal associations also do not predict one pattern of shooting error over any other. That's because a minimal association between 'black' (or a more specific racial concept) and 'crime' could be an artifact of many different presumptions. For instance, it could be an artifact of the presumption that black men are especially *un*likely to be holding a crime-related object. But the results of the experiments would not be explained by that presumption. It would not explain why participants are so ready to press "shoot" when the target is black.

The fact that that minimal associations can't explain these results strengthens the idea that culturally prevalent attitudes sometimes operate in the minds of individuals in ways that are typical of beliefs. They contribute to the interpretation of information, they lead to inferences, and they guide action.

3. Epistemology

If racialized bias operates in the mind in the same basic ways as beliefs, then nothing in the structure of such biases precludes them from being epistemically evaluable in the same way that beliefs can be. Beliefs are evaluable along two dimensions: first, they can be true or false, and second, they can be proper responses to a subject's evidence or not. The most general version of the second dimension is that beliefs can be formed and maintained epistemically well or epistemically badly. A belief or judgment is ill-founded if it is formed or maintained epistemically badly, and in contrast it is well-founded if it is formed and maintained epistemically well. Being ill-founded or well-founded is distinct from being true or false. True beliefs can be ill-founded, and well-founded beliefs can be false.

We've seen that racialized bias can influence perception in several different ways, by affecting the contents of perceptual experience, the role of experience in the forming

beliefs, or the contents of beliefs formed in response to perception. These functional differences involve different kinds of epistemic impact on the perceiver.

For instance, in the Bypass scenario, you have very good grounds from your experience to think that the thing you're seeing is a tool, but you end up judging that it's a gun. Here, your judgment is ill-founded, because it is formed in a way that does not take account of the evidence you have. By contrast, if you look in the fridge for some mustard and see the jar on the shelf, normally you have very good reason to think that there's mustard in the fridge. If you believe that there's mustard in the fridge on the basis of seeing it, then your belief is well-founded. If there is mustard in the fridge, and you believe that there is, but you believe this because you have a superstition that mustard appears in the fridge when the sun comes out and disappears when the sun goes behind the clouds, then your belief is true but ill-founded.

If we want to know what kind of epistemic impact racialized bias makes on perception, we can treat racialized bias as an ill-founded belief. And then we can ask: what epistemic impact would an ill-founded belief make on perception?

A first observation is that if perceptual judgment ends up congruent with ill-founded racialized bias, then perception is pressed into service of an ill-founded outlook, either by making the outlook seem supported by experience via cognitive penetration or attention, or by making experience irrelevant to judgment (bypass, introspective error).

A second observation when ill-founded bias influences perceptual experience through cognitive penetration, as special philosophical problem arises. Here is a simple example. Jack and Jill have a complicated relationship. One day, Jill is worried that Jack is angry with her. She's anxious to see him so that she can figure out where things stand. When she sees him, her suspicion that he's angry affects the way he looks to her. In reality, Jack's expression is neutral. If you saw him, his face would look neutral to you. But he looks angry to Jill.

Does Jill's visual experience give her reason to believe that Jack is angry?
On the one hand, if Jack really looks angry to Jill when she sees him, and she has no indication that her experience is due to her fear, then what else could Jill reasonably believe about Jack's emotional state, other than that he's angry? To her, that's just how he looks. From Jill's point of view, she's in an utterly ordinary circumstance.

On the other hand, it looks like what's happening to Jill is that fear is leading to her belief, via an experience. If it's wrong to base your belief on an unfounded fear, why should be okay to base your belief on an experience that comes from an unfounded fear?

The philosophical problem is that this simple Yes-No question has no simple answer. It is called *the problem of hijacked experiences*, to capture the idea that in these cases, perceptual experience is hijacked by fear, and in being overly influenced by, it's overly influenced by a factor that in some intuitive sense shouldn't be steering it (Siegel 2016, 2017).

Since the problem takes the form of a Yes-No question, one form its solution could take is to argue that one of these answers is correct. In the rest of this section, I explore the position that the correct answer is No, it's not reasonable for Jill to believe her eyes, because perceptual experiences can actually be formed irrationally or rationally, in response to expectations – even if you have no idea how your perceptions came about., and even if you're not aware of the fact that you in effect reasoned your way to your experience from your expectations. Believing that someone's happy just because want them to be happy is called wishful thinking. Believing that someone's angry, or dangerous, just because we fear that they are is called fearful thinking.

This position says that Jill's situation is like fearful thinking – except its fearful seeing, and fearful seeing redounds just as badly on a person as fearful thinking does (At least, when the fear is unfounded). It is called the Rationality of Perception solution to the epistemological problem (Siegel 2017, Clark 2018).

This of course is not the only solution. Some say No, but give a different backstory about why No is the right answer (Lord 2019, Ghijsen 2018, McGrath 2013a, 2013b, Peacocke 2018). Others say Yes (Pautz 2019, Huemer 2013, Fumerton 2013). Or you can say both, by saying Yes in some ways and No in others. Like most philosophical problems, this problem has many possible solutions.
The Rationality of Perception solution is especially interesting for two kinds of reasons.

First, it can make a difference in legal contexts. The social versions of the perceptual hijacking are especially vivid and extreme when perception leads quickly to violence, and often death. In the first decades of the 21st century cases like these have been brought them to the front of political discussion were Black Lives Matter movement. There was the shooting and killing of 12-year old Tamir Rice in Cleveland, where the officers' decided to shoot within a few moments of perceiving the boy, who they were told had a gun, describing the boy as "about 20 years old". There was the killing of eighteen year old Michael Brown by officer Darren Wilson, who testified to a grand jury about how Michael Brown's face looked to him when they were physically struggling by saying that Wilson "had the most intense aggressive face. The only way I can describe it, it looks like a demon, that's how angry he looked."

We don't know exactly what perceptual experiences these particular officers have, just as we don't know whether to interpret psychological results as concerning experience or judgment. So the cases don't necessarily give us more instances of the problem of hijacked experience, since that problem is specific to influences on perceptual experience.

But to think through possible solutions to that problem, we don't need actual cases of influences on experience. We can use hypothetical versions of the actual cases, where we just assume for the sake of argument that racialized expectations gave rise to perceptual experiences in which young people appear threatening and dangerous to the perceivers. And then we can ask: if these perceptual experiences were manifestations of racialized

attitude that black boys and men are dangerous, is it reasonable for people having those perceptual experiences to believe their eyes?

It will seem reasonable *to them*. In fact it will seem as reasonable as it is to conclude that there's mustard in the fridge, when you open the door and see the mustard. But these examples make clear the consequences of letting your solution to the problem be guided by how things seem to the perceiver. The idea that perceptual experiences can come about irrationally helps us see why we don't have to be guided in that way.

Police officers are legally allowed to use force based on perception of threat, so long as their perception is defined as reasonable – and it's prosecutors, judges, juries or grand juries that are allowed to determine what's reasonable. It is hard to see how you could have a police force at all, without leeway for using force, and hard to see how you could have a decent policy about such leeway without something like a reasonable person standard. The difficulty comes in applying the standard. (For discussion, see reading suggestions under "Bias and the Law").

Both the officer who shot and killed Tamir Rice (Timony Loehmann) and the one who shot and killed Michael Brown (Darren Wilson) were not convicted, and their actions, and therefore their beliefs about threat, were found by the legal system to be reasonable. Those verdicts mobilized thousands people who felt that what the officers did couldn't possibly have been reasonable responses to the situation, because they their estimations of the threat or danger posed by these young people was so far off the mark (Lebron 2017).

When those juries, judges or prosecutors determine whether a defendant's perception is reasonable, they're supposed to consider what a reasonable person in the defendants' circumstances would believe about whether they face an imminent severe threat, and if so, how imminent and severe that threat is. They are supposed to ask what would be reasonable to believe about those things, in those circumstances.

On the prevailing view, both in philosophy and in law, what it's reasonable for people to believe depends in part on how it's reasonable to respond to the way things look to them (in this case, the way other people look to them). How one comes to have the perceptual experiences they're responding to isn't supposed to matter. If someone looked dangerous to you, it'd be reasonable for you to believe that they're dangerous. And if you looked dangerous to someone else, you should excuse them if they become agitated upon seeing you, because it's reasonable to be agitated in response in danger.

On the Rationality of Perception view, the reasonableness of a belief doesn't just depend on how you respond to the perceptions you have. It can also depend on which perceptual experiences you have in the first place. For instance, the danger-experience could be inferred from unreasonable expectations built into racial prejudice, and then it will be an experience that's not reasonable to have. This way, when we assess what a reasonable person under similar circumstances would believe, we need not hold constant their experience. A reasonable person in similar circumstances would not have an experience that they inferred from an unreasonable prejudice.

Finally, the Rationality of Perception view challenges the idea that perceptual experience occurs prior to reasoning in the mind. We reason from information we have already, whereas perception is a way of taking in new and current information about the environment. We're used to thinking about perceptual experience as part of what we respond to, rather than already a response to what we believe, suspect, or feel. We think of perceptual experience that way because we feel passive with respect to it. It never feels like we're reasoning our way to experience. Going with that, we're used to locating perceptual experience off the grid of moral or epistemic evaluation. The Rationality of Perception picture is different. It puts perceptual experience on par with beliefs when it comes to justification and morality.

References

Allport, G. (1954). *The Nature of Prejudice*. Addison-Wesley.

Bijlstra, G. et al (2014). Stereotype Associations and Emotion Recognition. *Personality and Social Psychology Bulletin*, *40*(5), 567–577. https://doi.org/10.1177/0146167213520458

Clark, A. (2018). Priors and Prejudices: Comments on Susanna Siegel's The Rationality of Perception. *Res Philosophica*, 95(4), 741-750.

Coates, T. N. (2015). *Between the World and Me*. Random House.

Cooper, A. J. (1892). *A Voice from the South*. Aldine Printing House.

Correll, J., Park, B., Judd, C. M., and Wittenbrink, B. (2002). The Police Officer's Dilemma: Using Ethnicity to Disambiguate Potentially Threatening Individuals. *Journal of Personality and Social Psychology,* 83(6), 1314-1329.

Correll, J., Park, B., Judd, C. M., Wittenbrink, B., Sadler, M. S., and Keesee, T. (2007). Across the Thin Blue Line: Police Officers and Racial Bias in the Decision to Shoot. *Journal of Personality and Social Psychology*, 92(6), 1006.

Crenshaw, K. (2015). Black Girls Matter. *Ms. Magazine*, 25(2), 26-29.

Dilulio, J. (1996). My Black Crime Problem, and Ours. *City Journal*, 6(2), 14-28.

Dotson, K. (2017). Theorizing Jane Crow, Theorizing Unknowability. *Social Epistemology*, 31(5), 417-430.

Duncan, B. L. (1976). Differential Social Perception and Attribution of Intergroup Violence: Testing the Lower Limits of Stereotyping of Blacks. *Journal of Personality and Social Psychology,* 34(4), 590-598.

Eberhardt, J. L., Goff, P. A., Purdie, V. J., and Davies, P. G. (2004). Seeing Black: Race, Crime, and Visual Processing. *Journal of Personality and Social Psychology,* 87(6), 876-893.

Eberhardt, J. L., Davies, P. G., Purdie-Vaughns, V., and Johnson, S. L. (2006). Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Capital-Sentencing Outcomes. *Psychological Science,* 17(5), 383-388.

Firestone, C. and Scholl, B. (2015) Can you experience 'top-down' effects on perception?: The case of race categories and perceived lightness. Psychonomic Bulletin Rev. 2015 Jun;22(3):694-700. doi: 10.3758/s13423-014-0711-5.

Fumerton, R. (2013). Siegel on the Epistemic Impact of 'Checkered' Experience. *Philosophical Studies,* 162(3), 733-739.

Cadogan, G. (2018) "Black and Blue". in *The Fire This Time*, ed. Jesmyn Ward. New York: Scribner.

129-144.

Ghijsen, H. (2018). How to Explain the Rationality of Perception. *Analysis*, 78(3), 500-512.

Glaser, J. (2014). *Suspect Race: Causes and Consequences of Racial Profiling.* Oxford University Press.

Glaser, J. and Knowles, E. (2008). Implicit Motivation to Control Prejudice. *Journal of Experimental Social Psychology,* 44(1), 164-172.

Goff, P. A., Jackson, M. C., Di Leone, B. L., Culotta, C. M., and DiTomasso, N. A. (2014). The Essence of Innocence: Consequences of Dehumanizing Black Children. *Journal of Personality and Social Psychology,* 106(4), 526-545.

Hinton, E. (2016). *From the War on Poverty to the War on Crime.* Harvard University Press.

Huemer, M. (2013). Epistemological Asymmetries Between Belief and Experience. *Philosophical Studies*, 162(3), 741-748.

James, L., Vila, B., and Daratha, K. (2013). Results from experimental trials testing participant responses to White, Hispanic and Black suspects in high-fidelity deadly force judgment and decision-making simulations. *Journal of Experimental Criminology*, 9(2), 189-212.

Johnson, D.J. and Wilson, J.P. (2019) "Racial Bias in perceptions and size and strength: the impact of stereotypes and group differences" *Psychological Science*. https://doi.org/10.1177/0956797619827529

Johnson, K. L., Freeman, J. B., & Pauker, K. (2012). Race is gendered: How covarying phenotypes and stereotypes bias sex categorization. *Journal of Personality and Social Psychology*, *102*(1), 116–131. https://doi.org/10.1037/a0025335

Lebron, C. J. (2017). *The making of black lives matter: A brief history of an idea.* Oxford University Press.

Lerman, A. and Weaver, V. (2014). *Arresting Citizenship: The Democratic Consequences of American Crime Control.* University of Chicago Press.

Levin, M. (1992). Responses to Race Differences in Crime. *Journal of Social Philosophy,* 23(1), 5-29.

Levin, D. T., and Banaji, M. R. (2006). Distortions in the Perceived Lightness of Faces: The Role of Race Categories. *Journal of Experimental Psychology: General*, 135(4), 501.

Lord, E. (forthcoming). The Vices of Perception. *Philosophy and Phenomenological Research.*

McGrath, M. (2013a). Phenomenal Conservatism and Cognitive Penetration: the 'Bad Basis' Counterexamples. *Seemings and Justification: New Essays on Dogmatism and Phenomenal Conservatism*, 225-247. Oxford University Press.

McGrath, M. (2013b). Siegel and the Impact for Epistemological Internalism. *Philosophical Studies,* 162(3), 723-732.

Mendelberg, T. (2001). *The Race Card: Campaign Strategy, Implicit Messages, and the Norm of Equality*. Princeton University Press.

Morris, M. (2016). *Pushout: The Criminalization of Black Girls in Schools*. The New Press.

Murray, P. (1970). The Liberation of Black Women. *Words of Fire: An Anthology of Black Feminist Thought*, 186-198. The New Press.

Pautz, A. (forthcoming) The Irrationality of Perception. *Philosophy and Phenomenological Research*.

Payne, B. K. (2001). Prejudice and Perception: The Role of Automatic and Controlled Processes in Misperceiving a Weapon. *Journal of Personality and Social Psychology*, 81(2), 181.

Payne, B. K. (2006). Weapon Nias: Split-Second Decisions and Unintended Stereotyping. *Current Directions in Psychological Science*, 15(6), 287-291.

Peacocke, C. (2018). Are Perceptions Reached by Rational Inference? Comments on Susanna Siegel, The Rationality of Perception. *Res Philosophica*, 95(4), 751-760.

Plant, E. A., and Peruche, B. M. (2005). The Consequences of Race for Police Officers' Responses to Criminal Suspects. *Psychological Science*, 16(3), 180-183.

Sagar, H. A. and Schofield, J. W. (1980). Racial and Behavioral Cues in Black and White Children's Perceptions of Ambiguously Aggressive Acts. *Journal of Personality and Social Psychology,* 39(4), 590-598.

Siegel, S. (2016) Epistemic Charge. *Proceedings of the Aristotelian Society,* 115(3), 277-306.

Siegel, S. (2017) *The Rationality of Perception*. Oxford University Press.

Steele, C. (2011). *Whistling Vivaldi: And Other Clues to How Stereotypes Affect Us*. Norton.

Stokes, M. B. and Payne, B. K. (2010). Mental Control and Visual Illusions: Errors of Action and Construal in Race-Based Weapon Misidentification. *The Science of Social Vision*, 295-305.

Wilson, J. P., Hugenberg, K., & Rule, N. O. (2017). Racial bias in judgments of physical size and formidability: From size to threat. *Journal of Personality and Social Psychology*, *113*(1), 59–80. https://doi.org/10.1037/pspi0000092

Yancy, G. (2008). Elevators, Social Spaces, and Racism: A Philosophical Analysis. *Philosophy and Social Criticism*, 34(8), 843-876.

Glossary terms

Bias:

Implicit bias:

Associations:

Minimal associations:

Ill-founded: a mental state is ill-founded just in case it is formed or maintained epistemically badly.

Recommendations for additional reading

Association and associationism in psychology:
Mandelbaum, Eric, "Associationist Theories of Thought", *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2017/entries/associationist-thought/>.

Implicit bias in psychology:
Lai, C. K., et al. (2016). Reducing implicit racial preferences: II. Intervention effectiveness across time. *Journal of Experimental Psychology: General, 145*, 1001-1016.

Lai, C. K., et al (2014). Reducing implicit racial preferences: I. A comparative investigation of 17 interventions. *Journal of Experimental Psychology: General, 143*, 1765-1785.

Bias, implicit bias, reasonableness, and the law:
R. Bollinger (2017) "Reasonable mistakes and regulative norms" *Journal of Political Philosophy* 25:1 196-217.
M. Brownstein (2017) *The implicit mind*. Oxford
B. Harcourt (2007) *Against Prediction* University of Chicago Press.
C. Lee, *Murder and the reasonable man*
G. Loury (2002) *The Anatomy of Racial Inequality*. Cambridge: Harvard University Press.
R. Schauer (2003) *Profiles, Probabilities, and Stereotypes*. Cambridge: Harvard University Press.

Epistemology and belief:
R. Basu (2019) "The wrongs of racist beliefs" *Philosophical Studies* (forthcoming)
K. Dotson (2018) "Accumulating Epistemic Power" *Philosophical Topics* 46:1.
J. Munton (2017) "The eye's mind: perceptual process and epistemic norms" *Philosophical Perspectives* 31 (1):317-347.

S. Siegel (2011) Cognitive Penetrability and Perceptual Justification *Nous* .
S. Siegel (2013) The Epistemic Impact of the Etiology of Experience – Symposium with comments by Richard Fumerton, Michael Huemer, Matthew McGrath and replies. *Philosophical Studies* 162

Cultural analysis:
T. Coates (2015) *Between the world and me*
J. Ward, ed. (2018) *The Fire This Time*
Lebron, C. (2017) *The making of Black Lives Matter: A brief history of an idea*. Oxford University Press.

Web resources
Ethics in the World series – Book talk on The Rationality of Perception (focuses on cultural analysis and the problem of hijacked perception)
http://forum-network.org/lectures/susanna-siegel-rationality-perception/

Brains Blog on *The Rationality of Perception* (focuses on inference and epistemology):
http://philosophyofbrains.com/category/books/susanna-siegel-the-rationality-of-perception

Study questions

1. Bias-induced illusions could differ with respect to how long they persist in light of further information. For example, suppose someone sees a black man as angry even though his facial expression is neutral. What kinds of factors would you expect to make an illusion like this end, once it begins? What kinds of experiments could measure the persistence of illusions?

2. Suppose you knew someone was susceptible to bias-induced illusions, and you had to brainstorm ways to make them less susceptible to them. What strategies come to mind? Are they focused around individuals, groups who have the same susceptibilities, groups that differ greatly in their susceptibilities? What advantages and drawbacks do the potential strategies have?

3. Can you think of examples besides racialized bias where someone's perceptions are inflected with their antecedent commitments? Can you find examples of this in fiction? In the cases you come up with, does the influence help the person epistemically, or make it worse for them, or both?

4. In discussing Levin and Banaji (2006), Firestone and Scholl (2015) argue that the effect isn't due to racial on the basis of a second study in which the "black" face still looked darker even though the images were blurred in ways that masked the features that standardly

elicit the racial categorizations "black" and 'white. If the original effect is stronger than the subsequent one, does the critique by Firestone and Scholl settle whether racial categories affect the perception of lightness?

5. Some people think that our biases directly affect perception (how things look to us) whereas other people think that biases only affect the judgments and interpretations we form on the basis of what we see (what we think about how things look). What kinds of evidence might help us decide between these two possibilities?