

Chapter #

COLOR IN THE THEORY OF COLORS?

OR: ARE PHILOSOPHERS' COLORS ALL WHITE?

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1. Introduction: White Theories of Color

Let's say that a philosophical theory is white just in case it treats the perspective of the white (perhaps Western male) as objective.¹ The potential dangers of proposing or defending white theories are two-fold. First, if not all of reality is objective, a fact which I take to be established beyond doubt,² then white theories could well turn out to be false.³ A white theory is unwarranted (and indeed false) when it treats non-objective reality as objective. Second, by proposing or defending unwarranted white theories one thereby treats the perspective of the non-white as faulty, and this in turn serves to perpetuate the distorted representation of whites as superior to non-whites. As David Owen puts it,

[whiteness] serves to underwrite perceptions, understandings, justifications and explanations of the social order that perpetuate distortions in the social system that are a legacy of our nation's history ...what is associated with whiteness becomes defined as natural, normal or mainstream.⁴

In this chapter I will focus on a particular class of philosophical theories, viz. philosophical theories of color. I argue that realist theories of the objectivist variety

(and indeed some non-realist theories) are unjustifiably white: They aim at explaining away cross-ethnic (and cross-gender) variation in color perception and cognition by attributing unwarranted and oppressive color vision deficiencies to people of color and women.

The first part of the chapter is concerned with showing that objectivists must subscribe to the following three hypotheses: (i) there is a perceptual norm, (ii) perceivers who do not satisfy the perceptual norm suffer from color vision deficiencies, and (iii) non-whites and females suffer from color vision deficiencies. The second part of the chapter is concerned with showing that these hypotheses are unwarranted. At the end of the chapter I draw some conclusions as to how whiteness is embedded within the conceptual tools of theories of perception more generally.

My argument runs as follows. Objectivists hold that there is a perceptual norm. The perceptual norm is satisfied only by those who do not suffer from color vision deficiencies. Some perceivers plausibly suffer from color vision deficiencies. Blind people might fall into this category.⁵ But matters a bit more complicated than this. As we will see below, evidence indicates that whites and people of color perceive colors differently. But if this is so, and objectivism is right, then perceivers in at least one of the two groups fail to satisfy the perceptual norm. But if people who do not satisfy the perceptual norm suffer from color vision deficiencies, then either people of color or whites suffer from color vision deficiencies. Some color scientists hypothesize that chronic exposure to UV-light causes the eye to age. If these UV-caused changes in the eye are passed down through the generations, and if people of color descend from perceivers living in areas close to the equator, then people of color are likely to have an “aged” eye. As far as the aforementioned color scientists are concerned, an “aged” eye is a deficient eye. So, it is concluded that people of color

suffer from color vision deficiencies. It is not difficult to conjure up similar arguments in support of attributing color vision deficiencies to women. So, it is tempting to conclude that the perceptual norm is satisfied only by white males. However, for reasons I will get into below, these lines of argument are unsound. Hence, attributions of color vision deficiencies to people of color and women are unwarranted.

Attributions of color vision deficiencies to people of color and women are also oppressive because, by taking white males to constitute the perceptual norm, one thereby implicitly endorses a distorted world view associating the natural, normal and well-functioning with whiteness and maleness. As George Yancy puts it for the case of whiteness, “Whiteness is that according to which what is nonwhite is rendered Other, marginal, ersatz, strange, native, inferior, uncivilized, ugly”.⁶ Objectivists inadvertently attribute unwarranted and oppressive color vision deficiencies to people of color vis-a-vis those (white males) who constitute the perceptual norm. I say “inadvertently”, because it is not normally the case that objectivists intend to endorse a distorted world view associating the natural, normal and well-functioning with whiteness and maleness. In many cases objectivists do not even recognize that these sorts of attributions follow from their view. Despite being inadvertent, however, the implicit division of human beings into perceptually superior white males and perceptually inferior people of color and females is still highly problematic philosophically, ethically and socially. Just as the inadvertence of the sort of male favouritism that is common practice in our profession does not make male favouritism reasonable or just, so the inadvertence of attributions of color vision deficiencies to people of color and women does not render these kinds of attributions unproblematic.

The consequences of endorsing a distorted world view associating naturalness, normality, and optimality with whiteness and maleness are far-reaching. The consequences needn't just amount to inequalities in the distribution of social and economic goods but can also amount to differences in how women and people of color are perceived, approached and evaluated in terms of intelligence or moral character. George Yancy, for example, describes how his skin color gives rise to inadvertent misperceptions of his moral character.⁷ Due to the negative value associated with the color of his skin whites sometimes inadvertently respond to him as if he were threatening or wicked. As Yancy puts it, "whiteness comes replete with its assumptions for what to expect of a Black body (or non-white body), how dangerous and unruly it is, how unlawful, criminal and hypersexual it is".⁸ Associating the white body or, what is more relevant to the topic of this chapter, the white visual system with the normal, superior and well-functioning is perhaps rarely intentional but may have deeply regrettable consequences nonetheless.

2. Color Objectivism

Before stating my argument to the conclusion that positing a perceptual norm has unwarranted consequences I shall begin with a quick overview of the philosophical commitments of objectivist theories of color. Objectivism is committed to the view that, relative to the world as a whole and the human species as a whole, there is a fact of the matter as to which perceivers and viewing conditions are normal. Given objectivism, then, there is a perceptual norm, and there are human perceivers that satisfy the norm, and human perceivers who don't. Those who don't are often mistaken about the colors of objects.

Here are three examples of objectivist theories: objectivist reflectance physicalism, objectivist dispositionalism, and objectivist primitivism. Objectivist reflectance physicalism takes the colors to be dispositions to reflect certain proportions of the incident light or, more plausibly, equivalence classes of these, for instance, disjunctions of those reflectances that give rise to certain phenomenal effects in normal human perceivers in normal viewing conditions.⁹ Objectivist dispositionalism takes the colors to be dispositions to give rise to certain phenomenal effects in normal human perceivers in normal viewing conditions.¹⁰ And objectivist primitivism takes the colors to be primitive non-relational and non-disjunctive color properties that are possessed by objects and revealed directly in the color perception of normal perceivers in normal viewing conditions. When revealed they are the representational equivalents of phenomenal color properties.¹¹

Even setting aside the evidence for variation in color perception across different groups of perceivers, difficulties arise when we attempt to get clear on what the perceptual norm is. What exactly is a normal perceiver? Some cases are perhaps clear enough. If you can't see, you don't satisfy the perceptual norm. A tree doesn't satisfy the perceptual norm. A blind person might not satisfy it either. However, beyond the more obvious cases, it is hard to say what it takes to satisfy or fail to satisfy the norm. A normal perceiver presumably is not one who is sufficiently similar to perceivers in a uniform majority group. First off, it is highly doubtful that there is a uniform majority group. Supposing that there is seems to evade the question to some extent. Second, even if there is a uniform majority group, it is doubtful that one satisfies the perceptual norm in virtue of being a member of that group. Suppose that due to a nuclear event only 5% of the global population survives, including the 8% of the male population who are color blind. Despite the fact that the number of

color blinds would exceed that of non-color blinds in this scenario I suppose objectivists would not want to say that a normal perceiver in the envisaged scenario is a color blind perceiver.

Rather, normality is somehow linked to non-defectiveness in humans. To a first approximation, a normal perceiver is a perceiver whose color vision works optimally for a human. The color vision of color blinds, for example, does not work optimally for humans, so they do not count as normal perceivers. This is a first approximation only. As we will see below, it is not at all clear that there are any optimal perceptual systems. There is too much variation in color perception for that to be the case.

In the next section I will review some of the evidence for variation in color perception. I will then move onto the question of how objectivists might attempt to accommodate this evidence.

3. The Objection from Color Variability

Variations in Color Perception

It would be rather surprising if there were no variation in the color experiences of individuals who pass tests for color vision normality. The number of cones (photoreceptors) in the human retina is not constant.¹² Sometimes they are present in large numbers, and sometimes they are barely present. And this difference occurs in so-called normal individuals who react in the same way to color stimuli. This suggests that there are mechanisms in the brain which somehow automatically adjust the input from the retina, and hence that variations in color perception are not purely a matter of the nature and number of the cones in the retina. It is not hard to imagine

that the automatic calibration of input from the retina is not constant among different individuals, thus giving rise to different color experiences relative to the same input.

One approach to test for variation in color vision is to test for variations in color judgments and color discrimination abilities. Such tests have demonstrated vast variation in color vision across perceivers exposed to the same stimulus. Gokhan Malkoc, Paul Kay and Michael Webster,¹³ for example, report vast individual differences in which stimuli are chosen as the individuals' best examples of a unique hue (e.g. red) or a binary hue (e.g. orange). One stimulus chosen as one individual's best example of orange, for example, was chosen by other individuals as their best example of red.

Malkoc et al tested only for individual differences in hue settings and not for how hue settings line up with gender, national origin, or ethnicity. But others have conducted experiments showing variations across gender, national origin, and ethnicity. I. G. H. Ishak, M. L. Daley et al and N. Louanna Furbee et al, for example, report a difference in spectral sensitivity in the short-wavelength (blue) regions of the color spectrum between Africans and Caucasians.¹⁴ As we will see below, these differences happen to correlate with differences in the lexical entries of languages spoken by the individuals' ancestors.

Sex differences in color vision have been demonstrated on several occasions.¹⁵ Recent studies indicate significant variance in a gene located on the X chromosome which codes for a protein that detects light in the long-wavelength (red/orange) regions of the color spectrum.¹⁶ As women have two copies of the X-chromosome, it is possible for them to have two different versions of this gene, and hence it is possible for them to have a more fine-grained ability to discriminate light in the long-

wavelength regions of the color spectrum. Women are thus potentially in a position to perceive a broader spectrum of colors in the long-wavelength regions than men.

Kimberly Jameson and her colleagues have taken the hypothesis that there are sex-differences in color vision one step further.¹⁷ They speculate that up to 40% of women have tetrachromatic color vision. The line of argument runs as follows. Most humans have three cone types, which absorb maximally in different regions of the spectrum. So, most humans are trichromats. However, 8% males (and an insignificant number of females) have only two cone types. They are dichromats (color blind). Dichromacy results when a genetically mutant red or green photopigment gene on the X-chromosome fails to express retinal photopigment. Women who carry a deviant photopigment gene needn't be color blind but if she has a male offspring he is highly likely to have some degree of color blindness. Now, the mothers and daughters of dichromats and the mothers and daughters of males with deviant red/green photopigment genes may have a typical X chromosome and an X chromosome that carries one of the deviant red or green photopigment genes. If the normal red and green photopigments and a highly altered variant are all expressed, together with the blue photopigment (from chromosome 7), then the woman could have tetrachromatic color vision. Of course, for tetrachromacy to be present, the variant photopigment must constitute a distinct cone type, and the brain must be able to process the color signal coming from the variant photopigment.

Jameson argues that evidence for the possibility of female human tetrachromacy can be found in the animal kingdom. Female spider monkeys are normally dichromats but females possessing extra photopigment gene variants are trichromats. The gene variants allow some female monkeys to experience shades of color which others can't experience.¹⁸ Experiments that test for tetrachromacy in

women with dichromatic offspring have also been conducted.¹⁹ Though still preliminary, the results indicate that women who are genetically capable of expressing more than three kinds of photopigments tend to perform differently on tests involving color categorization, color naming, and color similarity judgments, thus suggesting that some women do have tetrachromatic color vision.

Variation in Color Categories across Languages

Variation in color categories across languages is another indicator of variation in color vision. Many languages are so-called “grue languages.” They do not lexically discriminate blue from green but have only one basic color term that names stimuli with dominant wavelengths in the middle- and short-wavelength (blue/green) regions of the color spectrum. These include Vietnamese, Kuku-Yalanji (an aboriginal language), Tswana (a South-African language), and Zulu (a South-African language). Other languages do distinguish between blue and green but also have “mixed” color terms that name stimuli with dominant wavelengths in the middle- and short wavelength regions of the spectrum. These include Chinese, Korean, and Japanese.

Some languages are so-called “dark languages,” they do not lexically discriminate blue from gray or black (e.g. Tswana), and some languages only have two words, one for dark and one for light (e.g. Dani, a New Guinean language and Lani, the Indonesian language). There are also languages that have more color terms than English. For example, Russian has a term for light blue (“goluboy”) and a different term (“siniy”) for medium and dark blue. Furthermore, the lexical category boundaries between the colors shift as we move across linguistic communities, for example, in Chinese light blue and green fall in the same category as do dark blue and black.

Now, linguistic variability by itself does not demonstrate variation in color perception. But it does indicate it. On the assumption that when things go right, color discourse reflects the content of color perception, differences in color discourse ought to correspond to differences in the content of color perception. Of course, differences in the color lexicon needn't indicate differences in the content of current color perception. But at least one should think that it might have done so at stages at which the language developed. If the differences in color perception are linked to differences in the visual system, and these differences are passed down through the generations, then differences in the color lexicon suggest variations in color perception.

We thus have evidence for variation in color perception from two sources: Evidence from tests for variations in color judgments and color discrimination abilities and evidence from differences in the lexical entries for color terms in different languages.

The Objection from Color Variability

Variation in color perception presents a challenge to objectivism. Objectivism presupposes that normal individuals detect the same color properties when exposed to the same stimulus in the same viewing conditions. But the empirical evidence indicates that this is false. If we take the empirical evidence at face value, individuals who pass standardized tests for normality detect different color properties when exposed to the same stimulus in the same viewing conditions. Call this *the objection from color variability*.

There are several ways for objectivists to respond to the objection from color variability. One is to insist that normal individuals are individuals whose color vision

operates the way Mother Nature originally designed human color vision to work.

Michael Tye entertains this line in the following excerpt:²⁰

many of today's human perceivers are not Normal. Their colour detection systems are not operating as Mother Nature originally designed. Genetic mutations have resulted in a shift in such humans' colour experiences. So, where some stimulus looks red to me and orange to you, for example, one of us is subject to a normal error or misperception, that is, an error or misperception occurring under everyday viewing conditions in a human perceiver who passes the usual perceptual tests for normality.²¹

The color vision of a colorblind male, for example, is not operating as Mother Nature originally designed human vision to operate. So, on the envisaged view, colorblind males are not normal. Hence, the deviant color experiences of colorblind males are falsidical.

There are two problems with this way of dividing humans into normal and deviant perceivers. First, there are differences in the color vision of individuals who pass standardized tests of normality. These differences suggest, not that the color vision of some of these individuals is not as Mother Nature designed it to be, but rather that Mother Nature did not design human color vision to operate in just one way. Second, the envisaged view cannot easily account for cognitive development. Suppose humans develop tetrachromatic color vision. Modern humans then can distinguish colors in, say, the red region of the visible spectrum, which their ancestors could not distinguish. But Mother Nature originally designed humans to be

trichromats. So, when human tetrachromats experience two ripe tomatoes that have different reflectance tokens as having different colors, and trichromats experience them as having the same color, the experiences of the tetrachromats are falsidical. But that is odd. After all, the color vision of tetrachromats is, by all important measures, better than the color vision of trichromats.

A different way to justify classifying some individuals who pass standardized tests of normality as normal and others as deviant is to insist hardheadedly that there is a fact of the matter about normality and hence about the colors of objects. Byrne expresses the view as follows (in response to Jonathan Cohen):

Suppose that normal human observers S1 and S2 are viewing a chip C ... C looks unique green to S1, and bluish green to S2. The problem, as Cohen has it, is to explain “what would (metaphysically) make it the case” that S1, say and not S2, is perceiving C correctly. He purports to find the explanation “extremely hard to imagine”, and so concludes that *both* S1 and S2 are perceiving C correctly. ... what “makes it the case” that S1, not S2, is perceiving C correctly, is that S1 is representing C as being unique green, S2 is representing C as being bluish green (no problem so far), and C *is* unique green, not bluish green (likewise no problem).²²

On Byrne’s view, whenever two individuals disagree about what the color of an object is or whether two objects have the same color, at least one of them is wrong. One apparent problem for this view is that it entails that there are unknowable color facts.²³ For any colored object, there are bound to be individuals who pass

standardized tests of normality yet disagree about color attributions. But if there is possible disagreement among normal individuals about all questions of the form “what is the color of that object?”, then answers to all such questions are unknowable. So, radical color epistemicism is true. We will return to the problems with this thesis below.

Probably the best strategy for color objectivists is to borrow from defenders of a currently popular thesis in cognitive science, known as “color universalism.” According to color universalism—a thesis originally made famous by Berlin and Kay in the late 60s—despite cultural variation in color perception and cognition there are a fixed number of basic color categories.²⁴ Berlin and Kay suggested that there are eleven basic color concepts corresponding to the white American English color lexicon (red, orange, yellow, green, blue, purple, pink, brown, grey, black, and white). This correspondence between the basic color concepts and the basic color terms in white American English is no coincidence, according to them, for, as they argue, color concepts like other language universals are innate and biologically constrained, where the biological constraints may, as Furbee et al put it, “be extended or restricted by cultural processes”.²⁵

The universality thesis started out as a response to the so-called linguistic relativity thesis, originally set forth by Edward Sapir and Benjamin Whorf.²⁶ Linguistic relativity is the thesis that color naming is a relatively arbitrary linguistic convention, and that linguistic differences affect how people perceive colors. However, we are familiar with the challenges to this view. First, it cannot account for similarities in color categorization in radically diverse communities. Second, it seems to be undermined by the fact that speakers of languages with very few color words

sometimes perform as well as (or better than) English speakers on prototype categorization tests.²⁷

The universality thesis offers a way of accommodating the obvious cultural differences in color categorization while maintaining the idea that there are color universals. But it does so only by classifying some perceivers who pass standardized tests of normality as suffering from color vision deficiencies. In a nutshell, the idea underlying universalism is that while some languages do not possess separate lexical entries for blue and green or for blue and black, people who do not suffer from color vision deficiencies have the innate ability to discriminate between the two. Those who don't have this discriminatory ability are those who suffer from color vision deficiencies.

Universalism does not offer a complete explanation of color variation. For example, it does not offer an account of why some languages lack the universals that universalists claim exist. However, the lack of certain color terms in Asian and African languages has recently been argued to be due to phototoxic effects of sunlight on the eye. The story, which is due to Delwin Lindsey and Angela Brown, runs as follows.²⁸ Variations in the lexical entries for color terms result from differences in color perception due to an accelerated aging of the eye in populations who have had chronic exposure to ultraviolet light (UV-B). Languages that have developed in low-UV linguistic communities generally have the word "blue." Languages that have developed in high-UV areas tend not to have the word "blue." Instead they call short-wavelength stimuli "green" or "dark." As Lindsey and Brown point out, their hypothesis does not presuppose that all members of a linguistic community are or were at some point visually impaired, but only that sufficiently many members of the population suffer or suffered from color vision deficiency. If sufficiently many

speakers have difficulties distinguishing two basic colors, then there will be no need for separate lexical entries for the corresponding color terms, the reason being that “communication of color information requires color competence in both speakers and listeners”.²⁹

Lindsey and Brown’s UV-light hypothesis, if correct, explains why many Asian and African languages having developed in high-UV areas do not or did not originally have separate lexical entries for blue and green. It furthermore explains why people from populations farther from the equator make more discriminations in the blue range of the color spectrum.

Moreover, the Lindsey/Brown UV hypothesis underwrites the universalist claim that color variability is partially due to color vision deficiencies. Color variability at the level of lexical entries may or may not correspond to underlying variations in color perception. But the two phenomena are at least weakly connected. Languages that lack color terms lack them because a sufficiently large proportion of the original population had a color vision deficiency. Current variations in color perception can likewise be understood in terms of degrees of separation from perceivers with color vision deficiencies perhaps partially caused by the phototoxic effects of sunlight.

According to one version of color universalism, then, brown eyes and non-white skin are not the cause of color vision deficiencies. Rather, brown eyes, non-white skin, and color vision deficiencies have a common cause: high, chronic exposure to high UV-light.

The Lindsey/Brown UV hypothesis does not explain variations in color vision that are not linked to variations in UV exposure. But their explanation suggests the beginning of a general story. Variations are due to color vision deficiencies: some are

linked to high UV exposure, others might be linked to genuine aging of the eye, yet others might be linked to gene mutations normally responsible for color blindness in males, etc.

One way for color objectivists to respond to the color variability objection then is to say that perceivers in high-UV localities, aging perceivers, and a large number of females fall outside of the range of normal perceivers/cognizers. Variations in color perception are due to mutations, aging, and so on, hence color objectivism is true.

However, this sort of reply, though less incomplete than the original objectivist replies, is far-fetched.

Let it be granted, at least for argument's sake, that sufficiently large proportions of populations in high-UV localities are negatively affected by high, chronic exposure to UV light. The lack of certain abilities to detect certain color differences which individuals in low-UV localities can detect can be understood as a deficiency only relative to individuals in low-UV localities. But what are we to say about individuals in low-UV localities? Individuals in low-UV localities can perceptually and cognitively discriminate blue from green. But unlike some non-human animals, they cannot perceptually or cognitively discriminate violet from ultraviolet. Lizards, goldfish, and ducks, among many other animals, have tetrachromatic color vision, and so can detect colors which most humans cannot detect, including in some cases ultraviolet. So, relative to such extra-human perceivers, the color vision of human individuals in low-UV-localities is deficient. Furthermore, in humans ultraviolet light is normally blocked by the lens. But humans with aphakia, a condition where the eye lacks a lens, sometimes appear to have the ability to detect

ultraviolet.³⁰ So, relative to people with aphakia, people who don't suffer from aphakia might turn out to suffer from color-vision deficiencies.

The standard response to the argument from tetrachromatism or enhanced color vision in other species is to insist on that when we offer an analysis of The Colors, we are interested only in the human colors—the colors humans can detect. But this sort of response gives non-objectivists a way of responding to the objectivists. Just as it might make sense to distinguish among human colors, fish colors and monkey colors, we ought to be able to distinguish between low-UV colors and high-UV colors, aphakia and non-aphakia-colors, female and male colors, and so on. To put the point differently: Just as one might insist that it doesn't make sense to say that human color vision is deficient compared to the color vision of fish, so one might insist that it doesn't make sense to say that the color vision of high-UV individuals is deficient compared to that of low-UV individuals or that the color vision of people who don't suffer from aphakia is deficient compared to that of people who suffer from aphakia.

There is a further reason to think that the color vision deficiency hypothesis cannot be correct: If individuals who deviate from The Normal suffer from color vision deficiencies, then tetrachromatic women who are tetrachromats in virtue of gene mutations presumably would classify as deviant. They would fail to satisfy the perceptual norm, which would be satisfied only by trichromatic perceivers. And this would be so even though tetrachromats are in a position to perceive a broader spectrum of colors in the long-wavelengths (red/orange) regions of the color spectrum. But this conclusion is absurd on its face. If, on the other hand, the color objectivists were to admit that women with tetrachromatic color vision and others who have improved abilities to detect differences in the visible spectrum are normal,

and that individuals with standard trichromatic color vision are deviant, then the objectivists might have to accept that the majority of the human population are systematically mistaken when they make color comparison judgments (e.g. “these two objects have exactly the same color”). This conclusion too is absurd on its face (at least, given realism about colors).

The upshot is that color objectivism does not offer a plausible account of variations in color perception. Color objectivism aims at explaining away variations by attributing unwarranted color vision deficiencies to people of color, women and others who pass standardized tests of normality.

The attributions of color vision deficiencies to people of color and women are not only unwarranted but also oppressive. They implicitly encourage a distorted world view associating the normal and well-functioning with whiteness and maleness. The white male’s visual system is that according to which the perceptual norm is defined. Of course, the objectivist’s implicit treatment of the non-white or female visual system as deficient is not normally recognized as being oppressive, in most cases it is not even recognized as a consequence of the view, but the inadvertence of an unwarranted and oppressive act does not make the act significantly less problematic.

4. Linguistic and Perceptual Relativity

Objectivism, it seems, attributes unwarranted and oppressive color vision deficiencies to people of color vis-a-vis those (white males) who constitute the perceptual norm. This gives us good reason to reject the view. What should we adopt in its place? Should we resort to linguistic or perceptual relativity? Should we say that color categorization is the result of arbitrary convention, and that color vision is affected by

this convention? I think not. Linguistic relativity is not a viable thesis. The fact that English has the lexical entries “blue,” “green,” and “black” indicates that English speakers have or have had the ability to perceptually and cognitively discriminate between stimuli in the blue and green range of the visible spectrum; it doesn’t show that speakers of other languages sometimes do not make the same discriminations as English speakers because they possess a different set of color concepts. Perception probably doesn’t require the *possession* of concepts, though it may require recognitional or discriminatory abilities. So, possessing different concepts probably doesn’t entail perceiving differently. Which beliefs, thoughts and ideas we have about the world and which judgments we are able to make on the basis of perceptual experience, on the other hand, plausibly are affected by which concepts we possess. And, I believe that it is this latter thesis concerning our conceptual inner life, together with popular myths, which underlies the initial plausibility of the early linguistic relativity thesis.³¹

This is not to say that no version of the linguistic relativity thesis has any degree of plausibility. Color-emotion relativity is highly plausible. Color-emotion relativity, as I will construe it, is the thesis that different cultural attachments of value to color and traditional use of color can affect which emotional experiences exposure to color stimuli produces. There are familiarly great cultural variation not only in color categorization but also in color use and the attachment of value to colors. In most North-Western countries wedding dresses are traditionally white or green, in India they are traditionally red. In most North Western countries one wears black to funerals, in South Africa red is the color of mourning. So, a Dane or an Indian might experience joy when exposed to a white or a red dress, whereas a person from South Africa might experience sadness when exposed to the same article of clothing. In

Northern countries (in America, in particular) the perception of dark skin produces negative emotions in white perceivers. As an illustration, George Yancy offers the following elevator case in which he, despite being well-dressed and non-threatening, is negatively seized by a white woman:

Well-dressed, I enter an elevator where a white woman waits to reach her floor. She ‘sees’ my Black body, though not the same one I have seen reflected back to me from the mirror on any number of occasions... Her body language signifies, ‘Look, *the Black!*’ ... her body language functions as an insult. Over and above how my body is clothed, she ‘sees’ a criminal, she sees me as a threat ... It is not necessary that I first perform a threatening action. The question of *deeds* is irrelevant. I need not *do* anything. ... It is as if my Black body has always already committed a criminal *deed* ... My dark body occludes the presumption of innocence. It is as if one’s Blackness is a congenital defect, one that burdens the body with tremendous inherited guilt. On this reading, one might say that Blackness functions metaphorically as original sin. There is not anything as such that a Black body needs *to do* in order to be found blameworthy.³²

Based on first-person experiences Yancy reports that his dark skin signifies to white people the original sin, and that this contingent fact about his skin color produces fear and other negative emotions towards him.

Color-emotion relativity is highly plausible. But color-emotion relativity, of course, is not a thesis about basic color vision. It is a thesis about how the link between color perception and emotion is differentially affected by social factors.

As for variations in color vision, I think we should opt for perceptual and linguistic relativity but not of the old-fashioned kind. Rather, we should reject the thesis that colors are objective. I propose that we treat the colors as centered properties—properties objects can possess only relative to a perceptual perspective.³³ Call this view ‘color perspectivalism’. On this view, ripe tomatoes will possess the property red only relative to a perceptual perspective. This view may seem radical. However, most objectivists are already committed to a weak form of perceptual relativity. Objectivists who believe that there is a plurality of possible worlds, for example ersatz worlds, must deny that objects simply possess properties. They possess properties only relative to a possible world. A ripe tomato does not simply have the property of being red. It has the property of being red relative to the actual world but relative to a different world it has the property of being blue. What I suggest is that some properties, including the colors, can be possessed not relative to a possible world but only relative to a possible world and a perceptual perspective. Or more simply put: I suggest that some properties can be had by objects only relative to centered worlds; they are centered properties.

Though there are various different ways in which the colors can be treated as centered properties, I prefer a centered version of realist primitivism. I have defended this view elsewhere.³⁴ Here I will just note that the view avoids attributing color vision deficiencies to females and people of color. The perspectives of females and people of color are just as valid as the perspectives of males and whites. Unlike color universalism and color objectivism, perspectivalism thus does not sanction white supremacism, androcentrism or Eurocentrism.³⁵

5. Color Non-Realism

Unlike standard realist views of colors, perspectival theories of color are not white; they do not assume a white perspective as objective. Objectivist forms of physicalism, dispositionalism, and primitivism, on the other hand, are unjustifiably white. They are committed to the view that there is a particular white perspective which is natural, normal and mainstream and which should be considered superior to other perceptual perspectives. The perspective is that of the white male.

How do non-realist theories fare compared to realist theories? Are non-realist theories of colors white? Non-realist theories are committed to an error-theory about colors. Strictly speaking, objects are not colored.³⁶ Non-realist theories would thus seem to agree with the centered view of the colors that no single property is detected by normal humans exposed to the same color stimulus in appropriate viewing conditions. Non-realist theories, however, can be just as white as their realist counterparts.

Non-realists hold that objects do not instantiate colors. They grant that colors partially constitute the content of color perception (Chalmers),³⁷ or that colors are instantiated in a visual array (Velleman and Boghossian).³⁸ But the colors that constitute the content of color perception or are instantiated in a visual array are not instantiated by the objects of experience. However, even though non-realists reject the idea that human color vision detects colors instantiated by external objects, they could grant that human color vision detects *some properties or other* which are instantiated by external objects. It's just that these properties are not to be equated with the colors. In fact, non-realists probably should grant that this is so. Otherwise, they cannot account for the difference between cases in which perception is falsidical yet normal and cases where perception is falsidical yet deviant. For example, they

need to account for the difference between a scenario in which a perceiver is looking at a piece of regular printer paper illuminated by red light and comes to believe on that basis that the paper is red and a scenario in which a perceiver is looking at a piece of regular printer paper in standard lighting conditions and comes to believe on that basis that the paper is white. The experience in the first scenario is faulty in a way that the experience in the second scenario is not. One way to account for the difference is to allow for experiences to be falsidical yet imperfectly veridical.³⁹

There are several ways to cash out the notion of imperfect veridicality. One could follow the objectivist's lead and take a color experience to be imperfectly veridical just in case the experience is of a kind that a normal perceiver would have when looking at the object in question in normal viewing conditions. One could then justifiably say that the perceiver who views a piece of paper in normal lighting conditions and comes to believe on this basis that the paper is white has an imperfectly veridical experience. The experience is imperfectly veridical because it is the kind of experience which a normal perceiver looking at the piece of paper in normal viewing conditions would have. The perceiver who views a piece of paper illuminated by red light and who comes to believe on that basis that the paper is red, on the other hand, does not have an imperfectly veridical experience. Her experience is falsidical through and through. But now the non-realist is no better off than the realist of the objectivist variety. She is forced to single out a type of perceiver as normal. Non-realism by itself, it seems, does not solve the problem of color variation.⁴⁰

6. Whiteness and the Conceptual Tools of Theories of Perception

Philosophical theories of perception, like many other philosophical theories, aim at objectivity. Naïve realists treat veridical experience as a relation to an external fact or object. Representationalists treat the content of experience as composed of objects and properties and standardly treat properties as something an object can possess relative to the world as a whole. But arguably objects are experienced as having lots of features that cannot be possessed by objects relative to the world as a whole but which can be possessed only relative to a particular experiential perspective. I experience strawberries as sweet, Indian curry as pungent, my best friend as gracious, my place in the social world as auspicious, my happiness as pleasant and my longing as painful. But strawberries are not sweet, relative to the world as a whole. Strawberries taste sweet to me, but not to my cats. Indian curry is not pungent, relative to the world as a whole. It is pungent to me, but not to someone who suffers from ageusia. Still, I experience strawberries as sweet, and not necessarily as sweet-relative-to-me, and I experience my longing as painful, and not necessarily as painful-relative-to-me. The properties which things are perceived to have are not normally phenomenologically relational, they are phenomenologically non-relational. Yet non-relational pains, pleasures, sweetnesses and so on are not the sorts of entities that are instantiated by objects relative to the world as a whole. They are the sorts of entities that are instantiated relative to centered worlds in which (varying) experiential perspectives are marked.

Perceptual theories that ignore the centeredness of experience either treat the properties which objects are experienced as having as intrinsically relational, thus getting the phenomenology of experience wrong, or they treat the properties which objects are experienced as having as non-relational and objective. It's the latter kind of theories that risk giving privilege to the perspective of the white (perhaps Western

male). The latter kinds of theories give privilege to the perspective of the white by mistakenly treating the perceptual systems of white perceivers as normal and that of non-whites as deficient.

A philosophical theory can, of course, be objective without being white. For example, an objectivist theory of color needn't treat tetrachromatic color vision or a failure to perceptually discriminate between certain reflectance types in the middle- and short-wavelength regions of the color spectrum as a deficiency and hence as something bad. It is a contingent fact that color vision that deviates from that of the white Western male comes to be associated with negative value by virtue of being treated as deficient and abnormal, and as the manufacturer of falsidical experience.

Nonetheless objective theories by their very nature need to treat *some kinds* of color vision as deficient. They could in principle treat trichromatic color vision as deficient and abilities to distinguish a vast variety of reflectances in the middle- and short-wavelength regions of the visible spectrum as deficiencies. It is, however, unlikely that anyone would defend such a theory, and it is unclear what its motivation would be.⁴¹

The objectivist carries the burden of proof to refute the allegation that it sanctions white supremacism, androcentrism and Eurocentrism. The objectivist could, of course, take the epistemicist route and remain silent on the issue of which perceivers suffer from deficiencies. He can then defend his corner without sanctioning white supremacism, androcentrism or Eurocentrism.

For example, the color objectivist might with Byrne just note that whenever the color experiences of two normal individuals exposed to same stimulus differ, then at least one individual is wrong, and then add that it is not discoverable by us who is right (if any) and who is wrong.

In the case of colors, the problem with the epistemicist line is that it entails that there is no knowable fact of the matter as to what an object's color is. Realists at least should be puzzled by this consequence. Someone who takes an epistemicist line with respect to ordinary vagueness can say that, in addition to the borderline cases in which it is unknowable whether or not the term applies, there are definite cases in which we know whether the term applies.⁴² For example, even if we don't know (and couldn't come to know) whether a person who is 5 feet 9 is tall for an American male, we do know that a person who is 7 feet is tall for an American male. Likewise, even if we don't know (and couldn't come to know) whether someone whose great grandfather is Greenlandic is Greenlandic, we do know that a person both of whose parents are Greenlandic is Greenlandic.⁴³ So the epistemicist with respect to vague terms like "tall" or "Greenlandic" can say that we come to know the meaning of the term by being exposed to definite cases. But this is not so if one is a radical epistemicist with respect to color facts. If one is a radical epistemicist with respect to color facts, then there are no definite cases, that is, there are no cases in which one can say with justified certainty what the color of an object is. So, whereas the standard epistemicist can say that one comes to know the meaning of vague terms by being exposed to definite cases, the objectivist has no way of accounting for how one comes to know the meaning of color terms. The objectivist is forced to say that the meaning of color terms has no bearing on color facts, or worse: that meanings too are unknowable. And the same sort of problem, of course, is likely to arise also for radical epistemicism about other experiential terms.

There are further problems: even assuming an epistemicist line, we are left with an aim of inquiry problem. Even if it is not currently (or ever) discoverable who is right and who is wrong about the properties of objects, it would be nice if we had

some guidance when forming beliefs about these matters. Yet it seems that there is none to be had.

A related worry is that until we discover who is right and who is wrong (if ever), the epistemicist position entitles us to continue believing that people of color, women, etc., are abnormal and inferior. Of course, it is open to appeal to pragmatic factors when deciding what to believe. Pragmatic factors might give preference to beliefs that reflect a treatment of otherwise privileged individuals as non-privileged. Western moral codes arguably include the following deontic rule: “You should not commit burglary but if you do, at least leave behind the sentimental items.” Likewise, our list of rules for belief formation could include retribution or epistemic-affirmative-action rules of the following kind: “You shouldn’t form beliefs about the colors of objects (as answers to questions of the form ‘what is the color of that object?’ are unknowable), but if you do, at least give less weight to the judgments of those who are normally treated as privileged and supreme in modern society.” But one could, however, also treat the fact that the objectivist has to resort to epistemic affirmative action as a *reductio* on the view.⁴⁴

In conclusion: objectivism aims at explaining away cross-ethnic and cross-gender variation in perception and cognition by attributing deficiencies to people of color and others who pass standardized tests for normality. But not only are these attributions unwarranted, they also serve to perpetuate the distorted representation of whites as superior to non-whites, males as superior to females, and Westerners as superior to non-Westerners.⁴⁵

Endnotes

¹ This definition is roughly parallel to the standard characterization of androcentric theories. A theory is androcentric if it, as Sally Haslanger puts it, “takes males or masculinity to be the norm against which females and femininity are considered deviant, or if it considers its subject matter from the point of view of men and simply ignores women and women’s perspective” (2000, p. 109). Haslanger, S. 2000. “Feminism in Metaphysics: Negotiating the Natural,” in *The Cambridge Companion to Feminism in Philosophy*, ed., J. Hornsby and M. Fricker, Cambridge: Cambridge University Press, 107-126.

² Certainly, there is no one objective answer to the question of whether this water park is fun or this chilli is tasty.

³ Of course, white theories, thus understood, needn’t be false. A linguistic analysis of “bachelor” may well be white in that it implicitly treats the white person’s linguistic analysis as objective. But if there is an objective fact of the matter as to how to analyse “bachelor”, then I suppose there is no inherent danger or flaw in treating the analysis as objective.

⁴ Owen, D. S. 2007. “Towards a Critical Theory of Whiteness”, *Philosophy and Social Criticism* 33: 203-222, pp. 203, 206.

⁵ I hesitate here because some people with blindsight can reliably track movement and attribute properties to objects. Moreover, it is not obvious that blind people suffer from color vision deficiencies. Even if they cannot see, some blind people report that they are able to experience phosphenes and after-images. But one could hold a view to the effect that, as long as blind people experience color, they do not suffer from color vision deficiencies.

⁶ Yancy, G. 2008. “Elevators, Social Spaces and Racism: A Philosophical Analysis”, *Philosophy & Social Criticism* 34: 843-876, p. 846.

⁷ See Yancy, “Elevators, Social Spaces and Racism”.

⁸ Yancy, “Elevators, Social Spaces and Racism”, p. 846.

⁹ For a defense of reflectance physicalism, see e.g. Tye, M., 2000. *Consciousness, Color, and Content*, Cambridge, MA: MIT Press and Byrne, A and Hilbert D. R. 2003. “Color Realism and Color Science”, *Behavioral and Brain Sciences* 26: 3-21.

¹⁰ Classical dispositional theories, going back to John Locke, are objectivist. Contemporary defenses of objectivist and non-objectivist versions of dispositionalism include McGinn, C. 1983. *The Subjective View: Secondary Qualities and Indexical Thoughts*, Oxford: Oxford University Press, McDowell, J. 1985. “Values and Secondary Qualities”, *Morality and Objectivity*, T. Honderich, ed., London: Routledge and Kegan Paul, 100-29, Smith, A. D. 1990. “Of Primary and Secondary Qualities”, *The Philosophical Review* 99: 221-54, Johnston, M. 1992. “How to Speak of the Colors”, *Philosophical Studies* 68: 221-63. Thompson, (1995. *Colour Vision*, New York: Routledge), and Noë (2005. *Action in Perception*, Cambridge, MA: MIT Press) defend the view that the colors are ecological dispositions. For a defense of the view that the colors are the categorical grounds of dispositions, see e.g. Jackson, F. 1996. “The Primary Quality View of Color”, *Philosophical Perspectives* 10, ed. J. Tomberlin, Cambridge, MA: Blackwell, and McLaughlin, B. P. 2003. “The Place of Color in Nature”, *Color Perception: Mind and the Physical World*, ed. R. Mausfeld and D. Heyer, Oxford: Oxford University Press, 475-505.

¹¹ Various objectivist and non-objectivist versions of primitivism have been defended by e.g. Campbell, J. 1993. “A Simple View of Colour”, *Reality Representation, Projection*, J. Haldane and C. Wright, ed. Oxford: Oxford University Press, 257-68, Yablo, S. 1995. “Singling Out Properties”, *Philosophical Perspectives* 9, J. Tomberlin, ed., *AI, Connectionism, and Philosophical Psychology*, 477-502, Brogaard, B. Forthcoming. “Perspectival Truth and Color Primitivism”, *New Waves in Truth*, C. Wright and N. Pedersen, eds. and Brogaard, B. Manuscript. “R-Primitivism Defended”. The view is discussed in Byrne, A and Hilbert, D. R. 2007. “Color Primitivism”, *Erkenntnis* 66: 73-105. Chalmers (2006. “Perception and the Fall from Eden”, in *Perceptual Experience*, ed. T. Gendler and J. Hawthorne, Oxford: Clarendon Press: 49-125) defends the view that the content of color perception contains perfect primitive color properties but on his view, these properties are not instantiated by objects.

¹² Hofer, H. J. Carroll, J. Neitz, M. Neitz and D.R. Williams, 2005. “Organization of the Human Trichromatic Cone Mosaic”, *J. Neuroscience* 25(42), 9669–9679.

¹³ Malkoc, G., Kay, P., and Webster, M. A. 2005. “Variations in Normal Color Vision. IV. Binary Hues and Hue Scaling”, *Journal of the Optical Society of America*, A 22, 2154-2168.

¹⁴ Ishak, I. G. H.. 1952. “The Spectral Chromaticity Coordinates for one British and Eight Egyptian Trichromats”, *Journal of the Optical Society of America* 42: 534-539, Daley, M. L., Burghen, G. A., Meyer, D. and Malsky, P. 1991. “Differences in Color Vision Between Racial Groups”, *Speech, Hearing and Vision Aids* 33/4-3: 1913-1914, and Furbee, N. L., Maynard, K., Smith, J. J., Benfer Jr.,

B. A., Quick, S and Ross, L. 1997. "The Emergence of Color Cognition from Color Perception", *Journal of Linguistic Anthropology* 6: 223-240. See also Ned Block, 1999, "Sexism, Racism, Ageism, and the Nature of Consciousness", *Philosophical Topics* 26, 1&2: 39-70 for discussion.

¹⁵ See e.g. Bimler, D. and Kirkland, J. 2002. "Sex Differences in Color vision and the Salience of Color-Space Axes", *Journal of Vision* 2: 28a.

¹⁶ Verrelli, B. and S. Tishkoff. 2004. "Signatures of Selection and Gene Conversion Associated with Human Color Vision Variation", *The American Journal of Human Genetics* 75/3: 363-375, cf. Mollon, J. 1992. "Words of Difference", *Nature* 356: 378-379.

¹⁷ Jameson, K. A. 2007. "Tetrachromatic Color Vision", *The Oxford Companion to Consciousness*, in P. Wilken, T. Bayne, and A. Cleeremans, ed. Oxford University Press: Oxford.

¹⁸ Cf. Jordan, G. & Mollon, J. D. 1993. "A Study of Women Hererozygous for Colour Deficiencies", *Vision Research* 33: 1495-1508.

¹⁹ Jameson, K. A., Highnote, S. M., & Wasserman, L. M. 2001. "Richer Color Experience in Observers with Multiple Photopigment Opsin Genes", *Psychonomic Bulletin & Review* 8: 244-261, Jameson, K. A., Bimler, D., and Wasserman, L. M. 2006. "Re-assessing Perceptual Diagnostics for Observers with Diverse Retinal Photopigment Genotypes", in *Progress in Colour Studies 2: Cognition*, N. J. Pitchford, and C. P. Biggam, eds., Amsterdam: John Benjamins Publishing Co., 13-33.

²⁰ Tye's own view is captured in the following excerpt from his "The Truth about True Blue", *Analysis* 66 (2006): 340-44:

"The upshot is that there is nothing in the Malkoc results that requires the admission that there is error at the level of coarse-grained colour experience for *Normal* perceivers under design conditions. Error arises, (as noted in Tye 2006), at the level of very fine-grained hue experiences such as that of true blue. Where at least one of John and Jane *must* be wrong is at the level of their experiences of different, determinate, finegrained hues; for *S* cannot have both the determinate, fine-grained hue John experiences it as having and the determinate fine-grained hue Jane experiences.

The truth about true blue and other determinate hues at its level of grain is that Mother Nature did not bother to design us so as to detect *them*. There was no point in Her doing so. No selectional advantage would have accrued. Thus, even when everything is working as it should, still sometimes a surface can look true blue and not be. This did not worry Mother Nature; and it should not worry us either (p. 344)."

There is something to be said for this line of argument. However, I think that the considerations I set out below should raise a worry even for Tye's view. For example, if the evidence commits the objectivist to the view that tetrachromatic females are systematically wrong about finegrained hues, then this is a genuine worry.

²¹ Tye, "The Truth about True Blue", pp. 342-343.

²² Byrne, A. 2006. "Comments on Cohen, Mizrahi, Maund, and Levine" *Dialectica* 60: 337-40, p. 337.

²³ Byrne and Hilbert, "Color Realism and Color Science", fn 50.

²⁴ Berlin, B and Kay, P. 1969. *Basic Color Terms: Their Universality and Evolution*, University of California Press, Berkley.

²⁵ Furbee, N. L., Maynard, K., Smith, J. J., Benfer Jr., B. A., Quick, S and Ross, L. 1997. "The Emergence of Color Cognition from Color Perception", *Journal of Linguistic Anthropology* 6: 223-240, p. 224.

²⁶ Sapir, E. 1921. *Language: An introduction to the study of speech*, New York: Harcourt Brace, and Whorf, B. L. 1956. *Language, thought, and reality*, J. B. Carroll, ed., Cambridge, MA: MIT Press.

²⁷ Rosch, E. 1978. "Principles of categorization", in E. Rosch and B. B. Lloyd, ed., *Cognition and categorization*, Hillsdale, NJ: Lawrence Erlbaum, 27-48.

²⁸ Lindsey D. T. and Brown, A. M. 2002. "Color Naming and the Phototoxic Effects of Sunlight on the Eye", *Psychological Science* 13: 506-12, cf. Bornstein, M. H. 1973. "Color Vision and Color Naming: a Psychophysiological Hypothesis of Cultural Difference", *Psychological Bulletin* 80, 257-287.

²⁹ Lindsey and Brown, "Color Naming and the Phototoxic Effects of Sunlight on the Eye", p. 511.

³⁰ Roorda, A. and Williams, D. R. 1999. "The Arrangement of the Three Cone Classes in the Living Human Eye", *Nature* 397: 520-522.

³¹ One popular myth supporting linguistic relativity is the claim that Greenlandic Inuits have more words for snow than do speakers of English and accordingly perceive snow differently than do monolingual English (or Danish) speakers. Peter Hoeg's novel *Smilla's Sense of Snow*, for example, mentions that Inuits have dozens of words for snow and represents the main character Smilla (who is half-Danish and half-Inuit) as having an increased sense of snow.

³² Yancy, “Elevators, Social Spaces and Racism”, pp. 846-847.

³³ Alternatively one could treat the colors as subjective relational properties as proposed by Cohen (2004. “Color Properties and Color Ascriptions: A Relationalist Manifesto”, *The Philosophical Review*, 113: 451-506).

³⁴ The view is defended at greater length in Brogaard, “Perspectival Truth and Color Primitivism” and “R-Primitivism Defended”.

³⁵ I take “Eurocentrism” to apply to theories and worldviews that privilege the perspectives of Europeans and people of European descent.

³⁶ Chalmers, “Perception and the Fall from Eden”, argues that the color terms might pick out imperfect colors, that is, the properties which normally cause the corresponding perfect phenomenal experiences.

³⁷ Chalmers, D. 2004. “The Representational Character of Experience”, *The Future for Philosophy*, ed. B. Leiter, Oxford: Oxford University Press: 153-81, and Chalmers, “Perception and the Fall from Eden”.

³⁸ Boghossian, P. A. and Velleman, J. D. 1989. “Colour as a Secondary Quality”, *Mind* 98: 81-103.

³⁹ Chalmers, “Perception and the Fall from Eden”.

⁴⁰ Chalmers, “The Representational Character of Experience”, allows that different normal perceivers exposed to the same stimulus can have different non-faulty experiences. But he avoids the objection from color variability not because of his non-realism about perfect colors but because he takes the physical properties in the content of perception to be picked out under different centered modes of presentation. *The property that normally causes red experiences* may pick out one reflectance type relative to me and a different reflectance type relative to you. In his “Perception and the Fall from Eden”, Chalmers argues that color experiences have edenic content which consists of perfect properties. These properties are not instantiated in the world, but stand in a matching relation to physical properties which are instantiated in the world. Different edenic or perfect properties can match the same physical property in different perceivers. For example, relative to inverts perfect green matches the physical property which perfect red matches in nonverts. This view can thus account for differences in the edenic content of the color experiences of different perceivers exposed to the same stimulus.

⁴¹ Of course, it could be motivated by anti-white-supremacy or feminist/anti-androcentric standpoint-theoretic considerations. Standpoint theories take the standpoint of the oppressed to provide valuable insight into the nature of the natural and social world. For a defense of feminist standpoint theory, see Harding, S. G. 2003. *The Feminist Standpoint Theory Reader, Intellectual and Political Controversies*, New York and London: Routledge.

⁴² Cf. Williamson, T. 1994. *Vagueness*, London: Routledge.

⁴³ Of course, someone both of whose parents are Greenlandic needn’t be Greenlandic in the social sense of the term but arguably she would be in the ancestral sense.

⁴⁴ See, however, Antony, L. 1995. “Sisters, Please, I’d Rather Do It Myself”, *Philosophical Topics* 23: 59-94: 89, for a defense of epistemic affirmative action as a way of removing biases towards females-qua-individuals-in-possession-of-knowledge.

⁴⁵ I am grateful to David Chalmers, Dimitria Gatzia, Susanna Schellenberg and George Yancy for helpful comments and discussion.