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THE ORIGINAL SIN OF COGNITION: FEAR, PREJUDICE, AND GENERALIZATION*

Long before we learn to talk, our expectations concerning novel members of a category are shaped by our experience with already-encountered members. We expect, for example, that objects that share obvious perceptible qualities will also share dispositional properties. If a given item rattles when shaken, nine-month-olds expect that other items that share the same perceptible profile will rattle when shaken.¹ By our first birthday, these inductive inferences are guided by language; we expect that even superficially dissimilar objects will share their hidden properties if they are identified by the same common noun—if, for example, each is introduced as ‘a blicket’.² From the very beginning, we are inclined to generalize from experience with a given item to other items that we perceive as belonging to a common category.

There is, presumably, some early developing cognitive mechanism that is responsible for these infant inductive generalizations. In earlier

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¹ Dare A. Baldwin, Ellen M. Markman, and Riikka L. Melartin, “Infants’ Ability to Draw Inferences about Nonobvious Object Properties: Evidence from Exploratory Play,” *Child Development*, LXIV, 3 (June 1993): 711–28.

² Susan A. Graham, Cari S. Kilbreath, and Andrea N. Welder, “Words and Shape Similarity Guide 13-month-olds’ Inferences about Nonobvious Object Properties,” in Johanna D. Moore and Keith Stenning, eds., *Proceedings of the Twenty-Third Annual Conference of the Cognitive Science Society* (Mahwah, NJ: Lawrence Erlbaum Associates, 2001), pp. 352–57.

papers, I argued that generics—sentences such as ‘ravens are black’ and ‘tigers are striped’—express the generalizations that are delivered by this cognitive mechanism.³ If this is so, then generics provide a window onto the workings of the mechanism. In this paper, I am concerned with a particular aspect of this mechanism, namely, the route by which we reach general conclusions regarding dangerous or harmful features. My aim is to identify and discuss a cognitive bias that has contributed to certain virulent forms of prejudice.

While I adopt a cognitive perspective here, this is not to imply that economic, political, and cultural perspectives are not of equal or even greater value and importance. These various perspectives are not in competition with each other; rather, they complement each other by providing different levels of explanation. Moreover, even within the domain of cognitive explanations of prejudice, I of course do not purport to offer anything close to a full psychological account of prejudiced attitudes. I focus on a particular subset of negative stereotypes: ones that involve generalizing extreme and horrific behavior from a few individuals to a group, for example, *Muslims are terrorists* or *Scots are violent drunkards*.⁴

Two things, though obvious, are worth noting at the beginning. First, cognitive-bias explanations do not excuse racial or cultural prejudice, any more than noting that we are hardwired to seek out and accumulate resources excuses extreme covetousness or theft. Second, offering a psychological explanation for prejudice does *not* entail that prejudice is inevitable. Quite the contrary—the closing sections of this paper will discuss some ways in which we might combat prejudice, with a particular focus on how we might help *prevent* the formation of these attitudes in the course of childhood development. These suggestions are based on recent psychological research, and so—far from implying that prejudice is an inevitable feature of human psychology—the cognitive perspective on prejudice may point to some novel means of combating it.⁵

³Sarah-Jane Leslie, “Generics: Cognition and Acquisition,” *Philosophical Review*, cxvii, 1 (January 2008): 1–49; Sarah-Jane Leslie, “Generics and the Structure of the Mind,” *Philosophical Perspectives*, xxi, 1 (December 2007): 375–405; Sarah-Jane Leslie, “Generics Articulate Default Generalizations,” *Recherches Linguistiques de Vincennes: New Perspectives on Genericity at the Interfaces*, xli (2012): 25–45; Sarah-Jane Leslie, “Generics Over-simplified,” *Nous*, xlix, 1 (2015): 28–54.

⁴For discussion of another way in which generic generalizations relate to social prejudice and stereotyping, particularly in the context of gender, see Sarah-Jane Leslie, “Hillary Clinton Is the Only Man in the Obama Administration”: Dual Character Concepts, Generics, and Gender,” *Analytic Philosophy*, lvi, 2 (2015): 111–41.

⁵For a defense of the utility of psychological accounts of prejudice against various criticisms and misunderstandings, see Edouard Machery, Luc Faucher, and Daniel R. Kelly,

I. STRIKING PROPERTY GENERALIZATIONS

In previous work, I argued that a variety of philosophical, linguistic, and psychological considerations suggest that generic sentences may be language's way of letting us give voice to cognitively fundamental generalizations.⁶ This hypothesis has subsequently received support from various psychological experiments.⁷ There are now several convergent reasons for supposing that the generalizations we articulate using generics reflect deep-seated aspects of our psychology.

In theorizing about generic generalizations, it is helpful to identify subclasses of these generalizations, one of which I term *striking property generalizations*. This class includes claims such as:

- Mosquitoes carry the West Nile virus.
- Sharks attack bathers.
- Deer ticks carry Lyme disease.
- Pit bulls maul children.
- Tigers eat people.

These claims are intuitively true, even though very few members of the kind in question possess the predicated property. As it happens, less than one percent of mosquitoes carry the West Nile virus, and yet we are quick to assent to 'mosquitoes carry the West Nile virus', even after learning this statistical fact. (Conversely, 'mosquitoes do not carry the West Nile virus' remains patently false, even though 99% of mosquitoes do not carry the virus.)

It may appear that these generics require for their truth only that *some* of the kind possess the property in question.⁸ This is not true for

"On the Alleged Inadequacy of Psychological Explanations of Racism," *The Monist*, XCIII, 2 (2010): 228–55.

⁶ Leslie, "Generics: Cognition and Acquisition," *op. cit.*; Leslie, "Generics and the Structure of the Mind," *op. cit.*; Leslie, "Generics Articulate Default Generalizations," *op. cit.*; and Leslie, "Generics Oversimplified," *op. cit.*

⁷ See, for example, Sarah-Jane Leslie, Sangeet Khemlani, and Sam Glucksberg, "Do All Ducks Lay Eggs? The Generic Overgeneralization Effect," *Journal of Memory and Language*, LXV, 1 (July 2011): 15–31; Sarah-Jane Leslie and Susan A. Gelman, "Quantified Statements Are Recalled as Generics: Evidence from Preschool Children and Adults," *Cognitive Psychology*, LXIV, 3 (May 2012): 186–214; Amanda C. Brandone, Andrei Cimpian, Sarah-Jane Leslie, and Susan A. Gelman, "Do Lions Have Manes? For Children, Generics Are About Kinds Rather Than Quantities," *Child Development*, LXXXIII, 2 (March/April 2012): 423–33. For a summary, see Leslie, "Generics Articulate Default Generalizations," *op. cit.*

⁸ One might be tempted to think that these generics are true because, for example, *only* mosquitoes carry the West Nile virus. There is certainly a reading of 'mosquitoes carry the West Nile virus' to that effect; to see this, try stressing 'mosquitoes', as in 'MOSQUITOES carry the West Nile virus', or else paraphrasing the sentence as 'it is MOSQUITOES that carry the West Nile virus'. Consider, however, whether one's

generics in general; for example, *some* cats are female, but ‘cats are female’ is false, and *some* (in fact, *most*) mosquitoes do not carry the West Nile virus, but the corresponding generic is false. Such examples abound. I suggest that the generics above are special in that their predicates express properties that we have a strong interest in avoiding.⁹ If even just a few members of a kind possess a property that is harmful or dangerous, then a generic that attributes that property to the kind is likely to be judged true.

Since we are working under the hypothesis that generics give voice to psychologically fundamental generalizations, this observation implies that our basic way of dealing with dangerous or harmful information involves rapidly generalizing this information to the salient kind or category. We do not wait around to see what percentage of tigers eat people before drawing a general conclusion—even a single instance may be enough for us to conclude that tigers eat people. It is not hard to imagine the evolutionary benefits of such a disposition, since the costs of under-generalizing such information are potentially huge. Our ancestors were far better off jumping to conclusions, as it were, than taking the time to judiciously determine the precise likelihood of their being eaten.

The tendency to rapidly generalize such striking information manifests itself elsewhere in our thinking. Consider, for example, how many murders one must commit to be a murderer versus how many times one must worry to be a worrier. The latter case requires one to worry with considerable regularity, whereas a single murder suffices to make one a murderer.

The disposition to generalize strikingly negative information on the basis of even a single event thus appears to be a pervasive aspect of our thinking. For generalizations concerning neutral or positive information, we require the instances or events to occur with significant regularity; this is not so with negative information. There is a fundamental asymmetry between the impact of very negative information

intuitions would change upon learning that deer ticks also carry the virus. This would falsify one reading of the sentence; an assertion of ‘it is MOSQUITOES that carry the West Nile virus’ can be countered by the observation that deer ticks do likewise. However, there is still a salient reading of the sentence upon which it remains true. There is nothing contradictory, or even infelicitous, about the remark that mosquitoes carry the West Nile virus and deer ticks do too. Thus these generics do not depend on the property’s being uniquely possessed by the subject.

⁹For empirical support for the idea that generics are more likely to be accepted at low prevalence levels if the property in question is dangerous, see Andrei Cimpian, Amanda C. Brandone, and Susan A. Gelman, “Generic Statements Require Little Evidence for Acceptance but Have Powerful Implications,” *Cognitive Science*, xxxiv, 8 (November 2010): 1452–82.

and the impact of neutral or more positive information on our tendency to generalize.¹⁰

The “introduction” conditions, as it were, of striking property generalizations—how the world must be for us to form or accept these generalizations—are very undemanding when it comes to how prevalent the property has to be in the relevant population. What, though, of the “elimination” conditions of these generalizations—how does acceptance or rejection of these generalizations impact the inferences we are willing to draw?¹¹ We are content to accept ‘ticks carry Lyme disease’ despite knowing that very few ticks actually carry the relevant bacterium. One might imagine that an ideally rational agent would be very hesitant to suppose that an arbitrary tick carries Lyme disease, in light of these statistical facts.

However, recent psychological results suggest that acceptance of a generic influences our judgments concerning whether an arbitrary member of a kind has a property *over and above our beliefs about the prevalence of the property*. This is especially so for striking property generalizations. Sangeet Khemlani, Sam Glucksberg, and I found that people were as likely to agree that *Jumpy the tick carries Lyme disease* as they were to agree that *Joe the Canadian is right-handed*—despite the very large discrepancy between the subjects’ own (roughly correct) judgments of the prevalence of the respective properties in the respective populations. Sixty-five percent of our participants who accepted the striking property generalizations judged—with varying degrees of confidence—that an *arbitrary* member of the kind would have the striking property.¹² Andrei Cimpian, Amanda Brandone, and Susan

¹⁰The same arguably applies to strikingly positive information. One extremely large charitable donation presumably suffices to make one a philanthropist; though if it is a one-time occurrence, the donation must be very large indeed. (A single gift of a moderate sum does not a philanthropist make.) Such cases are less clean-cut, however, and examples are far less readily available.

¹¹I must emphasize that I mean “elimination conditions” here to be read as wholly psychological and not at all normative (hence the scare quotes). That is, I mean to highlight the inference that we *actually* draw from these generalizations, not the inferences that we *ought* to draw from them.

¹²We showed participants the following information:

Suppose you are told: Jumpy is a tick.

What do you think of the following statement: Jumpy carries Lyme disease.

Participants responded by marking a seven-point scale that ranged from “strongly agree” to “I couldn’t possibly tell” to “strongly disagree.” Participants were never shown a generic in this portion of the experiment, so they had to rely solely on background beliefs. A variety of examples were used, with varying degrees of prevalence and predictiveness (cue validity). Acceptance of the generic was found to predict responses above and beyond estimates of prevalence and predictiveness. As an intuitive illustration

Gelman found comparable results using a very different experimental design. While their participants frequently accepted novel striking property generics at low prevalence levels, if they were presented with a novel striking property generic and asked to estimate how prevalent the property might be among the kind, they gave extremely high estimates—in many cases, 100%.¹³

These findings suggest that such generalizations play a powerful role in guiding our inferences concerning property possession, despite their relatively weak acceptance conditions. These generalizations are not psychologically inert—rather they play a powerful role in guiding our judgments about members of a kind. In an early paper on generics, Robert Abelson and David Kanouse noted that some generics require very little evidence for acceptance, and yet “once accepted psychologically they appear to be commonly taken in a rather strong sense, as though the quantifier *always* had implicitly crept into their interpretation.”¹⁴ Our most basic method of generalization seems to encourage us in reasoning from “some” to “many” or “most,” or even to “all,” at least when striking properties are in play.

II. FEAR, PREJUDICE, AND GENERALIZATION

The cognitive disposition to generalize strikingly negative information very widely may serve a useful purpose in the nonsocial realm. When we turn to generalizations about groups of people, however, it can

of this, average prevalence estimates for striking property generalizations were 33% (already inflated relative to actual fact), and average prevalence estimates for items like ‘Canadians are right-handed’ were 60%, yet the mean responses were the same for both types of items despite the gross differences in average estimated prevalence (and overall similar ratings of cue validity). For more details, see Sangeet Khemlani, Sarah-Jane Leslie, and Sam Glucksberg, “Inferences about Members of Kinds: The Generics Hypothesis,” *Language and Cognitive Processes*, xxvii (2012): 887–900.

¹³Cimpian, Brandone, and Gelman, “Generic Statements,” *op. cit.* Participants who were told that, for example, 10% (or 30%, or 50%) of lorches have feathers that can cause massive bleeding frequently accepted the generic ‘lorches have dangerous feathers’. However, participants who were instead told ‘lorches have dangerous feathers’, and then asked to estimate the prevalence, gave much higher estimates—often as high as 100%. Interestingly, this asymmetry was only found if the property was striking and/or “characteristic” of the kind. For more accidental properties such as *having muddy feathers*, no such asymmetry was found. See Leslie, “Generics: Cognition and Acquisition,” *op. cit.*, for a discussion of the different types of generics—striking, characteristic, and more the “accidental” majority generics.

¹⁴Interestingly, their clearest examples are of striking property generics, though they do not identify them as such. (They do, however, note that it is the predicate that determines how likely the generic is to be accepted on the basis of weak statistical evidence.) Robert P. Abelson and David E. Kanouse, “Subjective Acceptance of Verbal Generalizations,” in Shel Feldman, ed., *Cognitive Consistency: Motivational Antecedents and Behavioral Consequents* (New York: Academic Press, 1966), pp. 171–97, here p. 172; see also David J. Schneider, *The Psychology of Stereotyping* (New York: Guilford Press, 2004).

lead to disastrous consequences. Our most fundamental method of generalization has the potential to enshrine a pervasive form of bigoted thinking.¹⁵

The basic idea is simple: just as it takes but a few instances of sharks attacking bathers, or of mosquitoes carrying the West Nile virus, for us to make the corresponding category-wide generalization, so also a strikingly negative action of a few members of a racial, ethnic, or religious minority may lead others to form a general belief concerning their entire group. I discuss below why it may be that these particular social groups, as opposed to others, tend to be the targets of such generalizations, and I then identify the fundamental error behind these generalizations in the case of social groups. (That is, I explain how it may be true that *mosquitoes carry the West Nile virus*, and yet decidedly false that, say, *Muslims are terrorists*.) Once we identify the enabling error behind such generalizations over social groups, the opportunity arises to consider novel ways of combating this way of thinking.

As a result of a profound and pervasive cognitive bias built into our most basic method of generalization, a few appalling acts by some members of a given group can lead others to draw conclusions about the group in general. As the available experimental evidence suggests, acceptance of a striking property generalization can lead one to draw the corresponding conclusion about an arbitrary member of the group—conclusions that go beyond even the *perceived* statistical facts. Extreme and aberrant actions of the few can thus lead to conclusions concerning the group at large, and these conclusions will influence judgments concerning a newly encountered member of the group.

A rather pristine version of this pattern of reasoning appears in Laura Ingalls Wilder's *Little House on the Prairie*. The Ingalls' prejudiced

¹⁵ It should be clear that the thesis set out here need not conflict with other theories of the psychological roots of racism. I rather take my thesis to be quite compatible with them, allowing that each theory may delineate a different aspect of this complex phenomenon. For example, the sophisticated analysis of group identification provided by Social Identity Theory is extremely important to our understanding of group dynamics and is not at all challenged by my identification of this particular cognitive bias of ours. (See, for example, Henri Tajfel, *Social Identity and Intergroup Behavior* (New York: Cambridge University Press, 1982); Henri Tajfel and John C. Turner, "The Social Identity Theory of Intergroup Behavior," in Stephen Worchel and William G. Austin, eds., *Psychology of Intergroup Relations* (Chicago: Nelson Hall, 1986).) Similarly, Realistic Conflict Theory's insights into the role of competition over limited resources fill in an important part of the picture that my account does not touch (for example, Muzafer Sherif, *In Common Predicament: Social Psychology of Intergroup Conflict and Cooperation* (Boston: Houghton-Mifflin, 1966)). It would be quite surprising if prejudice turned out to have a single and uniform psychological basis, rather than being the result of many disparate factors. To seek *the* psychological explanation for prejudice is likely a mistaken quest.

neighbor, Mrs. Scott, claims that “The only good Indian is a dead Indian”—certainly an offensive and sweeping claim. She justifies the claim by saying, “To anyone who disagrees, I say, ‘Remember the Minnesota Massacre!’” Mrs. Scott reasons from the single horrific incident of the Minnesota Massacre to the conclusion that there are no good (living) American Indians. Considering that the Scotts and the Ingalls were living in Kansas at the time, it is unlikely that she believed that any of the American Indians they actually encountered were personally involved in the Minnesota Massacre. Nonetheless, she took the single incident to justify the claim that “The only good Indian is a dead Indian.” She was also apparently confident that only someone who had forgotten about the massacre would disagree with her on the point.

Mrs. Scott’s reasoning perfectly illustrates how human beings can move from a horrific particular to a sweepingly prejudiced generalization. If reasoning of this sort really is a pervasive cognitive disposition, then we should find many examples of it in whatever historical period we examine. We should not be surprised if the same mechanism of generalization has hovered in the background wherever human beings were formulating prejudiced attitudes toward social groups. A detailed historical analysis is beyond the scope of this paper, but let us briefly consider the example of September 11th, 2001.

In the aftermath of the events of 9/11, hate crimes against Muslims rose more than 1,600%, according to FBI statistics.¹⁶ Hate crimes are, by definition, crimes motivated by the mere fact that the victim is a member of a particular group; the hate crimes following 9/11 were motivated by the fact that the victims in question were perceived to be Muslims. Many of these crimes were committed against Muslim children; the perpetrators surely were not under the impression that their victims were themselves involved in or personally responsible for the 9/11 bombings. It was sufficient that the victims appeared to be Muslims. We might characterize the reasoning of the hate-crime perpetrators as moving from the horrific events of 9/11—events that involved a very small number of extremist individuals—to the conclusion that the arbitrary Muslim deserved to be victimized in virtue of being Muslim. The conclusions drawn from the 9/11 attacks concerned not just the bombers and their supporters, but Muslims in general.

Such generalizations were made even by members of the U.S. Congress. Shortly after 9/11, Representative John Cooksey told a Louisiana radio

¹⁶ Tanya Schevitz, “FBI Sees Leap in Anti-Muslim Hate Crimes / 9/11 Attacks Blamed for Bias – Blacks Still Most Frequent Victims,” *San Francisco Chronicle*, November 26, 2002, <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2002/11/26/MN224441.DTL>.

station, “If I see someone [who] comes in that’s got a diaper on his head and a fan belt wrapped around the diaper on his head, that guy needs to be pulled over.”¹⁷ In Georgia, Representative (later Senator) C. Saxby Chambliss told law enforcement officials to “just turn [the sheriff] loose and have him arrest every Muslim that crosses the state line.”¹⁸ These statements again reflect conclusions pertaining to Muslims quite generally. They do not reflect the more moderate conclusion that vanishingly few Muslims had any involvement in 9/11 whatsoever.

A vivid and recent example, captured on video in August 2016, involved the chef of *Le Cenacle*, a restaurant in Tremblay-en-France. The chef refused service to two women wearing hijabs, stating “Terrorists are Muslims, and all Muslims are terrorists.” Of that utterance, he then insisted, “That sentence says it all, analyze it, *voilà*.” As justification for this statement, he noted, “They recently killed a priest”—a reference to a gruesome attack in a French church in July 2016. He concluded by telling them to leave his restaurant, saying, “People like you, I don’t want them here.”¹⁹

To return to an earlier time period, consider the origins of anti-Algerian prejudice in France. The relationship between the French and the Algerians is complicated, as would be expected given their history of war, colonization, and occupation, and indeed anti-Algerian racism is still virulent in France today. The cognitive bias under investigation here is, of course, too simple to account for all the subtleties of racism with such a complex history. However, if we trace anti-Algerian prejudice to its early days, we arguably find again the dead hand of striking property generic reasoning.

In 1923, French-Algerian relations declined rapidly. A wave of anti-Algerian violence began in which North Africans were attacked at random. The attacks included a public lynching in the rue Frémicourt in Paris, and it was unsafe for North Africans to venture into the surrounding area. The media denigrated North Africans, and petitions were circulated that called for “the undesirables to be driven from the area.”²⁰

¹⁷ Human Rights Watch, *‘We Are Not the Enemy’: Hate Crimes Against Arabs, Muslims, and Those Perceived to be Arab or Muslim after September 11* (New York: Human Rights Watch, 2002), <http://www.hrw.org/reports/2002/usahate/usal102.pdf>.

¹⁸ *Ibid.*

¹⁹ Daniel Politi, “Watch French Chef Refuse to Serve Two Muslim Women: ‘All Muslims Are Terrorists,’” *Slate*, August 28, 2016, http://www.slate.com/blogs/the_slatest/2016/08/28/video_shows_french_restaurant_refusing_to_serve_two_muslim_women.html.

²⁰ Neil MacMaster, “The Rue Fondary Murders of 1923 and the Origins of Anti-Arab Racism,” in Jan Windebank and Renate Gunther, eds., *Violence and Conflict in the Politics and Society of Modern France* (Lampeter, UK: Edwin Mellen Press, 1995), pp. 149–60.

According to Neil MacMaster, this rapid swell in hostility toward North Africans can be traced to a single catalytic incident. On November 7th, 1923, Khemile Ousliman, an unemployed North African man, knifed a woman in the rue Fondary. Ousliman, who was likely mentally ill, had been obsessed with the woman and had repeatedly made sexual advances toward her. When she refused, he slit her throat, then turned in a frenzy on some passersby, killing another woman and wounding two others.

Immediately following this incident, there began a surge of anti-Arab violence, hatred, and discrimination throughout France. Seven years later, Paul Catrice, a Catholic priest and immigration expert, remarked, "If the *Sidi*, in general, inspires a certain repulsive fear, it is because of the memories of certain sensational crimes from which Parisians have drawn unconsidered generalizations."²¹ These "unconsidered generalizations" are exactly those considered in this paper. There is no *a priori* reason to think that human beings would be disposed to reason from a single sensational event to a category-wide generalization; certainly there is no logical demand for such thinking. We are, however, possessed of a particular cognitive bias—a style of generalization—that makes such reasoning not only possible but pervasive.

More speculatively, since the veil of years here is thicker, the origins of Anglo-American prejudice toward Africans and American Indians may have been partly fueled by sensational reports of horrific acts relayed in travel books, which were extremely popular among the newly literate population of Britain. Very few people could afford to travel abroad themselves, so the reports of a small number of explorers were the source of public knowledge of foreign lands and their inhabitants. The initial impressions of the English population vis-à-vis Africans and Native Americans derived almost wholly from these travel books.²² Winthrop Jordan, in his discussion of travel books on Africa, writes:

To judge from the comments of voyagers, Englishmen had an unquenchable thirst for the details of savage life. . . . It is scarcely surprising that civilized Englishmen should have taken an interest in reports about cosmetic mutilation, polygamy, infanticide, ritual murder and the like—of course *English* men did not really *do* any of these things themselves. . . . It would be a mistake to slight the importance of the

²¹ *Ibid.*, p. 158.

²² Richard G. Cole, "Sixteenth-Century Travel Books as a Source of European Attitudes toward Non-White and Non-Western Culture," *Proceedings of the American Philosophical Society*, cxvi, 1 (February 1972): 59–67.

Negro's savagery, since it fascinated Englishmen from the very first. English observers in West Africa were sometimes so profoundly impressed by the Negro's deviant behavior that they resorted to a powerful metaphor with which to express their own sense of difference from him. They knew perfectly well that Negroes were men, yet they frequently described the Africans as "brutish" or "bestial" or "beastly." The hideous tortures, the cannibalism, the rapacious warfare, the revolting diet (and so forth page after page) seemed somehow to place the Negro among the beasts.²³

These travel books, which did so much to shape England's early image of Africa, contained endless gory accounts of shocking behavior (allegedly) exhibited by Africans. It should be noted that the travelers themselves often reported only specific incidents of cannibalism, or other specific instances of horrific violence. That is, it would be overly simplistic to place the blame for the formation of early negative stereotypes squarely on the explorers. Many of them were quite responsible in their reporting and did not indulge in broad generalizations. Given the nature of our default system of generalization, they did not have to. Reporting specific instances sufficed to encourage very general beliefs in the mind of the reader.

III. GENERALIZATIONS, DISPOSITIONS, AND PREDICTORS

If the foregoing is correct, then the same pattern of generalization is in play for both claims like 'mosquitoes carry the West Nile virus' and claims like 'Muslims are terrorists'. Surely, though, there must be some dissimilarities between them; in particular, is it not the case that the former claim is *true*, while the latter is *false*? Even if the same unreflective mechanism is responsible for both judgments, it surely makes an error in judging that Muslims are terrorists—an error that is not (necessarily) involved in judging that mosquitoes carry the West Nile virus.

Let us, then, consider striking property generics in more detail. Their truth conditions are not quite as straightforward as the earlier discussion suggests. We have been speaking as if a generic '*Ks are F*', is true iff some *Ks* are *F*, given that *being F* is a dangerous or harmful property. But this would suggest that 'insects carry the West Nile virus', or even 'animals carry the West Nile virus' would also be true—certainly there are some insects, and therefore some animals, that carry the virus, namely, those few mosquitoes. Similarly, the truth of 'tigers eat people' would entail the truth of 'mammals eat people', and from the

²³ Winthrop D. Jordan, *White over Black: American Attitudes toward the Negro, 1550–1812* (Chapel Hill: University of North Carolina Press, 1968), pp. 25–28.

truth of ‘sharks attack bathers’ we should conclude that fish attack bathers. People do not tend to find these inferences acceptable, so the truth conditions of these generics must involve some further complexity.

In earlier work, I suggested that the mechanism of generalization in question seeks a *good predictor* of the property in question.²⁴ It is easy enough to see an evolutionary rationale behind generalizing striking properties only so far up the taxonomic hierarchy. If our ancestors had undertaken to avoid all mammals after seeing a tiger eating one of their companions, the costs of doing so may well have outweighed the benefits. (One could waste a lot of time running from small, harmless creatures.) Someone who avoided all animals, big or small, after witnessing a lion maul his companion would be at a significant disadvantage relative to a more sophisticated competitor who limited his conclusions to lions alone.

An efficient generalizing mechanism, we might suppose, should seek a good predictor of the striking property—a kind that is inclusive enough to aid us in avoiding the property, but not so inclusive as to needlessly hamper our activities.

I further suggest that what makes a kind a good predictor of a striking property is that the members of the kind that do not possess the property are typically *disposed* to possess it.²⁵ It matters, then, for the truth of ‘mosquitoes carry the West Nile virus’ that the virus-free mosquitoes will carry the virus if circumstances allow. ‘Sharks attack bathers’ is true only if the sharks that never in fact cause harm to humans would typically do so given half a chance, and so on. Statements such as ‘animals carry the West Nile virus’ and ‘sea creatures attack bathers’ are false because the members of the kinds in question do not share the relevant dispositions. A generic statement in which a striking property is predicated is, I claim, true if and only if some members of the kind in question possess the relevant property, and the others are typically disposed to possess it.²⁶ To determine which

²⁴ Leslie, “Generics: Cognition and Acquisition,” *op. cit.*

²⁵ *Ibid.* The metaphysics of dispositions is an intriguing subject. I shall not delve into it here but rather rely on our intuitive understanding of the notion. For two helpful discussions of dispositions, see Michael Fara, “Dispositions and Habituals,” *Nous*, xxix, 1 (March 2005): 43–82; and David Lewis, “Finkish Dispositions,” *Philosophical Quarterly*, XLVII, 187 (April 1997): 143–58.

²⁶ If this is correct, then we must allow for the possibility that some of the striking property generics listed above are, in fact, strictly false. Perhaps it is only great white sharks that are disposed to attack bathers (as it is sometimes claimed), or perhaps only mosquitoes with a particular mutation are capable of carrying the virus. If these turn out to be the facts, then my account predicts that the above generics are in fact false, and it is

striking property generics are strictly true and strictly false, then, would require detailed knowledge of dispositions and capacities. Dispositions are not directly observable in the way their manifestations are, so we do not normally possess such knowledge. We thus often operate under uncertainty when it comes to attributing dispositions and so must adopt certain heuristics to guide our judgments. To probe this strategy further, let us set aside questions of whether sentences are true or false and consider how our basic mechanism of generalization must work, if these theses here are correct.

IV. DISPOSITIONS, ESSENCES, AND BASIC-LEVEL KINDS

If the preceding remarks are correct, then our basic mechanism for generalization, when confronted with the manifestation of a striking property, seeks to generalize that property to a kind whose members are disposed to manifest it. Detailed scientific knowledge of dispositions is not likely to be available for most of these generalizations. However, even in the absence of scientific knowledge, we nonetheless often form (tacit) beliefs about the shared natures and dispositions of members of certain kinds. In the psychological literature, these kinds are said to be *essentialized*.²⁷ We essentialize a kind if we form the (tacit) belief that there is some hidden, nonobvious, and persistent property or underlying nature shared by members of that kind that causally grounds their common properties and dispositions.²⁸

For example, one might believe, implicitly or explicitly, that there is *something about* tigers that causes them to have stripes, to have four legs,

only the weaker claims 'great white sharks attack bathers' and 'mosquitoes with a particular mutation carry the West Nile virus' that are true. This seems to be the intuitively correct conclusion here: under such circumstances, the more inclusive generic claims are, strictly speaking, false.

²⁷ Douglas Medin and Andrew Ortony, "Psychological Essentialism," in Stella Vosniadou and Andrew Ortony, eds., *Similarity and Analogical Reasoning* (New York: Cambridge University Press, 1989), pp. 179–96; Susan A. Gelman, *The Essential Child* (New York: Oxford, 2003).

²⁸ There is a variety of evidence to suggest that we view kinds as essentialized from a young age. For example, preschool-aged children expect that members of the same basic-level kind will have the same internal organs, even if some of the members look quite different from the others (see Gelman, *The Essential Child*, *op. cit.*, and references therein). They also maintain that a raccoon dressed up as a skunk is nonetheless a raccoon, and possessed of raccoon innards, thus demonstrating a belief that there is more to kind membership than outward appearance. Children also have strong views about the power of nature over nurture when it comes to cross-species comparisons; they expect that a cow raised from birth by pigs will look like a cow, say moo, and so on. Gelman and her colleagues argue at length that these convictions reflect a belief in the essences of these kinds. From a very young age, we think that there is something intrinsic to the nature of cows that will cause a cow to resemble other cows, regardless of how it is raised.

to growl, to hunt their prey, and so on. These are not accidental features of tigers; they are grounded in the very nature of tigerhood. What is more, we believe that even a stripeless, three-legged tiger possesses this intrinsic, “essential” nature, even if she does not manifest its outward effects. The “essence” of tigers causally grounds these dispositions, though it does not guarantee their manifestation, since adventitious factors may intervene.²⁹

Different levels of the subjective taxonomic hierarchy for biological kinds are essentialized to differing degrees, in the sense that some levels are seen as possessing highly distinctive essences that ground a large number of shared features, while others are not. For example, simply being a mammal is not predictive of a wide range of properties, since animals as diverse as tigers, whales, mice, and humans all count as mammals. Conversely, while Bengal tigers share many properties in common with each other, this shared nature is not particularly distinctive, since Siberian tigers also share many of those properties. There tends to be a privileged level of the subjective taxonomic hierarchy at which the essence of the kind is taken to ground a wide range of properties that are shared by its members but not shared by members of another kind. This privileged level of the taxonomy is known as the *basic level*. The notion of a basic-level kind is due to Eleanor Rosch and her colleagues, who found that various measures of psychological salience converged on a particular taxonomy that is psychologically privileged.³⁰

²⁹The relevant notion of essence at work in the psychological literature is obviously not the philosopher’s stricter notion of that intrinsic aspect of a thing that grounds all and only the intrinsic metaphysical necessities that hold of the thing. It should also be noted that the claim being made here is that our folk theories treat biological kinds in this way, not that this is the correct metaphysics of these kinds. The claim is merely psychological. For more discussion, see Sarah-Jane Leslie, “Essence and Natural Kinds: When Science Meets Preschooler Intuition,” in Tamar Szabó Gendler and John Hawthorne, eds., *Oxford Studies in Epistemology*, vol. 4 (New York: Oxford University Press, 2013), pp. 108–65.

³⁰Eleanor H. Rosch, “Principles of Categorization,” in Eleanor H. Rosch and Barbara Lloyd, eds., *Cognition and Categorization* (Hillsdale, NJ: Erlbaum Associates, 1978), pp. 27–48. For example, when asked to identify what is in a picture of the animal that is Princeton University’s mascot, people tend to identify it as a tiger rather than as a Bengal tiger, a mammal, a vertebrate, and so on. Alternatively, if people are asked to “list features” that they associate with various kinds, basic-level kinds have the greatest number of features that are both widely shared by members of the kind and *not* shared by members of comparable kinds. For kinds that are taxonomically below the basic level (so-called subordinate kinds), the features listed tend to be ones that are listed for other subordinate kinds; Bengal tigers share most of their psychologically salient features with other types of tigers. If asked to list features for superordinate kinds such as mammal, people have much greater difficulty coming up with features and often list features that are not widely shared by members of the kind.

In the course of language acquisition, names for basic-level kinds are learned first, and there is a high degree of cross-cultural agreement about basic-level taxonomy, even

The most interesting feature of basic-level kinds from our point of view is that, from a young age, we construe them as having rich inductive potential, thanks to their members' sharing highly predictive natures. These highly essentialized basic-level kinds thus appear to be the default starting points for our common inductive generalizations. Since we view members of basic-level kinds as sharing a nature, we tend to treat these kinds as supportive of inductive generalizations and inferences about nonobvious properties. Further, since we take this nature to be distinctive—that is, not shared by other comparable kinds—we are reluctant to generalize properties to the more inclusive kinds above the basic level on the taxonomic hierarchy. The psychologically privileged status of basic-level kinds results from a useful trade-off between the extent to which natures or “essences” are taken to be shared and the extent to which they are taken to be distinctive.

I suggest that, in making a striking property generalization, the default is to choose a relevant, highly essentialized basic-level kind as the target of the generalization. Since such kinds are the primary targets of our inductive generalizations and inferences, it is perhaps not surprising that they are also the targets of these particular generalizations. Basic-level kinds are fine-grained enough to reduce wasted effort but still coarse-grained enough to allow one to err on the side of caution. And since they are the most readily recognizable categories, they make for a practical starting point for striking property generalizations.

Most importantly, basic-level kinds—because they are highly essentialized—support inferences concerning the dispositions of its members. Upon seeing a tiger eat a companion of ours, we conclude that there is something about tigers that disposes them to eat us—it lies in their nature to eat us, given half a chance. A typical tiger is thereby—thanks to his underlying intrinsic nature—disposed to eat us.³¹ I thus propose that when an instance of a particular basic-level kind

though cultures may differ significantly on the taxonomy of superordinate and subordinate kinds.

The notion of a basic-level kind is an explanatory psychological notion, not an explanatory biological notion. In many cases, the basic-level kind corresponds to a genus or a species considered as biological taxa, but this is not always the case. For example, while the basic-level kind tiger corresponds to a species of the genus *Panthera*, the basic-level kind jellyfish corresponds to the class Scyphozoa, which has many orders, families, genera, and species below it.

³¹ If one is unconvinced by this example, consider the following. A Savannah cat is a hybrid bred from the domestic cat and an African hunting cat known as the serval. The adult Savannah is quite magnificent, weighing in at 40 lbs., and possessed of a long neck and beautiful leopard-esque spots. There have been no documented cases (to my knowledge) of Savannahs attacking either people or other pets, though the breed is relatively new, so its general tendencies are not yet well understood. Suppose, however, that tomorrow we see splashed across the *New York Times* a report of a Savannah savagely

manifests a striking property, by default we take the manifestation of that property to be grounded in some nature common to the members of that basic-level kind. Unless we learn otherwise, we take the disposition to manifest the property to belong to typical members of the kind, that is, those that share the common nature.

Notably, non-striking properties are not treated in this way. Upon learning that a given tiger is female, we do not conclude that typical tigers, by their nature, are disposed to be female—the disposition simply failing to manifest itself in the case of male tigers. If we saw a hamster with an odd growth on its back, it would not occur to us to decide that the disposition to grow such lumps is grounded in hamsterhood, though rarely manifested. The rapid generalizations to typical underlying dispositions are specific to striking properties.

V. SOCIAL KINDS AND ESSENCE

In recent years, a number of social psychologists have argued that we view certain social kinds as essentialized in much the way we view animal kinds. This line of thinking was popularized by Rothbart and Taylor³² and has since received a significant amount of empirical support.³³ Within psychology, the basic observation originated with Gordon Allport in 1954, who wrote:

attacking a toddler. Would one suspend judgment as to the typical Savannah's violent tendencies, or would one immediately view the entire breed as dangerous?

³² Myron Rothbart and Marjorie Taylor, "Category Labels and Social Reality: Do We View Social Categories as Natural Kinds?," in Gün Semin and Klaus Fiedler, eds., *Language, Interaction and Social Cognition* (London: Sage Publications, 1992), pp. 11–36.

³³ For example: Lawrence A. Hirschfeld, *Race in the Making* (Cambridge, MA: MIT Press, 1996); Francisco J. Gil-White, "Are Ethnic Groups Biological 'Species' to the Human Brain?," *Current Anthropology*, XLII, 4 (August–October 2001): 515–54; Nick Haslam, Louis Rothschild, and Donald Ernst, "Essentialist Beliefs about Social Categories," *British Journal of Social Psychology*, xxxix, 1 (March 2000): 113–27; Nick Haslam, Louis Rothschild, and Donald Ernst, "Are Essentialist Beliefs Associated with Prejudice?," *British Journal of Social Psychology*, xli, 1 (March 2002): 87–100; Stéphanie Demoulin, Jacques-Philippe Leyens, and Vincent Yzerbyt, "Lay Theories of Essentialism," *Group Processes and Intergroup Relations*, ix, 1 (January 2006): 25–42. See also Deborah A. Prentice and Dale T. Miller, "Psychological Essentialism of Human Categories," *Current Directions in Psychological Science*, xvi, 4 (2007): 202–06.

A related line of empirical research has been pioneered by Leyens and colleagues under the heading of *infra-humanization*. They present a series of empirical findings that suggest that people are more reluctant to attribute uniquely human emotions to members of (at least some) out-groups. While people readily attribute to out-group members emotions that are shared with animals (for example, fear, anger, and surprise), they are less likely to attribute uniquely human sentiments (for example, shame, resentment, and love) to out-group members versus in-group members. The researchers argue convincingly that this reflects a tendency to deny fully human essence to certain out-groups. This work thus suggests not only that out-group members are seen as possessing a distinctive essence, but that this essence is fundamentally *less than fully human*.

... a *belief in essence* develops. There is [a belief in] an inherent “Jewishness” in every Jew. The “soul of the Oriental,” “Negro blood,” ... “the passionate Latin”—all represent a belief in essence. A mysterious *mana* (for good or ill) resides in a group, all of its members partaking thereof.³⁴

Rothbart and Taylor argue that we may view some social kinds—such as racial or ethnic kinds—not simply as essentialized, but more specifically as natural kinds, and in some cases as biological kinds. This may be true, but it obscures the central notion. In the case of animal kinds, there is no need to separate out these different threads of belief, but in the case of social kinds it is imperative to do so. The notion of essence—or at least the notion of essence that is relevant for our purposes here—is not limited to biological kinds, or even to natural kinds (though such kinds constitute paradigmatic examples of essentialist thinking). For the remainder of this paper, I will understand a kind or group to be essentialized just in case its members are viewed as sharing a fundamental nature that causally grounds a substantial number of their outwardly observable properties. This nature need not be biologically grounded, nor need it be seen as immutable or strictly necessary for membership in the kind.³⁵ With this understanding of the notion of essence we can generalize the idea of a

Conversely, one might interpret their findings as reflecting that, to the extent that the in-group is essentialized, its essence consists of a purely human essence. See, for example, Jacques-Philippe Leyens et al., “Psychological Essentialism and the Differential Attribution of Uniquely Human Emotions to Ingroups and Outgroups,” *European Journal of Social Psychology*, xxxi, 4 (July/August 2001): 395–411; and Jacques-Philippe Leyens et al., “Emotional Prejudice, Essentialism, and Nationalism,” *European Journal of Social Psychology*, xxxiii, 6 (November/December 2003): 704–17.

³⁴Gordon Allport, *The Nature of Prejudice* (Reading, MA: Addison Wesley, 1954), pp. 173–74.

³⁵Work in social psychology has begun to unravel the various threads of essence. For example, Haslam and colleagues (“Essentialist Beliefs about Social Categories,” *op. cit.*, “Are Essentialist Beliefs Associated with Prejudice?,” *op. cit.*) distinguish between the perception of a group as a natural kind (for example, having sharp boundaries, being determined by nature rather than man, being immutable) and the perception of a group as *entitative*. A group is highly entitative if its members are perceived as being very similar to one another and if membership in the group is highly informative about the nature of the individual. Their notion of entitativity most closely corresponds to how I here understand essence, though I hesitate to adopt this terminology because it is put to somewhat different uses by other social psychology researchers. (For example, Demoulin et al., “Lay Theories of Essentialism,” *op. cit.*, understand a group to be entitative if, in addition to Haslam et al.’s criteria, the group has common goals and will face a “common fate.”) Interestingly, Haslam et al. (“Essentialist Beliefs about Social Categories,” *op. cit.*) found that groups viewed as more entitative tended to be accorded lower status in society, but the degree to which groups were viewed as natural kinds did not predict their perceived status. Brock Bastian and Nick Haslam, in “Psychological Essentialism and Stereotype Endorsement,” *Journal of Experimental Social Psychology*, xlii, 2 (March 2006): 228–35, further found that people who were inclined to essentialize social groups were more likely to endorse social stereotypes and to attribute the persistence of

basic-level kind to the social arena: these will be social kinds that are perceived to have essences that occupy a “sweet spot” in trade-offs between distinctiveness (which is compromised as groups become less inclusive) and predictiveness (in the sense of grounding the maximal number of common features—a feature that is compromised as groups becomes more inclusive). These kinds will thus be taken to have highly distinctive essences that ground a large number of shared features. Such social kinds, we may suppose, will surely include racial, ethnic, and religious groups.

As with basic-level animal kinds, these social kinds play a privileged role in our inductive practices. The perception that members of a given group share highly predictive natures supports a willingness to generalize across the group, and the perception that these natures are distinctive produces reluctance to generalize to more inclusive categories—to the category *human being*, for example. As with animal kinds, these highly essentialized social kinds are the typical targets of striking property generalizations.

To recap, then, our most psychologically basic generalizations, voiced in language as generics, are especially sensitive to information that is particularly striking, horrific, or appalling. When we learn of individuals engaging in such an act, we are naturally inclined to seek to generalize this action to a kind to which the individuals belongs. The correctness conditions of these generalizations require that some members of the kind must indeed have the relevant property and that the other members must be typically disposed to have the property. We do not, however, normally have good information about unobservable dispositions available to us, so as a proxy we generalize the property to a kind that we perceive to have a highly predictive and distinctive essence. In the social domain, this means that aberrant actions of the few—such as the 9/11 perpetrators, or the American Indians involved in the Minnesota massacre, or the Algerian Khemil Ousliman—can lead to conclusions about an entire social kind. It is important, I think, to emphasize that this notion of essence or nature is not a biological notion. An essence *can* of course be biologically grounded, but it need not be: a kind can be essentialized without being construed as biological.³⁶ Much of the philosophical literature

stereotypes within a culture to the nature of the group being stereotyped (as opposed to socio-cultural conditions).

³⁶Interestingly, Nick Haslam and Sheri R. Levy, in “Essentialist Beliefs about Homosexuality: Structure and Implications for Prejudice,” *Personality and Social Psychology Bulletin*, xxxii, 4 (April 2006): 471–85, found that people who endorsed biological explanations for homosexuality were less likely to evidence anti-gay prejudice. However,

on race places considerable emphasis on the faulty conception of race as biologically grounded. Race is not a biological notion; there is no genetic ground for dividing people up along racial lines.³⁷ This is a tremendously important point that should be made repeatedly; however, we should not overestimate its capacity to alter people's prejudiced convictions. A belief in essence—in a shared nature—may be the more important belief to change, but beliefs in essence can survive the loss of belief in a biological essence.

To illustrate, consider attitudes toward Muslims—a group that is rarely if ever taken to be *biologically* defined. Here, the absence of belief in biological essence does not preclude belief in an essence more broadly understood, as is illustrated by persisting beliefs that Muslims are *fundamentally different* from other groups of people, while also being *fundamentally all alike*. For example, in an article entitled “The Roots of Muslim Rage,” Bernard Lewis discusses Islam and its followers. He argues that we are now facing nothing less than a “clash of civilizations,” since “Islamic fundamentalism has given an aim and a form to the otherwise aimless and formless resentment and anger of *the Muslim masses*” (my emphasis—note the high level of generality).³⁸ Lewis goes on to describe the followers of Islam in generic, essentialized terms:

Haslam et al. (“Are Essentialist Beliefs Associated with Prejudice?,” *op. cit.*) found that the degree to which people perceived gay men to constitute an “entitative” group (see footnote 35) *did* correlate with prejudice. One potential explanation of this phenomenon is that people who believe that sexual orientation is a simple biological phenomenon do not consider homosexual people to have fundamentally different natures from heterosexual people, but rather view sexual orientation as a more adventitious phenomenon (more akin to differences in taste in movies, or in athletic abilities, perhaps). People who view homosexuality as a choice—and more specifically as a morally reprehensible choice—may take this decision to act immorally (by their lights) as indicative of a fundamentally different nature. (For example, “I could never choose to do something so despicable, so anyone capable of making that choice must be deeply different from me and mine.”) Thus, belief in shared nature can come apart from beliefs about biological bases, as this case illustrates. Homosexual people—and perhaps gay men in particular (Haslam and Levy, “Essentialist Beliefs about Homosexuality,” *op. cit.*)—may still be essentialized by others even absent belief in biology.

³⁷ For clear and accessible discussion of the biology and its potential philosophical significance, see K. Anthony Appiah, “Race, Culture, Identity: Misunderstood Connections,” in K. Anthony Appiah and Amy Guttmann, eds., *Color Conscious: The Political Morality of Race* (Princeton: Princeton University Press, 1996), pp. 30–106; K. Anthony Appiah, “How to Decide if Races Exist,” *Proceedings of the Aristotelian Society*, cvii, 1 (June 2006): 365–82.

³⁸ Bernard Lewis, “The Roots of Muslim Rage,” *The Atlantic*, 266 (September 1990): 47–60.

There is something in the religious culture of Islam which inspired, in even the humblest peasant or peddler, a dignity and a courtesy toward others never exceeded and rarely equaled in other civilizations. And yet, in moments of upheaval and disruption, when the deeper passions are stirred, this dignity and courtesy toward others can give way to an explosive mixture of rage and hatred which impels even the government of an ancient and civilized country—even the spokesman of a great spiritual and ethical religion—to espouse kidnapping and assassination, and try to find, in the life of their Prophet, approval and indeed precedent for such actions.³⁹

According to Lewis, in virtue of following Islam, the arbitrary Muslim—be they “peasant or peddler”—is disposed in times of calm to be most courteous toward others, but when faced with upheaval, this person’s finer dispositions give way to an “explosive mixture of rage and hatred.” Lewis suggests that there is just *something about Islam* that affects people in this way. In virtue of being Muslim, people possess the dispositions he describes. This is a way of essentializing the followers of Islam, of attributing a shared essence to them—and further it is one that causally grounds their putative violent dispositions. In effect, Lewis offers a rationalizing framework for anti-Muslim striking property generalizations.

VI. LOOKING FOR HOPE: FAMILIARITY AND IDENTIFICATION

Highly essentialized social groups are prime targets of striking property generalizations. Extreme actions committed by a very small number of the members of such a group can result in the acceptance of a generalization concerning the whole group. If the group is highly essentialized then we readily suppose that the disposition to such action is widely shared among the members—indeed, that it is grounded in the very nature of the group. When presented with (a) strikingly awful actions and (b) a highly essentialized group, our primitive cognitive mechanism may deliver the corresponding generalization on this basis alone.

One interesting observation is that people do not tend to make these generalizations concerning groups to which they themselves belong; in-groups seem to be less likely to be targets of this particular sort of generalization. Of course, we may well be aware that *some* members of an in-group may have committed some or other horrific deed, but we do not generalize this information in the way we do when dealing with members of out-groups. The difference, I propose, lies in the differential tendency to view the deplorable actions as grounded in

³⁹ *Ibid.*

the nature or essence of the group in question. If a member of a group to which we belong commits an appalling act—and there is no highly essentialized subgroup that includes the individual but not us—we may not reach beyond that individual in attributing the disposition to so act. If such an individual belongs to a highly essentialized group that excludes us, however, we may view the inclination to appalling action as part of the essence of that group.

That we resist making such generalizations concerning groups to which we belong does not, on the face of it, hold much promise for helping to reduce the tendency to generalize in this way. Simply put, one cannot be a member of every essentialized group. However, increasing familiarity, knowledge, and solidarity may serve as a surrogate of sorts: people who are very familiar or identified with a class seem to reject striking property generalizations over that class.

How do we cope with sensational negative information concerning members of such familiar kinds? The case of dogs is telling. When a Rottweiler mauls a child, we do not impugn dogs in general. We instead seek a more restricted generalization that cites a better predictor of the tendency to maul children. While a Labrador owner might rest content with the generalization that Rottweilers maul children, the Rottweiler breeder may further restrict the generalization to, say, *poorly trained* Rottweilers.

This search for increasing specificity may be part of a more general tendency, as familiarity and knowledge grows, to view increasingly restricted sub-kinds as comprising the basic level. In the biological domain, for example, findings suggest that the Itzaj Mayan people treat individual tree species as highly essentialized basic-level kinds and the category *tree* as a less essentialized superordinate kind. American college students, however, treat *tree* as a basic-level kind. A natural explanation is that the Itzaj Mayans are simply more knowledgeable about trees than the American college students, and so the differences between the sub-kinds of trees are too salient to them to be ignored.⁴⁰ (Consider the neophyte wine drinker to whom there seems to be just two kinds of wine: red and white. In contrast, the most discerning oenophile might see each triple of vineyard, grapes, and vintage as carving out so unique a kind that each must be considered solely on its own terms, with no higher generalizations permitted.)

If the above observations concerning familiarity, knowledge, and solidarity are true, this would further serve to expose the fatal,

⁴⁰John D. Coley et al., "Inductive Reasoning in Folkbiological Thought," in Douglas Medin and Scott Atran, eds., *Folkbiology* (Cambridge, MA: MIT Press, 1999), pp. 205–32.

reinforcing “logic” of segregation. The more separated and distant we are, the more we see each other in the terms that invite invidious striking property generalizations.

These claims fit nicely with the so-called *contact hypothesis*, originally advanced by Gordon Allport in 1954.⁴¹ He predicted that contact between members of different groups would reduce prejudices directed toward the other group, but *only* if (a) the groups have equal status, (b) they participate in cooperative activities toward common goals, (c) the acquaintance is personalized, and (d) the contact is sanctioned by authorities and/or social norms. Whether all these conditions must be met and whether there are additional necessary conditions have been matters of some controversy over the ensuing decades, but the core idea has received considerable empirical support.⁴² Prejudice is reliably reduced when members of different groups interact in cooperative and personal ways. The conditions that the contact hypothesis sets forth may well lead us to resist viewing broadly inclusive social kinds as highly essentialized.

VII. LOOKING FOR HOPE: LANGUAGE AND ESSENTIALISM

Familiarity and knowledge can get us to view increasingly narrow kinds as the basic-level kinds. We might also consider which factors originally led us to view some social kinds as possessed of widely shared and highly distinctive natures and whether anything can be done to undermine this tendency. When such a belief in the group’s shared nature is lacking, we do not tend to accept these generalizations. For example, we do not think that *accountants are murderers* even though some accountants have committed murder, nor do we think that *fish attack bathers* even though some fish—that is, some sharks—do indeed attack bathers. A belief that such a shared essence exists and grounds the disposition to the striking behavior is a precondition for these generalizations.

If I am correct to suppose that striking property generalizations have played a role in the formation of some of our social prejudices, then the question arises, how might we most effectively combat and undermine these generalizations? The claim that the essentialization of social groups is a precondition raises a tantalizing empirical suggestion: if we can identify factors that lead us to essentialize a given group, then we may be able to develop novel means of combating prejudice.

⁴¹ Allport, *The Nature of Prejudice*, *op. cit.*

⁴² Thomas F. Pettigrew and Linda R. Tropp, “Does Intergroup Contact Reduce Prejudice? Recent Meta-Analytic Findings,” in Stuart Oskamp, ed., *Reducing Prejudice and Discrimination* (Mahwah, NJ: Lawrence Erlbaum Associates, 2000), pp. 93–115.

It is important to notice that, while the disposition to essentialize *some kinds or others* may be an immutable feature of our cognition, this does not determine *which* kinds we essentialize. While the available cross-cultural evidence suggests that essentialization may be a universal human phenomenon, there is significant cross-cultural variation as to *which* kinds are seen as essentialized.⁴³ For example, the different castes in India have been seen as highly essentialized, especially by members of the upper castes.⁴⁴ The Ancient Greeks are often said to have believed that there were two fundamental kinds of human beings: Greeks and Barbarians, each endowed with their own distinctive natures. We might suppose that class in English society has, at least until quite recently, been essentialized, and certainly medieval European notions of the great chain of being involve highly essentialist ways of thinking about the different strata of society. (Rebellious peasants were often said to be going against *nature itself*.) It is not difficult to come up with many more such examples.

Thus, while the capacity to essentialize may be a ubiquitous feature of human psychology, it does not fix *which* kinds are to be essentialized. We are not hard-wired to form the specific social categories that we do.⁴⁵ The examples just noted do not involve slicing humanity along the same lineaments as contemporary American thinking on race or ethnicity: the Greek term 'barbarian' encompassed a wide variety of groups that we would distinguish in contemporary American society, while the social classes

⁴³ For example, see Scott Atran, "Itzaj Maya Folkbiological Taxonomy: Cognitive Universals and Cultural Particulars," in Medin and Atran, eds., *Folkbiology*, *op. cit.*; Coley et al., "Inductive Reasoning in Folkbiological Thought," *op. cit.*; Gil-White, "Are Ethnic Groups Biological 'Species' to the Human Brain?," *op. cit.*; Rita Astuti, Gregg E. A. Solomon, and Susan Carey, "Constraints on Conceptual Development: A Case Study of the Acquisition of Folkbiological and Folksociological Knowledge in Madagascar," *Monographs of the Society for Research in Child Development*, LXIX, 3 (Serial Number 277, December 2004); for a review, see Gil Diesendruck, "Categories for Names or Names for Categories? The Interplay between Domain-Specific Conceptual Structure and Language," *Language and Cognitive Processes*, XVIII, 5–6 (October–December 2003): 759–87.

⁴⁴ Ramaswami Mahalingam, *Essentialism, Power, and Representation of Caste: A Developmental Study* (Ph.D. dissertation, University of Pittsburgh, 1998).

⁴⁵ For a fascinating empirical demonstration of how malleable our social categories (other than gender) may be, see Robert Kurzban, John Tooby, and Leda Cosmides, "Can Race Be Erased? Coalitional Computation and Social Categorization," *Proceedings of the National Academy of Sciences*, xcvi, 26 (December 2001): 15387–92. These authors argue that, contra prior claims, racial categories are not automatically encoded when we perceive others. Rather, we primarily encode information about membership in coalitions. The authors argue that the encoding of race is just a special case of this more general tendency—one that gets reinforced over a lifetime's participation in our society, thus acquiring an air of inevitability. It can be significantly undermined in certain contexts, however.

demarcated in medieval Europe cut more finely than the racial and ethnic categories that are so salient to us.

Since it is not a fixed and immutable part of our psychology to essentialize the specific groups that we do, the urgent question arises, what determines which groups we essentialize? As with everything else in this domain, I am highly skeptical of the possibility of providing a single, univocal answer to this question. There is a variant on the question, though, that may prove more tractable from the cognitive perspective. I propose that we ask, what are the cues that suggest to young children that a particular kind or group is to be essentialized?

Recent findings suggest that the *language* we use to talk about individuals and groups can have a significant impact on the degree to which they are essentialized. Marjorie Rhodes, Christina Tworek, and I conducted a study in which we used picture books about a novel social group called Zarpies. The Zarpies were depicted as diverse with regard to race, ethnicity, age, and gender, and did not map onto any actual social group about which participants might have had prior beliefs. There were two versions of the book, which differed from each other only in the language they used to talk about the people depicted therein.⁴⁶ The first book made frequent use of generic language (for example, 'Zarpies hate ice cream'), while the second contained no generics but instead used the specific noun phrase 'this Zarpie' (for example, 'this Zarpie hates ice cream'). Four-year-old children and adults read through the picture books several times and were then tested with a battery of questions designed to assess the extent to which they were prepared to treat Zarpies as an essentialized kind (for example, the extent to which they viewed Zarpie traits as innate versus learned, the extent to which they generalized novel properties from one Zarpie to another, and a number of other such measures). Children and adults who heard the Zarpies described with generic noun phrases were significantly more likely to essentialize Zarpies. Moreover, in a follow-up study, we found that when parents themselves were led to essentialize Zarpies, they produced significantly more generics about Zarpies when discussing the group with their children. Taken together, our studies suggest that generics may be a means by which social essentialist beliefs are transmitted across generations, as parents who themselves hold more essentialist beliefs about a group

⁴⁶Marjorie Rhodes, Sarah-Jane Leslie, and Christina Tworek, "Cultural Transmission of Social Essentialism," *Proceedings of the National Academy of Sciences*, CIX, 34 (2012): 13526–31. See also Susan A. Gelman, Elizabeth A. Ware, and Felicia Kleinberg, "Effects of Generic Language on Category Content and Structure," *Cognitive Psychology*, LXI, 3 (November 2010): 273–301.

produce more generics, which in turn leads young children to form essentialist beliefs of their own.⁴⁷

Other studies have compared the use of nouns/labels to verbs, adjectives, and descriptions, finding that the former foster essentialism, or at least related phenomena.⁴⁸ For example, Susan Gelman and Gail Heyman found that five- and nine-year-olds drew different conclusions depending on whether they were told, for example, 'Rosie eats carrots whenever she can' versus 'Rosie is a carrot-eater'.⁴⁹ The use of the label 'carrot-eater' led children to view the property as more stable, and they judged that Rosie was more likely to persist in eating carrots in the absence of the usual parental encouragement.⁵⁰ In an induction task conducted with Israeli preschoolers, Gil Diesendruck and Heidi haLevi found that five-year-olds preferred to generalize novel properties based on membership in familiar social categories as conveyed by labels (for example, a Jew versus an Arab), rather than based on either shared physical traits or shared personality traits as conveyed by appearance and/or description (for example, shy versus friendly).⁵¹

It must be emphasized that these linguistic cues are not *sufficient* for a kind's being essentialized. We can and do use labels and generics to talk about non-essentialized kinds. We therefore should not be misled into supposing that these linguistic cues are in and of themselves *sufficient* for essentialization of the kind. A very interesting question,

⁴⁷ For further discussion, see Sarah-Jane Leslie, "Carving Up the Social World with Generics," in Joshua Knobe, Tania Lombrozo, and Shaun Nichols, eds., *Oxford Studies in Experimental Philosophy*, vol. 1 (New York: Oxford University Press, 2014), pp. 208–32.

⁴⁸ For more discussion of nouns versus adjectives, see Anna Wierzbicka, "What's in a Noun? (Or: How Do Nouns Differ in Meaning from Adjectives?)," *Studies in Language*, x, 2 (1986): 353–89.

⁴⁹ Susan Gelman and Gail D. Heyman, "Carrot-Eaters and Creature-Believers: The Effects of Lexicalization on Children's Inferences about Social Categories," *Psychological Science*, x, 6 (November 1999): 489–93.

⁵⁰ Walton and Banaji found that the same held for adults, and Markman and Smith report a related contrast between nouns and adjectives. See Gregory M. Walton and Mahzarin R. Banaji, "Being What You Say: The Effect of Essentialist Linguistic Labels on Preferences," *Social Cognition*, xxii, 2 (April 2004): 193–213; Markman and Smith's work is reported in Ellen M. Markman, *Categorization and Naming in Children: Problems of Induction* (Cambridge, MA: MIT Press, 1989).

In a fascinating study, Andrea Carnaghi et al. ("*Nomina Sunt Omina*: On the Inductive Potential of Nouns and Adjectives in Person Perception," *Journal of Personality and Social Psychology*, xciv, 5 (May 2008): 839–59) extend a similar paradigm to social kinds and again find a parallel contrast between nouns and adjectives in the responses of their adult participants.

⁵¹ Gil Diesendruck and Heidi haLevi, "The Role of Language, Appearance, and Culture in Children's Social Category Based Induction," *Child Development*, lxxvii, 3 (May/June 2006): 539–53.

though, is to what extent these cues are *necessary* (or at least close to necessary—that is, only rarely would these cues not be needed). Certainly, it is difficult if not impossible to think of an essentialized kind for which we do not have a label. Even if such cues are not strictly necessary, the evidence points to their being at the very least important contributing causes. One might thus reasonably hypothesize that altering these cues would have an impact.

The above results and others point, I think, to a proposal for combating prejudice. If prejudice and essentialism about social kinds are crucially linked, then we might suppose that undermining the latter will help mitigate the former. The studies described above have identified some factors that promote essentialist thinking about a given kind; in particular, they shed some light on the cues that young children use to determine *which* kinds they should essentialize. The empirical evidence suggests that the use of nouns as labels promotes essentialism, and that the use of generics compounds this.

The intriguing upshot is that our very choice of words to describe racial, ethnic, and religious kinds may subtly communicate to children that these kinds are to be essentialized. We need not say anything negative about these groups—the use of generics or even simply labels may communicate that these are essentializable groups, and so open the door to prejudice.

The contrast between labels on the one hand and verbs and adjectives on the other suggests a possible way of mitigating this effect. In the early days of research on autism, researchers would often speak of “autistics”—using a noun to label this group of people. It came to be thought that this promoted an undesirable way of referring to this group, so researchers were urged to speak of “autistic people”—using an adjective instead. However, this sort of adjective-noun compound is all too easily heard as just another common-noun unit. Nowadays, the preferred locution is ‘people with autism’—a locution which emphasizes that they are people first and foremost, and that autism is just one property among many which they possess. The condition does not define them.⁵²

The role of labels—as opposed to other linguistic devices such as adjectives—in guiding categorization and generalization has been extensively studied in the nonsocial arena. A range of data suggests that labels have an impact on how we categorize and generalize from as young

⁵²For empirical confirmation of the effects of such rephrasing, see C. J. Cunningham, *Illnesses as Labels: The Influence of Linguistic Form Class* (Undergraduate Honors Thesis, University of Michigan, 1999).

as fourteen months of age.⁵³ Interestingly, these effects are only found when the label is clearly presented in a “naming phrase” (for example, ‘A blicket!’ but not ‘Blicket!’), so that the common noun indicates that the item in question belongs to a *kind*.⁵⁴ Further, for infants at least as young as sixteen months, using a description or an adjective (for example, ‘This is blickish!’) in place of a noun does not produce the same effect.⁵⁵ These infants were significantly less likely to generalize a property across perceptually dissimilar items introduced by the same description, as opposed to dissimilar items introduced with the same common-noun labels.

Innovative work by Sandra Waxman has extended these findings into the social realm.⁵⁶ Waxman presented preschoolers with pictures of people of different races and told them that one of the people depicted had a novel property (for example, ‘likes to play a game called “zaggit”’), then asked the children whether they thought the other people depicted would also have the property in question. In the first study, no labels were used, and Waxman found that the preschoolers did not use race as a guide to their attributions. In her second study, however, the person to whom the novel property was attributed was either introduced with a description (for example, ‘this one likes to eat big lunches’) or with an unfamiliar label (for example, ‘this one is a Wayshan’). Waxman found that the children who heard the description were again just as likely to attribute the novel property across racial boundaries as within, but this was not so for the children who heard the label. These children tended not to generalize the novel property across racial boundaries, but rather confined their generalizations to members of the same racial group. Of course these were of necessity rather artificial conditions, but the experiment highlights the impact of labeling—as opposed to merely describing—on preschoolers’ social thinking.

⁵³ Christopher T. Fennell and Sandra R. Waxman, “What Paradox? Referential Cues Allow for Infant Use of Phonetic Detail in Word Learning,” *Child Development*, LXXXI, 5 (September/October 2010): 1376–83; Sandra R. Waxman, “Specifying the Scope of 13-Month-Olds’ Expectations for Novel Words,” *Cognition*, LXX, 3 (April 1999): B35–B50; Sandra R. Waxman and Amy E. Booth, “Seeing Pink Elephants: Fourteen-Month-Olds’ Interpretations of Novel Nouns and Adjectives,” *Cognitive Psychology*, XLIII, 3 (November 2001): 217–42; Sandra R. Waxman and Amy E. Booth, “The Origins and Evolution of Links between Word Learning and Conceptual Organization: New Evidence from 11-Month-Olds,” *Developmental Science*, vi, 2 (April 2003): 130–37.

⁵⁴ Fennell and Waxman, “What Paradox?,” *op. cit.*

⁵⁵ Jean Keates and Susan A. Graham, “Category Markers or Attributes: Why Do Labels Guide Infants’ Inductive Inferences?,” *Psychological Science*, xix, 12 (December 2008): 1287–93.

⁵⁶ Sandra R. Waxman, “Names Will Never Hurt Me? Naming and the Development of Racial and Gender Categories in Preschool-Aged Children,” *European Journal of Social Psychology*, xL, 4 (June 2010): 593–610.

The foregoing discussion suggests that we might consider altering our ways of speaking about race, ethnicity, religion, and so on. Instead of *labeling* a person as *a Muslim*, we might instead *describe* the person—as, say, *a person who follows Islam*, emphasizing that *person* is the relevant kind sortal and that *following Islam* is a particular property that the individual happens to possess. Adopting such a way of speaking and thinking may have some immediate benefits; for example, findings by Carnaghi and colleagues suggest that hearing a member of a familiar social kind described by an adjective rather than a noun can reduce the extent to which adults expect the individual to conform to a stereotype.⁵⁷ It is possible, though, that the real benefits would extend beyond the alteration of the attitudes of adults; the really intriguing possibility would be to decrease the extent to which children in our society grow up essentializing social groups. The empirical results summarized here do not, of course, account for all the factors that lead children to essentialize, nor do they purport to. However, the evidence suggests that the use of labels and generics contributes to essentialization, and so the converse may also hold: reducing the use of labels and generics for racial, ethnic, and religious groups may reduce the extent to which children grow up essentializing these groups.

VIII. CONCLUSION

Depending on one's point of view, this linguistic revisionism may seem more or less appealing. The philosophical literature on race very often centers on the questions of whether racial categories (a) *can* be said to exist and (b) *ought* to be said to exist. Theorists are divided on this latter issue because of a number of complex reasons having to do with broad social, cultural, political, and economic factors.⁵⁸ I will not

⁵⁷ Carnaghi et al., "*Nomina Sunt Omina*," *op. cit.*

⁵⁸ Some excellent examples encompassing a variety of viewpoints include K. Anthony Appiah, "The Uncompleted Argument: DuBois and the Illusion of Race," *Critical Inquiry*, xxii, 1 (Autumn 1985): 21–37; Appiah, "Race, Culture, Identity," *op. cit.*; Sally Haslanger, "Gender and Race: (What) Are They? (What) Do We Want Them To Be?," *Noûs*, xxxiv, 1 (March 2000): 31–55; Charles W. Mills, *Blackness Visible: Essays on Philosophy and Race* (Ithaca: Cornell University Press, 1998); Lucius T. Outlaw, "On W. E. B. DuBois's 'The Conservation of the Races,'" *Bulletin of the Society for African Philosophy in North America*, iv, 1 (1992): 13–28; Lucius T. Outlaw, *On Race and Philosophy* (New York: Routledge, 1996); Ronald R. Sundstrom, "Racial Nominalism," *Journal of Social Philosophy*, xxxiii, 2 (Summer 2002): 193–210; Paul C. Taylor, "Appiah's Uncompleted Argument: Du Bois and the Reality of Race," *Social Theory and Practice*, xxvi, 1 (2000): 103–28; Naomi Zack, *Race and Mixed Race* (Philadelphia: Temple University Press, 1993); and Naomi Zack, *Philosophy of Science and Race* (New York: Routledge, 2002).

For a comprehensive discussion of how some socio-political considerations may interact with cognitive considerations, see Daniel Kelly, Edouard Machery, and Ronald Mallon, "Race and Racial Cognition," in John Doris, ed., *The Moral Psychology Handbook* (New York: Oxford University Press, 2010).

venture a view on these issues here, though of course this proposal will be far more appealing to theorists like Anthony Appiah and Naomi Zack, who have argued that we should eschew racial categories for political, social, and ethical reasons.⁵⁹ Eschewing reference to social kinds, at least by way of labels and generics, may be a direct way to reduce the extent to which we unconsciously teach our children to essentialize.

By comparison with Appiah and Zack, my perspective in this paper has been considerably narrower: I have explored these issues solely from the point of view of cognitive psychology. The best remedy for racial injustice from the political point of view may not be the same as, or even consistent with, the best preventative strategy from the cognitive point of view. To raise just one difficult question: can the members of the aggrieved group operate effectively in the political and cultural arenas without publicly essentializing the group in *positive* ways, thereby paradoxically taking on the risk of reinforcing the very kind of prejudice I have described?

The perspective offered here is not intended as the final word on the matter—nothing could be further from my intent. My aim has rather been to take a small slice of a huge phenomenon and identify some of the contributing cognitive factors. Identifying these contributing cognitive factors leads us to pose the question of how best to alter those factors and thereby combat those aspects of prejudice that arise from “the original sin” of cognition, namely, its primitive tendency to generalize strikingly negative information across the members of highly essentialized kinds.

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⁵⁹ Appiah, “The Uncompleted Argument,” *op. cit.*; Appiah, “Race, Culture, Identity,” *op. cit.*; Zack, *Race and Mixed Race*, *op. cit.*; Zack, *Philosophy of Science and Race*, *op. cit.*