

The Good, the Bad, and the Ugli

Can seemingly incompatible worldviews be hybridized?

KENNETH M. WEISS

We are a divided and perhaps even a dividing society. Whether it's inherent in human nature or a passing trend, we're experiencing a palpable move towards what, for want of a better term, I'll call ideological tribalism. Polarized views across the spectrum of subjects are becoming more fashionable, even though we're in an information age when nuances can easily be seen by anyone. This seems strange because we may be the most educated society in history. Yet, in important aspects of our lives, we seem largely impervious to education. We cling to opinions that may be expressed in terms of facts, but that vary deeply among people viewing the same facts.

In politics, as soon as you voice a view to someone, that person will wonder what color your state is—or what color state you're in (Fig. 1). Are you Red or Blue? In religion, you're a heretic or a believer. In biology, if you question any aspect of Darwinian theory, do you *believe* in evolution? If you're a committed Darwinian, then don't you even *believe* in God? Can you be trusted?

There is widespread division in society, and even within science, over the use of genetic data and evolutionary inferences. What made me

what I am? Is your genome a crystal ball in which can be read your or your *group's* past, future, potentials, and limitations?

Recently, agitation has been particularly stirred by topics that include racial profiling in medicine, racial or geographic ancestry estimation, commercial your-life-on-a-chip predictions from send-away DNA samples, and assertions about the genetic or evolutionary basis of behavior. Special journal issues, commentaries, books, and meetings are being organized to thrash out these issues.^{1,2–9} The media feature these issues every day as well because they relate to subjective perceptions, have policy implications, and, like other kinds of gossip, they sell. Views are sincere, strong, and emotionally held, but polarized, even given that we all have the same facts, if we choose to look at them.

Tribes or factions often represent themselves by some kind of symbolic totem or banner. Here, we can imagine the debate between representatives of two very different takes on genetic and evolutionary anthropology, which we can refer to as the Oranges and the Grapefruits. The dialogue often goes something like this (the scene perhaps starts off calmly enough).

ORANGE: "Science's job is to learn about the real world, which can't be done if we cover up what we find or if we avoid sensitive subjects. The world isn't always going to be what we might wish, and what is *done* with the facts is not our responsibility: it's society's."

GRAPEFRUIT: "I disagree. Actually, scientists *choose* what to study, which, rather than being objective, often cor-

relates with their personal world views. We investigate topics that are convenient for ourselves even if they are less so for others. But society has a right to curtail what is studied and should not be spending funds on research that can hurt people."

ORANGE: "The existence of race is obvious and genetic variation shows that people clearly sort into a few major groups that differ, sometimes quite dramatically, as in skin color. It's clearly sensible to take race into account in medical treatment because race is real."

GRAPEFRUIT: "People are individuals, not categories, regardless of where they are from. Skin color is a misleading visual trait that's only skin deep, and even that isn't so simply distributed around the world if you bother to look carefully. If you know a cause of disease, such as a genetic mutation, you treat *that*, not the person's group. Health disparities are due to socioeconomic circumstances, not genes. Whatever is real, that reality is social."

Now the drama in our scene heightens as, nose to nose, the debating candidates for each view point accusatorily at each other. Voices rise.

ORANGE: "Wrong! Not only are skin color and hair form genetic and partitioned differently but, for the same reason, every other trait will differ among races as well. Even selectively *neutral* variation unambiguously sorts people from different continents.¹⁰ It is foolish to deny that normal traits, not just disease susceptibilities, will be similarly patterned because they reflect the same history. Selection has worked to favor different traits according to

Department of Anthropology, Pennsylvania State University, 409 Carpenter, University Park, PA 16802. E-mail: kenweiss@psu.edu



Figure 1. Red states, Blue states of mind in the 2004 U.S. electoral votes. Source: en.wikipedia.org/wiki/Red_and_Blue_states.

the circumstances in each environment. And that includes intelligence! You Grapefruits may object, but some races are less intelligent on average than others. It's no use denying that there's a wealth of scientific test-score evidence to show it. After all, even if you don't like the word or its measure, there clearly are genetic differences in intelligence among individuals within populations. Natural selection favored intelligence in the northern Eurasian races and their complex societies because these races faced more challenging conditions than tropical Africans did. You dismiss what the evidence actually shows by inventing sociopolitical excuses for every study you don't like. And it's not just black-white differences. The poor aren't as smart as the wealthy either: as prominent geneticists have said for more than a century, natural selection sorts society according to genetic abilities.¹¹⁻¹⁴ This goes back even to Darwin's cousin Francis Galton who, by 1883, had seized on the importance of evolution in human affairs (Fig. 2).¹⁵ We're not bigots, just realists."

GRAPEFRUIT: "That's all absurd! Race is defined socially and society also determines environments. The race categories themselves come and go! Yes, the scientific evidence you cite does exist, but your accep-

tion of the data on its face value is willfully elitist and your citation of the literature highly selective. Those in power create the criteria for "intelligence" and design the tests, which, in effect, guarantees the different scores. Your *post hoc* justification about selection for intelligence in colder climates is silly.

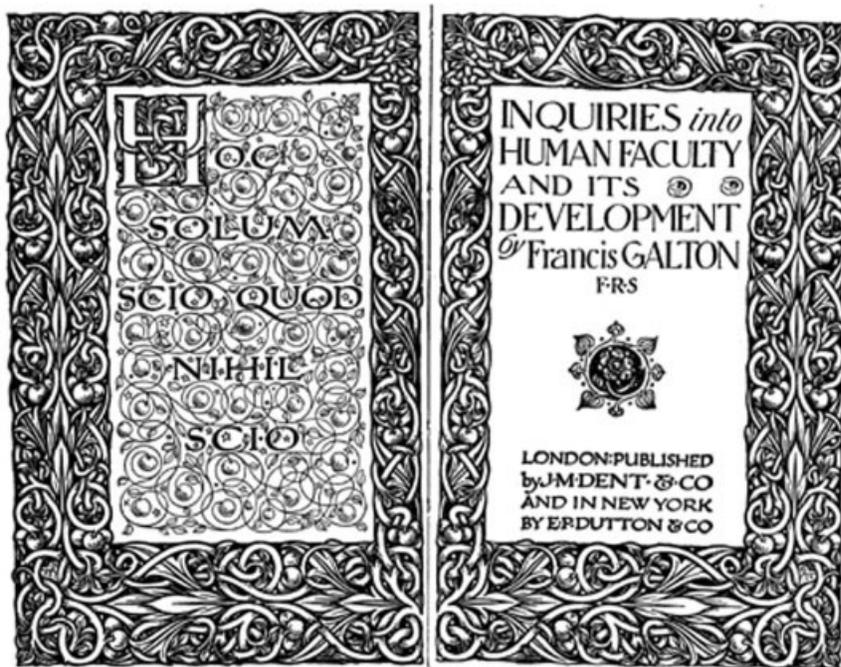


Figure 2. Galton on human inherent traits and variation. Source: <http://galton.org/books/human-faculty/>, where the book is also available.

Human intelligence evolved *first* in tropical Africa. Complex societies have evolved in the tropics, too, as in Mesoamerica. There is no reason that the adaptive advantages of brainpower wouldn't have continued everywhere, Africa included. You're simply a racist. People should be judged individually, not by the average of some assigned group. Evolution involves more than natural selection. And if selection has been so important an explanation, there wouldn't any longer even *be* any poor or dumb people! Besides, the poor or brown out-reproduce the wealthy or white, so if the selection you always invoke to justify your view has been favoring anyone, it's them!"

ORANGE: "Don't call me a racist! That's the desperate tactic of the defeated. Science is a value-neutral tool. It's the role of society to decide what conditions people should be tested for or how they should be treated. And it doesn't stop with intelligence. Genes for addictability, abuse, criminality, risk-taking, sexual preference, and even who you vote for are important to society. Testing and intervention are totally reason-

ble! They evaluate people for what they are, so they can be helped or society protected. You're in wishful-thinking denial!"

GRAPEFRUIT: "It's always those in power who decide what to test for. Criminality is defined in terms of street crimes rather than the social crimes of Wall Street hedge fund managers or car dealers, or genes for social falseness, snobbery, and greed. Those are the real crimes, with victims by the millions, but perpetrated by the class that decides what's nature's way for others."

ORANGE: "Ick! You Grapefruits think like medieval scholastics debating the soul. This is a strictly material world. We're made of molecules—*only* molecules—and especially DNA. They follow the laws of chemistry, which determine the nature of things, life included. Evolution selected our genes. They are molecules that interact with other molecules and they *have* to have predictive value or they couldn't have evolved! You think the world of facts doesn't matter so long as people you happen to favor are favored. And speaking of value judgments, they don't get any more blatant than that!"

GRAPEFRUIT: "Baloney, you're just a smug aristocrat! And it's *you* who are the religious zealots—Darwinian fundamentalists who dare speak for nature. Whatever seems best to you, you *define* as best by attributing it, untestably, to some selection story you make up. Yes, the world may be materialistic but it isn't just a deterministic machine. Probabilism is built into nature, too, from molecular interactions, to mutations, to inheritance, and yes, environments. Molecules only interact in context, and that means environment. Since we usually have little idea what the environmental factors actually are, even after billions of dollars spent, prediction is generally weak, much weaker than you assert, and so is selection, as you'd know if you paid attention to *all* the data. But asserting selection scenarios gives you a big kick out of prying into people's lives, claiming that, in your wisdom, you know what they

really are like, because you know how to run a DNA sequencer."

ORANGE: "You're just denying inconvenient truths, pretending a sense of equality, but you can't hide forever from nature's inherent inequality. You're obsessed to show that nothing makes you what you really are except what? Free will? Say something scientific, for a change!"

GRAPEFRUIT: "Well, you're just asserting a *convenient* truth that allows you to keep your social privilege. You find small quantitative differences based on alleged inherited causation and turn them into "important" social or behavioral categories. You can't resist the temptation to turn any differences into inherent, *genetic* differences. That's the historically predictable outcome of social Darwinism. Sadly, history also shows that you will probably get away with it forever. But if selection were really as effective as you say, there wouldn't *be* any Grapefruits anymore!"

ORANGE: "Hmm. That might be a good idea! I guess nature isn't so perfect after all."

JUST POLITICS

This scene may be fictional but is the tenor of the play of real conversations in a lot of anthropology departments, as well as on the street. One of the most common accusations, levied by each side against the other, is that its arguments have nothing to do with the facts, but are just politics. Finally, something true is said!

Behavior, race, and related subjects are about how society works, how people interact, how material and symbolic resources are distributed. The Oranges think it's fine for resources to be freely accumulated, even if unequally; Grapefruits think they need to be redistributed. Those aren't side issues, they're what politics *is*. Measurements like DNA genotypes may be objective, but neither the subjects of study, the study designs, the implementation, nor the interpretation are totally objective. The problem is not that these areas of investigation are just politics, but views on whether they lead to *unjust* politics.

It is easy to feel self-righteous about one's own view. The good, the bad, and the ugly of both sides are well-represented in society, science, and anthropology. Social justice is a value judgment, neither guaranteed nor prevented by the feline teeth of evolution. Advocates for social justice are often people living far above the equitable leveling they purport to believe in. But some of the strongest defendants of the reality of race or privilege are personally generous and non-discriminating. No one has a patent on virtue.

WHOSE TRUTH IS INCONVENIENT?

These issues came to a visible head recently, when James D. Watson (Fig. 3), co-discoverer of the structure of DNA, was quoted as saying that Africans are genetically inferior to Europeans in intelligence (entertainment.timesonline.co.uk/tol/arts_and_entertainment/books/article2630748.ece). It is useless to give them foreign aid because they could never reach our level of development. His statements came under immediate fire from public officials seeking damage control. In the face of this furor, he quickly apologized, said he hadn't really meant it nor to hurt peoples' feelings. He said there wasn't really any evidence for black intellectual inferiority after all. Of course, the denials weren't credible. He *did* mean it, and has a history of saying similar things. Indeed, his reference to Africans was a euphemism for African *Americans*, because he said anyone who had employed them knew just what he was talking about. Watson *did* refer to evidence. Further, he is by no means the only person of influence who has cited the same evidence: the systematic race-based differences in IQ test scores. The outrage came from those who deny the *cogency* of the evidence and its selective use, not its existence.

Watson said that populations that had been geographically separated over long time periods would have evolved differences. That is a correct statement about any populations or species, and applies to humans



Figure 3. Cold Spring Harbor Laboratory leaders: a laboratory of cultural momentum. A. Charles B. Davenport, author of a book that shouldn't be forgotten,¹³ and B. James D. Watson, author of statements that should (photo taken in 1962). Source: public domain, from the web.

native to different continents. But differences seem much greater when, as is common, humans are represented only by samples chosen from widely separated continents, usually northern Europe, eastern Asia, and western sub-Saharan Africa.¹⁶ In such restricted samples, searches for genetic differences or evidence of genes subject to recent natural selection^{17,18} will, in fact, if not by intent, be interpreted in terms of what each "major" race can be characterized by or what each race was selected to be better or worse at.^{19,20} Yet even authors looking at more diverse and representative samples of human variation arrive at varying conclusions.^{10,21–25}

Interpretations may be discomfiting for those who wish there to be *no* important differences among human groups. Interpretations may threaten their belief that socially or behaviorally achieved differences have no inherent biological basis and deserve to be redressed by social policy. But the belief that behavioral differences are due to social circumstances and discrimination is comparably inconvenient for people who want to hold onto resources for those who are, by nature, they

believe, better qualified. That may be selfish, but many accept the fundamental rightness of market competition and self-interest.

The acidic reaction to Watson's statements reflects the Great Citrus Divide. There was an outpouring of public outrage in the media. But views supporting Watson were common on the blogosphere. It isn't just the subterranean racists who feel that way: there are geneticists and anthropologists who quietly agree that he dared say what is true, no matter how unpopular.

Coming from the Director of the Cold Spring Harbor Laboratory, Watson's statements were especially ironic because that was formerly the Eugenics Record Office, started in 1910 under a notoriously racist director, Charles Davenport (Fig. 3).¹³ Eugenic views then, like Watson's now, were usually stated with detachment, in terms of nature's way, and aimed at human betterment (even if by discriminating against the "unfit").²⁶ Whether the Laboratory's repudiation of its director's statements was sincere or was done to avoid losing funders because of his political incorrectness, Watson was forced to resign.

Watson could be accused of going out of his way to find traits in "them", coldly judging people other than his own tribe and, in that sense, being classically colonialist or racist. But in his plaintive resignation statement he noted that under his leadership the Laboratory had invested in psychiatric diseases that caused human suffering, unfit states that even applied to his own family. So, depending on the fruit you campaign under, you might see him as an undeserving victim of postured outrage because he dared speak the unsavory truth or as a deserving victim of his unsavory elitist view that deficiencies in *his* family deserve help, but not those in the broader human family.

This Great Citrus Controversy won't go away easily. The many meetings being scheduled to discuss it will predictably ratify their attendees' prior positions. On both sides, there is quickness to invoke theory, Darwinian genetic determinism and environmental determinism, respectively. Each tribe wants to be on the side of truth and consistent with nature. Yet there is nothing conceptual in the genetic data, nothing more than details, that has not been well known, at least in principle, for a century or more. We can all see the facts, which are not particularly complicated,^{19,20,27} but most people are impervious to anything beyond their own paradigm of the world.

RESISTING HYBRID VIGOR

The reasons people gravitate to the solidarity of group affiliation are well known to anthropology. But is the heating-up of current divisions just a tempest in a teapot? Does the continued contentiousness reflect inadequacies of science or merely of scientists? Will there be visitations on society if either side prevails? In this Citrus Bowl, Orange and Grapefruit defend points of view by interpreting the data differently. Is one more right than the other? Or is just *your* view right? Or is it *mine*?

Hybrid vigor is a phenomenon well known to experimental breeders and



Figure 4. The taste of reconciliation: Orange, Grapefruit, and their Ugli hybrid.

evolutionary genetics. Oranges and grapefruits can hybridize to make the delicious fruit called the ugli (Fig. 4). But few people seem born to blend, even if hybrid views are often closer to the truth and likely to lead to a more savory society. There are no absolutes, because even the facts—the nature of race, the determinants and even definitions of behavior as well as measures of success—are culturally based. Except, perhaps, for what is clearly pathological, we haven't the technology, and perhaps not even the concepts, to adequately address the meaning of "genetic" for traits like intelligence or temperament, much less to know how they evolved. The reason is that environment begins at conception, and inheritance includes culture.

The situation should be frustrating to anyone who is trying to be an educator, which applies to most readers of *Evolutionary Anthropology*, whatever your state of mind. Can common ground be reached through education? Or are we condemned just to ride the cultural tides?

From Malthus to Darwin and Spencer, through capitalism, geneticists in the eugenics (and Nazi) era to our own Carleton Coon, to Watson today, inequity has been seen as a grim reality, nature's way to make things better. It need not be mean-spirited to state the truth, even for those who have drawn the long straws in life. Yet a similarly long chain of thought, from the Enlightenment idealists to Thomas Huxley, Wallace, Marx, state socialism (and Lysenko), and on to our own Frank Livingstone and egalitarians today,

social equity is a moral imperative. A sense of fairness is deeply built into our nature. The problem is that in neither case is science the Decider. It is not even clear what facts could be found that would make people come to agreement. Yet, perhaps more than any other body of experts, anthropologists are expected to be knowledgeable about these issues: they are *our* issues. But we're as much a fruit salad as society at large. An ugly picture perhaps, yet we can't duck the questions rightly directed our way by those in other fields who turn to us for advice. Isn't that an important reason why universities support anthropology departments?

The existing divisions, like Kroeber's famous dress hemline cycles, seem to reflect the mood of the times, cultural ebbs and flows that nobody can control. And most people, in most times, and even in most professions, seem to be content to stay within their tribe. In a speciated tribalistic world, you're expected to declare your state. Common ground is rarely sought or trusted, despite postured efforts to do so. Many readers will likely be irritated, if not infuriated, even by my attempt here to portray the differing sides of the swell of current issues. Yet we will be called upon. What will we say?

NOTES

I welcome comments on this column: kenweiss@psu.edu. I have a feedback and supplemental material page at http://www.anthro.psu.edu/weiss_lab/index.shtml. I thank Anne Buchanan and John Fleagle for crit-

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