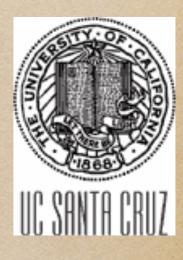
#### Are Races Like Constellations?

- \* Rasmus Grønfeldt Winther
- \* www.rgwinther.com; rgw@ucsc.edu
- \* Department of Philosophy, University of California, Santa Cruz



- \* April 12-13, 2013; UCSC; Public Conference "Genomics and Philosophy of Race" Research Cluster
- \* #GenoPhiloRace

#### "Apportionment of Human Diversity"

Gene	Alleles	Caucasoid	Negroid	Mongoloid
Duffy	Fy	0.03	0.94	O.I
U	Fya	0.42	0.06	0.9
	Fyb	0.56		
Auberger	Aua	0.62	0.64	
	Au	0.38	0.36	
Xg	Xga	0.67	0.55	
	Xg	0.33	0.45	

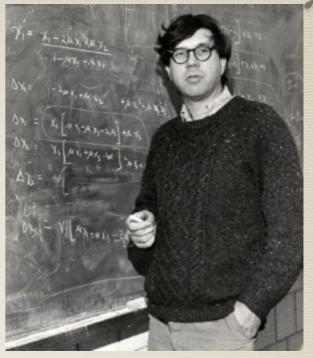
Lewontin 1972

#### "Races" don't exist, genetically

85% of Human Genetic Variation (HGV) is among individuals within populations

10% of HGV is among populations within "races" (continental regions)

5% of HGV is among "races"



Richard Lewontin

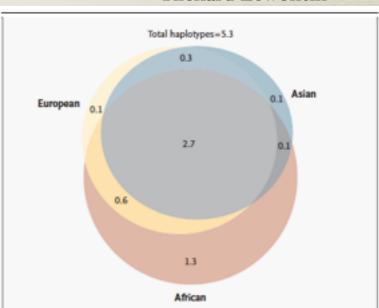
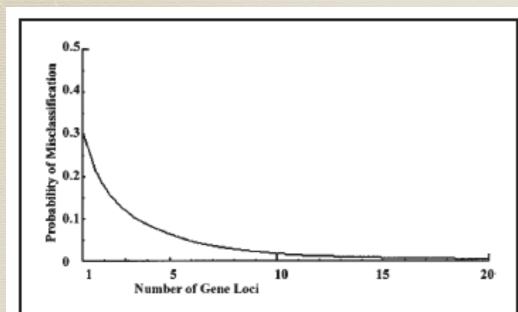


Figure 1. Distribution of Haplotypes According to Continental Population.

Across multiple regions of the genome, an average of 5.3 haplotypes were found in samples drawn from the three major geographic populations. As shown in the diagram, the majority of these haplotypes were shared by two or more of the populations. Adapted from Gabriel et al.<sup>29</sup> with the permission of the publisher.

#### "Lewontin's Fallacy"?



**Figure 1.** Graph showing how the probability of misclassification falls off as the number of gene loci increases, for the first example given in the text. The proportion of the variability within groups remains at 84% as in Lewontin's data, but the probability of misclassification rapidly becomes negligible.



Italy, 1963: standing—Luca and Alba Cavalli-Sforza and three of their children; seated—Hiroko Kimura, Anthony Edwards, Akio Kimura, and Thomas, Catharina, and Ann Edwards. Photograph by Motoo Kimura; reproduced by courtesy of Hiroko Kimura.

Edwards 2003

- \* Each additional locus provides classificatory information
- \* Especially true for loci with significant gene frequency differences across populations/groups/clusters

### Concepts of "race"

	Lewontin	Edwards
Bio-genomic race	?	Yes
Biological race	No	?
Social race	? (Post-racial)	?

## Stage-Setting

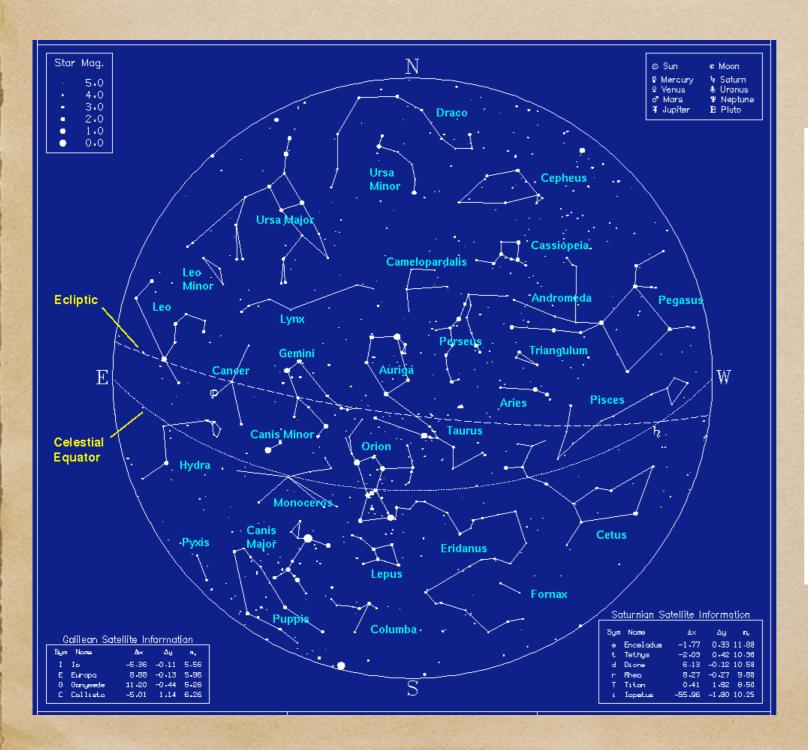
"Human racial classification is of no social value and is positively destructive of social and human relations."

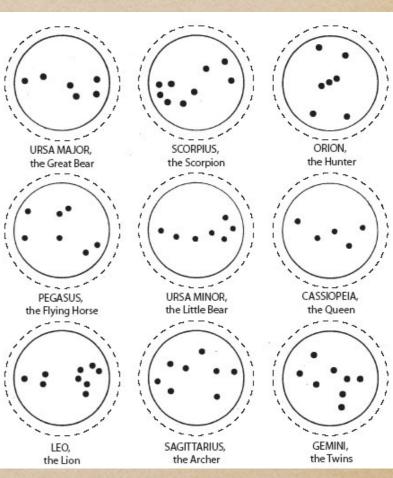
(Lewontin 1972 397)

"But it is a dangerous mistake to premise the moral equality of human beings on biological similarity, because dissimilarity, once revealed, then becomes an argument for moral inequality."

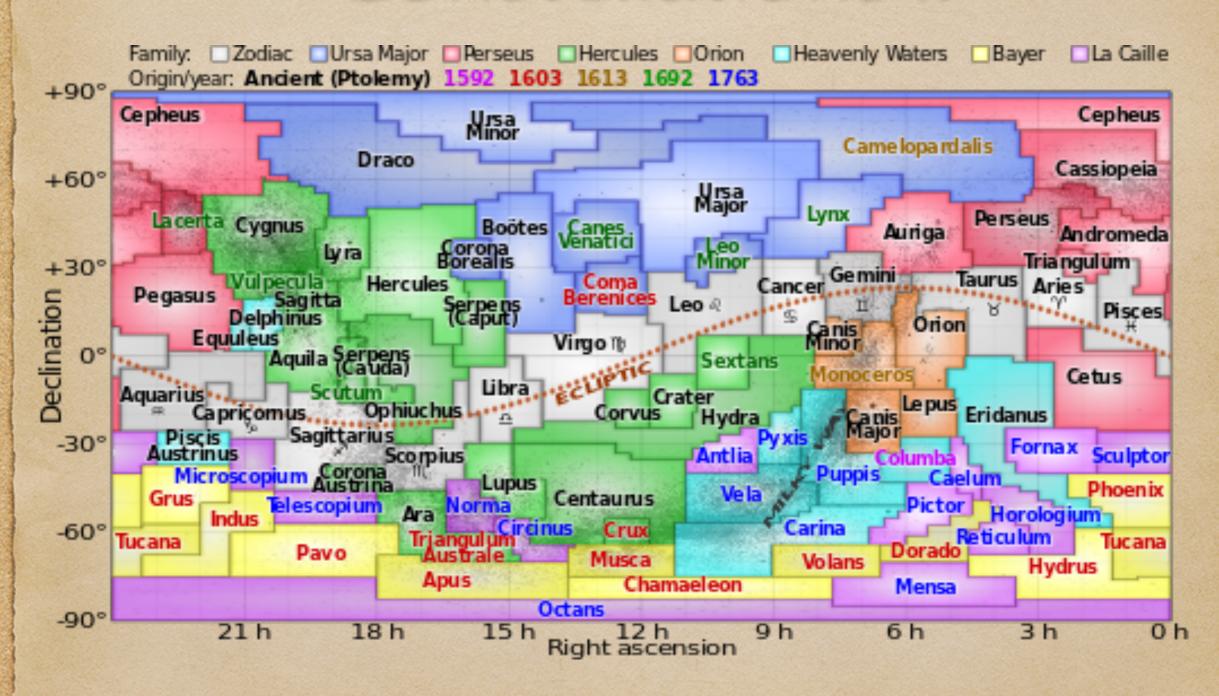
(Edwards 2003 801)

#### Constellations I

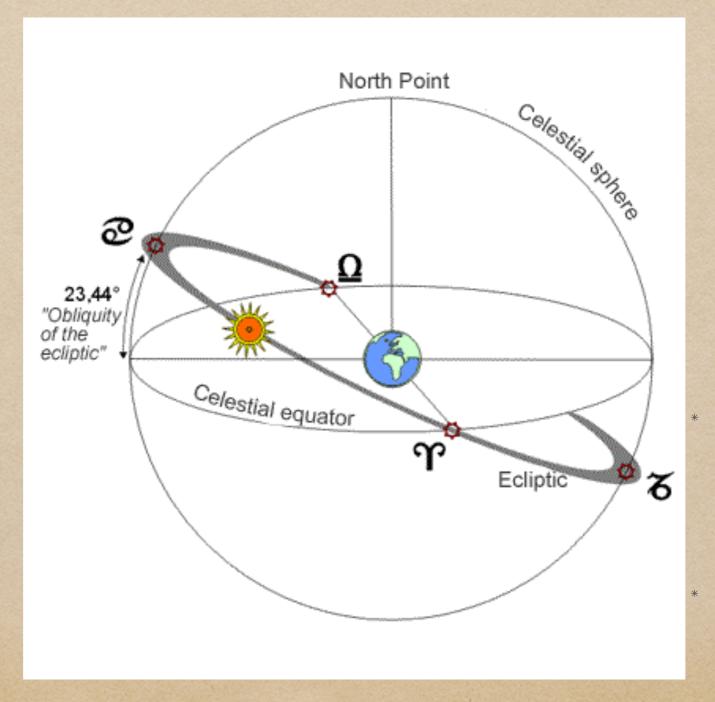




#### Constellations II



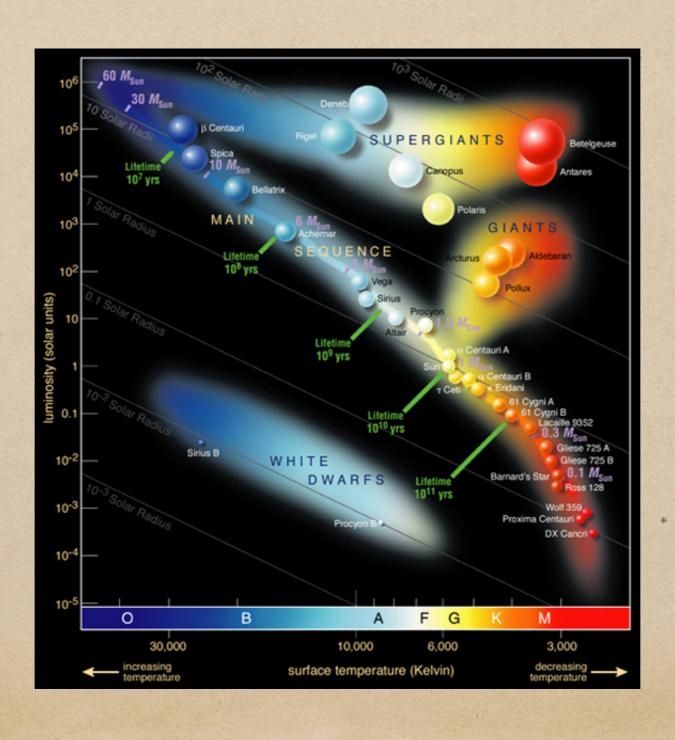
# Methodological Pluralism



Objective frame

Babylonian/ Greek vs. Chinese

## Alternative Classification



Hertzsprung-Russell Diagram

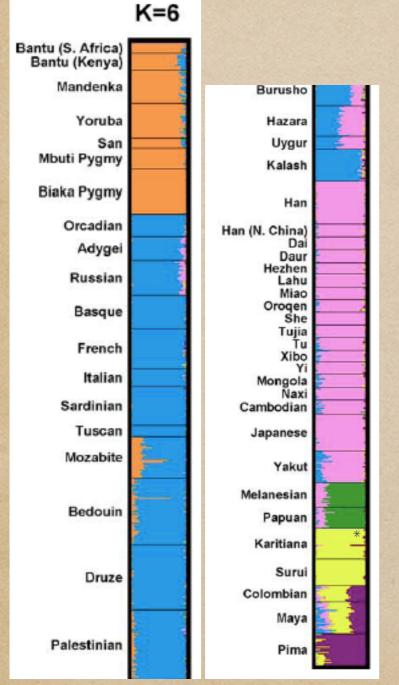
#### Constellation-Race Analogy

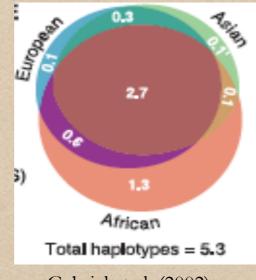
Strategy: explore a value- and politically-neutral area.

#### Analogous Similarities:

- \* Methodological pluralism: varieties of models, criteria, and assumptions.
- \* Some "inherent-structurism" (Hacking 1999) in nature, as framed/measured by us.
- \* Many real classifications. Choice is optional and "conventional."

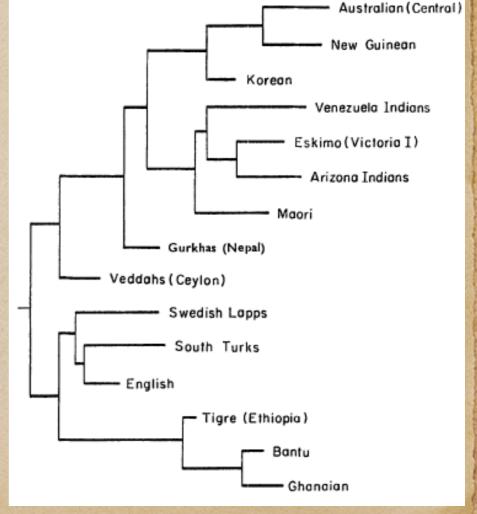
## Methodological Pluralism





Gabriel et al. (2002)

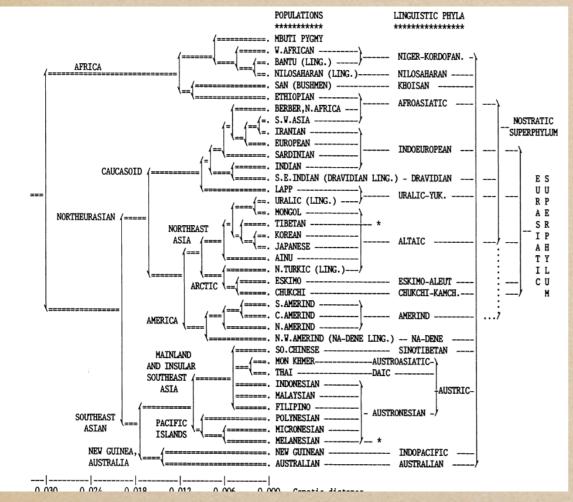
Pluralism of models, criteria, and assumptions.

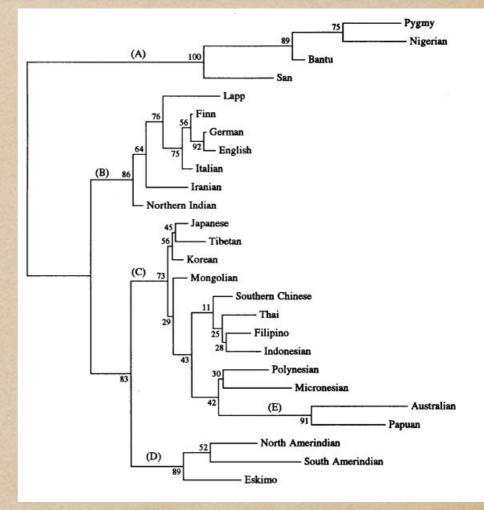


Cavalli-Sforza & Edwards. (1965)

Rosenberg et al. (2005)

## Alternative Classification





Cavalli-Sforza et al. 1988, 1994

Nei & Roychoudhury 1993

 $A(O(E(AsAm))) \neq A(E(Am(AsO)))$ 

A = African; Am = Amerind; As = Asian; E = European; O = Oceanian

# Constellation-Race Analogy Objections

- \* 1. The Objective Galaxies Objection
- \* 2. The Objective Star Types Objection
- \* 3. The Totally Arbitrary Objection
- \* 4. The Irrelevancy Objection

#### Conclusions

- \* Whence the Lewontin-Edwards discourse? Ontological and ethical lessons
- \* The uses (and abuses) of analogy in science and philosophy.
- \* Are races like constellations?

# Acknowledgements

- . IHR & Philosophy Department, UCSC
- . Ned Block
- . Doc Edge
- . Anthony Edwards
- . Ryan Giordano
- . Jonathan Kaplan

- . Richard C. Lewontin
- Carlos López
   Beltrán
- . Sergio Martinez
- . Roberta Millstein
- . Mette Smølz Skau