SOME HYPOTHESES REGARDING PERSONALITY TYPE DISTRIBUTIONS BY CONTINENT

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I was reading Chapter 15 of *Emotional Foundations of Personality* of Kenneth Davis and Jaak Panksepp. They emphasize that we know that Personality traits have high heritability.

I want to return to a theme that has occupied me for some years now, and that is the way in which we ought to understand heritability of various sorts of human traits. The substantial point I will be making is that it is quite easy to be misguided in one's conception of the world if one gets the wrong sort of idea about what heritability means.

I will suggest that scientists involved in these areas, the relation between genetic factors and personality and so on are mostly still under the influence of Francis Galton. Now Galton's ideas were about eugenics and heritability of genius and so on. Most modern people don't like to directly take the Galtonian point of view mostly because Stephen Jay Gould was quite devastating in *Mismeasure of Man* which was a refutation of Herrenstein-Murray's 1994 *Bell Curve* about heritability of intelligence. That's the actual intellectual context that has not disappeared yet.

Let me enter the controversy right here. I think there is a big conceptual mistake that people make all the time whenever 'genetic heritability' is mentioned if they are not wide in their examination of how the world is. The natural tendency is to consider clustering of traits. If you are from France and have been looking at heritability of some trait X and find that you and your ancestors for a thousand years have had variations of the trait with minor variation, let's write this symbolically:

$$X_j = X + \varepsilon_j$$

Let's say you find that the noise $\varepsilon_j \sim N(0, \sigma^2)$ and now you are quite excited and you designate X to be definitely a French trait and you have all sorts of measurements showing so.

The strange thing that might happen is that someone in Thailand was even more enthusiastic about similar trait X' and found that they had a thousand generation and measurements too

$$X'_j = X' + \varepsilon'_j$$

They are even more gushing about trait X' as definitely a Thai trait. And now Thailand has all sorts of superior X' trait that will make the Thais the great tribe and Thai will dominate the world for sure.

This is the sort of situation where you should not be surprised in the least that $|X - X'|$ is quite small and not different enough to have much significant effect.

This is a hypothetical scenario that I will claim that we expect a lot with a lot of heritable traits of human beings. The heritability is high in this hypothetical

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scenario for both, but in this case it's clear than the nationalist fervour was not completely justified.

And the sort of reasons are clear: the French and Thai were literally next door neighbors more than 75,000 years ago in Africa, and were literally part of the same tribe for millions of years and moreover, it so happens that Personality is determined by seven subcortical systems which evolved 245 million years before the Thai and French were cousins in Africa, and these really ancient systems are expressing their phenotypic expression with some variety.

Suddenly the French and Thai are at each others' throats claiming their differences and superiority for trait X or X' and there is an uncanny similarity in the traits.

And that is going to be repeatedly the consequence of highly heritable traits across the oceans.

So what's the error here? It's to assume that heritability assumes that there is no similarity across the groups. Human beings, sharing 99.9% of the letters in our genome, is quite able to handle diversity that is similar across the continents and similar traits showing up with strong heritability checks.

I want to try to examine this sort of situation and to produce some understanding of it. The sort of thing that happens quite often is that some really *ancient* systems are involved and then people having progeny etc. have locally some distribution; at the same time the slightly less ancient cousins across the oceans are also having progeny and the same ancient systems are diffusing in variety similarly and suddenly you have bizarre close distribution of personality features that does not make sense to someone with some standard prejudices about what strong heritability ought to imply.

These sorts of scenarios are not all that rare in humans because the genome is highly regular with 99.9% of same lettering and also because diversifying schemes are going to be quite ancient too because Personality is determined by very ancient systems which have been diversifying away in a robust manner for millions of years.

1. Why Has This Sort of Thing Not Been Central Before?

I think these sorts of variation schemes have simply not been noticed because of not enough global measurements. In a century the exact diffusion models and their local and global behaviour and similarity will be understood precisely. You can't really do Science with theoretical ideas in your mind. And that is what is going on with 'genetic heritability' meaning. The gene is high dimensional and so the theoretical models in our mind are not used to them which like drawing small trees of bloodlines or whatever and jump to generalisations. Actual full genome diversifying techniques ought to have similarities across the world which the theoretical pictures do not represent well.

Lest you think I am theorising, I worked on moral values across the world and found strong regularities where asking 1000 people from arbitrary geography yield similarity in distributions.