

Mystery of Ascia

The Urth list — 38 messages, 11 voices, 20 Jan 2011

<https://urth.darkrealm.vip/thread/urth/5934>

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Andrew Mason — 20 Jan 2011, 21:03

Son of Witz wrote: .

Sure, I suppose I can swallow the asian androgeny bit. Severian describes her eyes as "strangely tilted" and her nose as upturned. ?I think this is more or less safe to say she is asian or Ascian. The tilt would seem strange to him because they seem novel.

She may be Asian, but not Ascian. Wolfe has been quite insistent that Ascians are not Asian - they are North American. Asians are Xanthoderms or from the Xanthic lands.

Son of Witz — 20 Jan 2011, 21:20 · in reply to Andrew Mason

On Jan 20, 2011, at 1:03 PM, Andrew Mason <andrew.mason53 at gmail.com> wrote:
Son of Witz wrote: .

Sure, I suppose I can swallow the asian androgeny bit. Severian describes her eyes as "strangely tilted" and her nose as upturned. I think this is more or less safe to say she is asian or Ascian. The tilt would seem strange to him because they seem novel.

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Hmmm,

Frankly, I think the comment is ass-covering in a PC era.

North Americans could very well be Asian by the time of the story.

Wolfe leans Libertarian. I've heard many a Libertarian express the concern/prediction that China will overtake the US in the near future. Not implausible at all, really.

Clearly, these stand-ins for the "Godless Communists" embodied in Wolfe's life by the asians he combatted. The description and name seems so asian to me I think Wolfe is just back-pedaling in the interview.

And, you know, Wolfe said "Green is Urth" as well, but that is routinely dismissed.

Isn't Halavard from the Xanthic lands? He seems Scandinavian.

David Duffy — 20 Jan 2011, 22:50 · in reply to Son of Witz

On Thu, 20 Jan 2011, Son of Witz wrote:

On Jan 20, 2011, at 1:03 PM, Andrew Mason <andrew.mason53 at gmail.com> wrote:

Son of Witz wrote: .

Sure, I suppose I can swallow the asian androgeny bit. Severian describes her eyes as "strangely tilted" and her nose as upturned. I think this is more or less safe to say she is asian or Ascian. The tilt would seem strange to him because they seem novel.

She may be Asian, but not Ascian. Wolfe has been quite insistent that Ascians are not Asian - they are North American. Asians are Xanthoderms or from the Xanthic lands.

Hmmm, Frankly, I think the comment is ass-covering in a PC era. North Americans could very well be Asian by the time of the story.

Clearly, these stand-ins for the "Godless Communists" embodied in Wolfe's life by the asians he combatted. The description and name seems so asian to me I think Wolfe is just back-pedaling in the interview.

Asians do not have freckles, except a few interesting Chinese families. Severian comments that racial physiognomy and colour are acquired by living on the same continent for long enough.

Cheers, David Duffy.

Lee Berman — 21 Jan 2011, 13:01 · follows David Duffy

Son of Witz: > Why would Wolfe, who does A LOT of intentional linking of phonetically similar names, use the word Ascian for what are essentially a communist metaphor?

Actually, Witz, I think you are on the right track with this. I went through much of the same thought processes you have, though a sticking point was always that I had an intuition from the text that Ascians looked caucasian.

Somewhere I read a Gene Wolfe interview question on this topic and I'm really sorry to report that I can't find it again, despite a concerted effort. But in answering the question, Wolfe said that he meant to set the Ascian nation in what is now the United States because he knew that even this bastion of anti-communist Cold War sentiment could be nudged into socialism under the right conditions. Libertarian even back in the 70's. Sort of a warning, "look this could happen to us if we aren't careful".

It wasn't in the interview, but since reading that, I have guessed that Wolfe chose the name "Ascian" because it is an amalgam of "American" and "Asian" adding the mistake about the equator/no shadow origin later to justify that name.

(p.s. in my searches for the interview I chanced upon a video interview of Gene Wolfe in regard to Wizard/Knight. Am I just hopelessly out of the loop to not have known of this? Amazing, for the first time in my life, to hear him speak. http://www.youtube.com/watch?v=t_mEPLK8cWE)

Adam Thornton — 21 Jan 2011, 13:05 · in reply to Lee Berman

On Jan 21, 2011, at 7:01 AM, Lee Berman wrote:

It wasn't in the interview, but since reading that, I have guessed that Wolfe chose the name "Ascian" because it is an amalgam of "American" and "Asian" adding the mistake about the equator/no shadow origin later to justify that name.

I disbelieve.

One of the things I remember figuring out on a very early reading of the books (although I don't think I read *_Shadow_* until *_Sword_* had already been published, and then I read them all at once), was putting together the clues of "Ascian", who lived in the remote north, to deduce that the action must be south of the Equator, and then that made it very easy to take Ultan's library and assert that Nessus was on the site of Buenos Aires, making Ultan's library Borges's. But then I was also wallowing in Borges at the time.

Adam

Lee Berman — 21 Jan 2011, 20:41 · follows Adam Thornton

I still think a discussion of actual racial features is wrong-headed in a discussion of Ascians. I think the issue is diversity. North America, especially Wolfe's beloved USA has always had a significant population of people with Native American features (which of course are derived from Asian ancestry). Since colonization, there has also been a significant portion of african-american and various european looks along with creole looks from the Caribbean and Latin America and those from the middle east polynesia and direct from Asia.

I think the point of Ascians is not how they look but that they all look the same. Talk the same, think the same, act the same. Right or wrong, that is the fear Wolfe is expressing in regards to communism. Koreans may have looked asian but so did some of Wolfe's fellow soldiers. The sameness is the concern. The lack of diversity.

BTW, someone mentioned Hallvard earlier. His name does sound nordic (and that is a saint name; had to check as I usually do). Interesting is that there is a significant germanic- nordic population to be found in southern S. America. A frequent spot for them to emigrate to as were the northern states in the USA of Wisconsin and Minnesota. I first learned of that from my Argentinian roommate in college, Nikolaus.

Son of Witz — 21 Jan 2011, 21:14 · in reply to Lee Berman

On Fri, January 21, 2011 3:41 pm, Lee Berman wrote:

I still think a discussion of actual racial features is wrong-headed in a discussion of Ascians. ...

[snip]

Yes, we should reel back in. I only brought all that up because of Agia. Severian describes Ascian eyes as "brilliant", "wide", "insane" and "saner". Maybe there is another adjective, but if Agia's were "strangely tilted" it is likely that he would have described them with a reference to Agia.

Without the relation of eyes, there may just be a phonetic association between them. Ascia - Agia (and we could of course throw in Asia here). I don't think that is a particularly strong case though.

I think the point of Ascians is not how they look but that they all look the same. Talk the same, think the same, act the same. Right or wrong, that is the fear Wolfe is expressing in regards to communism. Koreans may have looked asian but so did > some of Wolfe's fellow soldiers. The sameness is the concern. The lack of diversity.

Yes, that is ABSOLUTELY the point, which is why I think it appropriate to link the Ascians with the myth of the Humans who traded their Wild side. It isn't about race AT ALL.

I do not think Wolfe was trying to make a statement about Asians, though I think the suggestions I've laid out are plausible as suggest why he might have called these soulless communists Ascians other than the stated myth.

There is a hot button issue currently about a negative-reinforcement, devaluing parenting philosophy ostensibly practiced by many Chinese-Americans. Current issue of Time is about it. Tiger Parents. Yesterday I was thinking all day about this idea of the AsCians' extreme application of negating an individual's worth, then I came home and was introduced to this Tiger Parenting issue. The combination of the two admittedly non related subjects in my head, though, made for an uber-creepy headspace for a while.

I'm not going to try to describe the methodology, because I barely know anything about it. CNN has a bunch of stuff this week on it. It really seemed, to me, like a philosophy of cutting out a child's wild side.

Lee Berman — 21 Jan 2011, 21:21 · follows Son of Witz

Gerry Quinn wrote (21-01-2011 20:10):

It would be foolish to take a law such as Dollo's as an absolute in any case - but it is a pretty solid general prediction if the conventional theory of evolution is valid.

Antonio Pedro Marques: Not really, since our species is not known for being dependent on biological adaption to the environment in the same way the others are.

There is something to what Antonio says but not only because humans use cultural flexibility to adapt to our environments. It is also because our species is so young. As young as 50,000 years old but no more than 1 million years old depending on how you want to define things. Either way, not long enough for significant evolutionary change to take place, on the level that Dollo's Law requires.

Anyway, Dollo's Law, while insightful, is pretty damn archaic. It was formulated before Mendelian genetics was widely understood. And even 5HoC was written before a couple revolutions in modern understanding of genetics occurred. So Gene Wolfe didn't understand that most shorter term evolution (like in the tens of millions of years) occurs by a shutting off of certain genes, not their loss from the gene pool.

This is one of the reason our genome is mostly composed of "junk DNA". Codes for stuff that doesn't do anything. But the genes are often still there, and sometimes they get accidentally turned on as we see when those rare children are born with a tail or covered in a furry pelt.

Gerry Quinn — 21 Jan 2011, 22:04 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>

Gerry Quinn wrote (21-01-2011 20:10):

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Antonio Pedro Marques:

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Nonsense. Dollo's Law will apply in any situation where selection is sufficient to reduce the presence of certain genes to a very small proportion of the population. It will also apply to a degree when new genes become essentially omnipresent in a population, or at least when new genes start to interact significantly with other genes to the extent that they cannot simply be discarded.

This can and does occur on a timescale that is quite short compared to human evolutionary history.

I gave an obvious example: a tribe of Swedes, relocated to sub-Saharan Africa, will never become identical to the local people there (or more precisely, to their ancestors there, if we assume for simplicity that they started there and moved as a tribe to Sweden), even though they will adapt to the local climate in ways which will probably be similar to a degree. The Swedes have gained and lost genes over time, and the original pattern of genes and corresponding traits will never be replaced. They may turn black, but they will never be the same *shade* of black. This is precisely Dollo's Law in action.

Dollo may have formulated it in terms of large structural changes, but it applies on a smaller scale too.

Anyway, Dollo's Law, while insightful, is pretty damn archaic. It was formulated before Mendelian genetics was widely understood. And even 5HoC was written before a couple revolutions in modern understanding of genetics occurred. So Gene Wolfe didn't understand that most shorter term evolution (like in the tens of millions of years) occurs by a shutting off of certain genes, not their loss from the gene pool.

Gravity was discovered before more modern understandings of it were developed. Does that mean we should throw away the concept?

This is one of the reason our genome is mostly composed of "junk DNA". Codes for stuff that doesn't do anything. But the genes are often still there, and sometimes they get accidentally turned on as we see when those rare children are born with a tail or covered in a furry pelt.

The mechanism of shutting off is completely irrelevant. If a gene is shut off over many generations it is because another gene has changed, or been lost, or gained.

If humans develop tails or fur, they will be different from the tails and fur of our ancestors.

- Gerry Quinn

Son Of Witz: There is a hot button issue currently about a negative-reinforcement, devaluing parenting philosophy ostensibly practiced by many Chinese-Americans. Current issue of Time is about it.

I am married to a Chinese-American and know her family well. I can testify that this is a real phenomenon I have been aware of for some time. A traditional Chinese family is not the place to be if you want compliments. Excellence is expected but not praised. Engage in the slightest bragging and you will be pointedly ignored.

(I've heard it has been changing back in China, esp. on the wealthy coastal areas where the One Child Only policy is actually followed. They tend to treat their one kid in the pattern seen among the Japanese, Asian Indians and American Jews- little prince/princesses.)

Gerry Quinn: The Swedes have gained and lost genes over time, and the original pattern of genes and corresponding traits will never be replaced. They may turn black, but they will never be the same *shade* of black. This is precisely Dollo's Law in action.

Since this topic is not fiction, it is appropriate to say that you are incorrect. It sounds like you are implying that sub-saharan Africans are all the same exact *shade* of black. They aren't. so there is no exact shade for Swedes to return to.

50,000 years is a very short time in evolutionary history and for you to claim that Swedes have lost genes in that brief moment rather than had them shut off is a ridiculous statement to make without doing a full multi-population gene sequencing and comparison of both populations. Nobody would waste the time and money to do such a worthless assay but it doesn't matter. Admixture would do the trick long before genetic adaptation would kick in.

The mechanism of shutting off is completely irrelevant. If a gene is shut off over many generations it is because another gene has changed, or been lost, or gained.

This is an outdated understanding of genetics and organismal development. Expressed traits are now understood to be a function of GRNs (gene regulatory networks). A constellation of genes work in concert and there are what might be seen as genetic on/off switches. Your argument is the same as saying that once a light switch has been turned off in your house it can never be turned on again.

Check any current website on the subject if you don't believe me. Dollo's Law is currently understood as relevant only to major phylogenetic branchings like different classes of vertebrates or even orders of mammals. But certainly not for the minute genetic differences between geographical variants of the very same species (like Swedes and Africans). Anyway, as already noted, where admixture is possible, Dollo's Law becomes completely irrelevant.

Gravity was discovered before more modern understandings of it were developed. Does that mean we should throw away the concept?

This statement really is beneath you. The same sort of blunder as "the sky is blue". But I'll address it anyway. Yes, gravity was discovered a long time ago but that understanding is archaic. We now know that

gravity operates at one level on earth but at very different levels on other planets and negligibly in most parts of the universe. Let's not forget black holes. Nor string theory. Dollo's Law has been updated in its application just like the Law Of Gravity.

Antonio Pedro Marques: But not applicable if congruent selection is halted to begin with.

I'm not sure what you mean by this. Perhaps (based on an earlier comment) you think natural selection is no longer operating on human beings?

If so I would disagree. But I would suggest that human evolution is currently being driven more by the social environment we create for ourselves, rather than the natural, physical environment. Still the time frame is too short to truly know any particular direction we might be heading it. Get back to me in 1 million years and I'll hazard a guess then.

(social natural selection is still natural. Only when it comes to purposeful selective breeding [like dogs] and genetic engineering can we call it artificial selection)

Ryan Dunn — 22 Jan 2011, 01:43 · in reply to Lee Berman

On Jan 21, 2011, at 8:34 PM, Lee Berman <severiansola at hotmail.com> wrote:
50,000 years is a very short time in evolutionary history and for you to claim that Swedes have lost genes in that brief moment rather than had them shut off is a ridiculous statement to make without doing a full multi-population gene sequencing and comparison of both populations. Nobody would waste the time and money to do such a worthless assay but it doesn't matter. Admixture would do the trick long before genetic adaptation would kick in.

Ouch! Why so harsh? Is Berman Swedish? Hehh.

...ryan

Son Of Witz — 22 Jan 2011, 03:36 · in reply to Lee Berman

On Jan 21, 2011, at 5:34 PM, Lee Berman wrote:

Son Of Witz: There is a hot button issue currently about a negative-reinforcement, devaluing parenting philosophy ostensibly practiced by many Chinese-Americans. Current issue of Time is about it.

I am married to a Chinese-American and know her family well. I can testify that this is a real phenomenon I have been aware of for some time. A traditional Chinese family is not the place to be if you want compliments. Excellence is expected but not praised. Engage in the slightest bragging and you will be pointedly ignored.

(I've heard it has been changing back in China, esp. on the wealthy coastal areas where the One Child Only policy is actually followed. They tend to treat their one kid in the pattern seen among the Japanese, Asian Indians and American Jews- little prince/princesses.)

Interesting. thanks for sharing that. It's something I haven't been exposed to.
I'm getting a really strong sense of retro-empathy for a particular Chinese-American fellow

student back in high school. Some things I wondered about his apparent lack of self-esteem when he was constantly trouncing us in the grades dept now seem to make more sense. He never raise his hand in class, always seemed morbidly tense if he had to speak up. I'm wondering now if his parents were Tigers. I'm not one to say such methods are "wrong" but I have a real hard time relating. I don't want to treat my boys like princes who can't do wrong, but I do try hard to build their self esteem and sense of ability to maneuver in the world.

Jeff Wilson — 22 Jan 2011, 04:14 · in reply to Lee Berman

On 1/21/2011 7:34 PM, Lee Berman wrote:

The mechanism of shutting off is completely irrelevant. If a gene is shut off over many generations it is because another gene has changed, or been lost, or gained.

This is an outdated understanding of genetics and organismal development. Expressed traits are now understood to be a function of GRNs (gene regulatory networks). A constellation of genes work in concert and there are what might be seen as genetic on/off switches.

Who are you and what have you done with the real Lee Berman?!

Seriously guys, despite Lee's fast and loose style in association of literature with mythology, everything Les says about biological fact in this post agrees with my understanding of the subject as of the exhaustive consultations I arranged with multiple authorities including two working experimental researchers in the genetic engineering field and an editor of several of the field's professional journals on the occasion of GURPS BIO-TECH about four years back.

And perhaps more remarkable, Lee's comments on Chinese parenting agree with lots and lots of passages in the autobiographical fiction of Amy Tan and the autobiography of Wen Ho Lee, two prominent Chinese Americans. (Wen Ho is also a fellow Ag, who emigrated and went to grad school at Texas A&M about a decade after Wolfe.)

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Lee Berman — 22 Jan 2011, 04:34 · follows Jeff Wilson

Ryan Dunn: Ouch! Why so harsh? Is Berman Swedish? Hehh.

LMAO, nah, something much worse. Anthropologist. But there is an anthro-linguistic principle called "code switching". Roughly means, "people understand you best when you speak in their dialect". I don't really like being harsh, but sometimes the need to communicate supersedes.

Son o' Witz: I'm getting a really strong sense of retro-empathy for a particular Chinese-American fellow student back in high school. Some things I wondered about his apparent lack of self-esteem when he was constantly trouncing us in the grades dept now seem to make more sense.

Yep, sounds a lot like my brother-in-law.

I'm not one to say such methods are "wrong" but I have a real hard time relating. I don't want to treat my boys like princes who can't do wrong, but I do try hard to build their self esteem and sense of ability to maneuver in the world.

I also prefer to not judge (as much as possible, I am a creature of my own culture).

Anthropology helps.

Both the Tiger Parent and Little Prince/Princess family strategy makes sense if they are viewed as

originating in a society with a rigid caste system. In the lower to middle classes, the best strategy

is "be humble and do your best to honor the family". For the upper classes it makes sense to raise your kids to feel they deserve only the best, to accept nothing less. The message for all is basically "know your place". Some sort of caste system is always necessary in an overcrowded society. Too much competition over carefully portioned resources is bad for everyone. Like the Commonwealth (heh, had to get a Wolfe reference in somehow).

A healthy mix of discipline and self-esteem building is probably the best parenting strategy in a society like ours where there are rules to follow but also moderate opportunity for advancement. I think so anyway since that's how I raise my kids. (Berman helpful hint of the day- be strict with your kids when they are young and loosen the reins when they become teens. Most kids raised this way will start to parent themselves, gradually given the freedom to do so).

Gerry Quinn — 22 Jan 2011, 05:48 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>
Gerry Quinn:

The Swedes have gained and lost genes over time, and the original pattern of genes and corresponding traits will never be replaced. They may turn black, but they will never be the same *shade* of black. This is precisely Dollo's Law in action.

Since this topic is not fiction, it is appropriate to say that you are incorrect. It sounds like you are implying that sub-saharan Africans are all the same exact *shade* of black. They aren't. so there is no exact shade for Swedes to return to.

Don't be absurd. Obviously we are simplifying the situation slightly for convenience in discussion, but the fact is that this hypothetical Swedish tribe will never recover all the traits of their African ancestors. They will have a unique and probably easily recognisable genotype and phenotype. Do you seriously doubt it?

50,000 years is a very short time in evolutionary history and for you to claim that Swedes have lost genes in that brief moment rather than had them shut off is a ridiculous statement to make without doing a full multi-population gene sequencing and comparison of both populations. Nobody would waste the time and money to do such a worthless assay but it doesn't matter. Admixture would do the trick long before genetic adaptation would kick in.

A full paragraph of obfuscation. Just to adress the essentially irrelevant points before I go on to the relevant matters... (1) 50000 years or 2000 generations is in fact a quite substantial time in human evolutionary history, and it is rather obvious that significant genetic changes have taken place in human populations over such timescales. (2) As gene sequencing technology becomes cheaper and the information from it becomes more pertinent, it is probable that an increasing

number of studies will be done, unless they are prevented by those opposing the gathering of this type of information for whatever reason. (3) We specified that our hypothetical population was isolated so your talk of admixture is irrelevant.

Now to the relevant points. In the first place, I never claimed that the Swedes have necessarily lost genes (although it is almost certain that they have). It may well be that most of the gene changes have been in regulatory genes which control genes that directly affect phenotypical traits, and it is conceivable - though unlikely - that genes have only been gained but never lost.. Even in the unlikely event that all this is the case, genes are still genes, and regulatory genes gained or lost are still genes gained or lost. .

Even if we pretend (however unlikely) that no genes were lost and only regulatory genes gained, and if we pretend that adaptation to a return to Africa will strongly favour the lost genes, it is surely quite obvious that (in accordance with Dollo's Law) there is no reasonable probability of the original pattern being restored.

In fact, even if we ignore genetic drift within Homo Sapiens lineages, current thinking is that 1-4% of the genetic heritage of European and Asian populations come from outcrossing with the subspecies Homo Neanderthalensis. If this is so, your case is completely destroyed. But even if it isn't, you are clearly incorrect.

The mechanism of shutting off is completely irrelevant. If a gene is shut off over many generations it is because another gene has changed, or been lost, or gained.

This is an outdated understanding of genetics and organismal development. Expressed traits are now understood to be a function of GRNs (gene regulatory networks). A constellation of genes work in concert and there are what might be seen as genetic on/off switches. Your argument is the same as saying that once a light switch has been turned off in your house it can never be turned on again.

There is nothing outdated about it - I was simply pointing out that the genetic equivalent of light switches over many generations are genes themselves. (Over just a few generations they could be epigenetic factors.) If you like, a regulatory network that has evolved over 50000 years is itself a complex constellation of genes which will never be recovered by natural selection, even if the environment is restored to the environment of 50000 years ago.

Check any current website on the subject if you don't believe me. Dollo's Law is currently understood as relevant only to major phylogenetic branchings like different classes of vertebrates or even orders of mammals. But certainly not for the minute genetic differences between geographical variants of the very same species (like Swedes and Africans). Anyway, as already noted, where admixture is possible, Dollo's Law becomes completely irrelevant.

Dollo's Law is clearly generalisable to minor traits. For all I know there may be another name for it in such cases, or it may be that the sites you consulted provide an inadequate briefing on the issue; it is irrelevant either way. Admixture is also irrelevant to the hypothesis under discussion, although it might indeed be relevant to the issue of "natural types of countries" - one could hypothesise that if an invading population interbreeds with a native population, the better-adapted native traits will tend to predominate. Indeed, this does I suppose provide a rationale for the possibility of 'natural country types' in some cases - precisely because it provides a mechanism for escaping Dollo's Law.

Gravity was discovered before more modern understandings of it were developed. Does that mean we should throw away the concept?

This statement really is beneath you. The same sort of blunder as "the sky is blue".

Just because I didn't bother to remonstrate with you doesn't mean I accept your assertion that the sky is pink, or green, or whatever colour you claim it is.

But I'll address it anyway. Yes, gravity was discovered a long time ago but that understanding is archaic. We now know that gravity operates at one level on earth but at very different levels on other planets and negligibly in most parts of the universe. Let's not forget black holes. Nor string theory. Dollo's Law has been updated in its application just like the Law Of Gravity.

But apples still fall, and Dollo's Law still applies. Modern theories may explain them better, but the reality remains as it always was. The ancients knew nothing about how the scattering of electromagnetic radiation by dust particles is affected by wavelength, yet they could see that the sky is blue. And that apples fall. Dollo's Law is an observation of more recent times, but none the less eternally true for that, so long as the biological world to which it applies persists.

- Gerry Quinn

Jeff Wilson — 22 Jan 2011, 06:25 · in reply to Gerry Quinn

On 1/21/2011 11:48 PM, Gerry Quinn wrote:

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Well, a bit less than half the time it's black, and a bit less than that it's mostly blue of some shade. The remaining time is mostly reds and oranges, but there are definite attested and documented times for all of the above.

Likewise, gravity has remained the phenomenon of most unsupported material objects accelerating toward the earth, but the existence of the force supposed to cause this has come into serious question during the past century. It's still treated as a force for simplicity since it involves acceleration of mass, but the most peculiar geometric abstraction behind Einsteinian gravity is unlike anything else my physics text calls a force.

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Lee Berman — 22 Jan 2011, 13:11 · follows Jeff Wilson

Gerry, I just can't maintain that tone you prefer to communicate in for paragraph after paragraph. So I'll just gently mention a few corrections of your last post for whomever might be following then let it drop.

(1) 50000 years or 2000 generations is in fact a quite substantial time in human evolutionary history, and it is rather obvious that significant genetic changes have taken place in human populations over such timescales.

The sort of evolutionary change from which Dollo's Law was formulated takes 10's of millions of years. Humans and chimpanzees share 98% of the same genetic code. This amount of change is currently estimated to have taken around 18 million years.

The huge amount of genetic difference many people assume exist among modern *Homo sapiens sapiens* is largely an illusion perpetrated by dietary and other environmental differences, clothing and hair style differences, and a xenophobic bias which pushes us to exaggerate visual differences, probably an ancient tribal recognition trait.

Swedes and Africans were not genetically separated for 50,000 and thus are even closer than the 99.998% similarity that time frame suggests. Walking seems like slow transportation but given thousands of years it works quite well to provide a genetic continuity across our entire species. And anywhere you can walk or boat, you can walk or boat back.

Some think of Swedes as "pale skinned, blonde and blue eyed" but the majority are not of this stereotype. Genes for dark coloration remain fully available there.

As a thought experiment, let's pretend an experimenter grabbed a random sample of 1000 babies from the different races and sub-races around the globe that people (though not scientists) say they recognize. All those babies are raised in an isolated commune with the same diet, sunlight exposure, clothing, hairstyle etc. As adults, this commune would not have recognizable "races". It would demonstrate a single species with slight gradations of diversity, which is what the world population of humanity is, from a genetic perspective. It is only when you focus exclusively on extremes and ignore gradations and environmental and cultural differences that genetic "races" can be "clearly" identified.

In fact, even if we ignore genetic drift within *Homo Sapiens* lineages, current thinking is that 1-4% of the genetic heritage of European and Asian populations come from outcrossing with the subspecies *Homo Neanderthalensis*.

There has been much debate in the past 50 years but the current majority opinion is that *Homo neanderthalensis* (proper nomenclature= genus capitalized, species lower-case) was, as that name implies, a different species than *Homo sapiens sapiens*. Meaning there was no interbreeding. Neanderthals originated in Africa then spread out as far as Europe. Later, *Homo sapiens* evolved in Africa and spread out even further.

It is just hypothesis. There is no way to know, without experimentation, whether *Homo sapiens* and neanderthals 1. could not produce offspring (like humans and chimps)* or 2. could only produce sterile mules (like horses and donkeys) or 3. actually could interbreed with viable offspring.

It doesn't matter. If "neanderthal genes" are present in the *Homo sapiens* gene pool they have been spread across our species, not concentrated in Europe or something like that. In the real world of the human species you can't ignore admixture. It part of who we are. We see "races" through a current snapshot of humanity around the globe. But 10,000 years ago that snapshot would have looked a lot different. In 10,000 years that snapshot will look very different again. These differences will have occurred without significant genetic changes.

The occasional (might be 1 in 10 million) dark baby born to light parents in Sweden or pale baby born to dark parents in Africa and the even rarer occasion of a baby born with a tail

demonstrates that the genetic potential of our ancestors remains in our genome, waiting to be turned on, whether by accident, or perhaps someday, by necessity.

*(the main reason humans and chimps cannot interbreed is not genetic dissimilarity but chromosomal differences [different number]. I don't know if it has ever been tried but if these species attempted to interbreed, the chromosomes would not match up properly during fertilization to allow a viable embryo to form)

entonio at gmail.com — 22 Jan 2011, 13:55 · in reply to Lee Berman

No dia 2011/01/22, às 13:11, Lee Berman <severiansola at hotmail.com> escreveu:

*(the main reason humans and chimps cannot interbreed is not genetic dissimilarity but chromosomal differences [different number]. I don't know if it has ever been tried but if these species attempted to interbreed, the chromosomes would not match up properly during fertilization to allow a viable embryo to form)

This is more properly the reason why mules are sterile - their maternal and paternal chromatids don't line up for meiosis. When populations become too dissimilar to interbreed, it's usually down to mechanics and gametal attachment incompatibility before chromosomal organisation. The latter of course matters because for a viable diploid organism about half the genome has to be deactivated, but there's some margin there (aneuploidy syndromes show some of the results when that's not possible).

But generally speaking I think these discussions are spurious. Again, observational data is usually solid. Explanations for it are ephemeral and one shouldn't count on them to understand the Books.

Gerry Quinn — 23 Jan 2011, 02:11 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>
Gerry Quinn wrote:

(1) 50000 years or 2000 generations is in fact a quite substantial time in human evolutionary history, and it is rather obvious that significant genetic changes have taken place in human populations over such timescales.

The sort of evolutionary change from which Dollo's Law was formulated takes 10's of millions of years. Humans and chimpanzees share 98% of the same genetic code.

This amount of change is currently estimated to have taken around 18 million years.

Dollo's Law was formulated before the days of molecular genetics, but it is easily generalised. Essentially it is a statement about the irreversibility of evolution, and its truth or otherwise can be observed on any scale on which one cares to look, including evolutionary changes taking place over quite short timescales. The key issue is irreversibility.

Your 98% figure is essentially meaningless. From human to chimpanzee is a considerable difference, at least according to criteria which would be considered important by humans and chimpanzees. If by some definition, the genetic difference is only 2%, all it proves is that 2% is a huge difference, and much smaller differences would be important.

What matters is not the numeric value, as measured by whatever criterion, but the net effect on phenotype.

The huge amount of genetic difference many people assume exist among modern Homo sapiens sapiens is largely an illusion perpetrated by dietary and other environmental differences, clothing and hair style differences, and a xenophobic bias which pushes us to exaggerate visual differences, probably an ancient tribal recognition trait.

Certainly some people exaggerate the difference between races (or whatever other paradigm they use to describe genetic differences among populations). On the other hand, it is equally true that many people - including not a few scientists - falsely minimise these differences, presumably taking the view that interracial harmony is more important than scientific truth. It's by no means obvious that their lies (or at least statements carefully designed to mislead) do indeed lead to interracial harmony, though.

Swedes and Africans were not genetically separated for 50,000 and thus are even closer than the 99.998% similarity that time frame suggests. Walking seems like slow transportation but given thousands of years it works quite well to provide a genetic continuity across our entire species. And anywhere you can walk or boat, you can walk or boat back.

In the first place, your figure of "99.998% similarity" is both wrong and irrelevant.

In the second place, you seem to be setting a lot of store by the fact that geographically separated populations may not be completely separated. Absence of complete separation does not in any way preclude genetic drift between populations. The most obvious counterexamples are 'ring species':

From Wikipedia:

In biology, a ring species is a connected series of neighboring populations, each of which can interbreed with closely sited related populations, but for which there exist at least two "end" populations in the series, which are too distantly related to interbreed, though there is a potential gene flow between each "linked" species. Such non-breeding-though-genetically-connected "end" populations may co-exist in the same region thus closing a "ring".

Ring species clearly give the lie to your notion that the possibility of occasional interbreeding eliminates the possibility of significant genetic drift.

Another thing giving the lie to it was mentioned already - the existence of human populations with considerably different phenotypes side by side - e.g. Pygmies and larger peoples.

As a thought experiment, let's pretend an experimenter grabbed a random sample of 1000 babies from the different races and sub-races around the globe that people (though not scientists) say they recognize. All those babies are raised in an isolated commune with the same diet, sunlight exposure, clothing, hairstyle etc. As adults,

this commune
would not have recognizable "races". It would demonstrate a single species
with slight
gradations of diversity, which is what the world population of humanity
is, from a
genetic perspective. It is only when you focus exclusively on extremes and
ignore
gradations and environmental and cultural differences that genetic "races"
can be
"clearly" identified.

Are you seriously proposing that the genetic heritage of these children would somehow disappear? Adopted children of different racial origin from their parents are commonly reared in their parents community. They don't develop all the phenotypical features of their adoptive parents!

In fact, even if we ignore genetic drift within Homo Sapiens lineages,
current thinking is that 1-4% of the genetic heritage of European and
Asian
populations come from outcrossing with the subspecies Homo
Neanderthalensis.

There has been much debate in the past 50 years but the current majority
opinion is that
Homo neanderthalensis (proper nomenclature= genus capitalized, species
lower-case)
was, as that name implies, a different species than Homo sapiens sapiens.
Meaning
there was no interbreeding. Neanderthals originated in Africa then spread
out as far
as Europe. Later, Homo sapiens evolved in Africa and spread out even
further.

The new research was in the news lately. Here's a link to a news report:
<http://news.bbc.co.uk/2/hi/science/nature/8660940.stm>

Of course it might be proven incorrect, but what it says is exactly what I stated.

It is just hypothesis. There is no way to know, without experimentation,
whether Homo sapiens
and neanderthals 1. could not produce offspring (like humans and chimps)*
or 2. could only
produce sterile mules (like horses and donkeys) or 3. actually could
interbreed with viable
offspring.

It doesn't matter. If "neanderthal genes" are present in the Homo sapiens
gene pool they
have been spread across our species, not concentrated in Europe or
something like that.

The research indicates where they have spread, and where they have not. Specifically, they found the Neanderthal genes in French, Chinese and Papuan populations, and not in San or Yoruba populations from sub-Saharan Africa.

The occasional (might be 1 in 10 million) dark baby born to light parents
in Sweden or pale
baby born to dark parents in Africa and the even rarer occasion of a baby
born with a tail
demonstrates that the genetic potential of our ancestors remains in our
genome, waiting to

be turned on, whether by accident, or perhaps someday, by necessity.

Yes, but the genes of a dark-skinned baby from Swedish stock, while they will probably lead to the expression of melanin of some kind, will probably be different in some ways to the genes currently expressed by the various dark-skinned races. They are likely to lead to the production of different kinds of melanin in different proportions. Like I said, a tribe of Swedes that moved to Africa would eventually grow dark skinned, but they would look different from nearby tribes. There is no 'natural country type'. Irreversibility of evolution (the generalised principle of Dollo's Law) says so.

- Gerry Quinn

Lee Berman — 23 Jan 2011, 04:16 · follows Gerry Quinn

Gerry, I wasn't going to continue this thread but you seem so intensely interested in the subject, which is my field of speciality, I'm willing to give it one last try if the List does not have major objections. This is contingent on the idea that you really are interested in learning something about this field from me. It may be that you are not interested and consider me an unsuitable instructor because of our differences in interpreting Gene Wolfe. It may be that you want to win this argument, feeling the enjoyment of being the mathematician who has schooled the anthropologist in basic anthropology. If this is the case, I understand and we can let it drop.

Gerry Quinn — 23 Jan 2011, 06:15 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>

Gerry, I wasn't going to continue this thread but you seem so intensely interested in the subject, which is my field of speciality, I'm willing to give it one last try if the List does not have major objections. This is contingent on the idea that you really are interested in learning something about this field from me. It may be that you are not interested and consider me an unsuitable instructor because of our differences in interpreting Gene Wolfe. It may be that you want to win this argument, feeling the enjoyment of being the mathematician who has schooled the anthropologist in basic anthropology. If this is the case, I understand and we can let it drop.

I'm certainly interested in learning, Lee, whether from you or anybody else. I hope however that "learning something about the field from me", does not mean taking you as some sort of unchallengeable authority on all subjects connected to anthropology.

That is not intended as any sort of insult - I would not take all Albert Einstein's views on physics as gospel either. I merely note that neither authority nor democracy are optimal criteria for determining scientific truth. Point to the observations and the theories they prove, and I hope I will be convinced to a degree appropriate to their force.

- Gerry Quinn

Lee Berman — 23 Jan 2011, 14:07 · follows Gerry Quinn

Gerry Quinn: I'm certainly interested in learning, Lee, whether from you or anybody else.

Okay, then I am willing to give it one last go-around. It occurred to me that is the trait of discussion were kidney shape or histone frequency or other non-visible items it would be a less politically/culturally loaded discussion. Among visible human features, surely none is more subject to biased thinking than skin color. But perhaps this can be turned to an advantage. So, I'll try an alternate route to understanding.

I have often heard the mistaken notion that the human race is moving toward homegeneity in skin color (usually from liberal-leaning thinkers). The idea is, "Someday we'll all be the same golden brown color; like Brazilians!" The mistake is due to an errant understanding of both molecular and population genetics. Which is understandable in the general population.

The thinking must be that the genes for pale nordic skin and the dark brown african skin of Brazilian ancestors have somehow been lost in the "blending" process of making a golden brown babies. All one needs to do is go to Brazil to learn the mistake of this.

When two golden brown skin Brazilian people people mate, their children's skin color can be in a range from "white" to "black". Nothing has been lost. So it will remain, generation after generation in Brazil and the world. Discounting a global eugenics movement, killing all pale white and dark black babies, our human future involves retained diversity in skin color not homegeneity.

The same principle applies to the rassenkreis or "ring species" you mention Gerry. As long as there is mating capability possible among all adjacent sub-species in the ring, any and all genes present in the population can and likely will be shared and not lost. That's why a rassenkreis population are all considered members of the same species though certain individuals, if artificially brought into contact, cannot interbreed.

The same principle applies to your Neanderthal genes example. San people are found to not have Neanderthal genes due to their extreme isolation. But the capacity for that population to absorb Neanderthal gene has not been lost. Perhaps Dr. Sorensson's after-research tryst with !X?H?? did that very thing. (the symbols represent those cool click sounds in the Khoi-san languages). As long as the possiblity of admixture exists, Dollo's Principle does not apply.

Thus for your hypothetical isolated Swedes in Africa population. First, as was discussed in a previous post, Native Swedes have likely not lost the genetic capability for extremely dark skin. It is just turned off. But even if, by some quirk of genetic drift, your sample population of Swedes HAD lost that gene, it wouldn't matter.

As long as Swedes remain human beings they have not lost the potential for admixture and the expression of dark skin. As your Neanderthal article demonstrates, even two closely related but different species of humans retain the potential to share genes (1-4%). As long as this potential remains, (even at .0001%) Dollo's Principle is null and void.

Perhaps, after 20 million years, if your isolated Swedish population remained completely isolated, they might

became a new species. Once this species became so different that there was 0.00% possibility of viable mating with Homo sapiens, ONLY then could the ratchet effect of Dollo's principle come into play. For Dollo's law to apply to your Swedes they would have to cease being human (in which case I think it would be fair to stop calling them Swedes. How about Eloi?...Morelocks?).

And the key issue here is that Wolfe/Severian is asserting that on Urth, beings spread across different continents and even different planets are still considered human. Thus no Dollo.

Gerry Quinn — 23 Jan 2011, 19:16 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>
Gerry Quinn:

Okay, then I am willing to give it one last go-around. It occurred to me that is the trait of discussion were kidney shape or histone frequency or other non-visible items it would be a less politically/culturally loaded discussion. Among visible human features, surely none is more subject to biased thinking than skin color. But perhaps this can be turned to an advantage. So, I'll try an alternate route to understanding.

It was never about skin colour. [Nor is skin colour especially susceptible to biased thinking, in my opinion. The notion that those who believe in racial differences are hypnotised by an obsession with skin colour is a popular straw man which has little basis in truth.]

I concede that my use of the term Dollo's Law to cover general principles of evolutionary irreversibility was incorrect. Dollo's Law appears to be used only in the context of single complex traits of a certain kind. However, I still think a form of evolutionary irreversibility will apply such that there can never be a "natural country type".

Even if all individual traits are recoverable, a particular constellation of traits may be statistically unrecoverable.

What I am saying is that there will be numerous possible valid adaptations to the conditions pertaining within a region, and the particular adaptations selected will depend both on the local conditions, and on the genetic history of the evolving group (and undoubtedly on other things, too). So, my hypothetical Swedish tribe migrating to Africa would develop a unique appearance; they would adapt to increased solar radiation, but not in exactly the same way as other groups living in the same place have adapted. By the same token, a tribe of Yoruba migrating to Sweden would, after adaptation, still look noticeably different from the current Swedish population.

That doesn't mean that Swedes don't have genes in their population - whether omnipresent but suppressed by regulatory genes or simply at low frequency - for dark skin, flat noses, curly hair, and any other traits that may be adaptive in tropical conditions. It means that even if Swedish versions of such genes are enhanced in the population, they won't be exactly the same versions in the same proportions that are enhanced in other populations. Maybe there are even some Neanderthal genes that proved useless in Sweden but in conjunction with other genes would become frequent in such a transplanted population.

When two golden brown skin Brazilian people mate, their children's skin color can be in a range from "white" to "black". Nothing has been lost. So it will remain, generation after generation in Brazil and the world. Discounting a global eugenics movement, killing all pale white and dark black babies, our human future involves retained diversity in skin color not homogeneity.

I agree. My argument does not depend on certain genes being unique to certain races.

The same principle applies to your Neanderthal genes example. San people are found to not have Neanderthal genes due to their extreme isolation. But the capacity for that population to absorb Neanderthal gene has not been lost.

Neither the San nor the Yoruba peoples have been especially isolated. Both throughout history have had considerable interaction with other populations. Yet the Neanderthal genes have not been observed in them. This is clear evidence that occasional gene transfer does not lead to genetic homogeneity. (I would guess that Neanderthal genes probably *are* present in some individuals, but have not been selected for in the populations, so remain at low concentrations.)

Perhaps, after 20 million years, if your isolated Swedish population remained completely isolated, they might become a new species.

But it would not take so long for them to become a new race, nor would occasional outcrossing prevent it.

Once this species became so different that there was 0.00% possibility of viable mating with Homo sapiens, ONLY then could the ratchet effect of Dollo's principle come into play. For Dollo's law to apply to your Swedes they would have to cease being human (in which case I think it would be fair to stop calling them Swedes. How about Eloi?...Morelocks?).

And the key issue here is that Wolfe/Severian is asserting that on Urth, beings spread across different continents and even different planets are still considered human. Thus no Dollo.

But also no natural country (or planetary) types, for reasons to do with evolutionary irreversibility, even if not precisely that aspect of it observed by Dollo.

Indeed, Wolfe himself gives an example in 5HoC. The Sainte Croix populace display a similarity of features - their "planetary face" - due not to conditions of Sainte Croix but to their ancestry in a particular, relatively homogenous group of colonists. [There are of course, "gypsies and criminal tribes" who look different, and among whom the descendants of the native Annese, or at least those who took on human appearance, are undoubtedly to be found.]

- Gerry Quinn

Lee Berman — 23 Jan 2011, 23:50 · follows Gerry Quinn

Gerry Quinn: I concede that my use of the term Dollo's Law to cover general principles of evolutionary irreversibility was incorrect.

I think it makes intuitive sense. Mixing up gene combinations is essential for survival of a gene line allowing organismal adaptability. Sexual creatures do it, but even most asexual organisms, including bacteria, have various means of swapping genetic material with each other.

Irreversibility is a huge evolutionary red flag. It will most often lead to extinction. If a gene line finds itself on an irreversible path of change it is a huge risk (since the original form was obviously a successful one in a given environment- changed environments usually change back). So irreversibility is a rare exception while reversibility is the rule.

It was never about skin colour. [Nor is skin colour especially susceptible to biased thinking, in my opinion. The notion that those who believe in racial differences are hypnotised by an obsession with skin colour is a popular straw man which has little basis in truth.]

Perhaps I've been dense about the undertones of this discussion but I'm not really sure what you mean by "those who believe in racial differences" and the lack of importance of skin color. What IS important to those who believe in racial differences?

So, my hypothetical Swedish tribe migrating to Africa would develop a unique appearance; they would adapt to increased solar radiation, but not in exactly the same way as other groups living in the same place have adapted. By the same token, a tribe of Yoruba migrating to Sweden would, after adaptation, still look noticeably different from the current Swedish population.

What I think you continue to miss is that there is no "exactly the same way" groups of humans adapt. There was no "original color" of Africans. There was always and will always be a range. The color range of Africans today is not the color range of Africans 50,000 years ago. And it will be a different range, 50,000 years hence.

If you took a sample tribe of Swedes and isolated them *in Sweden* or did the same for a group of Yoruba *in Africa* and gave them 1 million years of (hypothetical of course) complete isolation both groups would differ significantly from their non-isolated neighbors of the both past and that future.

Your hypothesis is staged under unnatural conditions. Under natural conditions, admixture is an essential part of the composition of a gene pool. Even for bacteria. It reduces irreversibility, which is necessary as explained above.

A gene pool is a dynamic thing, in constant motion and change. It sounds like you are arguing that

a bear walking around the woods can never be in exactly the same spot, to the nanometer, with the exactly same set of atoms composing its body. And the answer to that would seem to be, "so what?"

Are you arguing the bear isn't the same bear because it walked a few meters over and took a dump?

That doesn't mean that Swedes don't have genes in their population - whether omnipresent but suppressed by regulatory genes or simply at low frequency - for dark skin, flat noses, curly hair, and any other traits that may be adaptive in tropical conditions. It means that even if Swedish versions of such genes

are enhanced in the population, they won't be exactly the same versions in the same proportions that are enhanced in other populations.

Are noses, hair shape and other tropical adaptive traits, the ones which are more important than skin color to those who believe in racial differences?

There isn't such a thing as a "Swedish version" of a gene. While gene pools are mercurial, genes are not.

Changing one single base code among tens of millions on the gene for insulin is what makes people diabetic.

Genes are copied faithfully person to person. Mutations are almost always harmful.

A given gene expresses itself differently based on the other genes on a chromosome it happens to share, on

the combinations of genes on other chromosomes of the organism, on the development and environment and

diet of the organism, etc.

Think of the skin color of each human being as a result of throwing 100 dice simultaneously.

The dice

remain the same. It is the vast array of possible combinations which provide different results.

The exact

combination really doesn't matter. Does it matter whether a certain skin shade of, let's call it 450, is the

result of 100 sixes in one individual and 50 sixes in another? No, the outward expression of color 450

is all that matters.

And the presence of ones, two, threes etc. on the dice remain the same, generation after generation no matter

how they are mixed in a particular generation. Selection may shut off a particular numeral for a while, but it is

still there on the die, hidden from view, ready to turn on again one day.

However, I still think a form of evolutionary irreversibility will apply such that there can never be a "natural country type".

I don't understand what you are arguing. If evolution were irreversible wouldn't that argue FOR a "natural country type"?

Lee Berman — 24 Jan 2011, 04:02 · follows Lee Berman

Gerry, I later realized I can answer two of my questions to you myself. When you mention "those who believe in race" you are referring to sort of a polarizing notion in anthropology on whether there is any scientific basis to the idea of race.

Some argue that all the "obvious" demarcations of race have to do with visual appearance and little to do with genetic analysis so "race" is an artifact of biased perceptions and exaggerations

of the importance of physical appearance, which has little scientific value.

Others argue there are a few genetic markers that sort of separate the races but the obvious evidence is...well, LOOK at us! We are different. Anyone can see it.

My opinion is pretty much the same as for all controversial issues. There is validity to both arguments. Homo sapiens may be not be a "ring species" but our species could be described as "star-shaped". The arguments back and forth are simply whether more of our essence is to be found in the points of the star or the middle of it. Not an important argument for me. A star has both a middle and points.

The other was your assertion of "no natural country (or planetary) types". I remember now someone brought up epicanthic folds as a cold weather adaptation. With the argument that any cold weather region would select for these folds.

Maybe you are noting that "asian eyes" are found in tropical Asian areas and this is your inspiration for "Dollo's Law", feeling that epicanthic folds have become "locked in" to Asian populations. (they haven't, of course. Any illusion of this is caused by thinking that what exists now will exist forever.)

Light skin is a different cold weather (low light actually) adaptation found in Europe more than Asian populations. And we know that European immigrants to the tropics tend to retain that light skin in their offspring. Same thing for big noses. Europe more than Asia. Again, nothing is locked in. Plenty of individuals in Europe with light skin, blue eyes and epicanthic folds. Likewise many asians have round eyes, big noses and skin in various shades.

My advice on this issue is to not place too much stock in the genetic cross-section of humanity that we see now. True understanding of population genetics requires many generations of study. To think we really understand the nature of the human species by what we can find now would be as silly as taking a video of Gerry Quinn's day from rising in the morning to sleeping at night, then taking one still shot from that 17 hour video and saying, "This is Gerry's day! All we need to know".

The human gene pool is in motion, over many thousands of years. The star keeps changing shape. The reality of it, the essence, is not what exists at any given moment but the totality of it, from origin to extinction.

James Wynn — 24 Jan 2011, 15:02 · in reply to Adam Thornton

Lee Berman -

It wasn't in the interview, but since reading that, I have guessed that Wolfe chose the name "Ascian" because it is an amalgam of "American" and "Asian" adding the mistake about the equator/no shadow origin later to justify that name.

Wolfe has said in an interview that the Ascian (as-kee-an) / Asian false association never occurred to him at the time of writing but acknowledged that it was a reasonable inference for a reader to make. The idea was that most people of the Commonwealth thought the Ascians were from the equator and had no idea that they were from much further north.

Of course, the name also implies that they are in darkness ("no shadow"); rejecting the light of the New Sun.

u+16b9

Lee Berman — 24 Jan 2011, 16:24 · follows James Wynn

James Wynn: Wolfe has said in an interview that the Ascian (as-kee-an) / Asian false association never occurred to him at the time of writing but acknowledged that it was a reasonable inference for a reader to make. The idea was that most people of the Commonwealth thought the Ascians were from the equator and had no idea that they were from much further north. Of course, the name also implies that they are in darkness ("no shadow"); rejecting the light of the New Sun.

Thanks James. It is interesting and good to know that Wolfe's idea for the name Ascian had only to do with the equator-dwelling mistake and not with Asia or America.

I would disagree that the name implies dwelling in darkness. Being shadowless at the equator implies one is in such direct, overhead sunlight that no shadow is formed.

This might agree with a current hypothesis I (and I think some others) are exploring: that the New Sun is actually the thing most desired by the rulers of the Ascians, Erebus and Abaia. The one thing these monstrous, immortal, ocean-bound creatures would fear most is Ragnarok, the ultimate winter, with frozen oceans and frozen atmosphere. (remembering that, per Ash, in the future of ice, and unlike Ushas, most of Urth's humanity is saved).

To meander a little, I picture Ascia as a well-lit place. Few trees, few shadows. Everything chopped down to make fields and farms for agricultural communes. Apollonian/sun god society- everything based on order and rules and proper forms and proper speech. Forests are Dionysian places.

Contrast this with the Jungle Sorcerers. They prefer to live in shade and shadow. No agriculture. Their society is based on individual ability, magic and trickery. Even the formal test they set up for Severian is a sham. Cheating and trickery was inherent in it. Decuman had a blowgun dart and the sorcerers had their spears and claws to assure that Severian would be killed if Decuman's mysticism didn't work. They admire Severian greatly for his (not really his) trick of using the slug.

Hm...you know...it just occurs to me...It is part of my growing hypothesis that Hethor (the true boss of the partnership) never wanted to kill Severian, just test his abilities. Could the slug have been used by Hethor BECAUSE Severian was in real danger of losing and being killed by the jungle sorcerers? The timing is awfully suspicious to think the slug was intended to kill Severian.

You could argue that Agia wanted to kill Severian herself. But was she the real boss? Anyway she had numerous

real opportunities to kill him herself on his journey. Or capture him and torture him for weeks, then kill him.

She was riding a flying peryton that could have grabbed him at any time (as it did to rescue him from the evzones).

But she never did try to kill him, finding excuses not to, each and every time.

(Agia does slap Severian, tearing his cheek. This could be a mythological reference to the ancient goddess

Achlys, daughter of Nyx)

James Wynn — 24 Jan 2011, 16:41 · in reply to Lee Berman

James Wynn: The idea was that most people of the Commonwealth thought the Ascians were from the equator and had no idea that they were from much further north. Of course, the name also implies that they are in darkness ("no shadow"); rejecting the light of the New Sun.

Lee-

I would disagree that the name implies dwelling in darkness. Being shadowless at the equator implies one is in such direct, overhead sunlight that no shadow is formed.

Well, I think the term is ironic, but I get why you don't.

(Agia does slap Severian, tearing his cheek. This could be a mythological reference to the ancient goddess

Achlys, daughter of Nyx)

Hmmm...what a nice obscure reference. I like it!

u+16b9

Son of Witz — 24 Jan 2011, 18:06 · in reply to Lee Berman

On Jan 24, 2011, at 8:24 AM, Lee Berman <severiansola at hotmail.com> wrote:

I would disagree that the name implies dwelling in darkness. Being shadowless at the equator implies one is in such direct, overhead sunlight that no shadow is formed.

It's "Magical" reasoning, like blinding the Cock that Crows the sun. So, No Shadow = No Light. It doesn't compute rationally, only in terms of magical symbolism.

Son of Witz — 24 Jan 2011, 18:10 · in reply to Lee Berman

On Jan 24, 2011, at 8:24 AM, Lee Berman <severiansola at hotmail.com> wrote:

Hm...you know...it just occurs to me...It is part of my growing hypothesis that Hethor (the true boss of the partnership) never wanted to kill Severian, just test his abilities. Could the slug have been used by Hethor BECAUSE Severian was in real danger of losing and being killed by the jungle

sorcerers? The timing is awfully suspicious to think the slug was intended to kill Severian.

Exactly.

Hethor spurs him on more than anything else. The Circle of the Sorcerors and the slug is a good example of that. And the Salamander provides a good distraction for his escape, even though he blunders right into engaging with it.

Hethor is also morally repugnant to Severian, as he contextualizes him with the group that takes an unhealthy pleasure from the executions. This perverse enjoyment is repulsive to Severian, giving him more reason to put torture behind him.

Dan'I Danehy-Oakes — 24 Jan 2011, 20:36 · in reply to Son of Witz

Son of Witz wrote:

I would disagree that the name implies dwelling in darkness. Being shadowless at the equator implies one is in such direct, overhead sunlight that no shadow is formed.

It's "Magical" reasoning, like blinding the Cock that Crows the sun.

So, No Shadow = No Light.

I agree; the Ascians are the "people who live in darkness" despite living in the brightest sunlight of the Old Sun, which is the sun of darkness.

(I wonder whether there are any surviving Ascians in Ushas -- we are only shown a very small bit of the new world, after all.)

Dan'I Danehy-Oakes

Lee Berman — 24 Jan 2011, 20:52 · follows Dan'I Danehy-Oakes

Son O'Witz: It's "Magical" reasoning, like blinding the Cock that Crows the sun.

So, No Shadow = No Light.

Dan'I Danehy-Oakes: I agree; the Ascians are the "people who live in darkness" despite living in the brightest sunlight of the Old Sun, which is the sun of darkness.

I don't have an objection to this interpretation. My main point is that if the shadowy, jungle-dwelling, individualist sorcerers are against the coming of the New Sun, it may be that their opposites, the brightly-lit, field-dwelling, communistic Ascians and their bosses may be for it.

Ah, probably not such an important point, anyway.

Gerry Quinn — 25 Jan 2011, 17:13 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>

Gerry Quinn: I concede that my use of the term Dollo's Law to cover general principles of evolutionary irreversibility was incorrect.

I think it makes intuitive sense. Mixing up gene combinations is essential for survival of a gene line allowing organismal adaptability. Sexual creatures do it, but even most asexual organisms, including bacteria, have various means of swapping genetic material with each other.

Irreversibility is a huge evolutionary red flag. It will most often lead to extinction. If a gene line finds itself on an irreversible path of change it is a huge risk (since the original form was obviously a successful one in a given environment- changed environments usually change back). So irreversibility is a rare exception while reversibility is the rule.

That may be to individual genes or structures over short timescales (with large changes over long timescales Dollo's Law does apply and irreversibility is the rule, not the exception). It cannot reasonably be expected to apply to particular patterns or constellations of traits, because the number of possible patterns is enormous, and few environments impose selective pressures so

strong as to preclude all but one possibility.

It was never about skin colour. [Nor is skin colour especially susceptible to biased thinking, in my opinion. The notion that those who believe in racial differences are hypnotised by an obsession with skin colour is a popular straw man which has little basis in truth.]

Perhaps I've been dense about the undertones of this discussion but I'm not really sure what you mean by "those who believe in racial differences" and the lack of importance of skin color. What IS important to those who believe in racial differences?

I was merely responding to your assertion that "among visible human features, surely none is more subject to biased thinking than skin color". Race is (almost) invariably identified by multiple traits, of which skin colour is just one. [I seem to recall some so-called research in which skin colour was used as the sole proxy for race, but I suspect these studies were for the most part bogus science intended for propaganda purposes.]

So, my hypothetical Swedish tribe migrating to Africa would develop a unique appearance; they would adapt to increased solar radiation, but not in exactly the same way as other groups living in the same place have adapted. By the same token, a tribe of Yoruba migrating to Sweden would, after adaptation, still look noticeably different from the current Swedish population.

What I think you continue to miss is that there is no "exactly the same way" groups of humans adapt.

How can I be "continuing to miss" exactly what I am saying???

There was no "original color" of Africans. There was always and will always be a range. The color range of Africans today is not the color range of Africans 50,000 years ago. And it will be a different range, 50,000 years hence.

If you took a sample tribe of Swedes and isolated them *in Sweden* or did the same for a group of Yoruba *in Africa* and gave them 1 million years of (hypothetical of course) complete isolation both groups would differ significantly from their non-isolated neighbors of the both past and that future.

Well, that is certainly so. But do you doubt that if you took a tribe of Swedes and a tribe of Yoruba, and isolated each under isolated conditions, they would, even after adapting well to the local environment, look different? [Indeed, I think if you took two tribes of each, you would end up with four distinguishable peoples.]

That is an example of irreversibility, although it is not an example of Dollo's Law. I think such irreversibility is the rule, not the exception.

Your hypothesis is staged under unnatural conditions. Under natural conditions, admixture is an essential part of the composition of a gene pool. Even for bacteria. It reduces irreversibility, which is necessary as explained above.

Most scientific experiments are conducted under unnatural conditions, and most thought experiments even more so. It does not render them invalid. Here we are conducting a thought experiment with regard to the determination of a "natural country type". The theory of "natural country types" would predict that the two or four tribes in our gedanken would come to look alike.

Also, you have an exaggerated idea of the extent to which occasional gene transfer acts to induce homogeneity in a population, whether natural or experimental. The failure to detect Neanderthal genes among Yoruba and San is an example of how substantial inhomogeneity can persist and grow within a single species.

That doesn't mean that Swedes don't have genes in their population - whether omnipresent but suppressed by regulatory genes or simply at low frequency - for dark skin, flat noses, curly hair, and any other traits that may be adaptive in tropical conditions. It means that even if Swedish versions of such genes are enhanced in the population, they won't be exactly the same versions in the same proportions that are enhanced in other populations.

Are noses, hair shape and other tropical adaptive traits, the ones which are more important than skin color to those who believe in racial differences?

Along with skin colour, they are among the most commonly known signifiers of race, certainly. (Specialists such as forensic anthropologists will recognise many more.)

There isn't such a thing as a "Swedish version" of a gene. While gene pools are mercurial, genes are not. Changing one single base code among tens of millions on the gene for insulin is what makes people diabetic. Genes are copied faithfully person to person. Mutations are almost always harmful.

Not true. Here, for example, is Wikipedia on the subject of alleles:

"It is now appreciated that most or all gene loci are highly polymorphic, with multiple alleles, whose frequencies vary from population to population, and that a great deal of genetic variation is hidden in the form of alleles that do not produce obvious phenotypic differences."

We may safely assume that certain alleles are common in Sweden and rare in Africa, and vice versa.

However, I still think a form of evolutionary irreversibility will apply such that there can never be a "natural country type".

I don't understand what you are arguing. If evolution were irreversible wouldn't that argue FOR a "natural country type"?

No, quite the opposite! Consider a population that is adapted to country A, then moves to country B and adapts to it. Now assume they move back to country A, in which conditions have not changed. If there is a natural country type, they should revert to their original form. If evolution is irreversible, that cannot happen.

- Gerry Quinn

Gerry we are a bit closer to understanding on these issues. I misunderstood what you were getting at with "natural country type". I thought you meant there could be no prevalent variation of a gene in a certain region. Now I understand you are arguing that there is more than one possible adaptation that can help a population to live in a given environment. And of course that is true. Large body size, Hunter's response, brown adipose tissue, epicanthic folds, large nose, light skin; all these have been argued as cold weather adaptations in humans and a given population in a cold environment can have any of them (though I don't know of any which have all of them in high frequency).

A couple misunderstandings on your part:

Genes are copied faithfully person to person. Mutations are almost always harmful

Not true. Here, for example, is Wikipedia on the subject of alleles: "It is now appreciated that most or all gene loci are highly polymorphic, with multiple alleles, whose frequencies vary from population to population, and that a great deal of genetic variation is hidden in the form of alleles that do not produce obvious phenotypic differences.">

First it should be understood that "allele" is not a synonym for "gene". An allele is defined as a gene variant. Second it should be understood that "phenotype" refers to the outward expression of a gene.

So, Wikipedia is saying that there can be a lot of gene variation where the difference doesn't DO anything. This relates to the idea of "junk DNA". If a gene is not expressed, it is not subject to natural selection. It can just sit there and be copied or mutated from generation to generation and it doesn't matter.

With certain traits which don't have a selection pressure on them, like eye color or blood type, there are various alleles like blue/brown or A-B-O. But for stuff that matters, like the code for insulin or the code for having 5 fingers alternate alleles (diabetes and 6 fingers) are selected against and are rare.

But this is not what we are talking about. We are talking about high frequency genes which have obvious phenotypic effects and which are subject to selection and, as a result, show regional variation in frequency like skin color (btw, there is probably no adaptive advantage to blue eyes and blonde hair; they are just accidental by-products of the gene for low melanin production in the dermis). There is no "African" melanin or "Swedish" melanin or "Turkish" melanin or whatever. It is the same pigment in all humans (and many other animals as well). There is no irreversible variant of melanin that will make one population of humans forever different than others.

Anyway, those are just side issues. The main issue you are not getting is that there can be no inherent "irreversibility" of gene frequency within a species. By definition it is not possible because the potential for admixture exists. With admixture and selection, any particular gene in a

regional
population of a species can go from 0% to 100% and back to 0% as long as the gene exists
somewhere
on earth for that species.

You can't argue that artificially isolating a group of Swedes and a group of Africans in a cage for
infinity years constitutes an example of Dollo's Law of irreversibility. It makes no sense. A
scientific
law must describe what happens in nature. It must have an element of predictability. For your
experiment
to create irreversibility your caged individuals must become different species. So different that
there is
never a possibility of interbreeding. This has already been discussed and it must be understood
or there is
no point in discussion.

I get the impression you were hoping Dollo's Law might make it impossible for lighter skinned
people to
ever look like their African ancestors even if global warming turns the whole planet into a
tropical
rain forest or something like that. It just isn't the case. As long as we remain one, potentially
interbreeding species, it is possible for the whole of humanity to end up falling anywhere in the
range of
the spectrum of variability. We could all become light skinned, all dark skinned, all curly haired,
all
straight haired, all blue eyed, all brown eyed, etc.

I think Chances are highest that our diverse genome will maintain a diverse outer appearance
but there is
no way to know what the future selection pressure will be. No way to know which genes will get
turned on
which will get turned off nor in what frequency. But as long as we remain one species there is
no
irreversibility.

antonio at gmail.com — 25 Jan 2011, 22:03 · in reply to Lee Berman

No dia 2011/01/25, ?s 20:24, Lee Berman <severiansola at hotmail.com> escreveu:

So, Wikipedia is saying that there can be a lot of gene variation
where the difference doesn't DO
anything. This relates to the idea of "junk DNA"

No, they are saying that there
may be different alleles which produce a similar phenotype. They are talking about expressed
DNA. It's not a matter of having a couple of different bases which make no difference on the
result. The coded proteins may differ in structure yet not in function.

Lee Berman — 25 Jan 2011, 22:56 · follows antonio at gmail.com

Antonio: No, they are saying that there may be different alleles which produce a
similar phenotype. They are talking about expressed DNA. It's not a matter of
having a couple of different bases which make no difference on the result. The coded
proteins may differ in structure yet not in function.

I understand what you are saying but it is a different question being addressed.

The Wikipedia quote Gerry cited was:

"a great deal of genetic variation is hidden in the form of alleles that do not produce obvious phenotypic differences."

We are talking about a principle of natural selection and evolution. Natural selection can only act on phenotype. And if there is no "obvious difference" between two phenotypes the difference is invisible to natural selection.

Gerry Quinn — 26 Jan 2011, 01:27 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>

Gerry we are a bit closer to understanding on these issues. I misunderstood what you were getting at with "natural country type". I thought you meant there could be no prevalent variation of a gene in a certain region. Now I understand you are arguing that there is more than one possible adaptation that can help a population to live in a given environment. And of course that is true. Large body size, Hunter's response, brown adipose tissue, epicanthic folds, large nose, light skin; all these have been argued as cold weather adaptations in humans and a given population in a cold environment can have any of them (though I don't know of any which have all of them in high frequency).

Exactly. Different peoples migrating to a country would have different genetic capacities for such adaptations; combined with random chance this would result in various possibilities, rather than a specific type that would be forced by the conditions of a particular country.

A couple misunderstandings on your part:

There isn't such a thing as a "Swedish version" of a gene. While gene pools are mercurial, genes are not. Changing one single base code among tens of millions on the gene for insulin is what makes people diabetic. Genes are copied faithfully person to person. Mutations are almost always harmful

Not true. Here, for example, is Wikipedia on the subject of alleles: "It is now appreciated that most or all gene loci are highly polymorphic, with multiple alleles, whose frequencies vary from population to population, and that a great deal of genetic variation is hidden in the form of alleles that do not produce obvious phenotypic differences."

First it should be understood that "allele" is not a synonym for "gene". An allele is defined as a gene variant. Second it should be understood that "phenotype" refers to the outward expression of a gene.

An allele is a gene variant, yes, originating presumably in a mutation. Alleles vary from population to population. Alleles which are frequent in Sweden but rare elsewhere can

reasonably be described as Swedish versions of genes.

So, Wikipedia is saying that there can be a lot of gene variation where the difference doesn't DO anything. This relates to the idea of "junk DNA". If a gene is not expressed, it is not subject to natural selection. It can just sit there and be copied or mutated from generation to generation and it doesn't matter.

Wikipedia is saying nothing of the sort. They are not talking about junk DNA.

With certain traits which don't have a selection pressure on them, like eye color or blood type, there are various alleles like blue/brown or A-B-O. But for stuff that matters, like the code for insulin or the code for having 5 fingers alternate alleles (diabetes and 6 fingers) are selected against and are rare.

What makes you think there is no selection pressure on blood types or eye colour? As for insulin, the insulin molecule itself is a small peptide which seems to be highly conserved, but there are certainly common allele variants in regulatory genes related to it. (Incidentally, the prevalence of these varies with race.)

But this is not what we are talking about. We are talking about high frequency genes which have obvious phenotypic effects and which are subject to selection and, as a result, show regional variation in frequency like skin color (btw, there is probably no adaptive advantage to blue eyes and blonde hair; they are just accidental by-products of the gene for low melanin production in the dermis). There is no "African" melanin or "Swedish" melanin or "Turkish" melanin or whatever. It is the same pigment in all humans (and many other animals as well). There is no irreversible variant of melanin that will make one population of humans forever different than others.

First, you are leaping from "no obvious phenotypic effects" to "no phenotypic effects". Probably many if not most alleles have subtle phenotypic effects.

Second, melanin is emphatically **not** a single molecule - it is a complex polymer with thousands of variations. There are three main types in humans. It seems reasonable to assume that the exact type produced will vary according to allele combinations of melanin-related genes.

I don't know what you mean by "irreversible variant of melanin".

Anyway, those are just side issues. The main issue you are not getting is that there can be no inherent "irreversibility" of gene frequency within a species. By definition it is not possible because the potential for admixture exists. With admixture and selection, any particular gene in a regional population of a species can go from 0% to 100% and back to 0% as long as the gene exists somewhere on earth for that species.

That's irrelevant. The issue is whether a particular **constellation** of alleles can be replicated with finite probability.

You can't argue that artificially isolating a group of Swedes and a group of Africans in a cage for infinity years constitutes an example of Dollo's Law of irreversibility. It makes no sense.

I *already stated* that I was incorrect to describe the form of evolutionary irreversibility I am talking about in terms of Dollo's Law.

A scientific law must describe what happens in nature. It must have an element of predictability. For your experiment to create irreversibility your caged individuals must become different species. So different that there is never a possibility of interbreeding. This has already been discussed and it must be understood or there is no point in discussion.

They do *not* have to become different species or be unable to interbreed to create irreversibility of the sort I am describing. I agree that a single allele if strongly selected for could go from around 0% to around 100% and back again. That does not mean that it is statistically feasible to recover a particular constellation of traits controlled by many genes all with variant alleles. If you put a tribe of Swedes or Yoruba in a cage and subject them to selective pressures so that they adapt to their new environment, then even if you change the conditions back to those of Sweden or Yorubaland, the original allele frequencies and the constellations of traits they govern will not be recoverable. They will never again be exactly like the original Swedes or Yoruba. This is a form of evolutionary irreversibility.

I get the impression you were hoping Dollo's Law might make it impossible for lighter skinned people to ever look like their African ancestors even if global warming turns the whole planet into a tropical rain forest or something like that. It just isn't the case. As long as we remain one, potentially interbreeding species, it is possible for the whole of humanity to end up falling anywhere in the range of the spectrum of variability. We could all become light skinned, all dark skinned, all curly haired, all straight haired, all blue eyed, all brown eyed, etc.

How many times do I have to repeat that I am not talking about Dollo's Law? Do you even read the posts you respond to? But yes, no current people will ever come to look exactly like the African ancestors of humans. While any single gene could revert to ancestral forms, it is a statistical impossibility for large numbers of genes to revert together. Thus, a form of irreversibility.

- Gerry Quinn

Gerry Quinn — 26 Jan 2011, 01:30 · in reply to Lee Berman

From: "Lee Berman" <severiansola at hotmail.com>

Antonio: No, they are saying that there may be different alleles which produce a similar phenotype. They are talking about expressed DNA. It's not a matter of having a couple of different bases which make no difference on the result. The coded proteins may differ in structure yet not in function.

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We are talking about a principle of natural selection and evolution. Natural selection can only act on phenotype. And if there is no "obvious difference" between two phenotypes the difference is invisible to natural selection.

Nonsense. Natural selection can operate on quite subtle differences, not just obvious ones.

- Gerry Quinn