

ON UNIVERSALITY AND NATURAL HISTORY OF ROMANTIC LOVE

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1. ZULF'S ROMANTIC LOVE HYPOTHESIS

The fundamental hypothesis that I am interested in establishing is that romantic love as a subjective state with various descriptions at various times has existed from before the emergence of homo sapiens 8-7 million years ago, and that the genetic and biological machinery for experience of romantic love is part of the genetic code in common for all human beings, G_c , which is known to be around 99.9% of the code for each person today on Earth. In particular the implication of this hypothesis is that every one of our ancestors to before homo habilis had the evolutionary adaptations to experience romantic love and had experienced it with low probability of failure.

We reject all theories of recent origins of romantic love in the last 20,000 years as false.

2. WHAT IS ROMANTIC LOVE?

In natural sciences, such as physics, the concepts that are valid objects of study are extremely well established. Isaac Newton was able to develop the entire mathematical theory of infinitesimal calculus and specify quantitative laws of mass, velocity and acceleration. For psychology, the development has been much slower, and more difficult too. The systems of interest are vastly more complex than atoms and molecules. And so one of the great talents in psychology is to delimit and make precise the domains of scientific inquiry. The execution in such a task is enormously difficult and it is a task that does not occur in fundamental physics at all. To most physicists, there is a messy quality to psychological theories where there is no sharp foundations and the variables that are defined do not have the same stability as the behaviour of an electron, with invariant width, charge, and precision of 10 decimal figures. The insight of mine that I would like to promote generally is that just as in physics and chemistry, development of higher precision examination of small objects had led to sharper understanding of the phenomena, in psychology and human sciences the vaster measurements over larger populations provides precision of measurements. I want to start with this general concept because subtle theories will not be possible to test without this viewpoint. It is in the statistical properties of measurements of a very large population size of human beings which enables us to distinguish fine features.

I wish to bring to fore another principle that had been very successful for me in the past few years in my work on universal human moral nature. It is that we can profitably hypothesise genetic evolutionary basis for features of human beings that have universality in manifestation across the globe without having any precise

molecular biological mechanism at all. This principle I have employed to establish universal human moral nature with great success.

My establishment of a successful evolutionary explanation of universal human moral nature leads to the natural conjecture that romantic love will also have an explanation that is evolutionary. By evolutionary I mean over several million years or more. I have introduced the 'genetic code in common' G_c as a significant concept since we all share 99.9% of exactly identical genetic code across all human beings.

I will evade an attempt to define the phrase romantic love in terms of descriptive words here. Dorothy Tennov's great work *Love and Limerence* from 1979 [1], was to define a particular sort of state. She called the phenomena *Limerence*.

3. UNIVERSALITY OF ROMANTIC LOVE

In Dorothy Tennov's study, 95% of the women and 91% of the men rejected the statement, "the best thing about love is sex" ([1], p. 79). This is a spectacular measurement, in our view, of *human nature*.

And also 86% agreed with 'the support and companionship of a member of the opposite sex is important to me.' ([1], p. 23)

Assuming these are global estimates, they represent *human nature* measurements from our viewpoint. And the fundamental driver we will hypothesize is long term evolution.

4. THE GREAT ERROR OF CHARLES DARWIN

Charles Darwin attempted to seek a view of evolution in terms of competition by males for females as a driving force, generalised from observations in some other animals. I wish to challenge the idea that this is the evolutionary driving force. Human beings are quite sophisticated overall with G_c , the genetic code in common explaining 99.9% of each person's code.

Assume known that romantic love is a universal phenomenon in a strong sense: more than 95% of human beings experience states of romantic love at least once in their life. Given this assumption, we would conclude that evolutionary adaptations encoded with G_c enable these states. And then we can conclude that romantic love is human nature in the strong sense. Then we can seek an evolutionary explanation for romantic love.

Now we know from the last section that 'the best thing about love is not sex' is human nature (since it is expressed by 90% of humans). This is crucial to understanding that human nature is not to seek sex but that we have evolved to target other sorts of things directly.

5. PROSTITUTION VALUES

It is human nature also to consider prostitution unjustified. Global Survey shows roughly that 85% of the people in the world think that prostitution is unjustified, i.e. they have moral values against it. Thus roughly this injunction against prostitution is part of human nature and that is not because of any particular religion. In fact white people, mostly Christian are more tolerant of it than East Asians and Indians who are mostly not Christian. But it does suggest that sex is not in itself targeted by human nature.

6. ROMANTIC LOVE EXISTED BEFORE HOMO SAPIENS

Even some of our primate ancestors of other species had bigger brains than could be accommodated by the maternal womb so they had a long gestation before homo sapiens evolved. Romantic love – for males – was necessary for paternal investment in childrearing. I believe this prototypical romantic love evolved over the past five million years by the mechanism of mate-choice.

7. UNIVERSALITY OF EXPERIENCE OF ROMANTIC LOVE TODAY

William Jankowiak and Edward F. Fischer showed 'near universality' of romantic love in 147 out of 166 contemporary societies [5]. The remaining 19 contain examples of ethnographic oversight. This establishes empirical universality of Romantic Love across the globe. Our main novelty to enhance these results is the note that Romantic Love is *human nature* in that all human beings possess the requisite biological machinery to experience states of Limerence. In the next section we will consider the age of some of this machinery.

8. NEURAL CORRELATES OF ROMANTIC LOVE AND AGE OF BIOLOGICAL COMPONENTS

Neural Correlates of Romantic Love have been studied since 2000 [4]. It is mostly an exercise to determine that all components involved in romantic love existed for tens of millions years in our evolutionary past.

The list of activations are for (a) Middle Insula, (b) Anterior Cingulate, (c) Caudate nucleus, (d) Putamen, (e) Putamen, (f) Posterior hippocampus, (g) Cerebellum. These exist in cats too, ergo they are all much more ten million years old. In particular the major regions that have been implicated for romantic love activation were all evolved by 8 million years ago when we broke off from the gorilla line.

Once old age is verified, we have a plausible case for activation of these pathways being capabilities that are encoded in G_c the common genetic code. From this we can infer that Romantic Love is part of our universal human nature as a potential in every man and every woman.

9. BUSS DATA ON MATE PREFERENCES WITH DAVIS-PANKSEPP PERSONALITY TRANSFORM

David Buss 2001 work on half a century of mate preferences we have a targeting of personality features, and we can use the Davis-Panksepp transform to map the targeting of mate preferences directly to preferences for modulation of the emotions.

The translation of Personality Traits from Big Five to biological basis of the Davis-Panksepp is one that I used recently in my evolutionary theory of human moral nature. This is an enormously powerful tool and the enormous achievement on which this rests is the genius of Kenneth L. Davis and Jaak Panksepp whose wonderful book [2] provides a strong scholarly account of the development of personality psychology models.

My use of the transform from the correlation matrix between Big Five vectors to Davis-Panksepp vectors is a strong way in which we can directly use the Buss et. al. mate preference targeting of personality traits as a direct objective in mating that had allowed evolutionary biases in various psychological features of human race.

This particular connection of ideas is my own contribution, and as it has shown merit in the evolution of human moral nature, so it will allow us to consider evolution of romantic love.

10. NOTE ON CULTURAL HISTORIES OF ROMANTIC LOVE

There is a very bad assumption about cultural histories of romantic love which is the lack of understanding of the deeper genetic basis of romantic love. These theories are wrong. All the biological components involved in romantic love are older than several million years old [3], and therefore it is not plausible that the neural pathways of romantic love could have evolved as recently as 20,000 years ago or later.

I do have significant view that Courtly Love in Medieval Europe was based on particular doctrine developed by Avicenna (980-1037) the Muslim Persian polymath. But the biological foundations and the inner experiences have been millions of years old.

REFERENCES

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