FEBRUARY 21 2022 11:42 AM ZULFIKAR MOINUDDIN AHMED EXAMINES ISSUES OF EMOTIONS

ZULFIKAR MOINUDDIN AHMED
ZULFIKAR.AHMED@GMAIL.COM

Two new fundamental ideas I have discovered in theory of emotions that are both original and will be canonical in my view for psychology in the future. I am starting to come to terms with death from wounds inflicted in my Deep Interior by Bill Gates. I sense death will result in a year or two at most and I do not put high reliance on United States Government, Harvard, or Stanford or Finance for that matter to deliver (a) $620 million of legitimately earned money from Finance, (b) tenured full professorship position at Stanford with ability to move with my own pad in San Francisco and pursue projects that are infinitely more important than what Bill Gates had done for America or the world, Quant Positive Psychology. Unfortunately it was experience of homelessness in 2008 that had allowed me to gain some endurance to these situations and so I will just keep pushing in Allen Texas and sketch out the right way forward for Science from here instead of waiting around for non-existent things. One has to accept the reality that one cannot actually expect things to be what they seem, such as United States Government to be the legitimate government of a Civilised nation, or Stanford or Harvard being able to operate without being sabotaged in elementary matters by a college-dropout career charlatan criminal who made some money and projected his criminal efforts with a facade of philanthropy. I am 50 and too old now to believe that things are as they seem.

Anyway, I am more serious about truth, and I have nobler soul and dispositions than these barbaric charlatans. The two major fruitful original ideas are the following. I defined emotions, analogously to Jaak Panksepp's 1982 general theory of emotions, but with simplifications that allow easier use of my definition in psychology. My definition just counts the number of neural systems that Jaak Panksepp had detailed producing primary emotions, seven, and models them as producing signals in $\mathbf{R}$ and so the latent state space for emotions is $E = \mathbf{R}^7$.

Then I define any emotion as a quantitative state vector $x \in E$ that is latent. The major advantages of my definition is that it is much more easily compatible with the rest of psychology, which produces models based on measurements in large population samples. The latent state space models are quite developed in statistics, and are familiar to people doing speech recognition where hidden markov models are common, in Finance where stochastic volatility models are latent models. So I expect my definition of emotions will relieve psychology of fruitless disputes about definitions of emotions.

The second and highly nontrivial idea is to resolve the debates about basic emotions, natural kinds of emotions, and non-basic emotions. I hypothesized that across human race, *habituation* will normalise all human emotions. In other words,

Date: February 22, 2022.

all non-basic emotions, i.e. emotions that are due to a mixture of primary-process emotions from subcortical systems and cognitive processes will be explained by *habituation*. This theory allows us to express universal emotions as a sum

$$x = x_{basic} + x_{habituation}$$

This idea is powerful and although it will require some work on questionnaires to measure habituation, it will rationalise psychological theories of universal emotions that can be tested on around 150,000 globally distributed sample. This is my idea, to introduce *habituation* as the explanatory variable, and it is my expectation that it will produce a scientific theory of all human emotions that covers all human emotions for all people with perhaps 60-80% or more of variation in emotions explained. I do not think this is unrealistic.

My general outlook on existence is the old idea of the division of Man and Nature. My four-sphere theory gives a complete (above $\delta = 10^{-15}$ cm) science of Nature. And I am pursuing significant empirically validated results of Universal Human Moral Nature and vindication of Aristotle's Virtue-Eudaimonia theory, both extremely strong original scientific advances that are revolutionary versus the entire Western Intellectual Tradition. These results give me confidence that a simple universal theory of emotions that is empirically verifiable without extraordinary efforts is feasible in the near future. Furthermore there is strong conviction I carry that *habituation* is the most important variable for variability of non-basic emotions for human race–rather than demographic variables and culture/ethnicity and such.

So these are good, and now I begin to explore some further issues. One of this is the issue of emotions in common language. This is actually an issue that is interesting to me mostly because I am deeply devoted to literature from early age, and while my creative writing talents are limited, my taste in literature is strongly developed. I took a course on Mikhail Bakhtin's works by Professor Caryl Emerson at Princeton many years ago. And I was quite interested in how Bakhtin approaches evolution of languages. Language is quite a sophisticated feature of human beings. Psychological theories of emotions are making their task enormously complex if they truly wish to do the following:

- Produce a theory of Natural Phenomena about emotions and human nature
- Demand that their theory conform to natural language concepts

The two goals are never going to produce any convergence in a million years. This is because language did not develop to produce theories of natural phenomena. The moment psychology pretends to do the second goal it annihilates any chance of ever being a very good Science. Psychologists have not really fully understood this at all. You cannot do both. You have to keep a distance from natural language.

1. Fundamental Error Psychology Of Emotions Is Demand For Linguistic Fidelity

Psychology of Emotions will never develop into a strong science at all if outrageously impossible demands are made that scientific theories also have fidelity to natural languages. Natural languages have their own laws in formation and evolution and I see grave error in pretending that linguistic fidelity will ever be compatible with scientific psychological theories of emotions.

I found out to my chagrin, that some people are theorising that emotions are not biological and natural but evolved over time. Beyond habituation, these ideas

are totally wrong. Languages do evolve with particular words being selected to express some emotions of importance at some periods but it is fatal to psychology of emotions to try to have any fidelity to natural languages while still claiming to have natural science aims. This is a project that is totally doomed to failure, and psychologists have too often failed to appreciate the magnitude of this error.

You see natural languages are far more *mythological* than they are natural scientific for very good reasons. That is why poetry of Rilke is not possible to map to empirical natural world experiences.

Psychology of emotions will never succeed at all unless the demand for fidelity to natural language is given up. Of course this is not to say that one has to be talking about things that people don't care about in their lives but the fundamental goal of science is to have *predictive power* and there is absolutely no guarantee of predictive power if we have to be faithful to natural language usage for emotions. The goal is absurd for natural sciences and probably the main reason why psychology of emotions has been extremely slow to develop. Psychologists were crippled by outrageous and absurd demands of the field.

2. Fidelity To Natural Language Is Guaranteed Failure For Psychology of Emotions

Psychology has as its premise to produce natural science theories. These theories have the same aim as natural science theories in chemistry and physics, i.e. you produce models of natural world phenomena, such as human psyche, and then you have power of prediction based on the model.

Fidelity to natural language usage for emotions is outrageously absurd for any successful theory of psychology. Psychologists who do not have some experience with literature and its criticism might be drawn to seeking fidelity but it is totally fatal for natural science.

You see, natural science did not really exist seriously before Descartes' *Meditations on the First Philosophy* of 1641. So for 8 million years human race had evolved language without any natural science at all. And Socrates' idea that human beings possess rational faculty and reason is a totaly myth. It's a myth that seemed to gain great following from Western Intellectual tradition but it is totally dubious. Reason is not part of human nature at all. Psychologists who do not have wisdom enough to understand this will often be led to impossible projects like "Let's create a natural science so that words about emotions shall represent Nature". That's totally absurd, and I have fifty years of life and can assure you that emotional words in natural language are not meant to express fidelity to objective nature at all.

Let me illustrate this for you.

> Unsealed on a porch a letter sat
> Then you said I wanna leave it again
> Once I saw her on a beach of weathered sand
> And on the sand I wanna leave it again, yeah
> On a weekend wanna wish it all away
> And they called and I said that I want what I said
> And then I call out again
> And the reason oughtta leave her calm, I know
> I said I don't know whether I'm the boxer or the bag
> Oh yeah, can you see them

Out on the porch
Yeah but they don't wave
I see them
'Round the front way, yeah
And I know and I know I don't want to stay
Make me cry
I see
I don't know, there's something else
I wanna drum it all away
Oh, I said I don't, I don't know whether
I'm the boxer or the bag
Oh yeah, can you see them
Out on the porch
Yeah but they don't wave
I see them
'Round the front way, yeah
And I know and I know I don't want to stay
I don't wanna stay
I don't wanna stay
I don't wanna stay, oh no
Yeah
Oh, oh
Oh, oh

This is "Yellow Ledbetter" of Pearl Jam, and the emotional content of this song is extremely strong, and yet natural language in a *scientific naturalistic mode* will totally fail to evaluate it. You see here how natural language can provoke strong emotions and haunting moods in art. The sort of fidelity that psychologists often seek to natural language about emotions is too unsophisticated on understanding the relationship between language and emotions. It is also a disaster for any natural science. It's a fatal error in psychology to seek convergence.

What you instead need to do is keep natural language out of psychology of emotions and focus on natural science of the phenomena of emotions. Then afterward you can have extra theories that give some accurate understanding of relationship to natural language. That is an entirely different project. If you *just assume a priori* the impossibility that there will be a mapping of natural language to that of natural science you doom your entire enterprise before it goes anywhere.

3. Let Me Give You A Pertinent Example

You see Self-Centered reality is not the same as natural objective world-view reality. Bill Gates believes that whites are superior and will use all his power to try to genocide all non-whites in America and prevent me from success in life here. He obstructed $620 million earnings for me from Finance even though David E. Shaw and Christine Lagarde okayed it. Then he is attempting to ensure that neither Harvard nor Stanford can offer me tenure even though large numbers of faculty at both universities believe that they ought to give me tenure. Now I believe that those who want to give me tenure at Stanford and Harvard are closer to objective reality and Bill Gates is both a total murderous criminal, a disgusting, vile, savage, beastly, worthless charlatan with power and the United States has a Constitutional

duty to eliminate him because I have legitimate right of way for both my money and my American Dream and tenure at Stanford. What is the truth here? Well if I go by simpleminded examination of what has happened so far, it would seem like Bill Gates is right, which to me seems absurd, but it is so, and so you have to be careful about what you are trying to understand about truth.

4. What Are The Goals Of Psychology Of Emotions?

I want to pursue this issue of problems of attempting to adhere to natural language in psychology a bit further. You see, let be backtrack a little. In Personality Psychology there is something called the *lexical hypothesis* of Sir Francis Galton [1]. I don't like Francis Galton very much, and find him quite distasteful frankly. I was probably influenced in this by *Mismeasure Of Man* by Stephen Jay Gould. It's an interesting idea to examing words in language about character. I would not call it very good science, but an amusing parlour game. Something reasonable comes out in the end from this approach, the Five Factor model of Personality Traits. But in the end, the firm grounds for this model is not in lexical hypothesis at all but in the correlation of the model to the Davis-Panksepp Model, which have biological basis.

No strong science of emotions in the end will result if the adherence to natural phenomena is not the priority. The sort of idea that Francis Galton had, that human beings *naturally retained words representing the underlying reality* is not a strong scientific hypothesis. It's a parlour game if you ask me. At best some noisy relationship will result. And indeed the eigenvalues of the correlation matrix of Big Five Personality traits model make clear that this sort of model is not exact but it's still good science in the end.

5. Sir Francis Galton Was A Third Rate Amateur

I want to emphasize that my assessment of Francis Galton is not very good. I strongly believe that the man was a third rate amateur and his contributions to Science are mostly minor technicalities. He was not a great scientist at all, and his lexical hypothesis is not a good scientific theory. In technical aspects of natural languages, Noam Chomsky is a great man, and others too. Now in evolution of natural languages, I think Mikhail Bakhtin is the deepest, but you also have works by Ferdinand de Sassure that is good. I want to make sure that before I die the world records my low assessment of Sir Francis Galton. *Galton was not a great genius but a third rate amateur.* His lexical hypothesis in the case of words describing character only produced any results because it so happened that there are seven subcortical systems for emotions. Here Jaak Panksepp is a great genius, and Davis-Panksepp model's correlations to Five Factor model give the latter scientific basis, and not the lexical hypothesis.

6. Psychology Of Emotions Is Lisp-Like In Activity

One of the things that is quite frustrating for a mathematically trained man such as myself dealing with psychology of emotions is that *lacking quantitative basis* in foundations, the normal thought process of practitioners is often Lisp-like. They bandy around lists of factors left, right and center, saying well this A had factors $(X_1, \ldots, X_M)$ that are related to it and then this B had factors $(Y_1, \ldots, Y_N)$ related to it and so on and then you are wondering, "No, no, no, no, what is the thing

that you are positing as *quantitative relationships between quantitative variables*? Where's the formula, what is the goodness of fit? What's the noise like of that fit?" And suddenly you realise that these psychologists of emotions were poor deprived people all their lives and they think that $R^2 = 0.3$ is superb match of prediction and measurement. Then you feel suddenly filled with sadness and want to say, "Oh you poor thing. Do you need a bowl of soup or something? Why don't I invite you over a cafe for some coffee and some food. You haven't had any food for how many decades?"

7. Alternative Attitude For Perspective: Finance Quants

The polar opposite of psychologists are Finance Quants. I am an experienced and successful Finance Quant and let me tell you the basic philosophy of Finance Quants for perspective. The first rule of Finance Quants is that if the theory doesn't give you match to data, it does not matter how many illustrious Nobel Prize winning names are behind it. You throw it out like a hot potato. Second rule of Finance Quant is that if your model with all sorts of extremely deeply theoretically justified measurements extracted with extreme care does not match your target measuments, then *put all sorts of irrelevant junk into your model that are totally theoretically unjustified* till you get numbers that match the target empirical data. Third rule of Finance Quant is that if your model matches the data, then do not change any of the totally random crap in your model that you don't even remember where the hell it came from at all. It's the golden model and if someone asks for what is the rationale for it was, do not hesitate to tell the truth: "God came to me in a dream and told me, Zulf, you are the Chosen one, and I shall give you the answer".

8. The Lesson From Finance Quant Perspective

In the end you will want to have great theories that are deeply satisfactory and aesthetically pleasing and just marvelous. That's *in the end*. In other words it is when *the fat lady sings*. Don't become Medieval Scholastic Theologians and get riled up about all sorts of theoretical subtleties. Just take lots and lots of measurements and hack the numbers till you fit measurements. For this you want to abandon allegiance to discrete variables and introduce continuous variables wherever possible because you want to have the flexibility to fit arbitrarily messy measurements without discrete constraints. It's fine to do these things because fitting measurement data is healthy for the soul. I don't think Psychologists are sufficiently reverent for measurement data. You see, I have years of Finance Quant experience. For me, if the target measurements are fit by a woman who was ecstatic, suicidal, depressed, in love and filled with revulsion and hatred and bitterness for the world but joyful all the time, that's what the right answer is. Psychologists have not reached this state where "if the numbers fit, no matter how bizarre the answer seems, it's the right answer" mode yet.

9. Emotion Knowledge Article Of Shaver, Schwartz, Kirson, O'Connor

I loved the cluster graph picture from Shaver, Schwartz, Kirson, and O'Connor's article "Emotion Knowledge" from 1987. It is from a study where a hundred psychology students were asked to group together 135 emotion words into similarity category.

I want to point out something quite clearly, repeating the point that I had raised earlier. *Psychology of Emotions can never be a natural science at all if there is a demand that the emotion concepts used for natural science theories appear as the concepts in a psychological theory involving the natural phenomenon of emotions.* So for example whether a sample of psychology students do to similarity sort emotion words with some manner of agreement is not a very strong scientific basis for producing a natural scientific theory involving actual emotions. The assumption that this will lead to any solid scientific theory that is robust and solid is absurd.

Having said that, on words there is some agreement about their meaning among speakers of English, and this is guaranteed to be a fairly noisy situation. Shaver and his colleagues are following a model of E. Rosch on how people categorise things. This is not at all a criticism of the paper of Shaver et. al. Their goal was to examine how people categorise emotion words.

I am simply reaffirming my point that *theories of psychology of natural phenomena cannot be guaranteed to conform with how people generally categorise emotions.* The entire enterprise of scientific psychology of emotions will totally be a disastrous failure if the assumption is made that serious science will result if the ways people categorise emotions are used as concepts of natural phenomena of emotions. That would make the outrageously impossible assumption that people actually have a scientific accuracy in knowing something about emotions and their relationships to behaviour. Let me assure you that people don't even know what their own emotions are, and have a weak sense for anyone else's and furthermore, I will vouch for myself that very often I don't really give a damn about other people's emotions. And I don't think I am abnormal at all. It is the professional duty of the scientific psychology to do serious work here. That's why they get paid the big bucks.

10. Clearer Repetition Of Separation Of Natural Science Concepts From Popular Concepts

I will use my own definition of emotions to illustrate how it differs from popular notions of emotions. I posit that some emotional state is attached to some region $D \subset E$ of a latent state space for an individual. Maybe this emotion is *longing.* So "She longed to be with him and could not tolerate the separation. She was lonesome and that night and she missed him. She was sorry that they drifted apart." That's from the famous Elvis Presley song "Are You Lonesome Tonight" So in my definition all of this combined will be a state that any man or woman will experience when their actual latent signal lies in $D \subset E$. Then there would need to be measurements of large samples of people in such a state where the signal intensities of seven subcortical emotional systems are measured by neuroimaging or whatever other method. Those measurements might be $x_j \in \mathbf{R}^7$ for $1 \leq j \leq 1000$ and then we'd estimate the region D or a density for the random variable $X_{lonesome}$ from the measurements. And then we store the measurements in a computer and that's our *objective measure* for what the emotion is in the human population.

You cannot *ask people* about these things and get anything reliable. That would be absurd. When I have romantic interest, I am likely to sing Elvis Presley to her even if she's harried, totally busy with work, and has no interest in remembering who the hell I am. I say "Are you lonesome tonight? Do you miss me? Are you sorry we drifted apart?" without the least care about her being totally busy with her work and friends and not even remembering who I am.

Scientific psychology is not going anywhere if objective measurements are not the basis of the propositions in psychology. I am just amazed that these things have to be mentioned at all. So let's fix this right away.

11. Charles Darwin's 1872 Work

Charles Darwin was a genius of first rank, and we all appreciate that. I have been studying evolutionary theory issues for my own interests. However, his emotion theories based on expressions on faces and such, pursued also by Paul Ekman are too primitive to produce a strong scientific theory for pscychology of emotions because I can assure you that I do not worry at all about facial expressions when dealing with emotions. It's *not that important* what the facial expression are. The saviour of the field is Jaak Panksepp's seven subcortical systems and latent state variable approach is infinitely superior as scientific theory of emotions. We want nontrivial results that are quantitatively precise and that are reliable and not continue on with this mishmash of some measurements, some opinion polls on emotions etc. The assumptions made about the consistency of the various sorts of mishmash in psychological theory is too difficult to digest. Human emotions are sophisticated natural phenomena, and ought to be treated with much more care when scientific theories are sought that have strong predictive power. The field will progress rapidly after we move to a quantitative basis and pay heed to latent systems and then seek logical coherence without so many assumptions about how language *automatically will give us trustworthy observations that will give us any information about objective natural phenomena*. I cannot emphasize how outrageously bad these assumptions are.

Let me read something to you.

> Everything is far
> and long gone by
> I think that the star
> glittering above me
> has been dead for a million years.
> I think there were tears
> in the car I heard pass
> and something terrible was said.
> A clock has stopped striking in the house
> across the road
> When did it start?...
> I would like to step out of my heart
> and go walking beneath the enormous sky
> I would like to pray
> And surely of all the stars that perished
> long ago,
> one still exists.
> I think I know
> which one it is
> which one, at the end of its beam in the sky,
> stands like a white city...

This is "Lament" of Rainer Maria Rilke from 1905 *The Book of Hours*. This is sublime use of language and you see here immediately the problem with attempting

to map natural language with scientific natural concepts too easily. This is refined use of language, and where here do you see scientific naturalism. You have deceived yourself, scientific psychology, into believing that natural language will assist you in your scientific naturalist project. It will take you to the white city standing at the end of the beam of the last living star, and then perhaps you will simply not give a damn about scientific naturalism at all. Be warned, therefore not to ask natural language to do things it does not *really want* to do.

My definition of emotion totally clarifies perennial problems of tabulation of emotions. Richard S. Lazarus discusses emotions as categories or dimensions pp.59–68 [**?**]. So when you treat emotions as categories, you have perennial problems that will not arise at all with my definition.

For example "Is annoyance in the same category as anger with just difference in degrees?" You take the approaches Lazarus discusses, you will have interminable disputes with "No, I am absolutely sure that Anger is not the same category as Annoyance because my Guru Hari-Krishna Swami from the Indian mountains and who is the descendents of Rishis of Rashidpoor meditated for forty nights and forty days till the divine answer enlightened him." You think you will be able to argue with this?

My approach says Annoyance corresponds to empirically determined $D_{annoyance} \subset E$ and $D_{anger} \subset E$ and just examine the geometry produced in E to determine answers to these questions through some means and then consider these things empirically resolved.

Mind you, this involved labour with neuroimaging. I don't do those things. Those are for all sorts of experimental people, I am pure theory.

12. Let's Look At Shaver et. al. Emotion Knowledge Association

I decided to just label the clusters that were determined by labeling by 100 people. This is quite nice, around 24 clusters here. Now that's a nice set of emotion words. This is quite exciting. Well I won't give you any highly nontrivial theory involving actual emotions at all. These clusters tell us how people have associated the emotions to produce clustering by relatedness *in their minds*. I do not think that these clusters are good to use for psychological scientific models at all. But the clusters tell us something about how people think of the relations between emotion words in their own minds and that is the measurement of something different than emotions as objective phenomena themselves.

I just put this list down because it gives the impression that I am dealing with emotions with all sorts of colourful words. It's true for example that Bill Gates used his aggressive powers to induce intense pain in my body to torment me with malevolent evil intent because of his ideology of white supremacy which apparently induces him to think that it is the *purpose of white people to torment and destroy and produce misery and happiness to non-white people*. He is from a crass peasant abominable savage family background so obviously his mother and father did not teach him about civilisation. What can you do about it?

13. All Theoretical Traditions Of Psychology Of Emotions Merge In Mine

I am so pleased to find a standard survey article on psychology of emotions from Ortony-Clore-Collins [**?**]. Yes, I am a novice to psychology of emotions in a

way, but I have big ideas that will change all of Science. The survey article is by Howard Leventhal and Andrew Tomarken [3]. Just what I needed, a concise and high quality account of the major theories of psychology of emotions. You see I have the Darwinian and neuroscience theories (a) and (c) in their list covered by asserting that emotions have evolved by the same neural systems that Panksepp details for 251-201 million years. I skib (b) body reaction theories which are not so important because we already know the source of emotions in subcortical systems. And (d) are the cognition-arousal theory which from my point of view just addresses triggering of the subcortical systems by the cortex.

The important issue is that my framework instantly covers conceptually (a), (c), (d) and the concept that is new is habituation. I like to wade into things slowly, so the key new issue that I mention is that habituation is much much more important for a universal theory than any theory that assumes that there is a rigid theory of causal relations could be right. Without habituation, there are no patterns that have regularity enough. And human beings are extremely reliant on habits and we expend a great many years of our lives habituating for the theories of (d) of [3] where cognition does have some role. Without knowing patterns of habituation, I think there are no universally correct pscychology of human theories that have any chance of being correct (vesus Nature).

14. My Grand Vision

I see the world in a way that is more familiar to the Romantics like Friedrich Schiller than modern scientists. My four-sphere theory is the theory of Nature, and it is successful, and I would like a holistic unified theory of Man.

Whether we actually have a detailed unity or not, I would like to forge a unified theory of Man. Part of this is a Universal theory of Human Emotions.

References

[1] `https://en.wikipedia.org/wiki/Lexical_hypothesis`
[2] Rosch, E. (1973). On the internal structure of perceptual and semantic categories. In T. E. Moore (Ed.), Cognitive development and the ac- quisition of language (pp. 111 -144). New York: Academic Press. [**?**]Richard S. Lazarus, *Emotion & Adaption*, Oxford 1991
[3] Howard Levanthal and Andrew Tomarken, Emotions: Today's Problems, Ann. Rev. Psychol. 1986. 37:565–610

	Second	Word
1	1	adoration
2	1	affection
3	1	love
4	1	fondness
5	1	liking
6	1	attraction
7	1	caring
8	1	tenderness
9	1	compassion
10	1	sentimentality
11	2	arousal
12	2	desire
13	2	lust
14	2	passion
15	2	infatuation
16	3	longing
17	4	amusement
18	5	bliss
19	5	cheerfulness
20	5	gaety
21	5	glee
22	5	jolliness
23	5	joviality
24	5	joy
25	5	delight
26	5	enjoyment
27	5	gladness
28	5	happiness
29	5	jubilation
30	5	elation
31	5	satisfaction
32	5	ecstasy
33	5	euphoria
34	6	enthusiasm
35	6	zeal
36	6	zest
37	6	excitement
38	6	thrill
39	6	exhiliaration
40	7	contentment
41	7	pleasure
42	8	pride
43	8	triumph
44	9	eagerness
45	9	hope
46	9	optimism
47	10	entrallment
48	10	rapture
49	11	relief
50	12	amazement
51	12	surprise
52	12	astonishment
53	13	aggravation
54	13	irritation
55	13	agitation
56	13	annoyance